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**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

**North American Electric Reliability  
Corporation )  
)**

**Docket No. \_\_\_\_\_**

**PETITION OF THE  
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION  
FOR APPROVAL OF PROPOSED RELIABILITY STANDARDS  
COM-001-2 AND COM-002-4**

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May 14, 2014

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B, K, and L); and (iv) the retirement of the currently-effective Reliability Standards COM-001-1.1, EOP-008-1 (Requirement R1), and COM-002-2 as listed in the Implementation Plans.

As required by Section 39.5(a)<sup>5</sup> of the Commission's regulations, this petition presents the technical basis and purpose of proposed Reliability Standards COM-001-2 and COM-002-4, a summary of the development history for each proposed Reliability Standard (Exhibits M and N), and a demonstration that the proposed Reliability Standards meet the criteria identified by the Commission in Order No. 672<sup>6</sup> (Exhibits F and G). The NERC Board of Trustees adopted proposed Reliability Standards COM-001-2 and COM-002-4 on November 7, 2012 and May 6, 2014 respectively.

## **I. EXECUTIVE SUMMARY**

Proposed Reliability Standards COM-001-2 and COM-002-4 replace and improve upon the currently effective COM-001-1.1 and COM-002-2 Reliability Standards to establish requirements for communication capabilities and communications protocols necessary to maintain reliability. Proposed COM-001-2 establishes a clear set of requirements for what communications capabilities various functional entities must maintain for reliable communications.

Proposed COM-002-4 requires entities to have or create a set of documented communications protocols that include certain minimum mandatory protocols. Proposed COM-002-4 improves communications surrounding the issuance of Operating Instructions by employing predefined communications protocols, thereby reducing the possibility of

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<sup>5</sup> 18 C.F.R. § 39.5(a) (2014).

<sup>6</sup> The Commission specified in Order No. 672 certain general factors it would consider when assessing whether a particular Reliability Standard is just and reasonable. *See Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, at P 262, 321-37, *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System. In addition to setting predefined communications protocols, the proposed Reliability Standard requires use of the same protocols regardless of the current operating condition. In other words, the same protocols apply during normal, alert, and Emergency operating conditions, negating the need to identify the current operating condition to determine if a different set of protocols applies. Proposed COM-002-4 also requires entities to reinforce the use of the documented communication protocols through training, assessing adherence by operating personnel to the documented communication protocols, and providing feedback to those operating personnel on their use of the protocols. During Emergencies, operating personnel must use the documented communication protocols for three-part communications without exception, since clear communication is essential to providing swift and coordinated response to events that are directly impacting the reliability of the Bulk Electric System.

Proposed Reliability Standards COM-001-2 and COM-002-4 address all of the pertinent Commission directives from Order No. 693 associated with the Commission's approval of COM-001-1.1 and COM-002-2.<sup>7</sup> The revisions made to proposed COM-002-4 also address Recommendation No. 26 from the final report issued by the U.S.-Canada Power System Outage Task Force to "[t]ighten communications protocols, especially for communications during alerts and emergencies."<sup>8</sup>

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<sup>7</sup> *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, 72 Fed. Reg. 16416, FERC Stats. & Regs. ¶ 31,242, at PP 487-93, 502-04, 508, 512, 514-15, 531-32, 534, 535, and 540, *order on reh'g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

<sup>8</sup> U.S.-Canada Power System Outage Task Force, *Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations*, April 2004 ("Blackout Report"). On August 15, 2003, President George W. Bush and then-Prime Minister Jean Chrétien directed the creation of a Joint U.S.-Canada Power System Outage Task Force to investigate the causes of the blackout and ways to reduce the possibility of future outages. The U.S.-Canada Task Force convened, investigated the causes of this blackout, and recommended actions to prevent future widespread outages.

Proposed COM-001-2 satisfies the Commission’s directives and improves upon Reliability Standard COM-001-1.1 by adding Generator Operators and Distribution Providers as applicable entities. Proposed COM-001-2 also identifies specific requirements for telecommunications capabilities for use in all operating conditions that reflect the roles of the applicable entities and their impact on Reliable Operation. Proposed COM-001-2 further includes adequate flexibility in its language for compliance with the Reliability Standard to permit the adoption of new technologies and cost-effective solutions.

Proposed COM-002-4 also satisfies the Commission’s directives and improves upon the previous Reliability Standard COM-002-2 by adding Distribution Providers as an applicable entity in the proposed Reliability Standard. Proposed COM-002-4 also meets the Commission’s directive to require “tightened communications protocols, especially for communications during alerts and emergencies” by establishing a baseline set of mandatory protocols and focusing certain requirements on zero-tolerance responsibility for failure to use or misuse of the protocols for three-part communications during Emergency conditions. Under proposed COM-002-4, all applicable entities must use the same set of protocols during all operating conditions, establishing communication uniformity as much as practical on a continent-wide basis.

For the reasons discussed in this Petition, NERC respectfully requests that the Commission approve the proposed Reliability Standards as just, reasonable, not unduly discriminatory or preferential, and in the public interest.

## **II. NOTICES AND COMMUNICATIONS**

Notices and communications with respect to this filing may be addressed to the following:<sup>9</sup>

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## **III. BACKGROUND**

### **A. Regulatory Framework**

By enacting the Energy Policy Act of 2005,<sup>10</sup> Congress entrusted the Commission with the duties of approving and enforcing rules to ensure the reliability of the Nation’s Bulk-Power System, and with the duties of certifying an ERO that would be charged with developing and enforcing mandatory Reliability Standards, subject to Commission approval. Section 215(b)(1)<sup>11</sup> of the FPA states that all users, owners, and operators of the Bulk-Power System in the United

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<sup>9</sup> Persons to be included on the Commission’s service list are identified by an asterisk. NERC respectfully requests a waiver of Rule 203 of the Commission’s regulations, 18 C.F.R. § 385.203 (2014), to allow the inclusion of more than two persons on the service list in this proceeding.

<sup>10</sup> 16 U.S.C. § 824o (2012).

<sup>11</sup> *Id.* § 824(b)(1).



States will be subject to Commission-approved Reliability Standards. Section 215(d)(5)<sup>12</sup> of the FPA authorizes the Commission to order the ERO to submit a new or modified Reliability Standard. Section 39.5(a)<sup>13</sup> of the Commission’s regulations requires the ERO to file with the Commission for its approval each Reliability Standard that the ERO proposes should become mandatory and enforceable in the United States, and each modification to a Reliability Standard that the ERO proposes should be made effective.

The Commission has the regulatory responsibility to approve Reliability Standards that protect the reliability of the Bulk-Power System and to ensure that such Reliability Standards are just, reasonable, not unduly discriminatory or preferential, and in the public interest. Pursuant to Section 215(d)(2) of the FPA<sup>14</sup> and Section 39.5(c)<sup>15</sup> of the Commission’s regulations, the Commission will give due weight to the technical expertise of the ERO with respect to the content of a Reliability Standard.

#### **B. NERC Reliability Standards Development Procedure**

The proposed Reliability Standards were developed in an open and fair manner and in accordance with the Commission-approved Reliability Standard development process.<sup>16</sup> NERC develops Reliability Standards in accordance with Section 300 (Reliability Standards

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<sup>12</sup> *Id.* § 824o(d)(5).

<sup>13</sup> 18 C.F.R. § 39.5(a).

<sup>14</sup> 16 U.S.C. § 824o(d)(2).

<sup>15</sup> 18 C.F.R. § 39.5(c)(1).

<sup>16</sup> *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672 at P 334, FERC Stats. & Regs. ¶ 31,204, *order on reh’g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006) (“Further, in considering whether a proposed Reliability Standard meets the legal standard of review, we will entertain comments about whether the ERO implemented its Commission-approved Reliability Standard development process for the development of the particular proposed Reliability Standard in a proper manner, especially whether the process was open and fair. However, we caution that we will not be sympathetic to arguments by interested parties that choose, for whatever reason, not to participate in the ERO’s Reliability Standard development process if it is conducted in good faith in accordance with the procedures approved by FERC.”).

Development) of its Rules of Procedure and the NERC Standard Processes Manual.<sup>17</sup> In its order certifying NERC as the Commission's Electric Reliability Organization, the Commission found that NERC's proposed rules provide for reasonable notice and opportunity for public comment, due process, openness, and a balance of interests in developing Reliability Standards<sup>18</sup> and thus satisfies certain of the criteria for approving Reliability Standards.<sup>19</sup> The development process is open to any person or entity with a legitimate interest in the reliability of the Bulk-Power System. NERC considers the comments of all stakeholders, and a vote of stakeholders and the NERC Board of Trustees is required to approve a Reliability Standard before the Reliability Standard is submitted to the Commission for approval.

#### **IV. Reliability Standard Version History and Commission Directives**

This section presents the version history of each Reliability Standard beginning with the version 0 Reliability Standards and the associated Commission directives from Order No. 693. NERC has also included relevant discussion from the Order No. 693 proceeding that has relevance to both the directives and the standards development work of the standard drafting teams to revise the COM-001 and COM-002 Reliability Standards. Discussion of the proposed Reliability Standards and how the proposed Reliability Standards satisfy the Commission directives is included below in section V of this Petition.

##### **A. History of COM-001-1 and Associated Commission Directives**

NERC originally implemented Reliability Standard COM-001-0 (Telecommunications) on April 1, 2005.<sup>20</sup> The version 0 Reliability Standard sought to ensure coordinated

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<sup>17</sup> The NERC *Rules of Procedure* are available at <http://www.nerc.com/AboutNERC/Pages/Rules-of-Procedure.aspx>. The NERC *Standard Processes Manual* is available at [http://www.nerc.com/comm/SC/Documents/Appendix\\_3A\\_StandardsProcessesManual.pdf](http://www.nerc.com/comm/SC/Documents/Appendix_3A_StandardsProcessesManual.pdf).

<sup>18</sup> 116 FERC ¶ 61,062 at P 250.

<sup>19</sup> Order No. 672 at PP 268, 270.

<sup>20</sup> See NERC Apr. 4, 2006 *Petition for Approval of Reliability Standards*, Docket No. RM06-16-000 at 33.

telecommunications among operating entities and established general telecommunications requirements for operating entities, including equipment testing and coordination. COM-001-0 also: (i) established English as the common language between and among operating personnel; and (ii) set the policy for using the NERCnet telecommunications system.<sup>21</sup> COM-001-0 applied to Transmission Operators, Balancing Authorities, Reliability Coordinators and NERCNet user organizations.<sup>22</sup> NERC submitted COM-001-0 in its original petition for approval of its proposed Reliability Standards.<sup>23</sup> NERC subsequently submitted a petition<sup>24</sup> to include a revised version 1 of the COM-001 Reliability Standard to add missing compliance elements.<sup>25</sup>

On May 11, 2006, Commission staff issued its *Staff Preliminary Assessment of the North American Electric Reliability Council's Proposed Mandatory Reliability Standards* ("Preliminary Assessment").<sup>26</sup> In the Preliminary Assessment, Commission staff made the following summary comments regarding COM-001-0:

- COM-001-0 does not contain specific or minimum adequacy, redundancy and diverse routing requirements for telecommunications facilities;
- the applicability section does not specify that Generator Operators are subject to telecommunications requirements; and
- COM-001-0 contains no Compliance Measures or Levels of Non-Compliance.

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<sup>21</sup> NERCNet is a Wide Area Network using Frame Relay as its communications medium. It supports the Interregional Security Network, Interchange Distribution Calculator and the Reliability Coordinator Information System. NERCnet has been used by NERC since 1997 to allow Reliability Coordinators, Transmission Operators, and Balancing Authorities and NERCnet user organizations to share Real-time operating reliability data.

<sup>22</sup> "NERCnet User Organizations" are defined in COM-001-1.1, Attachment 1 as "[us]ers of NERCnet who have received authorization from NERC to access the NERC network are considered users of NERCnet resources. To be granted access, users shall complete a User Application Form and submit this form to the NERC Telecommunications Manager."

<sup>23</sup> See NERC Apr. 4, 2006 *Petition for Approval of Reliability Standards*, Docket No. RM06-16-000.

<sup>24</sup> See NERC Nov. 16, 2006 *Petition for Approval of Reliability Standards*, Docket Nos. RM06-16-000 and RM07-03-000.

<sup>25</sup> The Commission approved an errata change to COM-001-1 by delegated letter order on May 13, 2009. As a result, the currently effective and enforceable version of COM-001 is COM-001-1.1. See *N. Am. Elec. Reliability Corp.*, Docket No. RD09-2-000 (2009) (delegated letter order).

<sup>26</sup> See *Staff Preliminary Assessment of the North American Electric Reliability Council's Proposed Mandatory Reliability Standards*, May 11, 2006, Docket No. RM06-16-000.

Commission staff explained in the Preliminary Assessment that COM-001 contains a general requirement to provide “adequate and reliable” telecommunications facilities for all applicable operating entities. Commission staff concluded that COM-001-0 does not contain specific or minimum requirements on adequacy, redundancy and diverse routing of the telecommunications facilities necessary to ensure the exchange of operating information, both internally and among operating entities. Staff explained that leaving the specification of what constitutes adequate and reliable telecommunication facilities to operating entities could lead to claims by operating entities that they comply with the Reliability Standard when in fact they still may not have “adequate” telecommunications facilities for use during real-time normal and Emergency operations.<sup>27</sup> Further, Commission staff noted that while COM-001 has a redundancy and diverse routing requirement, it is effective only “where applicable,” and no specification is provided regarding the circumstances where the requirement actually is applicable.

The Commission approved COM-001-1 in Order No. 693, but the Commission issued certain directives to improve the Reliability Standard including the additional of certain entities to the applicability of the standard and identification of specific requirements for telecommunications facilities.<sup>28</sup>

#### **B. History of COM-002-2 and Associated Directives**

Reliability Standard COM-002-0 was implemented on April 1, 2005. The stated purpose of the Reliability Standard was to:

To ensure Balancing Authorities, Transmission Operators, and Generator Operators have adequate communications and that these communications capabilities are staffed and available for addressing a real-time emergency condition. To ensure communications by operating personnel are effective.

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<sup>27</sup> *Id.* at 42-43.

<sup>28</sup> Order No. 693 at PP 487-93, 502-04, 508.

COM-002-0 applied to Reliability Coordinators, Balancing Authorities, Transmission Operators, and Generator Operators. Reliability Standard COM-002-1 was developed in November 2006 to replace COM-002-0. COM-002-1 added additional detail on the communications requirements between and among operating entities and included specific situations that require communications with other operating entities. COM-002-1 contained two Requirements. Requirement R1 required each Transmission Operator, Balancing Authority, and Generator Operator to have communications (voice and data links) with appropriate Reliability Coordinators, Balancing Authorities, and Transmission Operators. The communications had to be staffed and available for addressing a real-time emergency condition. In addition, each Balancing Authority and Transmission Operator had to notify its Reliability Coordinator and affected Balancing Authorities and Transmission Operators “of any condition that could threaten the reliability of its area or when firm load shedding is anticipated.” Requirement R2 required each Reliability Coordinator, Transmission Operator, and Balancing Authority to use three-part communications. Each entity was required to issue directives in a clear, concise, and definitive manner; ensure the recipient of the directive repeats the information back correctly; and acknowledge the response as correct or repeat the original statement to resolve any misunderstandings.<sup>29</sup>

NERC submitted COM-002-1 in its original petition for approval of its proposed Reliability Standards.<sup>30</sup> In its subsequent November 15, 2006 petition, NERC submitted COM-002-2, which supersedes the version 1 Reliability Standard. COM-002-2 adds Measures and Levels of Non-Compliance to the version 1 Reliability Standard.

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<sup>29</sup> Of particular note, the Reliability Standard did not place any obligation on the receiver of a communication. The responsibility for ensuring proper understanding was placed on the issuer.

<sup>30</sup> See NERC Apr. 4, 2006 *Petition for Approval of Reliability Standards*, Docket No. RM06-16-000 at 32-33.

The Preliminary Assessment issued by FERC staff also identified shortcomings in the COM-002-2 Reliability Standard. Commission staff stated that the standard did not contain a requirement that appropriate operating actions be assessed and approved first and then implemented in normal and emergency operating conditions in which reliability could be impacted beyond a local area. Commission staff noted in its explanation “[e]ffective communications with proper communications protocols among the operating entities are essential for maintaining reliable system operations.”

Commission staff’s comments relied heavily on recommendations made in the Blackout Report. The Blackout Report included 46 specific recommendations to address the primary causes of the blackout to help prevent or minimize the scale of future blackouts. The Blackout Report also identified eight factors that were common to some of the eight major outage occurrences from the 1965 Northeast Blackout through the 2003 blackout, including “ineffective communications.”<sup>31</sup> In particular, Recommendation No. 26 reads: “[t]ighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate.” Recommendation No. 26 continues:

NERC should work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations, and ensure that all key parties, including state and local officials, receive timely and accurate information. NERC should task the regional councils to work together to develop communications protocols by December 31, 2004, and to assess and report on the adequacy of emergency communications systems within their regions against the protocols by that date.<sup>32</sup>

The Blackout Report explained that on August 14, 2003, “reliability coordinator and control area communications regarding conditions in northeastern Ohio were in some cases ineffective,

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<sup>31</sup> Blackout Report at 107.

<sup>32</sup> *Id.* at 141, 161.

unprofessional, and confusing.” The Blackout Report concluded that ineffective communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade. The Blackout Report also stated “[c]onsistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability.”<sup>33</sup>

In its Preliminary Assessment, Commission staff interpreted the Blackout Report recommendation’s reference to “effective communications” with “tightened communications protocols” among operating entities to include two key components: (i) effective communications that are delivered in clear language via pre-established communications paths among pre-identified operating entities, and (ii) communications protocols which clearly identify that any operating actions with reliability impact beyond a local area or beyond a Reliability Coordinator’s area must be communicated to the appropriate Reliability Coordinator for assessment and approval prior to their implementation to ensure reliability of the interconnected systems.<sup>34</sup> Commission staff concludes that the requirements in COM-002-1 fulfill the “effective communications” component of the Blackout Report recommendation, but do not meet the call for “tightened communications protocols.” Specifically, the Commission states that COM-002-1, or other Reliability Standards, do not contain a requirement that the appropriate operating actions in normal and emergency operating conditions that may have reliability impact beyond a local area or Reliability Coordinator’s area must be assessed and approved by the Reliability Coordinator, before implementation by the operating entities.<sup>35</sup>

In its comments to the Preliminary Assessment, NERC stated that it did not believe that “tightened communications protocols” should include the requirement that “the appropriate

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<sup>33</sup> *Id.* at 161.

<sup>34</sup> Preliminary Assessment at 43-44.

<sup>35</sup> *Id.* at 44.

operating actions...*must be assessed and approved* by the reliability coordinator, before being implemented by the operating entities.”<sup>36</sup> NERC further argued that other NERC standards (e.g., EOP-001 and TOP-001) require the Transmission Operator, Balancing Authority, and Reliability Coordinator to coordinate their emergency operating plans and communicate actions with one another. However, NERC did state, without elaboration, that it “agrees with the need for development of additional standards addressing consistent communications protocols among personnel responsible for the reliability of the Bulk-Power System.”

The Commission ultimately approved COM-002-2 in Order No. 693, but the Commission issued certain directives to improve the Reliability Standard including adding Distribution Providers as an applicable entity in the Reliability Standard and requiring NERC to create tightened communications protocols, especially for communications during alerts and emergencies.<sup>37</sup> Section V includes a summary of these directives along with how the proposed Reliability Standard satisfies the directives.

### **C. Revisions to COM Reliability Standards**

#### **1. History of Project 2006-06**

Project 2006-06 – Reliability Coordination was established to ensure that reliability-related Requirements that are applicable to the Reliability Coordinator are clear, measurable, unique and enforceable, and to ensure that this set of Requirements is sufficient to maintain

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<sup>36</sup> NERC Jun. 26, 2006 *Comments to Preliminary Assessment*, Docket No. RM06-16-000 at 120 (quoting Preliminary Assessment) (emphasis added).

<sup>37</sup> In addition, the Commission suggests NERC consider certain comments in the Standards Development Process. The Commission asks NERC to consider the American Public Power Association’s (“APPA”) comments regarding the Measures and Levels of Non-Compliance when revising the Reliability Standard. APPA notes that the Levels of Non-Compliance for COM-002-2 are inadequate in two respects: (1) reliability coordinators are not included in any Level of Non-Compliance and (2) the Levels of Non-Compliance for transmission operators and balancing authorities in Compliance D.2 do not reference Requirements R1 and R2. Order No. 693 at P 533. The Commission also suggest that NERC consider comments by Santa Clara, FirstEnergy and Six Cities regarding specific new improvements to the Reliability Standards. Order No. 693 at 536-39.



reliability of the Bulk Electric System. Revisions to the COM-001 and COM-002 Reliability Standards were included within the project scope in order to modify the currently-effective Reliability Standards, COM-001-1.1 and COM-002-2, to address the applicable directives in Order No. 693, while adequately addressing the communication needs of Reliability Coordinators. The project resulted in two proposed Reliability Standards, COM-001-2 and COM-002-3.

## 2. History of Project 2007-02

The purpose of Project 2007-02 – Operating Personnel Communications Protocols was to create a new Reliability Standard that requires real time system operators to use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.<sup>38</sup> The Project drafted Reliability Standard COM-003-1 to accomplish this goal. The Project ultimately resulted in the combination of COM-002-3 from Project 2006-06 and draft COM-003-1 into a single proposed Reliability Standard, COM-002-4.

## V. JUSTIFICATION FOR APPROVAL

As discussed in Exhibits F and G and below, the proposed Reliability Standards, COM-001-2 and COM-002-4, satisfy the Commission’s criteria in Order No. 672 and are just, reasonable, not unduly discriminatory or preferential, and in the public interest. The following section separately provides: (i) the purpose of the proposed Reliability Standards; (ii) a description of the requirements in each of the proposed Reliability Standards, the technical basis supporting the requirements, and a description of proposed defined terms; (iii) a discussion of

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<sup>38</sup> See Standard Authorization Request, available at [http://www.nerc.com/pa/Stand/Project%20200702%20Operating%20Personnel%20Communications/SAR\\_Project\\_2007-02\\_Comm\\_Protocols\\_1st\\_Posting\\_15Mar07.pdf](http://www.nerc.com/pa/Stand/Project%20200702%20Operating%20Personnel%20Communications/SAR_Project_2007-02_Comm_Protocols_1st_Posting_15Mar07.pdf).

how the proposed Reliability Standards satisfy the outstanding Commission directives from Order No. 693; and (iv) a discussion of the enforceability of the proposed Reliability Standards.

**A. Proposed Reliability Standard COM-001-2**

1. Purpose of Proposed Reliability Standard

Proposed Reliability Standard COM-001-2 revises the currently effective COM-001-1.1 Reliability Standard. The purpose of proposed Reliability Standard COM-001-2 is to establish requirements for Interpersonal Communication capabilities necessary to maintain reliability. Proposed COM-001-2 applies to Reliability Coordinators, Balancing Authorities, Transmission Operators, Generator Operators, and Distribution Providers.

2. Requirements, Technical Basis and Defined Terms

The proposed Reliability Standard includes eleven requirements and two new defined terms, “Interpersonal Communication” and “Alternative Interpersonal Communication,” which collectively provide a comprehensive approach to establishing communications capabilities necessary to maintain reliability. The defined terms used in the requirements of proposed COM-001-2 are:

**Interpersonal Communication** – Any medium that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication** – Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.

These definitions provide clarity that an entity’s communication capability must be redundant and that each of the capabilities must not utilize the same medium. The new definitions, therefore, improve upon the language used in the current COM-001-1.1 Reliability Standard, which states “[e]ach Reliability Coordinator, Transmission Operator and Balancing

Authority shall provide *adequate and reliable* telecommunications facilities for the exchange of Interconnection and operating information.” COM-001-1.1, Requirement R1, Part R1.4 states that “[w]here applicable, these facilities shall be redundant and diversely routed.” Use of the defined terms eliminates the need to use the ambiguous phrases “adequate and reliable” and “redundant and diversely routed, which were identified in the Preliminary Assessment as potentially creating ambiguity in the Reliability Standard.

Requirements R1-R6 address the Interpersonal Communication capability and Alternative Interpersonal Communication capability of the Reliability Coordinator, Transmission Operator, and Balancing Authority. Each functional entity has a requirement to have an Interpersonal Communication capability and to designate an Alternative Interpersonal Communication capability with certain other functional entities as follows:

Requirements R1 and R2 require the Reliability Coordinator to have Interpersonal Communication capability (R1) and designate Alternative Interpersonal Communication capability (R2) with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and each adjacent Reliability Coordinator within the same Interconnection.

Requirement R3 requires each Transmission Operator to have Interpersonal Communication capability with: (i) its Reliability Coordinator; (ii) each Balancing Authority within its Transmission Operator Area; (iii) each Distribution Provider within its Transmission Operator Area; (iv) each Generator Operator within its Transmission Operator Area; (v) each adjacent Transmission Operator synchronously connected; and (vi) each adjacent Transmission Operator asynchronously connected.

Requirement R4 requires each Transmission Operator to designate Alternative Interpersonal Communication capability with: (i) its Reliability Coordinator; (ii) each Balancing

Authority within its Transmission Operator Area; (iii) each adjacent Transmission Operator synchronously connected; and (iv) each adjacent Transmission Operator asynchronously connected.

Requirement R5 requires each Balancing Authority to have Interpersonal Communication capability with: (i) its Reliability Coordinator; (ii) each Transmission Operator that operates Facilities within its Balancing Authority Area; (iv) each Distribution Provider within its Balancing Authority Area; (v) each Generator Operator that operates Facilities within its Balancing Authority Area; and (vi) each Adjacent Balancing Authority.

Requirement R6 requires each Balancing Authority to designate Alternative Interpersonal Communication capability with: (i) its Reliability Coordinator; (ii) each Transmission Operator that operates Facilities within its Balancing Authority Area; and (iii) each Adjacent Balancing Authority.

Requirements R7 and R8 require each Distribution Provider and Generator Operator, respectively, to have Interpersonal Communication capability with: (i) its Balancing Authority; and (ii) its Transmission Operator.

Requirement R9 requires the Reliability Coordinator, Transmission Operator, and Balancing Authority to test its Alternative Interpersonal Communication capability, initiate repair, or designate a replacement alternative communication capability within two hours following the test.

Requirement R10 requires the same entities to notify the entities identified in Requirements R1, R3, and R5 of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer. The notification must occur within 60 minutes of the detection of the failure. The standard drafting team determined that 60 minutes was a reasonable

timeframe for completing the notification. Some commenters in the standards development process expressed concern in meeting the 60-minute notification timeframe upon the loss of their Interpersonal Communication capability. However, the standard drafting team responded that the notification requirement applies to the Balancing Authority, Reliability Coordinator and Transmission Operator, which are required to have an Alternative Interpersonal Communication capability, and should have the ability to accomplish the required notification.

Finally, Requirement R11 requires the Distribution Provider and Generator Operator to consult with its Balancing Authority and Transmission Operator, upon detecting a failure of its Interpersonal Communication capability, to determine a mutually agreeable action for the restoration of its Interpersonal Communication capability. This requirement provides a means for the Distribution Provider and Generator Operator to have an understanding with the Balancing Authority and Transmission Operator of how the restoration of the Interpersonal Communication capability will occur, providing the necessary awareness to all of the status of the Interpersonal Communication capability.

### 3. Improvements Reflected in Proposed COM-001-2

Proposed COM-001-2 improves the currently-effective Reliability Standard by: (1) eliminating terms that do not adequately specify the desired actions that Reliability Coordinators, Balancing Authorities, and Transmission Operators are expected to take in relation to their telecommunication facilities; (2) clearly identifying the need for applicable entities to be capable of Interpersonal Communication and Alternative Interpersonal Communication, as those terms are defined and proposed for approval; (3) not requiring specific technology or systems to be utilized; and (4) including the Distribution Provider and Generator Operator as covered functional entities.

First, proposed COM-001-2 eliminates ambiguous terms used in COM-001-1 that do not adequately specify the desired actions that Reliability Coordinators, Balancing Authorities, and Transmission Operators are expected to take with respect to each's telecommunication facilities. For example, Requirement R1 of COM-001-1 includes the phrase "shall provide adequate and reliable telecommunications facilities." Entities explained during the Standards Development Process that "adequate and reliable" could lend itself to multiple interpretations. The Commission also raised concern over this phrase in the Preliminary Assessment prior to the issuance of Order No. 693. Rather than using the term "adequate," the proposed standard now specifies the communications capability requirements between entities by function and condition in Requirements R1 through R8. The term "reliable" is replaced by a specific requirement for testing (Requirement R9), along with two new requirements for notification of a failure of an applicable entity's communication capability (Requirements R10 and R11). Further, use of two new proposed defined terms – "Interpersonal Communication" and "Alternative Interpersonal Communication" – resolves the ambiguity caused by the phrases "adequate and reliable" and "redundant and diversely routed" communications in COM-001-1. COM-001-2 instead requires the applicable entities to have a clearly defined Interpersonal Communication capability and an Alternative Interpersonal Communication capability, in addition to specifying, under what conditions, those entities that must have the capability.

Second, proposed COM-001-2 clearly identifies the need to be capable of both Interpersonal Communication and Alternative Interpersonal Communication. By clearly identifying the capability needs, the proposed Reliability Standard eliminates the inferred need for redundant, emergency telecommunication facilities. In contrast, Requirement R2 of COM-001-1, states "[s]pecial attention shall be given to emergency telecommunications facilities and

equipment not used for routine communications.” While this language contains an inference that some equipment is maintained for uses other than routine communications, the requirement is not clear about what capabilities must be maintained. The new term “Alternative Interpersonal Communication” clarifies this language to explicitly require Interpersonal Communication capabilities that does not utilize the same infrastructure as the communications infrastructure for day-to-day operations.

Third, the use of word “capability” in the proposed Reliability Standard ensures the standard is technologically agnostic, allowing for future changes in technology and advances in communication to be employed without requiring a change to the Reliability Standard.

Lastly, the proposed Reliability Standard expands the applicability of the Reliability Standard to cover Distribution Providers and Generator Operators. These functional entities are now required to have an Interpersonal Communication capability with the listed entities in Requirements R7 and R8, respectively. This is directly responsive to directives in Order No. 693, as discussed below.

#### 4. Proposed COM-001-2 Satisfies the Commission’s Directives

In Order No. 693, the Commission issued three directives to NERC to modify certain aspects of the currently effective COM-001-1 Reliability Standard. Each is explained in turn, along with how the proposed Reliability Standard satisfies the directive.

The Commission reaffirmed its position taken in the *Notice of Proposed Rulemaking* that “Generator Operators” and “Distribution Providers” should be included as applicable entities in COM-001-1 to ensure there is no reliability gap during normal and emergency operations.<sup>39</sup> The Commission argued that during a blackstart when normal communications may be disrupted, it is

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<sup>39</sup> *Id.* at PP 487-93.

essential that the Transmission Operator, Balancing Authority and Reliability Coordinator maintain communications with their Distribution Providers and Generator Operators. In developing requirements for these newly applicable entities, the Commission noted that the revised Reliability Standard could establish an appropriate range of requirements for telecommunication facilities that reflect their respective roles on Reliable Operation of the Bulk-Power System.

The Commission also issued additional directives to revise COM-001-1<sup>40</sup> to: (i) identify specific requirements for telecommunications facilities for use in normal and emergency conditions that reflect the roles of the applicable entities and their impact on Reliable Operation; and (ii) include adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions.<sup>41</sup>

Proposed COM-001-2 meets all three of the Commission's directives issued in Order No. 693. First, NERC has included "Generator Operators" and "Distribution Providers" as covered applicable entities pursuant to the Commission's directive.

Second, proposed COM-001-2 meets the Commission's directive to "identify specific requirements for telecommunications facilities for use in normal and emergency conditions that reflect the roles of the applicable entities and their impact on Reliable Operation." The proposed Reliability Standard sets requirements to have "Interpersonal Communication" capability and "Alternative Interpersonal Communication" capability, where noted in the requirements, without limitation on the operating condition for each of the applicable entities (*see* Requirements R1-R8). By setting parameters for the types of communications capabilities and setting requirements for maintaining capabilities between certain functional entities, the proposed

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<sup>40</sup> *Id.* at PP 502-04.

<sup>41</sup> *Id.* at P 508 (summarizing Commission directives on COM-001-1).



Reliability Standard sets a clear baseline for communications capability during all operating conditions. In addition, the proposed Reliability Standard includes requirements for notifying other functional entities of the loss or failure of certain communications capabilities, further ensuring that entities are aware of the communications capabilities of other functional entities.

Lastly, the proposed Reliability Standard uses terminology that has sufficient flexibility for entities to adopt new technologies and cost-effective solutions. The requirements purposely use the word “capability” in a general sense in order to remain agnostic on the specific technology an entity must use, allowing opportunity for the adoption of new technology and cost-effective solutions that may become available for use in the future.

5. Revisions to Reliability Standard COM-001-1.1

Exhibit C to this petition contains an “Implementation Plan and Mapping Document” for proposed COM-001-2 that describes the associated retirement of currently effective COM-001-1.1 and provides a detailed mapping of how the requirements in COM-001-1.1 translate into proposed COM-001-2. In summary, proposed COM-001-2 will retire all Requirements of COM-001-1.1 upon proposed COM-001-2 becoming effective with the exception of Requirement R4. Requirement R4 of COM-001-1.1 will be retired by proposed Reliability Standard COM-002-4 because this Requirement was referred to Project 2007-02 for inclusion in COM-003-1, which addressed communications protocols. Of particular note in the Implementation Plan, the standard drafting team concluded that Requirement R5 in COM-001-1.1 is redundant with EOP-008-1, Requirement R1 and, therefore, has not been carried forward in proposed COM-001-2. As a result, NERC proposes EOP-008-1, Requirement R1 for retirement.

Additionally, Requirement R6 of COM-001-1.1 is also being proposed for retirement, which requires adherence to certain policies and requirements when using NERCnet.<sup>42</sup> Specification of the types of tools to be employed and requirements for interfacing with these tools are best handled by NERC internal policies. This approach preserves NERC's ability to be responsive to new technologies and improvements in security of the tool without having to modify a Reliability Standard to do so. The development of tools should support registered entities in meeting the intent of a Reliability Standard without creating a burden on acquisition of specific technology or tools. NERC is currently transitioning NERCnet to industry. Industry will take on the network infrastructure upgrade and future maintenance and enhancements. This transition will be complete prior to the effective date of COM-001-2. Policies and requirements for use of the new tool will be addressed internally by NERC as part of the new program.

**B. Proposed Reliability Standard COM-002-4**

1. Purpose of Proposed Reliability Standard

Proposed Reliability Standard COM-002-4 revises the currently effective COM-002-2 Reliability Standard and the Board-adopted COM-002-3 Reliability Standard.<sup>43</sup> The purpose of proposed Reliability Standard COM-002-4 is to improve communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System. The proposed Reliability Standard combines proposed Reliability Standard

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<sup>42</sup> See *infra* FN 21.

<sup>43</sup> The Board-adopted COM-002-3 Reliability Standard is proposed for retirement in the Implementation Plan because the proposed Reliability Standard has been combined with proposed COM-003-1 to create proposed COM-002-4. COM-002-3 has not been submitted to the Commission for approval, therefore, the currently effective version of COM-002 in the United States is COM-002-2.

COM-002-3 and the former draft COM-003-1 into a single standard that addresses communications protocols for operating personnel in Emergency and non-emergency conditions.

## 2. Standard Development History

The standard drafting team conducted eight comment and ballot periods in arriving at the final industry-approved language in the proposed COM-002-4 Reliability Standard. Over that time, the standard drafting team responded to comments and revised the draft Reliability Standard based on the consensus view of the standard drafting team following each consideration of comments. In addition to the required steps outlined in the Standards Development Process, the standard drafting team conducted stakeholder outreach in order to arrive at a draft Reliability Standard that meets the stated purpose of the Reliability Standard, addresses the Commission's directives, and represents consensus in industry, including:

- a full-day “Communications in Operations” technical conference held February 14-15, 2013 to gather industry input on a consensus communications standard approach;
- a survey distributed to a sample of industry experts by the Director of Standards Development and the Standards Committee Chair requesting feedback on the draft standard in preparation for the eighth additional ballot; and
- consultation on the use of the term “Reliability Directive” in the COM-002-4 standard with the Project 2007-03 Real-time Transmission Operations standard drafting team and the Project 2006-06 Reliability Coordination standard drafting team.

In addition to the outreach above, the standard drafting team received input from the NERC Board of Trustees on two occasions. On August 15, the Board adopted a resolution,<sup>44</sup> which requested input from NERC's Reliability Issues Steering Committee (“RISC”), the Independent Experts Review Panel, and NERC management to inform the Board and provide

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<sup>44</sup> See *Draft Minutes of the Board of Trustees*, August 15, 2013 at 3-4, available at <http://www.nerc.com/gov/bot/Agenda%20highlights%20and%20Minutes%202013/BOT0813m-draft-complete.pdf>.

input into the standard development process. These inputs were provided to the standard drafting team for its consideration and to the Operating Committee, with a request that the Operating Committee provide its input to as well. Responses from RISC, the Independent Experts Review Panel, NERC management, and the Operating Committee are included in Exhibit O.

At its November 7, 2013 meeting, the Board of Trustees adopted a resolution for the further development of the COM-003-1 Reliability Standard.<sup>45</sup> The resolution provided additional recommendations to the standard drafting team on the development of a subsequent revised draft.

### 3. Requirements, Technical Basis, and Defined Terms

Following posting six of the proposed COM-002-4 Reliability Standard, NERC staff prepared a “strawman” draft that combined the COM-002-3 and draft COM-003-1 Reliability Standards. The “strawman” provided a starting point for the standard drafting team to edit and adjust as it deemed appropriate based on its own expertise and from the feedback industry provided during the Standards Development Process.

In proposed COM-002-4, the same protocols are required to be used in connection with the issuance of Operating Instructions for *all* operating conditions – *i.e.*, non-emergency and Emergency communications. However, the proposed Reliability Standard employs the phrase “Operating Instruction during an Emergency” in certain Requirements (R5, R6, R7) to provide a demarcation for what is subject to a zero-tolerance compliance approach and what is not. This separation in the requirement structure is necessary to draft Violation Severity Levels to match

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<sup>45</sup> See Resolution for Agenda Item 8.i: Operating Personnel Communication Protocols, Nov. 7, 2013, available at <http://www.nerc.com/gov/bot/Agenda%20highlights%20and%20Mintues%202013/Board%20COM%20Resolution%2011.7.13%20v1%20AS%20APPROVED%20BY%20BOARD.pdf>.

each compliance approach described in the Board’s resolution. Where “Operating Instruction during an Emergency” is not used, an entity will be assessed under a compliance approach that focuses on whether an entity meets the initial training Requirement (either R2 or R3) and whether an entity performed the assessment and took corrective actions according to Requirement R4.

An entity should expect its operating personnel that issue and receive Operating Instructions to use the entity’s documented communication protocols for the issuance and receipt of all Operating Instructions. An entity reinforces its use of the documented communication protocols through training, assessing adherence by its operating personnel to the documented communication protocols, and providing feedback to those operating personnel on their use of the protocols. During Emergencies, operating personnel must use the documented communication protocols for three-part communications without exception, since clear communication is essential to providing swift and coordinated response to events that are directly impacting the reliability of the Bulk Electric System.

**a) Definition of “Operating Instruction”**

The current draft of COM-002-4 no longer includes the term “Reliability Directive,” which was included in previous postings as a subset within the definition of “Operating Instruction.”<sup>46</sup> The proposed definition of “Operating Instruction” reads as follows:

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<sup>46</sup> On November 21, 2013, the Commission issued a Notice of Proposed Rulemaking, which proposes to remand certain proposed TOP and IRO standards. *Monitoring System Conditions- Transmission Operations Reliability Standard Transmission Operations Reliability Standards Interconnection Reliability Operations and Coordination Reliability Standards*, NOPR, 145 FERC ¶ 61,158 (2013). The TOP/IRO NOPR is available at: [http://www.nerc.com/FilingsOrders/us/FERCOrdersRules/NOPR\\_TOP\\_IRO\\_RM13-12\\_RM13-14\\_RM13-15\\_20131121.pdf](http://www.nerc.com/FilingsOrders/us/FERCOrdersRules/NOPR_TOP_IRO_RM13-12_RM13-14_RM13-15_20131121.pdf). The proposed remand includes the defined term “Reliability Directive.” FERC’s proposal to remand the term “Reliability Directive” raised possible complications with the draft COM-002-4 Reliability Standard, which used the proposed definition. The standard drafting team consulted on the use of the term “Reliability Directive” in the COM-002-4 Reliability Standard with the Project 2007-03 Real-time Transmission Operations and the Project 2006-06 Reliability Coordination Standard Drafting Teams to ask whether they believed

A command by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. (A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.)

A “command” as used in the definition refers to both oral and written commands by operating personnel. The standard drafting team purposely did not modify the word “command” with either “oral” or “written” in order to maintain its broader meaning. Instead, in the requirements of COM-002-4, the standard drafting team has specified “oral” or “written” as needed to define which types of Operating Instructions are covered by the requirement. The definition also includes a clarifying note in parentheses that general discussions are not considered Operating Instructions. This clarification was requested by and supported by industry for inclusion in the definition itself.

#### **b) Applicability**

In addition to Balancing Authorities, Reliability Coordinators, and Transmission Operators, proposed COM-002-4 applies to Distribution Providers and Generator Operators. The standard drafting team added these entities in the Applicability section because they can be and in many cases are the recipients of Operating Instructions. The standard drafting team determined that not including these entities would leave a gap in a communications standard that addresses operating personnel. The addition of Distribution Providers as an applicable entity also

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removal of the term would cause concerns. Both teams agreed that the COM-002-4 standard did not need to require a specific protocol to identify “Reliability Directives” as such and that the definition of “Operating Instruction” could be used absent the term Reliability Directive in COM-002-4 to set the protocols. This would leave the TOP and IRO standard drafting teams the flexibility to address the issues surrounding the term “Reliability Directive” in response to the FERC TOP/IRO NOPR.

responds to FERC's directive in Order No. 693 to add them as applicable entities to the communications standard.

Recognizing that Generator Operators and Distribution Providers typically only receive Operating Instructions, the standard drafting team proposed that only Requirements R3 and R6 apply to these entities. Under proposed COM-002-4, Distribution Providers and Generator Operators are required to: (i) train operators prior to receiving an Operating Instruction; and (ii) use three part communication when receiving an Operating Instruction during an Emergency. The Measures for the requirements related to these applicable entities show that Distribution Providers and Generator Operators can demonstrate compliance for use of three-part communication when receiving an Operating Instruction during an Emergency by providing an attestation from the issuer of the Operating Instruction (i.e., a voice recording is not required). If a Distribution Provider or Generator Operator never receives an Operating Instruction, the requirements in proposed COM-002-4 would not apply. In both Requirements R3 and R6, qualifying language triggering performance based on the "receipt" of an Operating Instruction is included. This construct makes certain that appropriate entities are trained and able to use three-part communication for reliability purposes.

**c) Requirements in Proposed COM-002-4**

Proposed COM-002-4 has seven requirements that require certain entities to develop predefined communications protocols for the issuance of Operating Instructions. Each requirement and its Parts are discussed in detail below along with the technical basis for the inclusion of the requirement in the proposed Reliability Standard.

**Requirement R1**

Requirement R1 requires entities that can *both issue and receive* Operating Instructions to have documented communications protocols that include a minimum set of elements, outlined in Parts 1.1 through 1.6 of the Requirement. Because Operating Instructions affect Facilities and Elements of the Bulk Electric System, the communication of those Operating Instructions must be understood by all involved parties, especially when those communications occur between functional entities. An EPRI study reviewed nearly 400 switching mishaps by electric utilities and found that roughly 19% of errors (generally classified as loss of load, breach of safety, or equipment damage) were due to communication failures.<sup>47</sup> This was nearly identical to another study of dispatchers from 18 utilities that found that 18% of the operators' errors were due to communication problems.<sup>48</sup> The necessary protocols include the use of the English language unless agreed to otherwise (except for internal operations), protocols for use of a written or oral single-party to multiple-party burst Operating Instruction, three-part communications (including a protocol for taking an alternate action if a response is not received or if the Operating Instruction was not understood by the receiver), specification of instances that require time identification, and specification of nomenclature for Transmission interface Elements.

Requirement R1 provides consistency among communications protocols and promotes effective communications, while also allowing flexibility for entities to develop additional communications protocols based on its own operating environment. The inclusion of the elements in Parts 1.1 through 1.6 are necessary to improve communications protocols and drive uniformity.

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<sup>47</sup> Beare, A., Taylor, J. *Field Operation Power Switching Safety*, WO2944-10, Electric Power Research Institute.

<sup>48</sup> Bilke, T., *Cause and prevention of human error in electric utility operations*, Colorado State University, 1998.



The term “documented communication protocols” in R1 refers to a set of required protocols specific to the applicable entity and the entities with whom they must communicate. An entity should include as much detail as it believes necessary in its documented communication protocols,<sup>49</sup> but the documented communication protocols must address all of the applicable Parts of Requirement R1. Where an entity does not already have a set of documented communications protocols that meet the Parts of Requirement R1, the entity must develop the necessary communications protocols. Entities may also adopt the documented protocols of another entity as its own communications protocols, but the entity must maintain its own set of documented communications protocols to meet Requirement R1. Each part of Requirement R1 is discussed below:

*1.1. Require its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.*

Use of English language has been carried forward from COM-001-1.1, Requirement R4 as an essential protocol. As noted above, retirement of this requirement in COM-001-1.1 was specifically referred to Project 2007-02. Part 1.1 continues to permit the issuer and receiver to use an agreed to alternate language. This has been retained since use of an alternate language, on a case-by-case basis, may serve to better facilitate effective communications where the use of English language may create additional opportunities for miscommunications. Part 1.1 requires the use of English language (unless agreed to otherwise) when issuing oral or written<sup>50</sup> Operating

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<sup>49</sup> On September 19, 2012, the NERC Operating Committee issued a Reliability Guideline entitled: “System Operator Verbal Communications – Current Industry Practices.” As stated on page one, the purpose of the Reliability Guideline “. . . is to document and share current verbal Bulk Electric System communications practices and procedures from across the industry that have been found to enhance the effectiveness of system operator communications programs.” This guideline serves as an additional source of information on best practices that entities can draw on in creating the documented communications protocols. The guideline is available at: [http://www.nerc.com/comm/OC/Reliability%20Guideline%20DL/Reliability\\_Guideline\\_Final\\_2012.pdf](http://www.nerc.com/comm/OC/Reliability%20Guideline%20DL/Reliability_Guideline_Final_2012.pdf).

<sup>50</sup> An example of a written Operating Instruction is a switching order.

Instructions. This creates a standard language (either English or an agreed upon alternate language) for use when issuing commands that could change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Part 1.1 also clarifies that an alternate language can be used internally within the organization. The wording of the Part has been modified slightly from the language in COM-001-1.1, Requirement R4 to incorporate the term “Operating Instruction,” which defines the communications that require the use of the documented communications protocols.

*1.2. Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions:*

- *Confirm the receiver’s response if the repeated information is correct.*
- *Reissue the Operating Instruction if the repeated information is incorrect, if the receiver does not issue a response, or if requested by the receiver.*
- *Take an alternative if a response is not received or if the Operating Instruction was not understood by the receiver.*

*1.3. Require the receiver of an oral two-party, person-to-person Operating Instruction to take one of the following actions:*

- *Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct.*
- *Request that the issuer reissue the Operating Instruction.*

Part 1.2 requires communications protocols for the use of three-part communications for oral two-party, person-to-person Operating Instructions *by the issuer*. Part 1.3 requires communications protocols for the use of three-part communications for oral two-party, person-to-person Operating Instructions *by the receiver*. This carries forward the requirement to use three-part communications in COM-002-2 and COM-002-3 and also adds an option in Part 1.2 for the issuer to take an alternative action to resolve the issue if the receiver does not respond or understand the Operating Instruction. The addition of this third bullet, which is not included in

COM-002-2, serves to clarify in the requirement language itself that the issuing entity can take alternate action in lieu of reissuance, if necessary.

Three-part communication reduces the opportunity for confusion and misunderstanding when issuing and receiving Operating Instructions during all operating conditions. Because three-part communication is included as a protocol for both non-emergency conditions and Emergency conditions, there will be no mental “transition” between protocols when operating conditions shift from non-emergency to Emergency. The documented communication protocols for the operating personnel will remain the same during transitions through all operating conditions. Further, the formal requirement for three-part communication in an entity’s documented communications protocols will create a heightened sense of awareness in operating personnel that the task they are about to execute is critical, and recognize the risk to the reliable operation of the Bulk Electric System is increased if the communication is misunderstood.

*1.4. Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.*

This Part requires specific communications protocols for the issuance of an Operating Instruction using a one-way burst messaging system. One-way burst messaging systems are used to issue Operating Instructions to many entities at once. Because the use of three-part communications is not practical when utilizing this type of communication, a separate protocol was added to the proposed Reliability Standard. During the Standards Development Process, many entities expressed concern that if one-way burst messaging systems were not addressed, it would imply that three part communication would be required for all participants in the burst message.

*1.5. Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.*

This Part requires entities to identify the instances where time identification is required when issuing an oral or written Operating Instruction. Clarifying time and time zone (where necessary) contributes to reducing misunderstandings and reduces the risk of a grave error during BES operations, especially when communicating across time zones or specifying an action that will take place at a future time. The Part forces entities to name the instances in the documented communications protocols themselves if time identification is used. The standard drafting team chose this method of identification in lieu of requiring time identification to maintain flexibility for the entity in designing its communications protocols, but also providing clarity in the documented communications protocols where it is used.

*1.6. Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.*

Similarly to Part 1.5, Part 1.6 does not prescriptively require the use of nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction. The standard drafting team opted to require entities to identify the nomenclature, if it is used. This Part limits the scope to only Transmission interface Elements or Transmission interface Facilities (*e.g.*, tie lines and tie substations). This ensures that communicating parties are readily familiar with each other's interface Elements and Facilities, eliminating hesitation and confusion when referring to equipment for the Operating Instruction. This shortens response time and improves situational awareness. It also permits entities to jointly develop the nomenclature for their interface.

### **Requirements R2 and R3**

Requirement R2 requires each Balancing Authority, Reliability Coordinator, and Transmission Operator to conduct initial training for each of their operating personnel

responsible for the Real-time operation of the Bulk Electric System on the entity's documented communication protocols.

Requirement R3 requires Distribution Providers and Generator Operators to conduct initial training on three part communication for each of their operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction. Distribution Providers and Generator Operators would have to train their operating personnel prior to placing them in a position to receive an oral two-party, person-to-person Operating Instruction. Operating Personnel that would never be in a position to receive an oral two-party, person-to-person Operating Instruction, therefore, would not need initial training unless their circumstance changes.

Initial training is included in proposed COM-002-4 in response to the NERC Board of Trustees resolution, which directs that a training requirement be included. Additionally, requiring entities that issue and or receive Operating Instructions to conduct initial training with their operating personnel will ensure that all applicable operators will be trained in three-part communication. This training will reduce the possibility of a miscommunication, which could eventually lead to action or inaction harmful to the reliability of the Bulk Electric System. Ongoing training beyond initial training would fall under an entities' training program in PER-005 or could be separately listed as a type of corrective action under Requirement R4. Training is also mentioned by Commission staff in its Preliminary Assessment as an important aspect to effective communications.<sup>51</sup>

#### **Requirement R4**

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<sup>51</sup> Preliminary Assessment at 43 (citing Blackout Report at 161 which provides that lack of situational awareness can result from, among other things, inadequate operator training).

Requirement R4 requires Balancing Authorities, Reliability Coordinators, and Transmission Operators to, at least once every 12 months, assess adherence by its operating personnel to the documented communication protocols in Requirement R1 and to provide feedback to its operating personnel on their performance. This also includes any corrective action taken, as appropriate, to address deviations from the documented protocols. Requirement R4 also requires the aforementioned entities to assess the effectiveness of their documented communications protocols and make changes, as necessary, to improve the effectiveness of the protocols. An entity may determine that corrective action beyond identification of the misuse of the documented communications protocols to the operating personnel is not necessary, therefore, the phrase “as appropriate” is included in the Requirement R4 language to indicate that whether to take additional corrective action is determined by the entity and not dictated by the Requirement for all instances of a misuse of a documented communication protocol. In almost all cases found by an entity, NERC expects that an entity will have some form of corrective action such as ongoing scheduled training.

Most entities currently engage in some type of assessment activity for their operating personnel and provide operators with performance feedback on their adherence to the entity’s documented protocols. Doing so, provides entities an opportunity to evaluate the performance of their operating personnel and take corrective actions where necessary, which could prevent a miscommunication from occurring and thus possibly prevent an event which could be harmful to the reliability of the Bulk Electric System.

The associated Measure M4 for Requirement R4 lists the types of evidence that an entity can provide to demonstrate compliance and explains when an entity should show the corrective actions taken. Of particular interest is any corrective action taken where the miscommunication

is the sole or partial cause of an Emergency and the entity has opted to take a corrective action. While the Measure lists out this particular set of circumstances to highlight the importance, the Measure does not modify the Requirement to *require* corrective action.

Requirement R4 is the primary mechanism for implementation of the documented communication protocols in proposed COM-002-4 for non-emergency conditions. In order to meet its obligations under Requirement R4, an entity must be actively employing its documented communications protocols. However, the requirement also extends to assessing the use of communications protocols during Emergency communications. Specifically, this requirement compels entities to assess the adherence of its operating personnel to the pre-defined communication protocols, provide feedback to its operating personnel based on their performance, and implement corrective action to address deviations from those protocols or general ineffectiveness where necessary. Requirement R4 also aims to ensure that the documented protocol remains current and effective to address potential reliability issues that could be caused by non-inclusion of a communication protocol not otherwise required by Requirement R1.

The creation of an assessment obligation and a protocol effectiveness review process that arises at least once every twelve (12) months provides a short evaluation and correction cycle for entities. By providing feedback to operators on a regular basis, these entities can evaluate performance and take necessary corrective action in a timely manner. Specification that the review must occur “at least once every twelve (12) months” also does not preclude entities from employing processes that provide feedback in an even shorter timeframe or multiple times per year as part of their process design.

The language of the requirement clearly and explicitly delineates the obligations and expectations entities must meet. Requirement R4 requires that each entity maintain a successful program and measure its own compliance with its documented communications protocols. Requirement R4 intentionally does not specify a specific type of review to execute or mandate that corrective actions be taken. Entities are better equipped to design an appropriate program to meet their own operating environment and determine whether a corrective action is necessary. Because almost all entities have these types of programs in place today, this approach also provides an efficient means of establishing an assessment program by building on the programs currently in use. The primary purpose of Requirement R4 is to provide assurance that an entity is using its documented communications protocols, engaging its operators, and periodically reviewing its communications for improvement. The program required in Requirement R4 requires applicable entities to conduct retrospective review of their communications practices based on predefined documented communications protocols through an assessment design of their choosing and requires corrective actions be taken if the entity deems a corrective action necessary. As a result, Requirement R4 contains clear, unambiguous directions regarding the obligations placed on the entity.

The assessment process embodied in Requirement R4 has also been used in other Commission-approved NERC Reliability Standards. For example, Commission-approved Reliability Standard FAC-003-3 requires applicable entities to have in place “documented maintenance strategies or procedures or processes or specifications it uses to prevent the encroachment of vegetation into the MVCD of its applicable lines.” Entities are required to identify “the existence of a vegetation condition that is likely to cause a Fault at any moment,” and to remedy the problematic conditions. Requirement R5 states “... the applicable



Transmission Owner or applicable Generator Owner *shall take corrective action* to ensure continued vegetation management to prevent encroachments.” This risk-based requirement obligates applicable entities to create a current “documented maintenance strategy” to prevent vegetation encroachment, identify certain constraints, assess the possibility of a potential encroachment based on the documented strategy, and take necessary corrective action to ensure continued vegetation management.

In addition, Commission-approved Reliability Standard PRC-005-2 requires that applicable entities “establish a Protection System Maintenance Program (“PSMP”) for its Protection Systems,” and then implement and follow these PSMPs to achieve ideal intended performance. Applicable entities should subsequently “demonstrate efforts to correct identified Unresolved Maintenance Issues”. These standards also require applicable entities to develop a tailored baseline target for performance and retroactively measure compliance based on adherence to this predefined standard.

Additionally, Commission-approved Reliability Standard PRC-006-1 requires applicable entities to document certain criteria regarding the creation of islands and develop an underfrequency load-shedding (“UFLS”) program to arrest declining frequency, assist recovery of frequency following underfrequency events, and provide last resort system preservation measures. The Reliability Standard requires entities to conduct various assessments to determine conformity with the UFLS program created pursuant to Requirement R3 of that Reliability Standard. While a corrective action element is not included in the Reliability Standard language itself, NERC did clarify during regulatory approval, to the satisfaction of the Commission, that the language of PRC-006-1 anticipated corrective action.

### **Requirements R5 and R6**

Requirement R5 requires entities that issue oral two-party, person-to-person Operating Instructions during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, to use three-part communication or take an alternate action if the receiver does not respond or if the receiver did not understand the Operating Instruction. The language of Requirement R5 specifically excludes written or oral single-party to multiple-party burst Operating Instructions to make clear that three-part communication is not required when issuing Operating Instructions in this manner. Requirement R5 applies to each Balancing Authority, Reliability Coordinator, and Transmission Operator since these are the entities that would be in a position to issue oral two-party, person-to-person Operating Instructions during an Emergency.

Requirement R6 requires entities that receive an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, to repeat (not necessarily verbatim) the Operating Instruction and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction. Requirement R6 includes the same clarifying language as Requirement R5 for the exclusion of single-party to multiple-party burst Operating Instructions. Requirement R6 applies to each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator since these are the entities that would be in a position to receive oral two-party, person-to-person Operating Instructions during an Emergency.

The use of three-part communication when issuing and receiving Operating Instructions is always important because a miscommunication could create an Emergency. However, the use of three-part communication is critically important if an Emergency condition already exists, as further action or inaction could increase the harmful effects to the Bulk Electric System. Clear

communication is essential to providing swift and coordinated response to events that are directly impacting the reliability of the Bulk Electric System.

### **Requirement R7**

Requirement R7 requires that when a Balancing Authority, Reliability Coordinator, or Transmission Operator issues a written or oral *single-party to multiple-party burst Operating Instruction* during an Emergency, it must confirm or verify that at least one receiver of the Operating Instruction received the Operating Instruction. Because written or oral single-party to multiple-party burst Operating Instruction during an Emergency are excluded from Requirements R5 and R6, this separate Requirement is necessary to specify the performance an entity must meet to demonstrate clear communication for the use of written or oral single-party to multiple-party burst Operating Instructions during an Emergency. This prevents a gap in the means used to issue an Operating Instruction during an Emergency. This requirement is necessary because without confirmation from at least one receiver, the issuer has no way of confirming if the Operating Instruction was transmitted and received by any of the recipients. Therefore, the issuer cannot know whether to resend the Operating Instruction, wait for the recipient to take an action, or take an alternate action because the recipient cannot perform the action. As a best practice, an entity can opt to confirm receipt from more than one recipient, which is why the requirement states “at least one.”

#### 4. Improvements Reflected in COM-002-4

Proposed COM-002-4 includes a number of improvements over the currently effective Reliability Standard COM-002-2. These include: (i) removing the ambiguity surrounding the meaning of “directive” in COM-002-2; (ii) specifying specific minimum protocols that must be included and used by all applicable entities; (iii) mandating initial training for operating

personnel; and (iv) adding a process for entities to assess adherence to the documented communication protocols and take corrective action.

First, proposed COM-002-4 replaces the term “directive” in COM-002-2 with a new defined term “Operating Instruction.” Use of the defined term clarifies the types of commands covered by the proposed Reliability Standard, which now includes all commands “by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.” It was not clear whether the term “directive” referred to either non-emergency and emergency directives, or just emergency directives. This ambiguity was the subject of the interpretation request to COM-002-2 adopted by the Board of Trustees in 2012.<sup>52</sup>

Second, proposed COM-002-4 adds additional mandatory communications protocols in Requirement R1 beyond the use of three-part communication covered by COM-002-2 and the use of English language found in COM-001-1.1, Requirement R4. The proposed Reliability Standard adds protocols for: the issuance of a written or oral single-party to multiple-party burst Operating Instruction; specification of the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification; and

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<sup>52</sup> On October 1, 2009, a clarification was requested by the ISO-RTO Council of Requirement R2 of COM-002-2, specifically asking whether “directives” are limited to actions requested during actual and anticipated emergency operating conditions, or whether routine operating instructions are also considered “directives.” The interpretation of Reliability Standard COM-002-2, approved by the NERC Board of Trustees on February 9, 2012, clarifies that COM-002-2 R2 does not specify the conditions under which a directive is issued, nor does it define directive. It only provides that the requirements be followed when a directive is issued to address a real-time emergency. Routine operating instructions during normal operations would not require the communications protocols for repeat backs as specified in R2. The NERC Board of Trustees rescinded approval of the interpretation in conjunction with its adoption and successful implementation of proposed COM-002-4 since the proposed Reliability Standard no longer uses the lower case term “directive.” See Agenda Item 8c of the May 7, 2014 Board of Trustees Meeting, *available at* [http://www.nerc.com/gov/bot/Agenda%20highlights%20and%20Mintues%202013/board\\_agenda\\_package\\_May\\_2014.pdf](http://www.nerc.com/gov/bot/Agenda%20highlights%20and%20Mintues%202013/board_agenda_package_May_2014.pdf).

specification of the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction. Proposed COM-002-4 also includes specific communications protocols for the entity receiving an Operating Instruction, which is not present in COM-002-2. COM-002-2, by contrast, places the responsibility for ensuring proper three-part communication on the issuing entity only.

Third, for the first time, the COM-002 Reliability Standard will include requirements to provide initial training to operating personnel who issue and receive Operating Instructions. While many entities reported during the Standards Development Process that they already conduct training of their operating personnel, the inclusion of these requirements codifies the expectation that all operating personnel be trained on the documented communications protocols prior to being placed in a position to issue or receive an Operating Instruction. As FERC staff noted in its Preliminary Assessment and as reflected in the Blackout Report, lack of situational awareness can result from, among other things, inadequate operator training.<sup>53</sup>

Finally, the proposed COM-002-4 Reliability Standard adds a requirement for entities to assess adherence to the documented communication protocols and take corrective action. This aspect of the proposed Reliability Standard codifies good operating practice to review operator communications and provide feedback to the operating personnel. The requirement will also require entities to assess the effectiveness of their documented communications protocols and determine if additional protocols should be specified based on the observed use of the protocols in its operating environment. Such a requirement is not present in the prior version of the COM-002 Reliability Standard.

##### 5. Proposed COM-002-4 Satisfies the Commission's Directives

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<sup>53</sup> See Preliminary Assessment at 43 (citing Blackout Report at 161).

In Order Nos. 693, the Commission issued directives to NERC to modify certain aspects of COM-002-2. Exhibit J of this Petition provides a list of the directives and an explanation of the standard drafting team's consideration of each directive. In short, the Commission directed NERC to include Distribution Providers as an applicable entity in the Reliability Standard. The Commission stated, "during both normal and emergency operations, it is essential that the transmission operator, balancing authority and reliability coordinator have communications with distribution providers."

Second, the Commission directed NERC to include a requirement for the Reliability Coordinator to assess and approve actions that have impacts beyond the area views of transmission operators or balancing authorities, including how to determine whether an action needs to be assessed by the reliability coordinator. This directive was addressed outside of the revisions to COM-002-2. It was addressed by modifications to IRO-005 and has been reassigned to Project 2014-03.

Third, the Commission directed NERC to either modify the COM-002-2 Reliability Standard to require "tightened communications protocols, especially for communications during alerts and emergencies" or develop a new Reliability Standard to meet Blackout Report Recommendation No. 26. The following is a discussion of the outstanding directives addressed by proposed COM-002-4:

*Addition of Distribution Providers* (Order No. 693, P 512 and 540 (Part 1)): As noted above in the discussion of Requirements R3 and R6 and the Applicability section, Distribution Providers have been added to the coverage of proposed COM-002-4. Coverage within the requirements has been limited to their position as "receivers" of Operating Instructions.

*Tightened Communication Protocols* (Order No. 693, P 531, 534, 535, 540 (Part 3)):

Proposed COM-002-4 satisfies the Commission’s directive regarding establishing “tightened communication protocols” through the various improvements listed in the section above.

Proposed COM-002-4 improves communications protocols for the issuance of Operating Instructions in order to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System. The proposed Reliability Standard adds clarity to the scope of covered commands with the use of the new defined term “Operating Instruction. Proposed COM-002-4 also includes additional mandatory protocols that establish communication uniformity as much as practical on a continent-wide basis, while still maintaining flexibility for entities to employ additional protocols based on its own operating environment. The proposed Reliability Standard also “tightens communications protocols” by employing clear, zero-tolerance approaches for miscommunications of Operating Instructions issued during Emergencies and by mandating an assessment process aimed at reducing the number of repeat misuses of communication protocols by operating personnel.

### **C. Enforceability of Proposed Reliability Standards**

The proposed Reliability Standards, COM-001-2 and COM-002-4 include Measures that support each requirement to help ensure that the requirements will be enforced in a clear, consistent, non-preferential manner and without prejudice to any party. The proposed Reliability Standards also include VRFs and VSLs for each requirement. The VRFs and VSLs for the proposed Reliability Standards comport with NERC and Commission guidelines related to their assignment. A detailed analysis of the assignment of VRFs, the VSLs for proposed COM-001-2 and COM-002-4 are included as Exhibit K and Exhibit L.

## **VI. CONCLUSION**

For the reasons set forth above, NERC respectfully requests that the Commission:

- approve the proposed Reliability Standards and other associated elements included in Exhibits A and B;
- the new definitions, as noted herein;
- the VRFs and VSLs (Exhibits A, B, K, and L);
- approve the Implementation Plans included in Exhibits C and D; and
- approve the retirement of the currently effective Reliability Standards COM-001-1.1, EOP-008-1 (Requirement R1), and COM-002-2, as proposed in the Implementation Plans.

Respectfully submitted,

/s/ William H. Edwards

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Date: May 14, 2014



**CERTIFICATE OF SERVICE**

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary in the RM06-16-000 proceeding.

Dated at Washington, D.C. this 14th day of May, 2014.

*/s/ William H. Edwards*

William H. Edwards  
*Counsel for North American Electric  
Reliability Corporation*

**Exhibit A**

**Proposed Reliability Standard COM-001-2**

## A. Introduction

1. **Title:** **Communications**
2. **Number:** COM-001-2
3. **Purpose:** To establish Interpersonal Communication capabilities necessary to maintain reliability.
4. **Applicability:**
  - 4.1. Transmission Operator
  - 4.2. Balancing Authority
  - 4.3. Reliability Coordinator
  - 4.4. Distribution Provider
  - 4.5. Generator Operator
5. **Effective Date:** The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

## B. Requirements

- R1. Each Reliability Coordinator shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
  - 1.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.
  - 1.2. Each adjacent Reliability Coordinator within the same Interconnection.
- R2. Each Reliability Coordinator shall designate an Alternative Interpersonal Communication capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
  - 2.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.
  - 2.2. Each adjacent Reliability Coordinator within the same Interconnection.
- R3. Each Transmission Operator shall have Interpersonal Communication capability with the following entities (unless the Transmission Operator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
  - 3.1. Its Reliability Coordinator.
  - 3.2. Each Balancing Authority within its Transmission Operator Area.

- 3.3. Each Distribution Provider within its Transmission Operator Area.
  - 3.4. Each Generator Operator within its Transmission Operator Area.
  - 3.5. Each adjacent Transmission Operator synchronously connected.
  - 3.6. Each adjacent Transmission Operator asynchronously connected.
- R4.** Each Transmission Operator shall designate an Alternative Interpersonal Communication capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 4.1. Its Reliability Coordinator.
  - 4.2. Each Balancing Authority within its Transmission Operator Area.
  - 4.3. Each adjacent Transmission Operator synchronously connected.
  - 4.4. Each adjacent Transmission Operator asynchronously connected.
- R5.** Each Balancing Authority shall have Interpersonal Communication capability with the following entities (unless the Balancing Authority detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 5.1. Its Reliability Coordinator.
  - 5.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area.
  - 5.3. Each Distribution Provider within its Balancing Authority Area.
  - 5.4. Each Generator Operator that operates Facilities within its Balancing Authority Area.
  - 5.5. Each Adjacent Balancing Authority.
- R6.** Each Balancing Authority shall designate an Alternative Interpersonal Communication capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 1.1. Its Reliability Coordinator.
  - 1.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area.
  - 1.3. Each Adjacent Balancing Authority.
- R7.** Each Distribution Provider shall have Interpersonal Communication capability with the following entities (unless the Distribution Provider detects a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply): *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*
- 7.1. Its Balancing Authority.
  - 7.2. Its Transmission Operator.
- R8.** Each Generator Operator shall have Interpersonal Communication capability with the following entities (unless the Generator Operator detects a failure of its Interpersonal

Communication capability in which case Requirement R11 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*

**8.1.** Its Balancing Authority.

**8.2.** Its Transmission Operator.

**R9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communication capability at least once each calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communication capability within 2 hours. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations, Same-day Operations]*

**R10.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1, R3, and R5, respectively within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*

**R11.** Each Distribution Provider and Generator Operator that detects a failure of its Interpersonal Communication capability shall consult each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of its Interpersonal Communication capability. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*

### **C. Measures**

**M1.** Each Reliability Coordinator shall have and provide upon request evidence that it has Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R1.)

**M2.** Each Reliability Coordinator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R2.)

- M3.** Each Transmission Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority, Distribution Provider, and Generator Operator within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously or synchronously connected, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communication. (R3.)
- M4.** Each Transmission Operator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously and synchronously connected, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R4.)
- M5.** Each Balancing Authority shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator and Generator Operator that operates Facilities within its Balancing Authority Area, each Distribution Provider within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R5.)
- M6.** Each Balancing Authority shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator that operates Facilities within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R6.)
- M7.** Each Distribution Provider shall have and provide upon request evidence that it has Interpersonal Communication capability with its Transmission Operator and its Balancing Authority, which could include, but is not limited to:

- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R7.)
- M8.** Each Generator Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Balancing Authority and its Transmission Operator, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R8.)
- M9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it tested, at least once each calendar month, its Alternative Interpersonal Communication capability designated in Requirements R2, R4, or R6. If the test was unsuccessful, the entity shall have and provide upon request evidence that it initiated action to repair or designated a replacement Alternative Interpersonal Communication capability within 2 hours. Evidence could include, but is not limited to: dated and time-stamped test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R9.)
- M10.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it notified entities as identified in Requirements R1, R3, and R5, respectively within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasted 30 minutes or longer. Evidence could include, but is not limited to: dated and time-stamped test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R10.)
- M11.** Each Distribution Provider and Generator Operator that detected a failure of its Interpersonal Communication capability shall have and provide upon request evidence that it consulted with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine mutually agreeable action to restore the Interpersonal Communication capability. Evidence could include, but is not limited to: dated operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R11.)

## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance Enforcement Authority**

The Regional Entity shall serve as the Compliance Enforcement Authority (CEA) unless the applicable entity is owned, operated, or controlled by the Regional Entity. In such cases, the ERO or a Regional Entity approved by FERC or other applicable governmental authority shall serve as the CEA.

## 1.2. Compliance Monitoring and Enforcement Processes

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

## 1.3. Data Retention

The Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator for Requirements R1, R2, R9, and R10, Measures M1, M2, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.
- The Transmission Operator for Requirements R3, R4, R9, and R10, Measures M3, M4, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.
- The Balancing Authority for Requirements R5, R6, R9, and R10, Measures M5, M6, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.
- The Distribution Provider for Requirements R7 and R11, Measures M7 and M11 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.
- The Generator Operator for Requirements R8 and R11, Measures M8 and M11 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.

If a Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, or Generator Operator is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

## 1.4. Additional Compliance Information

None.



2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	The Reliability Coordinator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Reliability Coordinator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R2	N/A	N/A	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R2, Parts 2.1 or 2.2.	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R2, Parts 2.1 or 2.2.
R3	N/A	N/A	The Transmission Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Transmission Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Transmission Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Transmission Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R4	N/A	N/A	The Transmission Operator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.	The Transmission Operator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.

**Standard COM-001-2 — Communications**

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R5	N/A	N/A	The Balancing Authority failed to have Interpersonal Communication capability with one of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Balancing Authority detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Balancing Authority failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Balancing Authority detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R6	N/A	N/A	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.
R7	N/A	N/A	The Distribution Provider failed to have Interpersonal Communication capability with one of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Distribution Provider failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.

**Standard COM-001-2 — Communications**

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R8</b>	N/A	N/A	The Generator Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Generator Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.
<b>R9</b>	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 2 hours and less than or equal to 4 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 4 hours and less than or equal to 6 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 6 hours and less than or equal to 8 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to test the Alternative Interpersonal Communication capability once each calendar month.  OR The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 8 hours upon an unsuccessful test.
<b>R10</b>	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 60 minutes but less than or equal to 70 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 70 minutes but less than or equal to 80 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 80 minutes but less than or equal to 90 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 90 minutes.

**Standard COM-001-2 — Communications**

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R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R11	N/A	N/A	N/A	<p>The Distribution Provider or Generator Operator that detected a failure of its Interpersonal Communication capability failed to consult with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of the Interpersonal Communication capability.</p>

**E. Regional Differences**

None identified.

**F. Associated Documents**

**Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
1.1	October 29, 2008	BOT adopted errata changes; updated version number to “1.1”	Errata
2	November 7, 2012	Adopted by Board of Trustees	Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Replaced R1 with R1-R8; R2 replaced by R9; R3 included within new R1; R4 remains enforce pending Project 2007-02; R5 redundant with EOP-008-0, retiring R5 as redundant with EOP-008-0, R1; retiring R6, relates to ERO procedures; R10 & R11, new.

## A. Introduction

1. **Title:** ~~Telecommunications~~Communications
2. **Number:** COM-001-~~1~~2
3. **Purpose:** ~~Each Reliability Coordinator, Transmission Operator and Balancing Authority needs adequate and reliable telecommunications facilities internally and with others for the exchange of Interconnection and operating information~~To establish Interpersonal Communication capabilities necessary to maintain reliability.
4. **Applicability:**
  - 4.1. Transmission ~~Operators~~Operator
  - 4.2. Balancing ~~Authorities~~Authority
  - 4.3. Reliability ~~Coordinators~~Coordinator
  - 4.4. ~~NERCNet User Organizations.~~
5. ~~Effective Date:~~ May 13, 2009
  - 4.4. Distribution Provider
  - 4.5. Generator Operator
5. **Effective Date:** The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

## B. Requirements

- ~~R1.~~ Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information:
- ~~R1.1.~~ Internally.
- R1. Between shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator ~~and its~~ detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- ~~R1.2.~~ All Transmission Operators and Balancing Authorities.
- ~~R1.3.~~ With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability.
- ~~R1.4.~~ Where applicable, these facilities shall be redundant and diversely routed.
- 1.1. Each within its Reliability Coordinator, Transmission Operator, and Balancing Authority shall manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications Area.

~~R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas.~~

~~1.2. Unless agreed to otherwise, each Each adjacent Reliability Coordinator within the same Interconnection.~~

~~R2. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real shall designate an Alternative Interpersonal Communication capability with the following entities: [*Violation Risk Factor: High*] [*Time Horizon: Real-time generation control and operation of the interconnected Bulk Electric System: Operations*]~~

~~R3. 2.1. All Transmission Operators and Balancing Authorities may use an alternate language for internal operations.~~

~~Each within its Reliability Coordinator, Area.~~

~~2.2. Each adjacent Reliability Coordinator within the same Interconnection.~~

~~R3. Each Transmission Operator shall have Interpersonal Communication capability with the following entities (unless the Transmission Operator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]~~

~~3.1. Its Reliability Coordinator.~~

~~3.2. Each Balancing Authority within its Transmission Operator Area.~~

~~3.3. Each Distribution Provider within its Transmission Operator Area.~~

~~3.4. Each Generator Operator within its Transmission Operator Area.~~

~~3.5. Each adjacent Transmission Operator, and synchronously connected.~~

~~3.6. Each adjacent Transmission Operator asynchronously connected.~~

~~R4. Each Transmission Operator shall designate an Alternative Interpersonal Communication capability with the following entities: [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]~~

~~4.1. Its Reliability Coordinator.~~

~~4.2. Each Balancing Authority within its Transmission Operator Area.~~

~~4.3. Each adjacent Transmission Operator synchronously connected.~~

~~4.4. Each adjacent Transmission Operator asynchronously connected.~~

~~R5. Each Balancing Authority shall have Interpersonal Communication capability with the following entities (unless the Balancing Authority detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]~~

~~5.1. Its Reliability Coordinator.~~

- 5.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area.
- 5.1.5.3. ~~Each Distribution Provider within its Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities Area.~~
- 5.4. ~~Each NERCNet User Organization~~Generator Operator that operates Facilities within its Balancing Authority Area.
- 5.5. Each Adjacent Balancing Authority.
- R6. Each Balancing Authority shall ~~adhere to~~ designate an Alternative Interpersonal Communication capability with ~~the requirements~~ following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 1.1. Its Reliability Coordinator.
- 1.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area.
- 1.3. Each Adjacent Balancing Authority.
- R7. Each Distribution Provider shall have Interpersonal Communication capability with the following entities (unless the Distribution Provider detects a failure of its Interpersonal Communication capability in Attachment which case Requirement R11 shall apply): *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*
- 7.1-COM-001, “NERCNet Security Policy.”. Its Balancing Authority.
- 7.2. Its Transmission Operator.
- R8. Each Generator Operator shall have Interpersonal Communication capability with the following entities (unless the Generator Operator detects a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 8.1. Its Balancing Authority.
- 8.2. Its Transmission Operator.
- R9. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communication capability at least once each calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communication capability within 2 hours. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations, Same-day Operations]*
- R10. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1, R3, and R5, respectively within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*



R11. Each Distribution Provider and Generator Operator that detects a failure of its Interpersonal Communication capability shall consult each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of its Interpersonal Communication capability. [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]

### C. Measures

M1. Each Reliability Coordinator, ~~Transmission Operator and Balancing Authority~~ shall have and provide upon request evidence that it has Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to ~~communication facility test procedure documents, records of testing, and maintenance records for communication facilities;~~

- physical assets, or equivalent that will be used to confirm that it manages, alarms, tests and/or actively monitors vital telecommunications facilities. (Requirement 2 part 1)
- ~~The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and provide upon request~~ dated evidence that could include, but is not limited to, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings or, transcripts of voice recordings, or electronic communications, or equivalent, that will be used to determine compliance to Requirement 4. (R1.)

~~M1.~~M2. Each Reliability Coordinator, ~~Transmission Operator and Balancing Authority~~ shall ~~have and provide upon request its current operating instructions and procedures, either electronic or hard copy that will be used to confirm that it meets Requirement 5.~~ shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to:

- ~~The NERCnet User Organization shall have and provide upon request evidence that could include, but is not limited to documented procedures~~ physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings or, transcripts of voice recordings, or electronic communications. (R2.)

M3. Each Transmission Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority, Distribution Provider, and Generator Operator within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously or synchronously connected, which could include, but is not limited to:

- physical assets, or

- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, electronic communications, or electronic communication. (R3.)
- M4.** Each Transmission Operator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously and synchronously connected, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R4.)
- M5.** Each Balancing Authority shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator and Generator Operator that operates Facilities within its Balancing Authority Area, each Distribution Provider within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R5.)
- M6.** Each Balancing Authority shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator that operates Facilities within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R6.)
- M7.** Each Distribution Provider shall have and provide upon request evidence that will be used it has Interpersonal Communication capability with its Transmission Operator and its Balancing Authority, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R7.)

M8. Each Generator Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Balancing Authority and its Transmission Operator, which could include, but is not limited to determine if it adhered:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R8.)

M2-M9. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it tested, at least once each calendar month, its Alternative Interpersonal Communication capability designated in Requirements R2, R4, or R6. If the test was unsuccessful, the entity shall have and provide upon request evidence that it initiated action to the (User Accountability and Compliance) requirements in Attachment 1 COM-001. (Requirement 6) repair or designated a replacement Alternative Interpersonal Communication capability within 2 hours. Evidence could include, but is not limited to: dated and time-stamped test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R9.)

M10. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it notified entities as identified in Requirements R1, R3, and R5, respectively within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasted 30 minutes or longer. Evidence could include, but is not limited to: dated and time-stamped test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R10.)

M11. Each Distribution Provider and Generator Operator that detected a failure of its Interpersonal Communication capability shall have and provide upon request evidence that it consulted with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine mutually agreeable action to restore the Interpersonal Communication capability. Evidence could include, but is not limited to: dated operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R11.)

## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance ~~Monitoring Responsibility~~ Enforcement Authority**

~~NERC shall be responsible for compliance monitoring of the Regional Reliability Organizations~~

~~Regional Reliability Organizations shall be responsible for compliance monitoring of all other entities~~

The Regional Entity shall serve as the Compliance Enforcement Authority (CEA) unless the applicable entity is owned, operated, or controlled by the Regional Entity. In such cases, the ERO or a Regional Entity approved by FERC or other applicable governmental authority shall serve as the CEA.

## 1.2. Compliance Monitoring and ~~Reset Time Frame~~ Enforcement Processes

~~One or more of the following methods will be used to assess compliance:~~

- ~~— Self certification (Conducted annually with submission according to schedule.)~~
- ~~— Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)~~
- ~~— Periodic Audit (Conducted once every three years according to schedule.)~~
- ~~— Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 calendar days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case by case basis.)~~

~~The Performance Reset Period shall be 12 months from the last finding of non-compliance.~~

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

## 1.3. Data Retention

~~For Measure 1 each~~ The Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall keep data or evidence ~~to show~~ compliance for the previous two calendar years plus the current year. as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- ~~• For Measure 2 each~~ The Reliability Coordinator, Transmission Operator for Requirements R1, R2, R9, and Balancing Authority R10, Measures M1, M2, M9, and M10 shall ~~keep~~ retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days of historical data (evidence).
- ~~• For Measure 3, each Reliability Coordinator, The~~ Transmission Operator, for Requirements R3, R4, R9, and R10, Measures M3, M4, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.
- ~~• The~~ Balancing Authority shall have its current operating instructions and procedures to confirm that it meets Requirement 5. for Requirements R5, R6, R9, and R10, Measures M5, M6, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.
- ~~• For Measure 4, each~~ The Distribution Provider for Requirements R7 and R11, Measures M7 and M11 shall retain written documentation for the most

recent twelve calendar months and voice recordings for the most recent 90 calendar days.

- The Generator Operator for Requirements R8 and R11, Measures M8 and M11 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.

If a Reliability Coordinator, Transmission Operator, Balancing Authority and NERCnet User Organization shall keep 90 days of historical data (evidence).

If an entity, Distribution Provider, or Generator Operator is found non-compliant the entity, it shall keep information related to the ~~noncompliance~~ non-compliance until ~~found compliant~~ mitigation is complete and approved or for two years plus the current year time specified above, whichever is longer.

Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor.

The Compliance ~~Monitor~~ Enforcement Authority shall keep the last ~~periodic~~ audit report records and all requested and submitted subsequent ~~compliance~~ audit records.

#### 1.4. Additional Compliance Information

Attachment 1 — COM-001 — NERCnet Security Policy

#### ~~2. Levels of Non-Compliance for Transmission Operator, Balancing Authority or Reliability Coordinator~~

~~2.1. Level 1: Not applicable.~~

~~2.2. Level 2: Not applicable.~~

~~2.3. Level 3: There shall be a separate Level 3 non-compliance, for every one of the following requirements that is in violation:~~

~~2.3.1 The Transmission Operator, Balancing Authority or Reliability Coordinator used a language other than English without agreement as specified in R4.~~

~~2.3.2 There are no written operating instructions and procedures to enable continued operation of the system during the loss of telecommunication facilities as specified in R5.~~

~~2.4. Level 4: Telecommunication systems are not actively monitored, tested, managed or alarmed as specified in R2.~~

#### ~~3. Levels of Non-Compliance — NERCnet User Organization~~

~~3.1. Level 1: Not applicable.~~

~~3.2. Level 2: Not applicable.~~

~~3.3. Level 3: Not applicable.~~

~~3.4. Level 4: Did not adhere to the requirements in Attachment 1 COM-001, NERCnet Security Policy.~~

None.

**2. Violation Severity Levels**

R#	Lower_VSL	Moderate_VSL	High_VSL	Severe_VSL
<u>R1</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>	<u>The Reliability Coordinator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>
<u>R2</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R2, Parts 2.1 or 2.2.</u>	<u>The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R2, Parts 2.1 or 2.2.</u>
<u>R3</u>	<u>N/A</u>	<u>N/A</u>	<u>The Transmission Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Transmission Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>	<u>The Transmission Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Transmission Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>
<u>R4</u>	<u>N/A</u>	<u>N/A</u>	<u>The Transmission Operator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.</u>	<u>The Transmission Operator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.</u>

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R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
<u>R5</u>	<u>N/A</u>	<u>N/A</u>	<u>The Balancing Authority failed to have Interpersonal Communication capability with one of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Balancing Authority detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>	<u>The Balancing Authority failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Balancing Authority detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>
<u>R6</u>	<u>N/A</u>	<u>N/A</u>	<u>The Balancing Authority failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.</u>	<u>The Balancing Authority failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.</u>
<u>R7</u>	<u>N/A</u>	<u>N/A</u>	<u>The Distribution Provider failed to have Interpersonal Communication capability with one of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>	<u>The Distribution Provider failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>

Standard COM-001-2 — Communications

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R8</b>	N/A	N/A	<u>The Generator Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>	<u>The Generator Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>
<b>R9</b>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 2 hours and less than or equal to 4 hours upon an unsuccessful test.</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 4 hours and less than or equal to 6 hours upon an unsuccessful test.</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 6 hours and less than or equal to 8 hours upon an unsuccessful test.</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to test the Alternative Interpersonal Communication capability once each calendar month.</u>  <u>OR</u> <u>The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 8 hours upon an unsuccessful test.</u>
<b>R10</b>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 60 minutes but less than or equal to 70 minutes.</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 70 minutes but less than or equal to 80 minutes.</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 80 minutes but less than or equal to 90 minutes.</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 90 minutes.</u>



Standard COM-001-2 — Communications

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R11	N/A	N/A	N/A	<p>The Distribution Provider or Generator Operator that detected a failure of its Interpersonal Communication capability failed to consult with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of the Interpersonal Communication capability.</p>

**E. Regional Differences**

None ~~Identified~~identified.

**F. Associated Documents**

**Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
<u>1</u>	<u>April 4, 2007</u>	<u>Regulatory Approval — Effective Date</u>	<u>New</u>
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
1.1	October 29, 2008	BOT adopted errata changes; updated version number to “1.1”	Errata
<u>2</u>	<u>November 7, 2012</u>	<u>Adopted by Board of Trustees</u>	<u>Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Replaced R1 with R1-R8; R2 replaced by R9; R3 included within new R1; R4 remains enforce pending Project 2007-02; R5 redundant with EOP-008-0, retiring R5 as redundant with EOP-008-0, R1; retiring R6, relates to ERO procedures; R10 &amp; R11, new.</u>

## **Attachment 1 — COM-001 — NERCnet Security Policy**

### **Policy Statement**

The purpose of this NERCnet Security Policy is to establish responsibilities and minimum requirements for the protection of information assets, computer systems and facilities of NERC and other users of the NERC frame relay network known as “NERCnet.” The goal of this policy is to prevent misuse and loss of assets.

For the purpose of this document, information assets shall be defined as processed or unprocessed data using the NERCnet Telecommunications Facilities including network documentation. This policy shall also apply as appropriate to employees and agents of other corporations or organizations that may be directly or indirectly granted access to information associated with NERCnet.

The objectives of the NERCnet Security Policy are:

- To ensure that NERCnet information assets are adequately protected on a cost effective basis and to a level that allows NERC to fulfill its mission.
- To establish connectivity guidelines for a minimum level of security for the network.
- To provide a mandate to all Users of NERCnet to properly handle and protect the information that they have access to in order for NERC to be able to properly conduct its business and provide services to its customers.

### **NERC’s Security Mission Statement**

NERC recognizes its dependency on data, information, and the computer systems used to facilitate effective operation of its business and fulfillment of its mission. NERC also recognizes the value of the information maintained and provided to its members and others authorized to have access to NERCnet. It is, therefore, essential that this data, information, and computer systems, and the manual and technical infrastructure that supports it, are secure from destruction, corruption, unauthorized access, and accidental or deliberate breach of confidentiality.

### **Implementation and Responsibilities**

— This section identifies the various roles and responsibilities related to the protection of NERCnet resources.

#### **NERCnet User Organizations**

Users of NERCnet who have received authorization from NERC to access the NERC network are considered users of NERCnet resources. To be granted access, users shall complete a User Application Form and submit this form to the NERC Telecommunications Manager.

#### **Responsibilities**

It is the responsibility of NERCnet User Organizations to:

- Use NERCnet facilities for NERC authorized business purposes only.
- Comply with the NERCnet security policies, standards, and guidelines, as well as any procedures specified by the data owner.
- Prevent unauthorized disclosure of the data.
- Report security exposures, misuse, or non-compliance situations via Reliability Coordinator Information System or the NERC Telecommunications Manager.
- Protect the confidentiality of all user IDs and passwords.
- Maintain the data they own.
- Maintain documentation identifying the users who are granted access to NERCnet data or applications.
- Authorize users within their organizations to access NERCnet data and applications.

- ~~Advise staff on NERCnet Security Policy.~~
- ~~Ensure that all NERCnet users understand their obligation to protect these assets.~~
- ~~Conduct self assessments for compliance.~~

### **User Accountability and Compliance**

~~All users of NERCnet shall be familiar and ensure compliance with the policies in this document.~~

~~Violations of the NERCnet Security Policy shall include, but not be limited to any act that:~~

- ~~Exposes NERC or any user of NERCnet to actual or potential monetary loss through the compromise of data security or damage.~~
- ~~Involves the disclosure of trade secrets, intellectual property, confidential information or the unauthorized use of data.~~
  - ~~Involves the use of data for illicit purposes, which may include violation of any law, regulation or reporting requirement of any law enforcement or government body.~~

**Exhibit B**

**Proposed Reliability Standard COM-002-4**

## A. Introduction

1. **Title:** Operating Personnel Communications Protocols
2. **Number:** COM-002-4
3. **Purpose:** To improve communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES).
4. **Applicability:**
  - 4.1. **Functional Entities**
    - 4.1.1 Balancing Authority
    - 4.1.2 Distribution Provider
    - 4.1.3 Reliability Coordinator
    - 4.1.4 Transmission Operator
    - 4.1.5 Generator Operator
5. **Effective Date:** The standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date the standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

## B. Requirements

- R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum: [*Violation Risk Factor: Low*][*Time Horizon: Long-term Planning*]
  - 1.1. Require its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
  - 1.2. Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions:
    - Confirm the receiver's response if the repeated information is correct.
    - Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver.

- Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.
- 1.3. Require its operating personnel that receive an oral two-party, person-to-person Operating Instruction to take one of the following actions:
    - Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct.
    - Request that the issuer reissue the Operating Instruction.
  - 1.4. Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.
  - 1.5. Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.
  - 1.6. Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.
- R2.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall conduct initial training for each of its operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System on the documented communications protocols developed in Requirement R1 prior to that individual operator issuing an Operating Instruction. *[Violation Risk Factor: Low][Time Horizon: Long-term Planning]*
- R3.** Each Distribution Provider and Generator Operator shall conduct initial training for each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction to either: *[Violation Risk Factor: Low][Time Horizon: Long-term Planning]*
- Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or
  - Request that the issuer reissue the Operating Instruction.
- R4.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall at least once every twelve (12) calendar months: *[Violation Risk Factor: Medium][Time Horizon: Operations Planning]*
- 4.1. Assess adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, provide feedback to those operating personnel and take corrective action, as deemed appropriate by the entity, to address deviations from the documented protocols.
  - 4.2. Assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modify its documented communication protocols, as necessary.

- R5.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*
- Confirm the receiver's response if the repeated information is correct (in accordance with Requirement R6).
  - Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver, or
  - Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.
- R6.** Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that receives an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*
- Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or
  - Request that the issuer reissue the Operating Instruction.
- R7.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency shall confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*

### **C. Measures**

- M1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1.
- M2.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its initial training records related to its documented communications protocols developed for Requirement R1 such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R2.
- M3.** Each Distribution Provider and Generator Operator shall provide its initial training records for its operating personnel such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R3.
- M4.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence of its assessments, including spreadsheets, logs or other evidence of feedback, findings of effectiveness and any changes made to its documented communications protocols developed for Requirement R1 in fulfillment of



Requirement R4. The entity shall provide, as part of its assessment, evidence of any corrective actions taken where an operating personnel's non-adherence to the protocols developed in Requirement R1 is the sole or partial cause of an Emergency and for all other instances where the entity determined that it was appropriate to take a corrective action to address deviations from the documented protocols developed in Requirement R1.

- M5.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issued an oral two-party, person-to-person Operating Instruction during an Emergency, excluding oral single-party to multiple-party burst Operating Instructions, shall have evidence that the issuer either: 1) confirmed that the response from the recipient of the Operating Instruction was correct; 2) reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver; or 3) took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver. Such evidence could include, but is not limited to, dated and time-stamped voice recordings, or dated and time-stamped transcripts of voice recordings, or dated operator logs in fulfillment of Requirement R5.
- M6.** Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that was the recipient of an oral two-party, person-to-person Operating Instruction during an Emergency, excluding oral single-party to multiple-party burst Operating Instructions, shall have evidence to show that the recipient either repeated, not necessarily verbatim, the Operating Instruction and received confirmation from the issuer that the response was correct, or requested that the issuer reissue the Operating Instruction in fulfillment of Requirement R6. Such evidence may include, but is not limited to, dated and time-stamped voice recordings (if the entity has such recordings), dated operator logs, an attestation from the issuer of the Operating Instruction, memos or transcripts.
- M7.** Each Balancing Authority, Reliability Coordinator and Transmission Operator that issued a written or oral single or multiple-party burst Operating Instruction during an Emergency shall provide evidence that the Operating Instruction was received by at least one receiver. Such evidence may include, but is not limited to, dated and time-stamped voice recordings (if the entity has such recordings), dated operator logs, electronic records, memos or transcripts.

## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance Enforcement Authority**

As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority" means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

#### **1.2. Data Retention**

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to

provide other evidence to show that it was compliant for the full time period since the last audit.

Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, and Transmission Operator shall each keep data or evidence for each applicable Requirement for the current calendar year and one previous calendar year, with the exception of voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.

If a Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, or Transmission Operator is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

### **Compliance Monitoring and Assessment Processes**

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

### **1.3. Additional Compliance Information**

None

**COM-002-4 – Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R1</b>	Long-term Planning	Low	<p>The responsible entity did not specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification, as required in Requirement R1, Part 1.5</p> <p>OR</p> <p>The responsible entity did not specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction, as required in Requirement R1, Part 1.6.</p>	<p>The responsible entity did not require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise, as required in Requirement R1, Part 1.1. An alternate language may be used for internal operations.</p>	<p>The responsible entity did not include Requirement R1, Part 1.4 in its documented communication protocols.</p>	<p>The responsible entity did not include Requirement R1, Part 1.2 in its documented communications protocols</p> <p>OR</p> <p>The responsible entity did not include Requirement R1, Part 1.3 in its documented communications protocols</p> <p>OR</p> <p>The responsible entity did not develop any documented communications protocols as required in Requirement R1.</p>

**COM-002-4 – Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R2</b>	Long-term Planning	Low	N/A	N/A	An individual operator responsible for the Real-time operation of the interconnected Bulk Electric System at the responsible entity issued an Operating Instruction, prior to being trained on the documented communications protocols developed in Requirement R1.	An individual operator responsible for the Real-time operation of the interconnected Bulk Electric System at the responsible entity issued an Operating Instruction during an Emergency prior to being trained on the documented communications protocols developed in Requirement R1.
<b>R3</b>	Long-term Planning	Low	N/A	N/A	An individual operator at the responsible entity received an Operating Instruction prior to being trained.	An individual operator at the responsible entity received an Operating Instruction during an Emergency prior to being trained.

**COM-002-4 – Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R4</b>	Operations Planning	Medium	<p>The responsible entity assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions and provided feedback to those operating personnel and took corrective action, as appropriate</p> <p>AND</p> <p>The responsible entity assessed the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modified its documented communication</p>	<p>The responsible entity assessed adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, but did not provide feedback to those operating personnel</p> <p>OR</p> <p>The responsible entity assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions and provided feedback to those operating personnel but did not take corrective action, as appropriate</p> <p>OR</p> <p>The responsible entity assessed the effectiveness of its documented communications protocols</p>	<p>The responsible entity did not assess adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions</p> <p>OR</p> <p>The responsible entity did not assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions.</p>	<p>The responsible entity did not assess adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions</p> <p>AND</p> <p>The responsible entity did not assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions.</p>

**COM-002-4 – Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
			<p>protocols, as necessary</p> <p>AND</p> <p>The responsible entity exceeded twelve (12) calendar months between assessments.</p>	<p>in Requirement R1 for its operating personnel that issue and receive Operating Instructions, but did not modify its documented communication protocols, as necessary.</p>		

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R5	Real-time Operations	High	N/A	<p>The responsible entity that issued an Operating Instruction during an Emergency did not take one of the following actions:</p> <ul style="list-style-type: none"> <li>Confirmed the receiver’s response if the repeated information was correct (in accordance with Requirement R6).</li> <li>Reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver.</li> <li>Took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver.</li> </ul>	N/A	<p>The responsible entity that issued an Operating Instruction during an Emergency did not take one of the following actions:</p> <ul style="list-style-type: none"> <li>Confirmed the receiver’s response if the repeated information was correct (in accordance with Requirement R6).</li> <li>Reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver.</li> <li>Took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver.</li> </ul> <p>AND</p> <p>Instability, uncontrolled separation, or cascading failures occurred as a result.</p>

**COM-002-4 – Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R6</b>	Real-time Operations	High	N/A	The responsible entity did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction.	N/A	The responsible entity did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction  AND  Instability, uncontrolled separation, or cascading failures occurred as a result.
<b>R7</b>	Real-time Operations	High	N/A	The responsible entity that that issued a written or oral single-party to multiple-party burst Operating Instruction during an Emergency did not confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.	N/A	The responsible entity that that issued a written or oral single-party to multiple-party burst Operating Instruction during an Emergency did not confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction  AND  Instability, uncontrolled separation, or cascading failures occurred as a result.



**E. Regional Variances**

None

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	February 7, 2006	Adopted by Board of Trustees	Added measures and compliance elements
2	November 1, 2006	Adopted by Board of Trustees	Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Retired R1, R1.1, M1, M2 and updated the compliance monitoring information. Replaced R2 with new R1, R2 and R3.
2a	February 9, 2012	Interpretation of R2 adopted by Board of Trustees	Project 2009-22
3	November 7, 2012	Adopted by Board of Trustees	
4	May 6, 2014	Adopted by Board of Trustees	

## A. Introduction

- ~~1. Title: Communication and Coordination~~
1. Title: Operating Personnel Communications Protocols
2. Number: COM-002-~~24~~
- ~~3. Purpose: To ensure Balancing Authorities, Transmission Operators, and Generator Operators have adequate communications and that these communications capabilities are staffed and available for addressing a real-time emergency condition. To ensure communications by operating personnel are effective.~~
3. Purpose: To improve communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES).
4. Applicability:
  - 4.1. Functional Entities
    - 4.1.1 Balancing Authority
    - 4.1.2 Distribution Provider
    - ~~4.1.4.1.3 Reliability Coordinators~~Coordinator
  - ~~4.2. Balancing Authorities.~~
    - ~~4.3.4.1.4~~ Transmission OperatorsOperator
    - ~~4.4.4.1.5~~ Generator OperatorsOperator
- ~~5. Effective Date: January 1, 2007~~
5. Effective Date: The standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date the standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

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## B. Requirements

- R1. Each ~~Transmission Operator~~, Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum: [Violation Risk Factor: Low][Time Horizon: Long-term Planning]

- 1.1. Require its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
  - 1.2. Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions:
    - Confirm the receiver’s response if the repeated information is correct.
    - Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver.
    - Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.
  - 1.3. Require its operating personnel that receive an oral two-party, person-to-person Operating Instruction to take one of the following actions:
    - Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct.
    - Request that the issuer reissue the Operating Instruction.
  - 1.4. Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.
  - 1.5. Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.
  - 1.6. Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.
- R2. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall conduct initial training for each of its operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System on the documented communications protocols developed in Requirement R1 prior to that individual operator issuing an Operating Instruction. [Violation Risk Factor: Low][Time Horizon: Long-term Planning]
- R3. Each Distribution Provider and Generator Operator shall ~~have communications (voice and data links) with~~ conduct initial training for each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction to either: [Violation Risk Factor: Low][Time Horizon: Long-term Planning]
- Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or
  - Request that the issuer reissue the Operating Instruction.

R4. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall at least once every twelve (12) calendar months: *[Violation Risk Factor: Medium][Time Horizon: Operations Planning]*

R1.4.1. Assess adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, provide feedback to those operating personnel and take corrective action, as deemed appropriate Reliability Coordinators, Balancing Authorities, and Transmission Operators. Such communications shall be staffed and available for addressing a real-time emergency condition by the entity, to address deviations from the documented protocols.

4.2. Assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modify its documented communication protocols, as necessary.

R5. Each Balancing Authority and Transmission Operator shall notify its Reliability Coordinator, and all other potentially affected Balancing Authorities and Transmission Operators through predetermined communication paths of any condition that could threaten the reliability of its area or when firm load shedding Transmission Operator that issues an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*

- 5.1. Confirm the receiver's response if the repeated information is anticipated-correct (in accordance with Requirement R6).
- Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver, or
- Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.

R6. Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that receives an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*

- Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or
- Request that the issuer reissue the Operating Instruction.

R2.R7. Each Balancing Authority, Reliability Coordinator, and Transmission Operator, and Balancing Authority shall issue directives in a clear, concise, and definitive manner; that issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency shall ensure the recipient of the directive repeats the information back correctly; and shall acknowledge the response as correct or repeat

~~the original statement to resolve any misunderstandings, confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. [Violation Risk Factor: High][Time Horizon: Real-time Operations]~~

### C. Measures

- ~~M1. Each Transmission Operator, Balancing Authority and Generator Operator shall have communication facilities (voice and data links) with appropriate Reliability Coordinators, Balancing Authorities, and Transmission Operators and shall have and provide as evidence, a list of communication facilities or other equivalent evidence that confirms that the communications have been provided to address a real-time emergency condition. (Requirement 1, part 1)~~
- ~~M1. The~~Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have and provide upon request its documented communications protocols developed for Requirement R1.
- ~~M2. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its initial training records related to its documented communications protocols developed for Requirement R1 such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R2.~~
- ~~M3. Each Distribution Provider and Generator Operator shall provide its initial training records for its operating personnel such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R3.~~
- ~~M4. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence of its assessments, including spreadsheets, logs or other evidence of feedback, findings of effectiveness and any changes made to its documented communications protocols developed for Requirement R1 in fulfillment of Requirement R4. The entity shall provide, as part of its assessment, evidence of any corrective actions taken where an operating personnel's non-adherence to the protocols developed in Requirement R1 is the sole or partial cause of an Emergency and for all other instances where the entity determined that it was appropriate to take a corrective action to address deviations from the documented protocols developed in Requirement R1.~~
- ~~M5. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issued an oral two-party, person-to-person Operating Instruction during an Emergency, excluding oral single-party to multiple-party burst Operating Instructions, shall have evidence that the issuer either: 1) confirmed that the response from the recipient of the Operating Instruction was correct; 2) reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver; or 3) took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver. Such evidence could include, but is not limited to, operator logs, dated and time-stamped voice recordings, or dated and time-stamped transcripts of voice recordings, or dated operator logs in fulfillment of Requirement R5.~~
- ~~M6. Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that was the recipient of an oral two-party, person-to-person~~

Operating Instruction during an Emergency, excluding oral single-party to multiple-party burst Operating Instructions, shall have evidence to show that the recipient either repeated, not necessarily verbatim, the Operating Instruction and received confirmation from the issuer that the response was correct, or requested that the issuer reissue the Operating Instruction in fulfillment of Requirement R6. Such evidence may include, but is not limited to, dated and time-stamped voice recordings (if the entity has such recordings), dated operator logs, an attestation from the issuer of the Operating Instruction, memos or transcripts.

~~M2.M7.~~ Each Balancing Authority, Reliability Coordinator and Transmission Operator that issued a written or oral single or multiple-party burst Operating Instruction during an Emergency shall provide evidence that the Operating Instruction was received by at least one receiver. Such evidence may include, but is not limited to, dated and time-stamped voice recordings (if the entity has such recordings), dated operator logs, electronic communications, or other equivalent evidence that will be used to determine if it notified its Reliability Coordinator, and all other potentially affected Balancing Authorities and Transmission Operators of a condition that could threaten the reliability of its area or when firm load shedding was anticipated. (Requirement 4.1)records, memos or transcripts.

## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance ~~Monitoring Responsibility~~ Enforcement Authority**

~~Regional Reliability Organizations shall be responsible for compliance monitoring.~~

#### **1.2. ~~Compliance Monitoring and Reset Time Frame~~**

~~One or more of the following methods will be used to assess compliance:~~

- ~~— Self-certification (Conducted annually with submission according to schedule.)~~
- ~~— Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)~~
- ~~— Periodic Audit (Conducted once every three years according to schedule.)~~
- ~~— Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)~~

~~The Performance Reset Period shall be 12 months from the last finding of non-compliance.~~

As defined in the NERC Rules of Procedure, “Compliance Enforcement Authority” means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

**1.3.1.2. Data Retention**

~~Each Balancing Authority, Transmission Operator and Generator Operator shall keep evidence of compliance for the previous two calendar years plus the current year. (Measure 1)~~

~~Each~~The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

~~Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, and Transmission Operator shall each keep data or evidence for each applicable Requirement for the current calendar year and one previous calendar year, with the exception of voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.~~

~~If a Balancing Authority and, Distribution Provider, Generator Operator, Reliability Coordinator, or Transmission Operator shall keep 90 days of historical data. (Measure 2).~~

~~If an entity is found non-compliant the entity, it shall keep information related to the noncompliance non-compliance until found compliant mitigation is complete and approved or for two years plus the current year time period specified above, whichever is longer.~~

~~Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor.~~

~~The Compliance Monitor~~Enforcement Authority shall keep the last periodic audit report records and all requested and submitted subsequent compliance audit records.

**Compliance Monitoring and Assessment Processes**

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

**1.4.1.3. Additional Compliance Information**

None.

~~2. Levels of Non-Compliance for Transmission Operator and Balancing Authority:~~

~~2.1. Level 1: Not applicable.~~

~~2.2. Level 2: Not applicable.~~

~~2.3. Level 3: Not applicable.~~

~~2.4. Level 4: Communication did not occur as specified in R1.1.~~

~~3. Levels of Non-Compliance for Generator Operator:~~

~~3.1. Level 1: Not applicable.~~

~~3.2. Level 2: Not applicable.~~

~~3.3. Level 3: Not applicable.~~

~~3.4. Level 4: Communication facilities are not provided to address a real-time emergency condition as specified in R1.~~



**Standard COM-002-2—4 – Operating Personnel Communications and Coordination Protocols**

R.#	Time Horizon	VBE	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<u>R1</u>	<u>Long-term Planning</u>	<u>Low</u>	<p><u>The responsible entity did not specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification, as required in Requirement R1, Part 1.5</u></p> <p><u>OR</u></p> <p><u>The responsible entity did not specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction, as required in Requirement R1, Part 1.6.</u></p>	<p><u>The responsible entity did not require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise, as required in Requirement R1, Part 1.1. An alternate language may be used for internal operations.</u></p>	<p><u>The responsible entity did not include Requirement R1, Part 1.4 in its documented communication protocols.</u></p>	<p><u>The responsible entity did not include Requirement R1, Part 1.2 in its documented communications protocols</u></p> <p><u>OR</u></p> <p><u>The responsible entity did not include Requirement R1, Part 1.3 in its documented communications protocols</u></p> <p><u>OR</u></p> <p><u>The responsible entity did not develop any documented communications protocols as required in Requirement R1.</u></p>

**Standard COM-002-2—4 – Operating Personnel Communications and Coordination Protocols**

R.#	Time Horizon	VRE	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL

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Effective Date: January 1, 200712 \_\_\_\_\_

**Standard COM-002-2—4 – Operating Personnel Communications and Coordination Protocols**

<u>R2</u>	<u>Long-term Planning</u>	<u>Low</u>	<u>N/A</u>	<u>N/A</u>	<u>An individual operator responsible for the Real-time operation of the interconnected Bulk Electric System at the responsible entity issued an Operating Instruction, prior to being trained on the documented communications protocols developed in Requirement R1.</u>	<u>An individual operator responsible for the Real-time operation of the interconnected Bulk Electric System at the responsible entity issued an Operating Instruction during an Emergency prior to being trained on the documented communications protocols developed in Requirement R1.</u>
<u>R3</u>	<u>Long-term Planning</u>	<u>Low</u>	<u>N/A</u>	<u>N/A</u>	<u>An individual operator at the responsible entity received an Operating Instruction prior to being trained.</u>	<u>An individual operator at the responsible entity received an Operating Instruction during an Emergency prior to being trained.</u>
<u>R.#</u>	<u>Time Horizon</u>	<u>VRE</u>	<u>Violation Severity Levels</u>			
			<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>

**Standard COM-002-2—4 – Operating Personnel Communications and Coordination Protocols**

<p><b>R4</b></p>	<p><u>Operations Planning</u></p>	<p><u>Medium</u></p>	<p><u>The responsible entity assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions and provided feedback to those operating personnel and took corrective action, as appropriate</u> <u>AND</u> <u>The responsible entity assessed the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modified its</u></p>	<p><u>The responsible entity assessed adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, but did not provide feedback to those operating personnel</u> <u>OR</u> <u>The responsible entity assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions and provided feedback to those operating personnel but did not take corrective action, as appropriate</u> <u>OR</u> <u>The responsible entity assessed the effectiveness of its documented communications protocols</u></p>	<p><u>The responsible entity did not assess adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions</u> <u>OR</u> <u>The responsible entity did not assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions.</u></p>	<p><u>The responsible entity did not assess adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions</u> <u>AND</u> <u>The responsible entity did not assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions.</u></p>
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**Standard COM-002-2—4 – Operating Personnel Communications and Coordination Protocols**

			<u>documented communication</u>			
<u>R #</u>	<u>Time Horizon</u>	<u>VRF</u>	<u>Violation Severity Levels</u>			
			<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>

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**Standard COM-002-2—4 – Operating Personnel Communications and Coordination Protocols**

			<p><u>protocols, as necessary</u></p> <p><u>AND</u></p> <p><u>The responsible entity exceeded twelve (12) calendar months between assessments.</u></p>	<p><u>in Requirement R1 for its operating personnel that issue and receive Operating Instructions, but did not modify its documented communication protocols, as necessary.</u></p>		
<u>R.#</u>		<u>YRE</u>	<u>Violation Severity Levels</u>			

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**Standard COM-002-2—4 – Operating Personnel Communications and Coordination Protocols**

	<u>Time Horizon</u>		<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
<u>R5</u>	<u>Real-time Operations</u>	<u>High</u>	<u>N/A</u>	<p><u>The responsible entity that issued an Operating Instruction during an Emergency did not take one of the following actions:</u></p> <ul style="list-style-type: none"> <li><u>Confirmed the receiver’s response if the repeated information was correct (in accordance with Requirement R6).</u></li> <li><u>Reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver.</u></li> <li><u>Took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver.</u></li> </ul>	<u>N/A</u>	<p><u>The responsible entity that issued an Operating Instruction during an Emergency did not take one of the following actions:</u></p> <ul style="list-style-type: none"> <li><u>Confirmed the receiver’s response if the repeated information was correct (in accordance with Requirement R6).</u></li> <li><u>Reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver.</u></li> <li><u>Took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver.</u></li> </ul> <p><u>AND</u></p> <p><u>Instability, uncontrolled separation, or cascading failures occurred as a result.</u></p>

**Standard COM-002-2—4 – Operating Personnel Communications and Coordination Protocols**

<u>R #</u>	<u>Time Horizon</u>	<u>VRF</u>	<u>Violation Severity Levels</u>			
			<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
<u>R6</u>	<u>Real-time Operations</u>	<u>High</u>	<u>N/A</u>	<u>The responsible entity did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction.</u>	<u>N/A</u>	<u>The responsible entity did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction</u>  <u>AND</u> <u>Instability, uncontrolled separation, or cascading failures occurred as a result.</u>
<u>R7</u>	<u>Real-time Operations</u>	<u>High</u>	<u>N/A</u>	<u>The responsible entity that that issued a written or oral single-party to multiple-party burst Operating Instruction during an Emergency did not confirm or verify that</u>	<u>N/A</u>	<u>The responsible entity that that issued a written or oral single-party to multiple-party burst Operating Instruction during an Emergency did not confirm or verify that the Operating Instruction was received by at</u>

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**Standard COM-002-2—4 – Operating Personnel Communications and Coordination Protocols**

				<u>the Operating Instruction was received by at least one receiver of the Operating Instruction.</u>		<u>least one receiver of the Operating Instruction</u> <u>AND</u> <u>Instability, uncontrolled separation, or cascading failures occurred as a result.</u>
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**E. Regional Differences/Variances**

None identified.

**Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	February 7, 2006	Adopted by Board of Trustees	<b>Revised</b> <u>Added measures and compliance elements</u>
2	November 1, 2006	Adopted by Board of Trustees	<b>Revised</b> <u>Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Retired R1, R1.1, M1, M2 and updated the compliance monitoring information. Replaced R2 with new R1, R2 and R3.</u>
<u>2a</u>	<u>February 9, 2012</u>	<u>Interpretation of R2 adopted by Board of Trustees</u>	<u>Project 2009-22</u>
<u>3</u>	<u>November 7, 2012</u>	<u>Adopted by Board of Trustees</u>	
<u>4</u>	<u>May 6, 2014</u>	<u>Adopted by Board of Trustees</u>	

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**Exhibit C**

**Implementation Plan and Mapping Document COM-001-2**

# Implementation Plan and Mapping Document

## COM-001-2 Communications

### Requested Approval

COM-001-2 – Communications

Definition: Interpersonal Communication

Definition: Alternative Interpersonal Communication

### Requested Retirement

COM-001-1.1 – Telecommunications, except Requirement R4

Requirement R4 is being revised for inclusion in Standard COM-002-4, Operating Personnel Communications Protocols and will be requested for retirement upon the effective date COM-002-4.

### Prerequisite Approvals

None.

### Defined Terms in the NERC Glossary

The RCSDT proposes the following new definitions:

**Interpersonal Communication:** Any medium that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.

### Conforming Changes to Requirements in Already Approved Standards

The RCSDT proposes retiring COM-001-1.1 Requirement R5 as it is redundant with EOP-008-0, Requirement R1 as well as EOP-008-1 Requirement R1.

### Revisions to Approved Standards and Definitions

The RCSDT revised the COM-001-1.1 standard proposes retiring four Requirements (R1, R4, R5, and R6). The COM-001-1.1 standard, Requirement R1 is proposed for replacement with COM-001-2, Requirements R1, R2, R3, R4, R5, R6, R7, and R8 to achieve clarity to which entities are required to have to reliable communications. Requirement R2 in COM-001-1.1 will become Requirement R9 in COM-001-2. Requirement R3 in COM-001-1.1 is included within Requirement R1 of COM-001-2. Requirement R4 will remain effective until its inclusion in COM-002-4 that is currently under development in Project 2007-02 – Operating Personnel Communication Protocols. Requirement R5 in COM-001-1.1 is redundant with EOP-008-0, Requirement R1 and EOP-008-1, Requirement R1 and is

proposed for retirement upon the effective date of COM-001-2. The COM-001-1.1 standard, Requirement R6 is proposed for retirement as it is an ERO procedural requirement and does not impact reliability. Requirements R10 and R11 are new requirements. Changes were made to eliminate redundancies between standards (existing and proposed), to align with the ERO Rules of Procedure and to address known issues and certain directives in FERC Order 693.

### **Applicable Entities**

- Reliability Coordinator
- Balancing Authority
- Transmission Operator
- Generator Operator
- Distribution Provider

### **Effective Date**

#### **New or Revised Standards**

COM-001-2      The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

#### **Standard for Retirement**

COM-001-1.1, Requirements R1, R2, R3, R5, and R6      Midnight of the day immediately prior to the Effective Date of COM-001-2 in the particular Jurisdiction in which the new standard is becoming effective. Note: Requirement R4 will remain effective until its inclusion in the standard COM-002-4 currently under development.

## New or Revised Definitions

**Interpersonal Communication** – The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

**Alternative Interpersonal Communication** – The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

**Revisions or Retirements to Already Approved Standards**

The following tables identify the sections of approved standards that shall be retired or revised when this standard becomes effective. If the drafting team is recommending the retirement or revision of a requirement, that text is [blue](#).

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1.1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></p>	<p><b>COM-001-2</b></p> <p><b>R1.</b> Each Reliability Coordinator shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R1.1.</b> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R1.2.</b> Each adjacent Reliability Coordinator within the same Interconnection.</p> <p><b>R2.</b> Each Reliability Coordinator shall designate an Alternative Interpersonal Communication capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R2.1.</b> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R2.2.</b> Each adjacent Reliability Coordinator within the same Interconnection.</p> <p><b>R3.</b> Each Transmission Operator shall have Interpersonal</p>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p>Communication capability with the following entities (unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <ul style="list-style-type: none"> <li><b>R3.1.</b> Its Reliability Coordinator.</li> <li><b>R3.2.</b> Each Balancing Authority within its Transmission Operator Area.</li> <li><b>R3.3.</b> Each Distribution Provider within its Transmission Operator Area.</li> <li><b>R3.4.</b> Each Generator Operator within its Transmission Operator Area.</li> <li><b>R3.5.</b> Each adjacent Transmission Operator synchronously connected.</li> <li><b>R3.6.</b> Each adjacent Transmission Operator asynchronously connected.</li> </ul> <p><b>R4.</b> Each Transmission Operator shall designate an Alternative Interpersonal Communication capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <ul style="list-style-type: none"> <li><b>R4.1.</b> Its Reliability Coordinator.</li> <li><b>R4.2.</b> Each Balancing Authority within its Transmission Operator Area.</li> </ul>



Already Approved Standard	Proposed Replacement Requirement(s)
	<p><b>R4.3.</b> Each adjacent Transmission Operator synchronously connected.</p> <p><b>R4.4.</b> Each adjacent Transmission Operator asynchronously connected.</p>
<p><b>Notes:</b> The requirements were made clearer as to which capabilities specific entities were required to have to reliable communications.</p>	
<p><b>COM-001-1.1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></p>	<p><b>COM-001-2</b></p> <p><b>R5.</b> Each Balancing Authority shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R5.1.</b> Its Reliability Coordinator.</p> <p><b>R5.2.</b> Each Transmission Operator that operates Facilities within its Balancing Authority Area.</p> <p><b>R5.3.</b> Each Distribution Provider within its Balancing Authority Area.</p> <p><b>R5.4.</b> Each Generator Operator that operates Facilities within its Balancing Authority Area.</p> <p><b>R5.5.</b> Each Adjacent Balancing Authority.</p> <p><b>R6.</b> Each Balancing Authority shall designate an Alternative Interpersonal Communication capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time</i></p>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p><i>Operations]</i></p> <p><b>R6.1.</b> Its Reliability Coordinator.</p> <p><b>R6.2.</b> Each Transmission Operator that operates Facilities within its Balancing Authority Area.</p> <p><b>R6.3.</b> Each Adjacent Balancing Authority.</p> <p><b>R7.</b> Each Distribution Provider shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply): <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R7.1.</b> Its Transmission Operator.</p> <p><b>R7.2.</b> Its Balancing Authority.</p> <p><b>R8.</b> Each <b>Generator Operator</b> shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply): <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R8.1.</b> Its Balancing Authority.</p> <p><b>R8.2.</b> Its Transmission Operator.</p>
<p><b>Notes:</b> The requirements we made clearer as to which capabilities specific entities were required to have for reliable interpersonal communications. Requirements R7 and R8 were created to address the FERC directive (Order No. 693, P508) to “(1) expand the applicability to include generator operators and distribution providers and includes Requirements for their telecommunications facilities;”</p>	

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1.1</b></p> <p><b>R2.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall <b>manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.</b> <i>[Violation Risk Factor: Medium]</i></p>	<p><b>COM-001-2</b></p> <p><b>R9.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall <b>test its Alternative Interpersonal Communication capability at least once each calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communication capability within 2 hours.</b> <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b></p>	
<p><b>COM-001-1.1</b></p> <p><b>R3.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall <b>provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas.</b> <i>[Violation Risk Factor: Lower]</i></p>	<p><b>COM-001-2</b></p> <p><b>R1.</b> Each Reliability Coordinator shall have Interpersonal Communication capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R1.1.</b> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R1.2.</b> Each adjacent Reliability Coordinator within the same Interconnection.</p>
<p><b>Notes:</b></p>	
<p><b>COM-001-1.1</b></p> <p><b>R4.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use</p>	<p><b>None - retire</b></p> <ul style="list-style-type: none"> <li>▪ This requirement is being vetted by the OPCPSDT in Project</li> </ul>

Already Approved Standard	Proposed Replacement Requirement(s)
<p>English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. <i>[Violation Risk Factor: Medium]</i></p>	<p>2007-02 – Operating Personnel Communication Protocols (COM-002-4). This requirement and measure will be removed from COM-001-1.1 upon the effective date of COM-002-4.</p>
<p><b>Notes:</b></p>	
<p><b>COM-001-1.1</b></p> <p><b>R5.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>EOP-008-0</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements:</p> <ul style="list-style-type: none"> <li><b>R1.1.</b> The contingency plan shall not rely on data or voice communication from the primary control facility to be viable.</li> <li><b>R1.2.</b> The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules.</li> <li><b>R1.3.</b> The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities.</li> </ul>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p><b>R1.4.</b> The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas.</p> <p><b>R1.5.</b> The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.</p> <p><b>R1.6.</b> The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans.</p> <p><b>R1.7.</b> The plan shall be reviewed and updated annually.</p> <p><b>R1.8.</b> Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.</p> <p><b>EOP-008-1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have a current Operating Plan describing the manner in which it continues to meet its functional obligations with regard to the reliable operations of the BES in the event that its primary control center functionality is lost. This Operating Plan for backup functionality shall include the following, at a minimum: [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]</p> <p><b>1.1.</b> The location and method of implementation for providing backup functionality for the time it takes to restore the</p>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p>primary control center functionality.</p> <p><b>1.2.</b> A summary description of the elements required to support the backup functionality. These elements shall include, at a minimum:</p> <p><b>1.2.1.</b> Tools and applications to ensure that System Operators have situational awareness of the BES.</p> <p><b>1.2.2.</b> Data communications.</p> <p><b>1.2.3.</b> Voice communications.</p> <p><b>1.2.4.</b> Power source(s).</p> <p><b>1.2.5.</b> Physical and cyber security.</p> <p><b>1.3.</b> An Operating Process for keeping the backup functionality consistent with the primary control center.</p> <p><b>1.4.</b> Operating Procedures, including decision authority, for use in determining when to implement the Operating Plan for backup functionality.</p> <p><b>1.5.</b> A transition period between the loss of primary control center functionality and the time to fully implement the backup functionality that is less than or equal to two hours.</p> <p><b>1.6.</b> An Operating Process describing the actions to be taken during the transition period between the loss of primary control center functionality and the time to fully implement backup functionality elements identified in Requirement R1, Part 1.2. The Operating Process shall include at a minimum:</p>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p><b>1.6.1.</b> A list of all entities to notify when there is a change in operating locations.</p> <p><b>1.6.2.</b> Actions to manage the risk to the BES during the transition from primary to backup functionality as well as during outages of the primary or backup functionality.</p> <p><b>1.6.3.</b> Identification of the roles for personnel involved during the initiation and implementation of the Operating Plan for backup functionality.</p>
<p><b>Notes:</b> The RCSDT proposes retiring COM-001-1.1, Requirement R5 as it is redundant with EOP-008-0, Requirement R1 as well as EOP-008-1 Requirement R1.</p>	
<p><b>COM-001-1.1</b></p> <p><b>R6.</b> Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, “NERCNet Security Policy.” <i>[Violation Risk Factor: Lower]</i></p>	<p><b>None – retire</b></p>
<p><b>Notes:</b> The RCSDT is recommending that R6 be retired. This is an ERO procedural issue and should not be in a reliability standard. It should be included in the ERO Rules of Procedure.</p>	
<p><b>None</b></p>	<p><b>New Requirement</b></p> <p><b>R10.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1, R3, and R5, respectively within 60 minutes of the detection of a failure of its Interpersonal Communication</p>

Already Approved Standard	Proposed Replacement Requirement(s)
	capability that lasts 30 minutes or longer. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]</i>
None	<p><b>New Requirement</b></p> <p><b>R11.</b>Each Distribution Provider and Generator Operator that detects a failure of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority to determine a mutually agreeable action to restore the Interpersonal Communication capability. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>
Notes:	

**Functions that Must Comply with the Requirements in the Standards**

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Purchasing Selling Entity	Transmission Operator	Transmission Service Provider	Load Serving Entity	Generator Operator	Distribution Provider
COM-001-2 Communications	X	X		X	X		X	X



**Exhibit D**

**Implementation Plan COM-002-4**

## Implementation Plan

### Operating Personnel Communications Protocols

#### COM-002-4

#### Standards Involved

Approval:

- COM-002-4 – Operating Personnel Communications Protocols

Retirements:

- COM-001-1.1 Requirement R4 – Telecommunications
- COM-002-2 – Communication and Coordination
- COM-002-3 – Communication and Coordination

#### Prerequisite Approvals

None

#### Revisions to Glossary

The following term is proposed for addition to the NERC Glossary of Terms:

#### Operating Instruction —

A command by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. (A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.)

#### Applicable Entities

Balancing Authority  
Distribution Provider  
Generator Operator  
Reliability Coordinator  
Transmission Operator

#### Conforming Changes to Other Standards

None

**Effective Date**

COM-002-4 and the definition of “Operating Instruction” shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date the standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

**Retirement of Existing Standards:**

COM-001-1.1 Requirement R4, COM-002-2, and COM-002-3, as applicable, shall be retired at midnight of the day immediately prior to the effective date of COM-002-4 in the particular jurisdiction in which the new standard is becoming effective.

**Exhibit E**

**Mapping Document COM-002-4**

## Project 2007-02: Operating Personnel Communication Protocols

Mapping Document

### COM-001-1.1 to COM-002-4

Board Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1.1</b></p> <p>R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.</p>	<p><b>COM-002-4</b></p> <p>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented communications protocols. The protocols shall, at a minimum: <i>[Violation Risk Factor: Low][Time Horizon: Long-term Planning]</i></p> <p>1.1. Require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations</p>
<p><b>Notes:</b> Moved COM-001-1 R4 into COM-002-4 Requirement R1 Part 1.1 and modified language to include the defined term "Operating Instruction."</p>	

## COM-002-2 to COM-002-3

Board Approved Standard	Proposed Replacement Requirement(s)
<p>COM-002-2</p> <p>R1. Each Transmission Operator, Balancing Authority, and Generator Operator shall have communications (voice and data links) with appropriate Reliability Coordinators, Balancing Authorities, and Transmission Operators. Such communications shall be staffed and available for addressing a real-time emergency condition. <i>[Violation Risk Factor: High]</i></p> <p>R1.1 Each Balancing Authority and Transmission Operator shall notify its Reliability Coordinator, and all other potentially affected Balancing Authorities and Transmission Operators through predetermined communication paths of any condition that could threaten the reliability of its area or when firm load shedding is anticipated. <i>[Violation Risk Factor: High]</i></p>	<p>The Project 2006-06 SDT proposed retiring COM-002-2, R1 and R1.1 during the development of proposed standard COM-002-3. The following rationale was provided by that drafting team in the Implementation Plan for Draft 6 of Project 2006-06. The same rationale continues to apply for the current version of COM-002-4:</p> <p>“The communications requirements of R1 are addressed in existing COM-001-1.1 as well as the proposed COM-001-2 requirements. Additionally, IRO-010-1a addresses data provisions.</p> <p>The Project 2006-06 SDT contends that COM-002-2, R1.1 is a low level facilitating requirement that is more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards. Examples include:</p> <ul style="list-style-type: none"> <li>• EOP-002-1, R3 – outlines BA to RC communications. IRO-001-1, R3 requires adequate telecommunication for the Reliability Coordinator to direct actions of multiple entities, including TOPs and BAs.</li> <li>• TOP-001-1, R3 requires adequate telecommunications facilities for the TOP, BA, and GOP to be able to receive directives from the RC.</li> <li>• TOP-001-1, R5 requires communications between TOPs and RCs for emergency situations.</li> </ul>

Board Approved Standard	Proposed Replacement Requirement(s)
	<ul style="list-style-type: none"> <li>• TOP-005-1, R1 and R3 require adequate telecommunications for BAs and TOPs to provide each other with operating data as well as providing data to the RC.</li> <li>• TOP-006-1, R1 requires adequate telecommunications for the GOP to inform the BA and TOP of resources. The BA and TOP will then inform the RC, other TOP and BAs of all transmission and generation available for use.</li> <li>• PER-001-1, R1 and PER-004-1, R1 set forth the staffing requirements.”</li> </ul>
<p><b>Notes:</b> None. The rationale provided above is available at the following hyperlink: <a href="#">Project 2006-06 Draft 6 Implementation Plan</a></p>	
<p>COM-002-2</p> <p>R2. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall issue directives in a clear, concise, and definitive manner; shall ensure the recipient of the directive repeats the information back correctly; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. <i>[Violation Risk Factor: Medium]</i></p>	<p>COM-002-3</p> <p>The Project 2006-06 expanded COM-002-2 R2 into three requirements in COM-002-3:</p> <p><b>R1.</b> When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p><b>R2.</b> Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive, shall repeat, restate, rephrase or recapitulate the Reliability Directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p>

Board Approved Standard	Proposed Replacement Requirement(s)
	<p><b>R3.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall either:  <i>[Violation Risk Factor: High] [Time Horizon: Real-Time]</i></p> <ul style="list-style-type: none"> <li>• Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or</li> <li>• Reissue the Reliability Directive to resolve any misunderstandings.</li> </ul>
<p><b>Notes:</b> The Project 2006-06 expanded the list of responsible entities to include the DP and GOP and subdivided the requirement to improve clarity.</p>	

## COM-002-3 to COM-002-4

Board Approved Standard	Proposed Replacement Requirement(s)
<p>COM-002-3</p> <p>R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p>	<p>COM-002-4</p> <p>None</p>
<p><b>Notes:</b> The Project 2007-02 SDT removed the term “Reliability Directive” in order to avoid complications that may result from the Notice of Proposed Rulemaking issued by the Federal Energy Regulatory Commission on November 21, 2014 proposing to remand the</p>	



Board Approved Standard	Proposed Replacement Requirement(s)
<p>definition of “Reliability Directive”. COM-002-4 uses the defined term Operating Instruction to define the circumstances when documented communications protocols must be used, and uses the phrase “Operating Instruction during an Emergency” to designate Operating Instructions that would have qualified as Reliability Directives. The Project 2007-02 SDT coordinated with the Project 2009-02 Real time Operations team and Project 2006-06 SDT and all parties agreed that requirement for an issuer to identify a command as a Reliability Directive is not a communication protocol, and will be considered by each team for future modifications.</p>	
<p>R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive, shall repeat, restate, rephrase or recapitulate the Reliability Directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p>R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall either: <i>[Violation Risk Factor: High] [Time Horizon: Real-Time]</i></p> <ul style="list-style-type: none"> <li>• Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or</li> </ul> <p>Reissue the Reliability Directive to resolve any misunderstandings.</p>	<p>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum: <i>[Violation Risk Factor: Low][Time Horizon: Long-term Planning]</i></p> <p>1.1 Require its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.</p> <p>1.2. Require the issuer of an oral two-party, person-to-person Operating Instruction to wait for a response from the receiver. Once a response is received, or if no response is received, require the issuer to take one of the following actions:</p> <ul style="list-style-type: none"> <li>• Confirm the receiver’s response if the repeated information is correct.</li> <li>• Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver.</li> </ul>

Board Approved Standard	Proposed Replacement Requirement(s)
	<ul style="list-style-type: none"> <li>• Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.</li> </ul> <p>1.3 Require its operating personnel that receive an oral two party, person-to-person Operating Instruction to take one of the following actions:</p> <ul style="list-style-type: none"> <li>• Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct.</li> <li>• Request that the issuer reissue the Operating Instruction.</li> </ul> <p>1.4 Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.</p> <p>1.5 Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.</p> <p>1.6 Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.</p> <p>R2. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall conduct initial training for each of its operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System on the</p>

Board Approved Standard	Proposed Replacement Requirement(s)
	<p>documented communications protocols developed in Requirement R1 prior to that individual operator issuing an Operating Instruction. <i>[Violation Risk Factor: Low][Time Horizon: Long-term Planning]</i></p> <p>R3. Each Distribution Provider and Generator Operator shall conduct initial training for each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction to either: <i>[Violation Risk Factor: Low][Time Horizon: Long-term Planning]</i></p> <ul style="list-style-type: none"> <li>• Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or</li> <li>• Request that the issuer reissue the Operating Instruction.</li> </ul> <p>R4. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall at least once every twelve (12) calendar months: <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning]</i></p> <p style="padding-left: 40px;">4.1. Assess adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, provide feedback to those operating personnel and take corrective action, as deemed appropriate by the entity, to address deviations from the documented protocols.</p>

Board Approved Standard	Proposed Replacement Requirement(s)
	<p>4.2. Assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modify its documented communication protocols, as necessary.</p> <p>R5. Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <ul style="list-style-type: none"> <li>• Confirm the receiver’s response if the repeated information is correct (in accordance with Requirement R6).</li> <li>• Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver, or</li> <li>• Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.</li> </ul> <p>R6. Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that receives an oral two-party, person-to-person Operating Instruction during an</p>

Board Approved Standard	Proposed Replacement Requirement(s)
	<p>Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <ul style="list-style-type: none"> <li>• Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or</li> <li>• Request that the issuer reissue the Operating Instruction.</li> </ul> <p>R7. Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency shall confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b> COM-002-3 Requirements R2 and R3 were moved into COM-002-4. The Project 2007-02 SDT has developed COM-002-4 to provide more stringent communication requirements during Emergencies and Alerts as well as establish communication protocols for non-Emergency/non-alert communications that occur between entities.</p>	

**Exhibit F**

**Order No. 672 Criteria COM-001-2**

## Exhibit F

### Order No. 672 Criteria

In Order No. 672,<sup>1</sup> the Commission identified a number of criteria it will use to analyze Reliability Standards proposed for approval to ensure they are just, reasonable, not unduly discriminatory or preferential, and in the public interest. The discussion below identifies these factors and explains how the proposed Reliability Standard has met or exceeded the criteria:

**1. Proposed Reliability Standards must be designed to achieve a specified reliability goal and must contain a technically sound means to achieve that goal.<sup>2</sup>**

The proposed standard achieves the specific reliability goal of establishing requirements for Interpersonal Communication and Alternative Interpersonal Communication capabilities necessary to maintain reliability. First, proposed COM-001-2 eliminates ambiguous terms used in COM-001-1 that do not adequately specify the desired actions that Reliability Coordinators, Balancing Authorities, and Transmission Operators are expected to take with respect to each's telecommunication facilities. The proposed Reliability Standard includes two new defined terms, "Interpersonal Communication" and "Alternative Interpersonal Communication," which

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<sup>1</sup> *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

<sup>2</sup> Order No. 672 at P 321. The proposed Reliability Standard must address a reliability concern that falls within the requirements of section 215 of the FPA. That is, it must provide for the reliable operation of Bulk-Power System facilities. It may not extend beyond reliable operation of such facilities or apply to other facilities. Such facilities include all those necessary for operating an interconnected electric energy transmission network, or any portion of that network, including control systems. The proposed Reliability Standard may apply to any design of planned additions or modifications of such facilities that is necessary to provide for reliable operation. It may also apply to Cybersecurity protection.

Order No. 672 at P 324. The proposed Reliability Standard must be designed to achieve a specified reliability goal and must contain a technically sound means to achieve this goal. Although any person may propose a topic for a Reliability Standard to the ERO, in the ERO's process, the specific proposed Reliability Standard should be developed initially by persons within the electric power industry and community with a high level of technical expertise and be based on sound technical and engineering criteria. It should be based on actual data and lessons learned from past operating incidents, where appropriate. The process for ERO approval of a proposed Reliability Standard should be fair and open to all interested persons.

collectively provide a comprehensive approach to establishing communications capabilities necessary to maintain reliability. The defined terms used in the requirements of proposed COM-001-2 are:

**Interpersonal Communication** – Any medium that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication** – Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.

These definitions provide clarity that an entity’s communications capabilities must be redundant and that each of the capabilities must not utilize the same medium. The new definitions, therefore, improve upon the language used in the current COM-001-1.1 Reliability Standard, which states “[e]ach Reliability Coordinator, Transmission Operator and Balancing Authority shall provide *adequate and reliable* telecommunications facilities for the exchange of Interconnection and operating information.” COM-001-1.1, Requirement R1, Part R1.4 states that “[w]here applicable, these facilities shall be redundant and diversely routed.” Use of the defined terms eliminates the need to use the ambiguous phrases “adequate and reliable” and “redundant and diversely routed, which were identified in the Preliminary Assessment as potentially creating ambiguity in the Reliability Standard.

Second, proposed COM-001-2 clearly identifies the need to be capable of both Interpersonal Communication and Alternative Interpersonal Communication. Requirements R1-R6 address the Interpersonal Communication capability and Alternative Interpersonal Communication capability of the Reliability Coordinator, Transmission Operator, and Balancing Authority.



Third, the use of word “capability” in the proposed Reliability Standard ensures the standard is technologically agnostic, allowing for future changes in technology and advances in communication to be employed without requiring a change to the Reliability Standard. Lastly, the proposed Reliability Standard expands the applicability of the Reliability Standard to cover Distribution Providers and Generator Operators. These functional entities are now required to have an Interpersonal Communication capability with the listed entities in Requirements R7 and R8, respectively.

**2. Proposed Reliability Standards must be applicable only to users, owners and operators of the bulk power system, and must be clear and unambiguous as to what is required and who is required to comply.<sup>3</sup>**

The proposed Reliability Standard applies to Transmission Operators, Balancing Authorities, Reliability Coordinators, Distribution Providers, and Generator Operators. The proposed Reliability Standard is clear and unambiguous as to what is required and who is required to comply. As noted above, the Requirements use two newly defined terms to clearly define the required capability needed to support the Requirements. The Requirements also clearly provide the communication capability necessary for each applicable entity.

**3. A proposed Reliability Standard must include clear and understandable consequences and a range of penalties (monetary and/or non-monetary) for a violation.<sup>4</sup>**

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<sup>3</sup> Order No. 672 at P 322. The proposed Reliability Standard may impose a requirement on any user, owner, or operator of such facilities, but not on others.

Order No. 672 at P 325. The proposed Reliability Standard should be clear and unambiguous regarding what is required and who is required to comply. Users, owners, and operators of the Bulk-Power System must know what they are required to do to maintain reliability.

<sup>4</sup> Order No. 672 at P 326. The possible consequences, including range of possible penalties, for violating a proposed Reliability Standard should be clear and understandable by those who must comply.

The Violation Risk Factors (“VRF”) and Violation Severity Levels (“VSL”) for the proposed Reliability Standard comport with NERC and Commission guidelines related to their assignment. The assignment of the severity level for each VSL is consistent with the corresponding Requirement and will ensure uniformity and consistency in the determination of penalties. The VSLs do not use any ambiguous terminology, and support uniformity and consistency in the determination of similar penalties for similar violations. For these reasons, the proposed Reliability Standard includes clear and understandable consequences.

**4. A proposed Reliability Standard must identify clear and objective criterion or measure for compliance, so that it can be enforced in a consistent and non-preferential manner.<sup>5</sup>**

The proposed Reliability Standard contains Measures that support the Requirements by clearly identifying what is required and how the requirements will be measured for compliance. The Measures, contained in Section C of the proposed COM-001-2 Reliability Standard, are as follows:

**M1.** Each Reliability Coordinator shall have and provide upon request evidence that it has Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R1.)

**M2.** Each Reliability Coordinator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to:

- physical assets, or

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<sup>5</sup> Order No. 672 at P 327. There should be a clear criterion or measure of whether an entity is in compliance with a proposed Reliability Standard. It should contain or be accompanied by an objective measure of compliance so that it can be enforced and so that enforcement can be applied in a consistent and non-preferential manner.

- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R2.)

**M3.** Each Transmission Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority, Distribution Provider, and Generator Operator within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously or synchronously connected, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communication. (R3.)

**M4.** Each Transmission Operator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously and synchronously connected, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R4.)

**M5.** Each Balancing Authority shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator and Generator Operator that operates Facilities within its Balancing Authority Area, each Distribution Provider within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R5.)

**M6.** Each Balancing Authority shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator that operates Facilities within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R6.)

**M7.** Each Distribution Provider shall have and provide upon request evidence that it has

Interpersonal Communication capability with its Transmission Operator and its Balancing Authority, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R7.)

**M8.** Each Generator Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Balancing Authority and its Transmission Operator, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R8.)

**M9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it tested, at least once each calendar month, its Alternative Interpersonal Communication capability designated in Requirements R2, R4, or R6. If the test was unsuccessful, the entity shall have and provide upon request evidence that it initiated action to repair or designated a replacement Alternative Interpersonal Communication capability within 2 hours. Evidence could include, but is not limited to: dated and time-stamped test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R9.)

**M10.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it notified entities as identified in Requirements R1, R3, and R5, respectively within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasted 30 minutes or longer. Evidence could include, but is not limited to: dated and time-stamped test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R10.)

**M11.** Each Distribution Provider and Generator Operator that detected a failure of its Interpersonal Communication capability shall have and provide upon request evidence that it consulted with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine mutually agreeable action to restore the Interpersonal Communication capability. Evidence could include, but is not limited to: dated operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R11.)

**5. Proposed Reliability Standards should achieve a reliability goal effectively and efficiently — but do not necessarily have to reflect “best practices” without regard to implementation cost or historical regional infrastructure design.<sup>6</sup>**

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<sup>6</sup> Order No. 672 at P 328. The proposed Reliability Standard does not necessarily have to reflect the optimal method, or “best practice,” for achieving its reliability goal without regard to implementation cost or historical regional infrastructure design. It should however achieve its reliability goal effectively and efficiently.

The proposed Reliability Standard achieves the reliability goal effectively and efficiently in accordance with Order No. 672. The proposed Reliability Standard establishes communications capabilities and redundant communications capabilities necessary to maintain reliability. For certain applicable entities, i.e., Distribution Providers and Generator Operators, a redundant capability has not been mandated, but a Requirement to determine a mutually agreeable action for the restoration of its Interpersonal Communication capability has been included for when the applicable entity detects a failure of its Interpersonal Communication capability. This construct ensures that the communications capabilities necessary to maintain reliability are reflected in the proposed Reliability Standard while striking an appropriate balance on which applicable entities must have redundant capabilities as part of the mandatory Reliability Standard.

**6. Proposed Reliability Standards cannot be “lowest common denominator,” i.e., cannot reflect a compromise that does not adequately protect Bulk-Power System reliability. Proposed Reliability Standards can consider costs to implement for smaller entities, but not at consequences of less than excellence in operating system reliability.<sup>7</sup>**

The proposed Reliability Standard does not reflect a “lowest common denominator” approach. On the contrary, the Reliability Standard establishes requirements for mandatory redundancies in communications capabilities necessary to maintain reliability and the testing of

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<sup>7</sup> Order No. 672 at P 329. The proposed Reliability Standard must not simply reflect a compromise in the ERO’s Reliability Standard development process based on the least effective North American practice — the so-called “lowest common denominator” — if such practice does not adequately protect Bulk-Power System reliability. Although FERC will give due weight to the technical expertise of the ERO, we will not hesitate to remand a proposed Reliability Standard if we are convinced it is not adequate to protect reliability.

Order No. 672 at P 330. A proposed Reliability Standard may take into account the size of the entity that must comply with the Reliability Standard and the cost to those entities of implementing the proposed Reliability Standard. However, the ERO should not propose a “lowest common denominator” Reliability Standard that would achieve less than excellence in operating system reliability solely to protect against reasonable expenses for supporting this vital national infrastructure. For example, a small owner or operator of the Bulk-Power System must bear the cost of complying with each Reliability Standard that applies to it.

those communications capabilities. The proposed Reliability Standard does not represent a compromise that does not adequately protect Bulk-Power System reliability.

- 7. Proposed Reliability Standards must be designed to apply throughout North America to the maximum extent achievable with a single Reliability Standard while not favoring one geographic area or regional model. It should take into account regional variations in the organization and corporate structures of transmission owners and operators, variations in generation fuel type and ownership patterns, and regional variations in market design if these affect the proposed Reliability Standard.<sup>8</sup>**

The proposed Reliability Standard applies throughout North America and does not favor one geographic area or regional model.

- 8. Proposed Reliability Standards should cause no undue negative effect on competition or restriction of the grid beyond any restriction necessary for reliability.<sup>9</sup>**

Proposed Reliability Standard COM-001-2 has no undue negative effect on competition. Since the proposed Reliability Standard only concerns communications capabilities, it also does not unreasonably restrict transmission or generation operation on the Bulk-Power System.

- 9. The implementation time for the proposed Reliability Standard is reasonable.<sup>10</sup>**

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<sup>8</sup> Order No. 672 at P 331. A proposed Reliability Standard should be designed to apply throughout the interconnected North American Bulk-Power System, to the maximum extent this is achievable with a single Reliability Standard. The proposed Reliability Standard should not be based on a single geographic or regional model but should take into account geographic variations in grid characteristics, terrain, weather, and other such factors; it should also take into account regional variations in the organizational and corporate structures of transmission owners and operators, variations in generation fuel type and ownership patterns, and regional variations in market design if these affect the proposed Reliability Standard.

<sup>9</sup> Order No. 672 at P 332. As directed by section 215 of the FPA, FERC itself will give special attention to the effect of a proposed Reliability Standard on competition. The ERO should attempt to develop a proposed Reliability Standard that has no undue negative effect on competition. Among other possible considerations, a proposed Reliability Standard should not unreasonably restrict available transmission capability on the Bulk-Power System beyond any restriction necessary for reliability and should not limit use of the Bulk-Power System in an unduly preferential manner. It should not create an undue advantage for one competitor over another.

<sup>10</sup> Order No. 672 at P 333. In considering whether a proposed Reliability Standard is just and reasonable, FERC will consider also the timetable for implementation of the new requirements, including how the proposal balances any urgency in the need to implement it against the reasonableness of the time allowed for those who must comply to develop the necessary procedures, software, facilities, staffing or other relevant capability.

The proposed effective date for the Reliability Standard appropriately balances the urgency to implement the standard against the time needed by those who must comply to develop necessary procedures and capabilities in support of the proposed Reliability Standard. To allow entities adequate and reasonable time to comply with the proposed Reliability Standard, the effective date is first day of the second calendar quarter beyond the date that the proposed Reliability Standard is approved.

**10. The Reliability Standard was developed in an open and fair manner and in accordance with the Commission-approved Reliability Standard development process.<sup>11</sup>**

The proposed Reliability Standard was developed in accordance with NERC's Commission-approved, ANSI- accredited processes for developing and approving Reliability Standards. Exhibit M includes a summary of the Reliability Standard development proceedings, and details the processes followed to develop the Reliability Standard. These processes included, among other things, multiple comment periods, pre-ballot review periods, and balloting periods. Additionally, all meetings of the standard drafting team were properly noticed and open to the public.

**11. NERC must explain any balancing of vital public interests in the development of proposed Reliability Standards.<sup>12</sup>**

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<sup>11</sup> Order No. 672 at P 334. Further, in considering whether a proposed Reliability Standard meets the legal standard of review, we will entertain comments about whether the ERO implemented its Commission-approved Reliability Standard development process for the development of the particular proposed Reliability Standard in a proper manner, especially whether the process was open and fair. However, we caution that we will not be sympathetic to arguments by interested parties that choose, for whatever reason, not to participate in the ERO's Reliability Standard development process if it is conducted in good faith in accordance with the procedures approved by FERC.

<sup>12</sup> Order No. 672 at P 335. Finally, we understand that at times development of a proposed Reliability Standard may require that a particular reliability goal must be balanced against other vital public interests, such as environmental, social and other goals. We expect the ERO to explain any such balancing in its application for approval of a proposed Reliability Standard.

NERC has identified no competing public interests regarding the request for approval of the proposed Reliability Standard. No comments were received that indicated the proposed Reliability Standards conflict with other vital public interests.

**12. Proposed Reliability Standards must consider any other appropriate factors.<sup>13</sup>**

No other factors relevant to whether the proposed Reliability Standard is just and reasonable were identified.

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<sup>13</sup> Order No. 672 at P 323. In considering whether a proposed Reliability Standard is just and reasonable, we will consider the following general factors, as well as other factors that are appropriate for the particular Reliability Standard proposed.



**Exhibit G**

**Order No. 672 Criteria COM-002-4**

## Exhibit G

### Order No. 672 Criteria

In Order No. 672,<sup>1</sup> the Commission identified a number of criteria it will use to analyze Reliability Standards proposed for approval to ensure they are just, reasonable, not unduly discriminatory or preferential, and in the public interest. The discussion below identifies these factors and explains how the proposed Reliability Standard has met or exceeded the criteria:

**1. Proposed Reliability Standards must be designed to achieve a specified reliability goal and must contain a technically sound means to achieve that goal.<sup>2</sup>**

Proposed Reliability Standard COM-002-4 achieves the specific reliability goal of improving communications for the issuance of Operating Instructions. Proposed COM-002-4 accomplishes this purpose by requiring the use of predefined communications protocols to reduce the possibility of a miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System. The proposed Reliability Standard combines proposed Reliability Standard COM-002-3 and the former draft COM-003-1 into a single standard that addresses communications protocols for operating personnel in Emergency and non-emergency conditions.

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<sup>1</sup> *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

<sup>2</sup> Order No. 672 at P 321. The proposed Reliability Standard must address a reliability concern that falls within the requirements of section 215 of the FPA. That is, it must provide for the reliable operation of Bulk-Power System facilities. It may not extend beyond reliable operation of such facilities or apply to other facilities. Such facilities include all those necessary for operating an interconnected electric energy transmission network, or any portion of that network, including control systems. The proposed Reliability Standard may apply to any design of planned additions or modifications of such facilities that is necessary to provide for reliable operation. It may also apply to Cybersecurity protection.

Order No. 672 at P 324. The proposed Reliability Standard must be designed to achieve a specified reliability goal and must contain a technically sound means to achieve this goal. Although any person may propose a topic for a Reliability Standard to the ERO, in the ERO's process, the specific proposed Reliability Standard should be developed initially by persons within the electric power industry and community with a high level of technical expertise and be based on sound technical and engineering criteria. It should be based on actual data and lessons learned from past operating incidents, where appropriate. The process for ERO approval of a proposed Reliability Standard should be fair and open to all interested persons.

In proposed COM-002-4, the same protocols are required to be used in connection with the issuance of Operating Instructions for *all* operating conditions – *i.e.*, non-emergency and Emergency communications. An entity should expect its operating personnel that issue and receive Operating Instructions to use the entity’s documented communication protocols for the issuance and receipt of all Operating Instructions. An entity reinforces its use of the documented communication protocols through training, assessing adherence by its operating personnel to the documented communication protocols, and providing feedback to those operating personnel on their use of the protocols. During Emergencies, operating personnel must use the documented communication protocols for three-part communications without exception, since clear communication is essential to providing swift and coordinated response to events that are directly impacting the reliability of the Bulk Electric System. In addition to Balancing Authorities, Reliability Coordinators, and Transmission Operators, proposed COM-002-4 applies to Distribution Providers and Generator Operators. The standard drafting team added these entities in the Applicability section because they can be and in many cases are the recipients of Operating Instructions.

**2. Proposed Reliability Standards must be applicable only to users, owners and operators of the bulk power system, and must be clear and unambiguous as to what is required and who is required to comply.<sup>3</sup>**

The proposed Reliability Standard applies to Balancing Authorities, Reliability Coordinators, Transmission Operators, Distribution Providers, and Generator Operators. The

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<sup>3</sup> Order No. 672 at P 322. The proposed Reliability Standard may impose a requirement on any user, owner, or operator of such facilities, but not on others.

Order No. 672 at P 325. The proposed Reliability Standard should be clear and unambiguous regarding what is required and who is required to comply. Users, owners, and operators of the Bulk-Power System must know what they are required to do to maintain reliability.

proposed Reliability Standard is clear and unambiguous as to what is required and who is required to comply. The proposed Reliability Standard proposes a clear set of required protocols (Requirement R1). It also mandates initial training on the protocols (Requirements R2 and R3). As noted above, entities are further required to assess their protocols for effectiveness and assess their operating personnel's adherence to the documented communication protocols (Requirement R4).

The language of Requirement R4 clearly and explicitly delineates the obligations and expectations entities must meet. Requirement R4 requires that each entity maintain a successful program and measure its own adherence to its documented communications protocols. Requirement R4 intentionally does not specify a specific type of review to execute or mandate that corrective actions be taken. Entities are better equipped to design an appropriate program to meet their own operating environment and determine whether a corrective action is necessary. Because almost all entities have these types of programs in place today, this approach also provides an efficient means of establishing an assessment program by building on the programs currently in use. The primary purpose of Requirement R4 is to provide assurance that an entity is using its documented communications protocols, engaging its operators, and periodically reviewing its communications for improvement. The program required in Requirement R4 requires applicable entities to conduct retrospective review of their communications practices based on predefined documented communications protocols through an assessment design of their choosing and requires corrective actions be taken if the entity deems a corrective action necessary.

**3. A proposed Reliability Standard must include clear and understandable consequences and a range of penalties (monetary and/or non-monetary) for a violation.<sup>4</sup>**

The Violation Risk Factor (“VRF”) and Violation Severity Level (“VSL”) for the proposed Reliability Standard comport with NERC and Commission guidelines related to their assignment. The assignment of the severity level for the VSLs is consistent with the corresponding Requirement and will ensure uniformity and consistency in the determination of penalties. The VSLs do not use any ambiguous terminology, and supports uniformity and consistency in the determination of similar penalties for similar violations. For these reasons, the proposed Reliability Standard includes clear and understandable consequences.

**4. A proposed Reliability Standard must identify clear and objective criterion or measure for compliance, so that it can be enforced in a consistent and non-preferential manner.<sup>5</sup>**

The proposed Reliability Standard contains Measures that support the Requirements by clearly identifying what is required and how the requirements will be measured for compliance. The Measures, contained in Section C of the proposed COM-002-4 Reliability Standard, are as follows:

**M1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1.

**M2.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its initial training records related to its documented communications protocols developed for Requirement R1 such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R2.

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<sup>4</sup> Order No. 672 at P 326. The possible consequences, including range of possible penalties, for violating a proposed Reliability Standard should be clear and understandable by those who must comply.

<sup>5</sup> Order No. 672 at P 327. There should be a clear criterion or measure of whether an entity is in compliance with a proposed Reliability Standard. It should contain or be accompanied by an objective measure of compliance so that it can be enforced and so that enforcement can be applied in a consistent and non-preferential manner.

**M3.** Each Distribution Provider and Generator Operator shall provide its initial training records for its operating personnel such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R3.

**M4.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence of its assessments, including spreadsheets, logs or other evidence of feedback, findings of effectiveness and any changes made to its documented communications protocols developed for Requirement R1 in fulfillment of Requirement R4. The entity shall provide, as part of its assessment, evidence of any corrective actions taken where an operating personnel's non-adherence to the protocols developed in Requirement R1 is the sole or partial cause of an Emergency and for all other instances where the entity determined that it was appropriate to take a corrective action to address deviations from the documented protocols developed in Requirement R1.

**M5.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issued an oral two-party, person-to-person Operating Instruction during an Emergency, excluding oral single-party to multiple-party burst Operating Instructions, shall have evidence that the issuer either: 1) confirmed that the response from the recipient of the Operating Instruction was correct; 2) reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver; or 3) took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver. Such evidence could include, but is not limited to, dated and time-stamped voice recordings, or dated and time-stamped transcripts of voice recordings, or dated operator logs in fulfillment of Requirement R5.

**M6.** Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that was the recipient of an oral two-party, person-to-person Operating Instruction during an Emergency, excluding oral single-party to multiple-party burst Operating Instructions, shall have evidence to show that the recipient either repeated, not necessarily verbatim, the Operating Instruction and received confirmation from the issuer that the response was correct, or requested that the issuer reissue the Operating Instruction in fulfillment of Requirement R6. Such evidence may include, but is not limited to, dated and time-stamped voice recordings (if the entity has such recordings), dated operator logs, an attestation from the issuer of the Operating Instruction, memos or transcripts.

**M7.** Each Balancing Authority, Reliability Coordinator and Transmission Operator that issued a written or oral single or multiple-

party burst Operating Instruction during an Emergency shall provide evidence that the Operating Instruction was received by at least one receiver. Such evidence may include, but is not limited to, dated and time-stamped voice recordings (if the entity has such recordings), dated operator logs, electronic records, memos or transcripts.

**5. Proposed Reliability Standards should achieve a reliability goal effectively and efficiently — but do not necessarily have to reflect “best practices” without regard to implementation cost or historical regional infrastructure design.<sup>6</sup>**

The proposed Reliability Standard achieves the reliability goal effectively and efficiently in accordance with Order No. 672. The proposed Reliability Standard expands on the mandated documented protocols to be used through Requirement R1, but does not provide an exhaustive list of all possible protocols that could be employed by an entity as part of its overall documented communications protocols. This achieves the reliability goal of tightening communications protocols while allowing entities to add additional protocols, as necessary and appropriate for the operating environment. NERC has also developed a guideline of current industry practices on system operator verbal communications (Exhibit Q) to assist entities in developing “best practices” to support their documented communications protocols. Further, the requirements for training are tailored to only *initial* training since entities currently conduct ongoing training pursuant to the PER-005 Reliability Standard. In addition, Requirement R4 includes flexibility for entities to design their assessment process and determine corrective actions necessary to address deviations from the protocols in order to leverage the existing processes each entity utilizes today to accomplish the same tasks. In aggregate, COM-002-4 provides an efficient and effective means to achieve the reliability goal of improving communications for the issuance of Operating Instructions.

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<sup>6</sup> Order No. 672 at P 328. The proposed Reliability Standard does not necessarily have to reflect the optimal method, or “best practice,” for achieving its reliability goal without regard to implementation cost or historical regional infrastructure design. It should however achieve its reliability goal effectively and efficiently.

**6. Proposed Reliability Standards cannot be “lowest common denominator,” *i.e.*, cannot reflect a compromise that does not adequately protect Bulk-Power System reliability. Proposed Reliability Standards can consider costs to implement for smaller entities, but not at consequences of less than excellence in operating system reliability.<sup>7</sup>**

The proposed Reliability Standard does not reflect a “lowest common denominator” approach. This proposed Reliability Standard is the result of multiple industry ballots and revisions that reflect an active comment and response process between industry and the standard drafting team. NERC held a technical conference and did considerable amounts of outreach to regulatory staff, industry and NERC’s technical committees in order to arrive at the final language in the proposed Reliability Standard. The standard drafting team also received input from the NERC Board of Trustees, NERC’s Reliability Issues Steering Committee (“RISC”), the Independent Experts Review Panel, and NERC management during the standard development process. The result of these efforts was a stronger final proposed Reliability Standard that protects the Reliability of the Bulk-Power System, achieved industry approval, and provides means of improving the effectiveness of communications practices.

**7. Proposed Reliability Standards must be designed to apply throughout North America to the maximum extent achievable with a single Reliability Standard while not favoring one geographic area or regional model. It should take into account regional variations in the organization and corporate structures of transmission owners and operators, variations in generation fuel type and ownership patterns,**

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<sup>7</sup> Order No. 672 at P 329. The proposed Reliability Standard must not simply reflect a compromise in the ERO’s Reliability Standard development process based on the least effective North American practice — the so-called “lowest common denominator” — if such practice does not adequately protect Bulk-Power System reliability. Although FERC will give due weight to the technical expertise of the ERO, we will not hesitate to remand a proposed Reliability Standard if we are convinced it is not adequate to protect reliability.

Order No. 672 at P 330. A proposed Reliability Standard may take into account the size of the entity that must comply with the Reliability Standard and the cost to those entities of implementing the proposed Reliability Standard. However, the ERO should not propose a “lowest common denominator” Reliability Standard that would achieve less than excellence in operating system reliability solely to protect against reasonable expenses for supporting this vital national infrastructure. For example, a small owner or operator of the Bulk-Power System must bear the cost of complying with each Reliability Standard that applies to it.



**and regional variations in market design if these affect the proposed Reliability Standard.<sup>8</sup>**

The proposed Reliability Standard applies throughout North America and does not favor one geographic area or regional model.

**8. Proposed Reliability Standards should cause no undue negative effect on competition or restriction of the grid beyond any restriction necessary for reliability.<sup>9</sup>**

Proposed Reliability Standard COM-002-4 has no undue negative effect on competition. Since the proposed Reliability Standard only concerns the use of documented protocols for communication, it also does not unreasonably restrict transmission or generation operation on the Bulk-Power System.

**9. The implementation time for the proposed Reliability Standard is reasonable.<sup>10</sup>**

The proposed effective date for the Reliability Standard appropriately balance the urgency to implement the standard against the time needed by those who must comply to develop necessary procedures and protocols in support of the proposed Reliability Standard. To allow covered Entities adequate and reasonable time to comply with the proposed Reliability Standard, the effective date is twelve (12) months following the date that the standard is approved.

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<sup>8</sup> Order No. 672 at P 331. A proposed Reliability Standard should be designed to apply throughout the interconnected North American Bulk-Power System, to the maximum extent this is achievable with a single Reliability Standard. The proposed Reliability Standard should not be based on a single geographic or regional model but should take into account geographic variations in grid characteristics, terrain, weather, and other such factors; it should also take into account regional variations in the organizational and corporate structures of transmission owners and operators, variations in generation fuel type and ownership patterns, and regional variations in market design if these affect the proposed Reliability Standard.

<sup>9</sup> Order No. 672 at P 332. As directed by section 215 of the FPA, FERC itself will give special attention to the effect of a proposed Reliability Standard on competition. The ERO should attempt to develop a proposed Reliability Standard that has no undue negative effect on competition. Among other possible considerations, a proposed Reliability Standard should not unreasonably restrict available transmission capability on the Bulk-Power System beyond any restriction necessary for reliability and should not limit use of the Bulk-Power System in an unduly preferential manner. It should not create an undue advantage for one competitor over another.

<sup>10</sup> Order No. 672 at P 333. In considering whether a proposed Reliability Standard is just and reasonable, FERC will consider also the timetable for implementation of the new requirements, including how the proposal balances any urgency in the need to implement it against the reasonableness of the time allowed for those who must comply to develop the necessary procedures, software, facilities, staffing or other relevant capability.

**10. The Reliability Standard was developed in an open and fair manner and in accordance with the Commission-approved Reliability Standard development process.<sup>11</sup>**

The proposed Reliability Standard was developed in accordance with NERC's Commission-approved, ANSI- accredited processes for developing and approving Reliability Standards. Exhibit N includes a summary of the Reliability Standard development proceedings, and details the processes followed to develop the Reliability Standard. These processes included, among other things, multiple comment periods, pre-ballot review periods, and balloting periods. Additionally, all meetings of the standard drafting team were properly noticed and open to the public.

**11. NERC must explain any balancing of vital public interests in the development of proposed Reliability Standards.<sup>12</sup>**

NERC has identified no competing public interests regarding the request for approval of the proposed Reliability Standard. No comments were received that indicated the proposed Reliability Standards conflict with other vital public interests.

**12. Proposed Reliability Standards must consider any other appropriate factors.<sup>13</sup>**

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<sup>11</sup> Order No. 672 at P 334. Further, in considering whether a proposed Reliability Standard meets the legal standard of review, we will entertain comments about whether the ERO implemented its Commission-approved Reliability Standard development process for the development of the particular proposed Reliability Standard in a proper manner, especially whether the process was open and fair. However, we caution that we will not be sympathetic to arguments by interested parties that choose, for whatever reason, not to participate in the ERO's Reliability Standard development process if it is conducted in good faith in accordance with the procedures approved by FERC.

<sup>12</sup> Order No. 672 at P 335. Finally, we understand that at times development of a proposed Reliability Standard may require that a particular reliability goal must be balanced against other vital public interests, such as environmental, social and other goals. We expect the ERO to explain any such balancing in its application for approval of a proposed Reliability Standard.

<sup>13</sup> Order No. 672 at P 323. In considering whether a proposed Reliability Standard is just and reasonable, we will consider the following general factors, as well as other factors that are appropriate for the particular Reliability Standard proposed.

No other factors relevant to whether the proposed Reliability Standard is just and reasonable were identified.

**Exhibit H**

**Rationale and Technical Justification COM-002-4**

# Project 2007-02, COM-002-4 Operating Personnel Communications Protocols Rationale and Technical Justification

## Background and Justification for COM-002-4 Requirements

The purpose of the proposed COM-002-4 Reliability Standard is to improve communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES). The proposed Reliability Standard combines COM-002-3 and former draft COM-003-1 into one standard that addresses communications protocols for operating personnel in Emergency, alert and non-emergency conditions. The Operating Personnel Communications Protocols Standard Drafting Draft (OPCP SDT) believes that one communications protocols standard that addresses emergency and non-emergency situations will improve communications because operating personnel will not need to refer to a different set of protocols during the different operating conditions. A single standard will improve consistency of communications and mitigate confusion during stressful emergency situations. As a result of the combination, the standard has been numbered as COM-002-4 to maintain the consecutive numbering of the standards (e.g., COM-001, COM-002) since the combined standard will replace COM-002-2 and COM-002-3, where necessary.

In preparing COM-002-4, the OPCS SDT considered industry comments and also drew from a variety of other resources including:

- the NERC Board of Trustees' November 7<sup>th</sup>, 2013 Resolution for Operating Personnel Communication Protocols, discussed below;<sup>1</sup>
- a survey distributed to a sample of industry experts by the Director of Standards Development and the Standards Committee Chair requesting feedback on the draft standard in posting 8;
- consultation on the use of the term "Reliability Directive" in the COM-002-4 standard with the Project 2007-03 Real-time Transmission Operations Standard Drafting Team and the Project 2006-06 Reliability Coordination Standard Drafting Team; and
- a full-day "Communications in Operations" technical conference held February 14-15, 2013 to gather industry input on a consensus communications standard approach.

<sup>1</sup> *Resolution for Agenda Item 8.i: Operating Personnel Communication Protocols*, NERC Board of Trustees Meeting, Nov. 7, 2013, available at:

<http://www.nerc.com/gov/bot/Board%20of%20Trustees%20Quarterly%20Meetings/Board%20COM%20Resolution%2011.7.13%20v1%20AS%20APPROVED%20BY%20BOARD.pdf>.

### *Structure of the COM-002-4 Draft*

In response to the Board of Trustees direction to draft a combined COM-002 and COM-003 standard that addresses, at a minimum certain protocols, NERC staff prepared a “strawman” draft standard and provided it as a starting point for the standard drafting team to edit and adjust as it deemed appropriate. The structure of posting 8 of COM-002-4 reflects the minimum elements listed by the Board in its resolution (see below for detail on the Board resolution). The structure also allows for the implementation of a compliance/enforcement approach also described by the Board’s resolution that maintains the current requirement that entities should be accountable for incorrect use of communication protocols in connection with emergency communications, without exception.

In COM-002-4, the same protocols are required to be used in connection with the issuance of Operating Instructions for all operating conditions – i.e. non-emergency, alert, and Emergency communications. However, the standard uses the phrase “Operating Instruction during an Emergency” in certain Requirements (R5, R6, R7) to provide a demarcation for what is subject to a zero-tolerance compliance/enforcement approach and what it not. This is necessary to allow the creation of Violation Severity Levels for each compliance/enforcement approach. Where “Operating Instruction during an Emergency” is not used, an entity will be assessed under a non-zero tolerance compliance/enforcement approach that focuses on whether an entity met the initial training Requirement (either R2 or R3) and/or whether an entity performed the assessment and took corrective actions according to Requirement R4.

Separately listing out Requirements R5, R6, and R7 and using “Operating Instruction during an Emergency” in them does not require a different set of protocols to be used during Emergencies or mandate the identification of a communication as an “Operating Instruction during an Emergency.” The same protocols are required to be used in connection with the issuance of Operating Instructions for all operating conditions. Their use is measured for compliance/enforcement differently using the operating condition as an indicator of which compliance/enforcement approach applies.

For example, an entity should expect its operating personnel that issue and receive Operating Instructions to use the documented communication protocols for all Operating Instructions. The way that they reinforce that with its operating personnel is through training, assessing adherence by its operating personnel to the documented communication protocols and providing feedback those operating personnel on their use of the protocols. During Emergencies, operating personnel must use the communication protocol without exception, since clear communication is essential to providing swift and coordinated response to events that are directly impacting the reliability of the BES.

### *Definition of “Operating Instruction”*

The current draft of COM-002-4 does not include the term “Reliability Directive,” which was included in previous postings as a subset within the definition of “Operating Instruction.”

The proposed definition of “Operating Instruction” in COM-002-4 reads as follows:

A command by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. (A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.)

The OPCP SDT debated whether to remove the term “Reliability Directive” in response to comments suggesting it should be removed from the definition of “Operating Instruction” and in light of FERC’s issuance of the TOP/IRO NOPR, which proposes to remand the definition of “Reliability Directive.” A detailed description of the FERC action is included in the section below titled “Developments Following Posting 7.”

In order to avoid unnecessary complications, the OPCP SDT consulted on the use of the term “Reliability Directive” in the COM-002-4 standard with the Project 2007-03 Real-time Transmission Operations and the Project 2006-06 Reliability Coordination Standard Drafting Teams to ask whether they believed removal of the term would cause concerns. Both teams agreed that the COM-002-4 standard did not need to require a protocol to identify Reliability Directives as such and that the definition of Operating Instruction could be used absent the term Reliability Directive in COM-002-4 to set the protocols. The OPCP SDT ultimately voted to remove the term and incorporate the phrase “Operating Instruction during an Emergency” in the Requirements where it was needed to preserve the structure created to ensure that only an Operating Instruction issued during an Emergency is subject to a zero-tolerance compliance/enforcement approach.

A “command” as used in the definition refers to both oral and written commands by operating personnel. In the requirements of COM-002-4, the OPCP SDT has specified “oral” or “written” as needed to define which Operating Instructions are covered by the requirement. The definition continues to clarify that general discussions are not considered Operating Instructions.

### *Applicability*

In addition to Balancing Authorities, Reliability Coordinators, and Transmission Operators, the proposed standard applies to Distribution Providers and Generator Operators. The OPCP SDT added these Functional Entities in the Applicability section because they can be and are on the receiving end of some Operating Instructions. The OPCP SDT determined that it would leave a gap to not cover them in a communications standard that addresses operating personnel. The addition of Distribution Providers as an applicable entity also responds to FERC’s directive in Order No. 693 to add them as applicable entities to the communications standard.

Recognizing that Generator Operators and Distribution Providers typically only receive Operating Instructions, the OPCP SDT proposed that only Requirements R3 and R6 apply to these Functional Entities. In response to the comments and the NERC Board Resolution, the OPCP SDT revised the standard to clarify that DPs and GOPs are required to a) train their operators prior to receiving an Operating Instruction, and b) use three part communication when receiving an Operating Instruction during an Emergency. In addition, the measures have been revised to show that a DP or GOP can demonstrate compliance for use of three-part communication when receiving an Operating Instruction during an Emergency by providing an attestation from the issuer of the Operating Instruction (i.e., a voice recording is not required). If a DP or GOP never receives an Operating Instruction, no requirement in COM-002-4 would apply to them. In both Requirements R3 and R6, qualifying language that discusses the “receipt” of an Operating Instruction is included to make this point clear. This construct ensures that appropriate entities are trained and able to use three-part communication for reliability purposes, while seeking to minimize the compliance burden on DPs and GOPs.

### *Requirements in COM-002-4*

#### **Requirement R1**

Requirement R1 requires entities that can both issue and receive Operating Instructions to have documented communications protocols that include a minimum set of elements, outlined in Parts 1.1 through 1.6 of the requirement. Because Operating Instructions affect Facilities and Elements of the Bulk Electric System, the communication of those Operating Instructions must be understood by all involved parties, especially when those communications occur between Functional Entities. An EPRI study reviewed nearly 400 switching mishaps by electric utilities and found that roughly 19% of errors (generally classified as loss of load, breach of safety, or equipment damage) were due to communication failures.<sup>2</sup> This was nearly identical to another study of dispatchers from 18 utilities representing nearly 2000 years of operating experience that found that 18% of the operators’ errors were due to communication problems.<sup>3</sup> The necessary protocols include the use of the English language unless agreed to otherwise (except for internal operations), protocols for use of a written or oral single-party to multiple-party burst Operating Instruction, specification of instances that require time identification, nomenclature for Transmission interface Elements, and three-part communications (including a protocol for taking an alternate action if a response is not received or if the Operating Instruction was not understood by the receiver).

The OPCP SDT drafted Requirement R1 to ensure consistency among communications protocols while also allowing flexibility for entities to develop additional communications protocols. The OPCP SDT determined that the inclusion of the elements in Parts 1.1 through 1.6 are necessary to improve communications protocols but are not overly prescriptive. The OPCP SDT determined that this

<sup>2</sup> Beare, A., Taylor, J. *Field Operation Power Switching Safety*, WO2944-10, Electric Power Research Institute.

<sup>3</sup> Bilke, T., *Cause and prevention of human error in electric utility operations*, Colorado State University, 1998.



approach is the best way to promote effective communications while maintaining flexibility for entities to include additional communications protocols based on its own operating environment.

It should be noted that requiring the use of alphanumeric clarifiers has been removed in this posting. Several entities have provided the comment that it is unnecessary to include them in a requirement, and pointed to the fact that the lack of use has not been shown to contribute to any investigated event. The drafting team agreed to remove the term, and NERC will continue to monitor events to determine if these clarifiers should be added in a future modification to the standard.

The term *documented communication protocols* in R1 refers to a set of required protocols specific to the Functional Entity and the Functional Entities they must communicate with. An entity should include as much detail as it believes necessary in their documented protocols, but they must address all of the applicable parts of Requirement R1. Where an entity does not already have a set of documented protocols that meet the parts of Requirement R1, the entity must develop the necessary communications protocols. Entities may also adopt the documented protocols of another entity as its own communications protocols, but the entity must maintain its own set of documented communications protocols to meet Requirement R1.

On September 19, 2012, the NERC Operating Committee issued a Reliability Guideline entitled: “System Operator Verbal Communications – Current Industry Practices.” As stated on page one, the purpose of the Reliability Guideline “. . . is to document and share current verbal BES communications practices and procedures from across the industry that have been found to enhance the effectiveness of system operator communications programs.” This guideline serves as an additional source of information on best practices that entities can draw on in creating the documented communications protocols.

Each part of Requirement R1 is discussed below:

*1.1. Require its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.*

The OPCP SDT has included this part to carry forward the same use of English language included in COM-001-1.1, Requirement R4. Retirement of this Requirement in COM-001-1.1 was specifically referred to this Project 2007-02. The requirement continues to permit the issuer and receiver to use an agreed to alternate language. This has been retained since use of an alternate language on a case-by-case basis may serve to better facilitate effective communications where the use of English language may create additional opportunities for miscommunications. Part 1.1 requires the use of English language when issuing oral or written (e.g. switching orders) Operating Instructions. This creates a standard language (unless agreed to otherwise) for use when issuing commands that could change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. It also clarifies that an alternate language can be used internally

within the organization. The phrase has been modified slightly from the language in COM-001-1.1, Requirement R4 to incorporate the term “Operating Instruction,” which defines the communications that require the use of the documented communications protocols.

*1.2. Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions:*

- *Confirm the receiver’s response if the repeated information is correct.*
- *Reissue the Operating Instruction if the repeated information is incorrect, if the receiver does not issue a response, or if requested by the receiver.*
- *Take an alternative if a response is not received or if the Operating Instruction was not understood by the receiver.*

*1.3. Require the receiver of an oral two-party, person-to-person Operating Instruction to take one of the following actions:*

- *Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct.*
- *Request that the issuer reissue the Operating Instruction.*

The OPCP SDT has included part 1.2 to require communications protocols for the use of three-part communications for oral two-party, person-to-person Operating Instructions *by the issuer*. The OPCP SDT has included part 1.3 to require communications protocols for the use of three-part communications for oral two-party, person-to-person Operating Instructions *by the receiver*. This carries forward the requirement to use three-part communications in COM-002-2 and COM-002-3 and also adds an option in part 1.2 for the issuer to take an alternative action to resolve the issue if the receiver does not respond or understand the Operating Instruction. The addition of this third bullet serves to clarify in the requirement language itself that the issuing entity can take alternate action in lieu of reissuance if necessary.

The reliability benefits of using three-part communication (Requirement R1, parts 1.2 and 1.3) are threefold:

1. The removal of any doubt that use of the documented communication protocols is required when issuing or receiving Operation Instructions. This will reduce the opportunity for confusion and misunderstanding during all operating conditions.
2. There will be no mental “transition” between protocols when operating conditions shift from non-emergency to Emergency. The documented communication protocols for the operating personnel will remain the same during transitions through all conditions.
3. The formal requirement for three-part communication will create a heightened sense of awareness in operating personnel that the task they are about to execute is critical, and

recognize the risk to the reliable operation of the BES is increased if the communication is misunderstood.

*1.4. Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.*

The OPCP SDT has included this part to require communications protocols for an issuer for the use of a one-way burst messaging system. The drafting team has included this because the use of three-part communications is not practical when utilizing this type of communication. Therefore, it is necessary to include a different set of protocols for these situations. In addition, many entities expressed concern that if one-way burst messaging systems were not addressed, it would imply that three part communication would be required for all participants. For this reason, the drafting team chose to address one-way burst messaging systems.

*1.5. Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.*

The OPCP SDT has included this part to add necessary clarity to Operating Instructions to reduce the risk of mistakes. Clarifying time and time zone (where necessary) contributes to reducing misunderstandings and reduces the risk of a grave error during BES operations, especially when communicating across time zones or specifying an action that will take place at a future time. Note that an action that is to occur immediately would not be required to have time identification, unless the entity specified that requirement in its communication protocols.

*1.6. Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.*

Project 2007-03 chose to eliminate TOP-002-2a, Requirement R18 when it developed TOP-002-3. This Requirement stated “Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network.” COM-002-4, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are readily familiar with each other’s interface Elements and Facilities, eliminating hesitation and confusion when referring to equipment for the Operating Instruction. This shortens response time and improves situational awareness. It also permits entities to jointly develop the nomenclature for their interface.

### **Requirements R2 and R3**

Requirement R2 requires the entities listed in Requirement R1 (i.e. each Balancing Authority, Reliability Coordinator, and Transmission Operator) to conduct initial training for each of their operating personnel responsible for the Real-time operation of the Bulk Electric System on the entity's documented communication protocols.

Requirement R3 requires Distribution Providers and Generator Operators to conduct initial training on three part communication for each of their operating personnel who can who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction. Distribution Providers and Generator Operators would have to train their operating personnel prior to placing them in a position to receive an oral two-party, person-to-person Operating Instruction. Operating Personnel that would never be in a position to receive an oral two-party, person-to-person Operating Instruction, therefore, would not need initial training unless their circumstance changes. The purpose of the language in Requirement R3, is to minimize the training burden, and demonstration of compliance, to only those operating personnel that can receive an oral two-party, person-to-person Operating Instruction.

The OPCP SDT has included an initial training requirement in the standard in response to the NERC Board of Trustees resolution, which directs that a training requirement be included in the COM-002-4 standard. Additionally, requiring entities who issue and or receive Operating Instructions to conduct initial training with their operating personnel will ensure that all applicable operators will be trained in three-part communication. The OPCP SDT believes this training will reduce the possibility of a miscommunication, which could eventually lead to action or inaction harmful to the reliability of the Bulk Electric System. Ongoing training would fall under an entities training program in PER-005 or could be listed as a type of corrective action under Requirement R4.

#### **Requirement R4**

Requirement R4 requires Balancing Authorities, Reliability Coordinators, and Transmission Operators to, at least once every 12 months, assess adherence by its operating personnel to the documented communication protocols in Requirement R1 and to provide feedback to its operating personnel on their performance. This also includes any corrective action taken, as appropriate, to address deviations from the documented protocols. It also requires the aforementioned entities to assess the effectiveness of their documented communications protocols and make changes, as necessary, to improve the effectiveness of the protocols. An entity may determine that corrective action beyond identification of the misuse of the documented communications protocols to the operating personnel is not necessary, therefore, the phrase "as appropriate" is included in the Requirement R4 language to indicate that whether to take additional corrective action is determined by the entity and not dictated by the Requirement for all instances of a misuse of a documented communication protocol.

Requiring entities to assess, identify and provide feedback to its operating personnel, was also included in the November 7, 2013 NERC Board of Trustees resolution as an element to include in the standard. Further, the OPCP SDT believes that it is good operating practice for an entity to periodically

evaluate the effectiveness of their protocols and improve them when possible. Most entities currently engage in some type of assessment activity for their operating personnel. Additionally, the OPCP SDT also believes it is good operating practice to provide operators with performance feedback on their adherence to the entity's documented protocols. Doing so, provides entities an opportunity to evaluate the performance of their operating personnel and take corrective actions where necessary, which could prevent a miscommunication from occurring and thus possibly prevent an event which could be harmful to the reliability of the Bulk Electric System.

The associated Measure M4 for Requirement R4 lists the types of evidence that an entity can provide to demonstrate compliance and also explains when an entity should show the corrective actions taken. Of particular interest is any corrective action taken where the miscommunication is the sole or partial cause of an Emergency and the entity has opted to take a corrective action. While the Measure lists out this particular set of circumstances to highlight the importance, the Measure does not modify the Requirement to require corrective action. Again, to reiterate, whether a corrective action is necessary is best determined by the entity based on the facts and circumstances of the particular communication.

### **Requirements R5 and R6**

Requirement R5 requires entities that issue oral two-party, person-to-person Operating Instructions during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, to use three-part communication or take an alternate action if the receiver does not respond or if the Operating Instruction was not understood by the receiver. The language of Requirement R5 specifically excludes written or oral single-party to multiple-party burst Operating Instructions to make clear that three-part communication is not required when issuing Operating Instructions in this manner. Requirement R5 applies to each Balancing Authority, Reliability Coordinator, and Transmission Operator since these are the entities that would be in a position to *issue* oral two-party, person-to-person Operating Instructions during an Emergency.

Requirement R6 requires entities that receive an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, to repeat (not necessarily verbatim) the Operating Instruction and receive confirmation from the issuer that the response was correct or request that the issuer reissue the Operating Instruction. Requirement R6 includes the same clarifying language as Requirement R5 for the exclusion of single-party to multiple-party burst Operating Instructions. Requirement R6 applies to each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator since these are the entities that would be in a position to *receive* oral two-party, person-to-person Operating Instructions during an Emergency

The use of three-part communication when issuing and receiving Operating Instructions is always important because a miscommunication could create an Emergency. An entity should expect its operating personnel that issue and receive Operating Instructions to use the documented communication

protocols for all Operating Instructions. The way that they reinforce that with its operating personnel is through training, assessing adherence by its operating personnel to the documented communication protocols and providing feedback those operating personnel on their use of the protocols. However, the use of three-part communication is critically important if an Emergency condition already exists, as further action or inaction could cause exponentially increase the harmful effects to the BES. Clear communication is essential to providing swift and coordinated response to events that are directly impacting the reliability of the BES.

### **Requirement R7**

Requirement R7 requires that when a Balancing Authority, Reliability Coordinator, or Transmission Operator issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency, it must confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. Because written or oral single-party to multiple-party burst Operating Instruction during an Emergency are excluded from Requirements R5 and R6, this separate Requirement is necessary to specify the standard an entity must meet to demonstrate clear communication for the use of written or oral single-party to multiple-party burst Operating Instructions during an Emergency. This prevents leaving a gap in the types of communications used during an Emergency.

The OPCP SDT believes this requirement is necessary because without confirmation from at least one receiver, the issuer has no way of confirming if the Operating Instruction was transmitted and received by any of the recipients. Therefore, the issuer cannot know whether to resend the Operating Instruction, wait for the recipient to take an action, or take an alternate action because the recipient cannot perform the action. As a best practice, an entity can opt to confirm receipt from more than one recipient, which is why the requirement states “at least one.”

## **NERC Board’s Resolution**

At its November meeting, the Board passed a resolution that directs the Standards Committee and the standard drafting team “to continue development of a combined COM-002 and COM-003 standard that addresses, at a minimum, the following:

- Draws on the Operating Committee Guideline for good communication practice;
- Includes an essential set of communications protocols to be used by all entities that would be included in an entity’s overall communications protocol approach;
  - The protocol should at a minimum require the use of three-part communications for

- (i) emergency and alert communications (“Emergency Communications”) and (ii) non-emergency communications that change or preserve the state, status, output, or input of the Bulk Electric System (“Non-Emergency Communications”);
- Requires training and periodic review of communications subject to the communications protocols; and
- Requires each entity to (i) periodically self assess its effectiveness in implementing the communications protocols, (ii) self identify any necessary changes to the entity’s protocols based upon experience and the results of periodic review, and (iii) provide feedback to its operators regarding their adherence to the protocols.”

The resolution further directs the standard drafting team to “consider the following compliance/enforcement approach:

- Maintain the current requirement that entities should be accountable for incorrect use of communication protocols in connection with Emergency Communications, without exception.
- For all other use of communication protocols in connection with Non-Emergency Communications, the standard should provide that compliance with the standard should only entail assessing whether an entity has: (i) adopted a communications protocol consistent with the foregoing; (ii) implemented training and periodic review of communications subject to the protocols; and (iii) implemented a process to (x) periodically self assess its effectiveness in implementing the communications protocols, (y) self identify any necessary changes to the entity’s protocols based upon experience and the results of periodic review, and (z) provide feedback to its operators regarding their adherence to the protocols.”

On November 21, 2013, the Commission issued the TOP/IRO NOPR, which proposes to remand the proposed TOP and IRO standards.<sup>4</sup> In the TOP/IRO NOPR, the Commission raises a concern that NERC “has removed critical reliability aspects that are included in the currently-effective standards without adequately addressing these aspects in the proposed standards.” For the term “Reliability Directive”, FERC states that the undefined term “reliability directive” used in prior standards does not appear to be limited to a specific set of circumstances. FERC continues that, in contrast, application of the proposed definition of “Reliability Directive” appears to require compliance with transmission operator directives only in emergencies, not normal or pre-emergency times. FERC states that directives from a reliability coordinator or transmission operator should be mandatory at all times, and not just during emergencies (unless contrary to safety, equipment, regulatory or statutory requirements). FERC states that the transition from normal to emergency operation can be sudden and indistinguishable until recognized, often after the damage is done. FERC has requested additional explanation from NERC and requested comments on its proposal to remand the term “Reliability Directive” along with the TOP and IRO standards. FERC will take final action on its proposal at time to be determined in the future.

FERC’s proposal to remand the term “Reliability Directive” raised possible complications with the draft COM-002-4 standard in Posting 7 since that term was included. Should the term be remanded by FERC, the COM-002-4 standard could contain a term that is no longer acceptable. In order to avoid unnecessary complications, the OPCP SDT consulted on the use of the term “Reliability Directive” in the COM-002-4 standard with the Project 2007-03 Real-time Transmission Operations and the Project 2006-06 Reliability Coordination Standard Drafting Teams to ask whether they believed removal of the term would cause concerns. Both teams agreed that the COM-002-4 standard did not need to require a protocol to identify Reliability Directives as such and that the definition of Operating Instruction could be used absent the term Reliability Directive in COM-002-4 to set the protocols. This would leave the TOP and IRO standard drafting teams the flexibility to address the issues surrounding the term “Reliability Directive” in response to the FERC TOP/IRO NOPR.

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<sup>4</sup> *Monitoring System Conditions- Transmission Operations Reliability Standard Transmission Operations Reliability Standards Interconnection Reliability Operations and Coordination Reliability Standards*, NOPR, 145 FERC ¶ 61,158 (2013). The TOP/IRO NOPR is available at: [http://www.nerc.com/FilingsOrders/us/FERCOrdersRules/NOPR\\_TOP\\_IRO\\_RM13-12\\_RM13-14\\_RM13-15\\_20131121.pdf](http://www.nerc.com/FilingsOrders/us/FERCOrdersRules/NOPR_TOP_IRO_RM13-12_RM13-14_RM13-15_20131121.pdf).



**Exhibit I**

**Frequency Asked Questions Document COM-002-4**

# Project 2007-02 Posting 8

## Frequently Asked Questions Guide

### General Questions

#### 1. What were the inputs that drove the development of posting 8 of Project 2007-02?

- The NERC Board of Trustees' November 7<sup>th</sup>, 2013 Resolution for Operating Personnel Communication Protocols, discussed below;
- Two separate surveys distributed to a sample of industry experts by the Director of Standards Development and the Standards Committee Chair requesting feedback on the draft standard; and
- Consultation on the use of the term "Reliability Directive" in the COM-002-4 standard with the Project 2007-03 Real-time Transmission Operations Standard Drafting Team and the Project 2006-06 Reliability Coordination Standard Drafting Team.
- Industry stakeholder comments from previous drafts of Project 2007-02.

#### 2. Why was the term "Reliability Directive" removed from the definition of Operating Instruction?

The OPCP SDT debated whether to remove the term "Reliability Directive" in response to comments suggesting it should be removed from the definition of "Operating Instruction" and in light of FERC's issuance of the TOP/IRO Notice of Proposed Rulemaking (NOPR), which proposes to remand the definition of "Reliability Directive" along with the proposed TOP and IRO standards. To avoid unnecessary complications with the timing of the NOPR and posting 8, the OPCP SDT consulted with the Project 2007-03 Real-time Transmission Operations and the Project 2006-06 Reliability Coordination Standard Drafting Teams to ask whether they believed removal of the term "Reliability Directive" in the COM-002-4 standard would cause concerns. Both teams agreed that the COM-002-4 standard did not need to require a protocol to identify Reliability Directives as such and that the definition of Operating Instruction could be used absent the term Reliability Directive in COM-002-4 to set the protocols. The OPCP SDT ultimately voted to remove the term. The OPCP SDT also decided to incorporate the phrase "Operating Instruction during an Emergency" in certain Requirements, where needed, to identify Requirements that are subject to a zero-tolerance compliance/enforcement approach.

#### 3. Why does this standard apply to Generator Operators and Distribution Providers?

The OPCP SDT included these Functional Entities in the Applicability section because they can be and are on the receiving end of some Operating Instructions. The OPCP SDT determined that it would leave a gap

to not cover them in a standard that addresses communications protocols for operating personnel. The inclusion of Distribution Providers as an applicable entity also responds to FERC's directive in Order No. 693 to add them as applicable entities to the communications standard. The inclusion of Distribution Providers and Generator Operators is also consistent with the currently approved COM-002-3 standard, which the Board directed be combined with COM-003-1.

Recognizing that Generator Operators and Distribution Providers typically only receive Operating Instructions, the OPCP SDT proposed that only Requirements R3 and R6 apply to these Functional Entities.

#### 4. What does the term *documented communications protocols* refer to?

The term *documented communication protocols* in R1 refers to a set of required protocols specific to the Functional Entity and the Functional Entities they must communicate with. An entity should include as much detail as it believes necessary in their documented protocols, but they must address all of the applicable parts of Requirement R1. Where an entity does not already have a set of documented protocols that meet the parts of Requirement R1, the entity must develop the necessary communications protocols. Entities may also adopt the documented protocols of another entity as its own communications protocols, but the entity must maintain its own set of documented communications protocols to meet Requirement R1.

#### 5. Is this a “zero tolerance” standard

The standard uses the phrase “Operating Instruction during an Emergency” in certain Requirements (R5, R6, R7) to provide a demarcation for what is subject to a “zero tolerance” compliance/enforcement approach and what is not. This is necessary to allow the creation of Violation Severity Levels for each compliance/enforcement approach. **Where “Operating Instruction during an Emergency” is not used, an entity will be assessed under a compliance/enforcement approach that focuses on whether or not an entity met the initial training Requirement (either R2 or R3) and whether or not an entity performed the assessment and took corrective action according to Requirement R4.** The proposed COM-002-4 does not contain a Requirement to adhere to all documented communications protocols during non-Emergency conditions. Under COM-002-4, the assessment and training documentation will provide auditors assurance that responsible entities are using their documented communications protocols and taking corrective actions, as necessary.

Separately listing out Requirements R5, R6, and R7 and using “Operating Instruction during an Emergency” in them does not require a different set of protocols to be used during Emergencies or mandate the identification of a communication as an “Operating Instruction during an Emergency.” The same protocols are required to be used in connection with the issuance of Operating Instructions for all operating conditions. Compliance/enforcement is measured differently using the operating condition as an indicator of which compliance/enforcement approach applies.

**6. Do any of the proposed requirements require the use of three-part communication when issuing or receiving an Operating Instruction outside of an Emergency?**

Compliance with the standard during non-Emergencies is based on whether or not an entity met the initial training Requirement (either R2 or R3) and whether or not an entity performed the assessment and took corrective action according to Requirement R4. An instance of an Operating Instruction outside of an Emergency not using three-part communication, or any of the other protocols in Requirement R1, is not in and of itself a violation of any requirement of COM-002-4. However, an entity will need be using three-part communication when issuing or receiving an Operating Instruction outside of an Emergency in order to complete the assessment of adherence to the entities' documented communications protocols.

**7. Why are entities required to assess the adherence of its operating personnel to the documented communication protocols the entity developed and provide feedback?**

Requiring entities to assess and provide feedback to its operating personnel, was also included in the November 7, 2013 NERC Board of Trustees' resolution as an element to include in the standard. Further, the OPCP SDT believes that it is good operating practice for an entity to periodically evaluate the effectiveness of their protocols and improve them when possible. Most entities currently engage in this type of assessment activity for their operating personnel. This assessment and feedback activity by the entity improves reliability as it provides a shorter evaluation and correction cycle than a traditional audit cycle, while reducing the associated compliance burden as well.

Additionally, the OPCP SDT believes it is good operating practice to provide operators with performance feedback on their adherence to the entity's documented protocols. Doing so, provides entities an opportunity to evaluate the performance of their operating personnel and take corrective actions where necessary, which could prevent a miscommunication from occurring and thus possibly prevent an event which could be harmful to the reliability of the Bulk Electric System.

**8. Should the BA, RC, and TOP provide their protocols to the GOPs and DPs and each other?**

While an entity may choose to provide their protocols to entities to which they communicate, there is not a mandatory and enforceable requirement that they do so.

**9. Why is the standard not applicable to Transmission Owners?**

Please refer to the Functional Model, found at <http://www.nerc.com/pa/Stand/Pages/FunctionalModel.aspx>. In the document, the following is provided for the Transmission Operator:

*The Transmission Operator operates or directs the operation of transmission facilities, and maintains local-area reliability, that is, the reliability of the system and area for which the Transmission Operator has responsibility. The Transmission Operator achieves this by operating the transmission system within its purview in a manner that maintains proper voltage profiles and System Operating Limits, and honors transmission equipment limits established by the Transmission Owner. The Transmission Operator is under the Reliability Coordinator's direction respecting wide-area reliability considerations, that is, considerations beyond those of the system and area for which the Transmission Operator has responsibility and that include the systems and areas of neighboring Reliability Coordinators. The Transmission Operator, in coordination with the Reliability Coordinator, can take action, such as implementing voltage reductions, to help mitigate an Energy Emergency, and can take action in system restoration.*

The following is provided for the Transmission Owner:

*The Transmission Owner owns its transmission facilities and provides for the maintenance of those facilities. It also specifies equipment operating limits, and supplies this information to the Transmission Operator, Reliability Coordinator, and Transmission Planner and Planning Coordinator. In many cases, the Transmission Owner has contracts or interconnection agreements with generators or other transmission customers that would detail the terms of the interconnection between the owner and customer.*

While the Transmission Owner owns the facilities, the Transmission Operator operates the facilities, and as such is subject to this standard. In the case where a Transmission Owner operates facilities, that Transmission Owner is bundled with a Reliability Coordinator or Transmission Operator, and as such would be covered by the standard.

**10. If an entity cannot complete a task included in an Operating Instruction, are they non-compliant?**

COM-002-4 deals with communication protocols, not actions taken by any entity. If an entity does not take action on an Operating Instruction, it may be a violation of another standard, but is not a violation of COM-002-4.

**11. A GOP contacts its TOP and notifies the TOP that a generator is about to trip due to a tube leak. Is this considered an Operating Instruction?**

No. This is not a command; it is simply relaying information about the generator to the Transmission Operator.

**12. If a Distribution Provider cannot operate a BES Element, would this standard apply to them?**

Distribution Providers are applicable entities for this standard. However, if they never receive an Operating Instruction due to their particular circumstance, they would not need to prove compliance with Requirements R3 and R6.

**Requirement R1 and Measure M1****13. Pursuant to R1, is it correct that an oral two-party, person-to-person Operating Instruction requires three part communication, but a single-party to multiple-party burst Operating Instruction message only requires two part communication?**

Yes. Since the use of three-part communications is not practical when issuing a single-party to multiple-party burst Operating Instruction, it is necessary to include a different set of protocols for these situations.

**14. Can you provide some examples of what is meant by written Operating Instructions as contemplated in Requirement R1 Parts 1.1 and 1.4 - 1.6?**

One example of a written Operating Instruction is a written switching order. Another example is an Operating Instruction issued by using a text message.

**15. Please explain how the current draft does not conflict with TOP-002 R18 (uniform line identifiers)?**

Project 2007-03 chose to eliminate TOP-002-2a, Requirement R18 when it developed TOP-002-3. This Requirement stated "Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network." COM-002-4, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations) for Operating Instructions. This supports both parties being familiar with each other's interface Elements and Facilities, minimizing hesitation and confusion when referring to equipment for the Operating Instruction.

**16. Can you explain what "specify when time identification required"? Is this just for entities in multiple time zones?**

The OPCP SDT has included this part to add necessary clarity to Operating Instructions to reduce the risk of miscommunications. The inclusion of "specify when time identification required" allows for an entity to evaluate its particular circumstances and communications to determine when it may be appropriate to use time identification in its Operating Instructions. The drafting recognized from comments the need to provide this flexibility while still requiring an entity to address this part in its documented communication protocols. Clarifying time and time zone (where necessary) contributes to reducing misunderstandings and reduces the risk of a grave error during BES operations. This is not exclusively for entities in multiple

time zones, but Operating Instructions between entities in multiple time zones is one example of instances that may need time identification when issuing and receiving Operating Instructions.

**17. Why did the drafting team remove the protocol requiring alphanumeric clarifiers?**

Based on feedback from industry and consideration of the NERC Board resolution, the drafting team chose to remove alphanumeric clarifiers as a required protocol. Entities are free to include it in their documented communication protocols.

**18. Why is there a requirement for the use of the English language?**

The drafting team included this part to carry forward the same use of English language included in COM-001-1, Requirement R4 and to retire this requirement from COM-001. The requirement continues to permit the issuer and receiver to use an agreed to alternate language. This has been retained since use of an alternate language on a case-by-case basis may serve to better facilitate effective communications where the use of English language may create additional opportunities for miscommunications. Part 1.1 requires the use of English language when issuing oral or written (e.g. switching orders) Operating Instructions. This creates a standard language (unless agreed to otherwise) for use when issuing commands that could change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. It also clarifies that an alternate language can be used internally within the organization. The phrase has been modified slightly from the language in COM-001-1, Requirement R4 to incorporate the term "Operating Instruction," which defines the communications that require the use of the documented communications protocols.

**Requirements R2 and R3 and Measures M2 and M3**

**19. Is there an obligation on the part of the entity issuing an Operating Instruction to ensure the receiving operator is trained to receive it?**

No. It is the responsibility of the receiving entity to ensure that their operator has received training prior to receiving an Operating Instruction.

**20. Why is there a requirement to conduct initial training?**

The OPCP SDT has included an initial training requirement in the standard in response to the NERC Board of Trustees' resolution, which directs that a training requirement be included in the COM-002-4 standard. Additionally, requiring entities that issue and/or receive Operating Instructions to conduct initial training with their operating personnel will ensure that all applicable operators will be trained in three-part communication. The OPCP SDT believes this training will reduce the possibility of a miscommunication, which could eventually lead to action or inaction harmful to the reliability of the Bulk Electric System. Ongoing training would fall under an entity's training program in PER-005 or could be listed as a type of corrective action under Requirement R4. As such, this requirement is not in conflict with PER-005, but complements it.

**21. Current operating personnel issue and receive Operating Instructions now and thus it is not possible to train them on documented protocols \*prior\* to their issuing or receiving their first Operating Instruction. If training takes place before the enforcement date for COM-002-4, would an entity meet the expectations of Requirement R2 and/or R3?**

Yes.

#### **Requirement R4 and Measure M4**

**22. Would you please provide more specificity as to how the R.4.1 and 4.2 assessments may be performed?**

An entity could perform an assessment by listening to random samplings of each of their operating personnel issuing and/or receiving Operating Instructions. If there were instances where an Operator deviated from the entity's protocols, the entity would provide feedback to the operator in question in any method it sees as appropriate. An example would be counseling or retraining the operator on the protocols.

An entity could assess the effectiveness of its protocols by reviewing instances where operators deviated from those protocols and determining if whether the deviations were caused by operator error or by flaws in the protocols that need to be changed.

**23. Doesn't Measure M4 extend beyond the scope of the requirement when it addresses communications which deviated from the protocol and contributed to an emergency?**

The purpose of COM-002-4 is "To improve communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES)." If the deviation from the protocol contributed to an emergency, the purpose of this standard was not met. The entity must determine what caused that deviation and address any necessary corrective actions.

#### **Requirements R5 and R6 and Measures M5 and M6**

**24. What is defined as an Emergency and who is responsible for declaring when an Emergency begins and ends?**

The NERC Glossary of Terms defines Emergency as "Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System." It is expected that these are abnormal and rare circumstances. There is not an expectation that an Emergency be declared. For further information, please refer to Question 15.

**25. Is it a violation of R5 if three-part communication is not used, but an alternative action is taken?**



If an operator issues an Operating Instruction during an Emergency and, based on the response from the receiver, or lack thereof, chooses to take an alternative action, that operator has satisfied Requirement R5 and is not in violation.

**26. How does the SDT envision operators differentiating, during Real-time, between Emergency Operating Instructions and non-emergency Operating Instructions? Are the operators to explicitly say "this is an Emergency Operating Instruction"?**

Separately listing out Requirements R5, R6, and R7 and using "Operating Instruction during an Emergency" in them does not require a different set of protocols to be used during Emergencies or mandate the identification of a communication as an "Operating Instruction during an Emergency." The same protocols are required to be used in connection with the issuance of Operating Instructions for all operating conditions. Their use is measured for compliance/enforcement differently using the operating condition as an indicator of which compliance/enforcement approach applies. In other words, it is not the drafting team's expectation that the operator must differentiate between Emergency and non-Emergency Operating Instructions.

**27. Does this standard require TOPs to provide evidence of another parties' compliance in Measure M6?**

No. The Measures provide various options that the drafting team considered as ways to demonstrate compliance for Requirement R6. It is not an exhaustive list, and in no way places an expectation on any entity that they must provide evidence of another party's compliance. It simply provides a few options to consider.

**28. Can you provide an example of an alternative action being taken?**

The following scenario is provided as an example of an alternative action:

A Transmission Operator (TOP) calls a Generator Operator (GOP) to reduce generation due to an Emergency. The GOP does not respond verbally. At that point the TOP could:

- Ask if the GOP understood the Operating Instruction (alternative action).
- Hang up and redial the GOP, assuming that the communication line was dead (alternative action),
- Request a different generator that is effective to reduce (alternative action);
- or
- Call a different contact at the GOP (alternative action)

**29. Must the receiver repeat the Operating Instruction back verbatim?**

No. The Operating Instruction does not have to be repeated verbatim. The issuer must confirm that the receiver's response of the Operating Instruction was correct.

**Exhibit J**

**Table of Issues and Directives COM-002-4**

## Table of Issues and Directives

Project 2007-02

Operating Personnel Communications Protocols

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
FERC Order No. 693, P 512 and 540 (Part 1)	512. The Commission finds that, during both normal and emergency operations, it is essential that the transmission operator, balancing authority and reliability coordinator have communications with distribution providers. In response to APPA, as discussed above, any distribution provider that is not a user, owner or operator of the Bulk-Power System would not be required to comply with COM-002-2, even though the Commission is requiring the ERO to modify the Reliability Standard to include distribution providers as applicable entities. APPA's concern that 2,000 public power systems would have to be added to the compliance registry is misplaced, since, as we explain in our Applicability discussion above, we are approving NERC's registry process, including the registry criteria. Therefore, we adopt our proposal to require	Distribution Providers have been included as applicable entities in COM-002-4	Applicability 4.1.2 Requirements R3 and R6

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
	<p>the ERO to modify COM-002-2 to apply to distribution providers through its Reliability Standards development process.</p> <p>540. ... In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to COM-002-2 through the Reliability Standards development process that: (1) expands the applicability to include distribution providers as applicable entities; (2) includes a new Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area view of a transmission operator or balancing authority and (3) requires tightened communications protocols, especially for communications during alerts and emergencies. Alternatively, with respect to this final issue, the ERO may develop a new Reliability Standard that responds to Blackout Report Recommendation No. 26 in the manner described above. Finally, we direct the ERO to include APPA's</p>		

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
	<p>suggestions to complete the Measures and Levels of Non-Compliance in its modification of COM-002-2 through the Reliability Standards development process.</p>		
<p>FERC Order No. 693, P 531, 534, 535, 540 (Part 3)</p>	<p>531. We adopt our proposal to require the ERO to establish tightened communication protocols, especially for communications during alerts and emergencies, either as part of COM-002-2 or as a new Reliability Standard. We note that the ERO’s response to the Staff Preliminary Assessment supports the need to develop additional Reliability Standards addressing consistent communications protocols among personnel responsible for the reliability of the Bulk-Power System.</p> <p>534. In response to MISO’s contention that Blackout Report Recommendation No. 26 has been fully implemented, we note that Recommendation No. 26 addressed two matters. We believe MISO is referring to the second part of the recommendation requiring NERC to “[u]pgrade communication system</p>	<p>COM-002-4 improves communications protocols for the issuance of Operating Instructions, in order to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System.</p>	<p>Definition of Operating Instruction Requirements R1, R2, R3, R4, R5, R6 and R7</p>

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
	<p>hardware where appropriate” instead of tightening communications protocols. While we commend the ERO for taking appropriate action in upgrading its NERCNet, we remind the industry to continue their efforts in addressing the first part of Blackout Recommendation No. 26. (Emphasis added)</p> <p>535. Accordingly, we direct the ERO to either modify COM-002-2 or develop a new Reliability Standard that requires tightened communications protocols, especially for communications during alerts and emergencies.</p>		
<p>FERC Order No. 693, P 532</p>	<p>532. While we agree with EEI that EOP-001-0, Requirement R4.1 requires communications protocols to be used during emergencies, we believe, and the ERO agrees, that the communications protocols need to be tightened to ensure Reliable Operation of the Bulk-Power System. We also believe an integral component in tightening the protocols is to establish communication uniformity as much as</p>	<p>Reliability Standard EOP-001-2.1b — Emergency Operations Planning (successor standard to EOP-001-0) requires that the emergency plans for each Transmission Operator and Balancing Authority include: communications protocols to be used during emergencies (Requirement R3.1). This requirement is compatible with COM-002-4, which establishes the documented</p>	<p>Requirements R1, R5, R6, R7</p>

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
	<p>practical on a continent-wide basis. This will eliminate possible ambiguities in communications during normal, alert and emergency conditions. This is important because the Bulk- Power System is so tightly interconnected that system impacts often cross several operating entities' areas.</p> <p>533. Regarding APPA's suggestion that it may be beneficial to include communication protocols in the relevant Reliability Standard that governs those types of emergencies, we direct that it be addressed in the Reliability Standards development process.</p>	<p>communications protocols and requires their use.</p> <p>COM-002-4 requires a set of protocols be used by all applicable entities, establishing communication uniformity as much as practical on a continent-wide basis</p>	
<p>FERC Order No. 693, P 514, 515</p>	<p>514. APPA notes that the Levels of Non-Compliance for COM-002-2 are inadequate in two respects: (1) reliability coordinators are not included in any Level of Non-Compliance and (2) the Levels of Non-Compliance for transmission operators and balancing authorities in Compliance D.2 do not reference Requirements R1 and R2. Therefore, APPA would support approval of COM-002-2 as a</p>	<p>COM-002-4 includes Measures, VRFs and VSLs for each requirement.</p>	<p>Section C, Measures Section D, Compliance</p>

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
	<p>mandatory Reliability Standard, but would not support levying penalties for violating incomplete portions of the Reliability Standard.</p> <p>515. As stated in the Common Issues section, a Reliability Standard is enforceable even if it does not contain Levels of Non-Compliance. However, the Commission agrees with APPA that this Reliability Standard could be improved by incorporating the changes proposed by APPA. Therefore, when reviewing the Reliability Standard through the Reliability Standards development process, the ERO should consider APPA’s concerns.</p>		
<p>2003 Blackout Report Recommendation No. 26</p>	<p>NERC should work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations, and ensure that all key parties, including state and local officials, receive timely and accurate information. NERC should task the regional councils to work</p>	<p>The requirements in COM-002-4 require the use of predefined communications protocols in order to reduce the possibility of a miscommunication(s) that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES).</p>	<p>Requirements R1, R2, R3, R4, R5, R6, and R7</p>



Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
	together to develop communications protocols by December 31, 2004, and to assess and report on the adequacy of emergency communications systems within their regions against the protocols by that date.		

**Exhibit K**

**Analysis of Violation Risk Factors and Violation Security Levels COM-001-2**

# Violation Risk Factor and Violation Severity Level Justifications

## COM-001-2 - Communications

### Violation Risk Factor and Violation Severity Level Justifications

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in: COM-001-2 – Communications

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Reliability Coordination Standard Drafting Team (SDT) applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSL for the requirements under this project.

#### **NERC Criteria – Violation Risk Factors**

##### ***High Risk Requirement***

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

##### ***Medium Risk Requirement***

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

***Lower Risk Requirement***

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

**FERC Violation Risk Factor Guidelines**

The SDT also considered consistency with the FERC Violation Risk Factor Guidelines for setting VRFs:<sup>1</sup>

***Guideline 1 – Consistency with the Conclusions of the Final Blackout Report***

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:<sup>2</sup>

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities

<sup>1</sup> North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh'g and compliance filing, 120 FERC ¶ 61,145 (2007) ("VRF Rehearing Order").

<sup>2</sup> Id. at footnote 15.

- Appropriate use of transmission loading relief

***Guideline 2 – Consistency within a Reliability Standard***

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

***Guideline 3 – Consistency among Reliability Standards***

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

***Guideline 4 – Consistency with NERC’s Definition of the Violation Risk Factor Level***

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC’s definition of that risk level.

***Guideline 5 – Treatment of Requirements that Co-mingle More Than One Obligation***

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC’s VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC’s Reliability Standards and implies that these requirements should be assigned a “High” VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

There are eleven requirements in the standard. None of the eleven requirements were assigned a “Lower” VRF. Requirements R1-R8 are assigned a “High” VRF while the other three requirements are assigned a “Medium” VRF.

**NERC Criteria – Violation Severity Levels**

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance, and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
<p>Missing a minor element (or a small percentage) of the required performance</p> <p>The performance or product measured has significant value as it almost meets the full intent of the requirement.</p>	<p>Missing at least one significant element (or a moderate percentage) of the required performance.</p> <p>The performance or product measured still has significant value in meeting the intent of the requirement.</p>	<p>Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component.</p> <p>The performance or product has limited value in meeting the intent of the requirement.</p>	<p>Missing most or all of the significant elements (or a significant percentage) of the required performance.</p> <p>The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.</p>

**FERC Order of Violation Severity Levels**

FERC’s VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in the standard meet the FERC Guidelines for assessing VSLs:

***Guideline 1 – Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance***

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

***Guideline 2 – Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties***

A violation of a “binary” type requirement must be a “Severe” VSL.

Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

***Guideline 3 – Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement***

VSLs should not expand on what is required in the requirement.

***Guideline 4 – Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations***

... unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

**VRF and VSL Justifications**

VRF Justifications – COM-001-2, R1-R6	
Proposed VRF	High
NERC VRF Discussion	
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report: N/A
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: Each requirement specifies which functional entities that are required to have Interpersonal Communication capability and Alternative Interpersonal Communication capability. The VRFs for each requirement are consistent with each other and are only applied at the Requirement level.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: These requirements are facility requirements that provide communications capability between functional entities. There are no similar facility requirements in the standards. The approved VRF for COM-001-1.1, R1 (which proposed R1-R6 replaces) is High and therefore the proposed VRF for R1-R6 is consistent.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to have Interpersonal Communication capability and Alternative Interpersonal Communication capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the Bulk Power System and could lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
FERC VRF G5	Guideline 5- Treatment of Requirements that Co-mingle More than One

VRF Justifications – COM-001-2, R1-R6	
Proposed VRF	High
Discussion	Obligation: Each of the six requirements, R1-R6, contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R1-R6				
R#	Lower	Moderate	High	Severe
R1	N/A	N/A	The Reliability Coordinator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Reliability Coordinator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R2	N/A	N/A	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R2, Parts 2.1 or 2.2.	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R2, Parts 2.1 or 2.2.
R3	N/A	N/A	The Transmission Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Transmission Operator detected a failure of its Interpersonal Communication	The Transmission Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Transmission Operator detected a failure of its Interpersonal Communication capability in accordance with



Proposed VSLs for COM-001-2, R1-R6				
			capability in accordance with Requirement R10.	Requirement R10.
R4	N/A	N/A	The Transmission Operator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.	The Transmission Operator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.
R5	N/A	N/A	The Balancing Authority failed to have Interpersonal Communication capability with one of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Balancing Authority detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Balancing Authority failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Balancing Authority detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R6	N/A	N/A	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.
VSL Justifications – COM-001-2, R1-R6				
NERC VSL Guidelines			Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance			The proposed requirement is a revision of COM-001-1.1, R1 and its sub-requirements. Each sub-requirement was separated out into a new stand-alone requirement. The VSLs for the approved sub-requirements are binary; however, proposed in these VSLs are increments because each entity may have multiple entities for which it must have	

Proposed VSLs for COM-001-2, R1-R6	
	an Interpersonal Communication capability.
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:</p> <p>N/A</p> <p>Guideline 2b:</p> <p>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</p>
<p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations.</p>

VRF Justifications – COM-001-2, R7	
Proposed VRF	Medium
NERC VRF Discussion	
FERC VRF G1 Discussion	<p>Guideline 1- Consistency w/ Blackout Report:</p> <p>N/A</p>
FERC VRF G2 Discussion	<p>Guideline 2- Consistency within a Reliability Standard:</p> <p>The requirement has no sub-requirements; only one VRF is assigned, so there</p>

<b>VRF Justifications – COM-001-2, R7</b>	
<b>Proposed VRF</b>	<b>Medium</b>
	is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, the Distribution Provider VRF is Medium because is not required to have an Alternative Interpersonal Communication and is not subject to Blackstart situations like that of the Generator Owner in Requirement R8.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to have Interpersonal Communication capability could limit or prevent communication between entities and directly; however, Bulk Power System instability, separation, or cascading failures are not likely to occur due to a failure to notify another entity of the failure. Therefore, this requirement is assigned a Medium VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation: The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R7				
R#	Lower	Moderate	High	Severe
R7	N/A	N/A	The Distribution Provider failed to have Interpersonal Communication capability with one of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Distribution Provider failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.
VSL Justifications – COM-001-2, R7				
NERC VSL Guidelines			Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance			The proposed requirement is a revision of COM-001-1.1, R1 and its sub-requirements. Each sub-requirement was separated out into a new stand-alone requirement. The VSLs for the approved sub-requirements are incremental and this is reflected in the proposed VSLs.	
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties  Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent  Guideline 2b: Violation Severity Level Assignments that Contain			Guideline 2a: N/A  Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	

Proposed VSLs for COM-001-2, R7	
Ambiguous Language	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

VRF Justifications – COM-001-2, R8	
Proposed VRF	High
NERC VRF Discussion	
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report: N/A
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, Requirement R8 is an analog to Parts 3.4 and 5.4 and they have the same VRF (High). The Generator Owner may be subject to Blackstart plans and system restoration.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to have Interpersonal Communication capability could limit or prevent communication between entities and directly affect the electrical state or the

VRF Justifications – COM-001-2, R8	
<b>Proposed VRF</b>	<b>High</b>
	capability of the Bulk Power System and could lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:  The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R8				
R#	Lower	Moderate	High	Severe
R8	N/A	N/A	The Generator Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Generator Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.

VSL Justifications – COM-001-2, R8	
NERC VSL Guidelines	Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations..
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The most comparable VSLs for a similar requirement are for the proposed analog requirement and its parts COM-001-2, Part 3.4 and Part 5.4. This requirement specifies the two-way nature of entities having Interpersonal Communications capability. In other words, if one entity is required to have Interpersonal Communications

Proposed VSLs for COM-001-2, R8	
	capability with another entity, then the reciprocal should also be required or the onus would be exclusively on one entity. Since Requirement R3 and R5 are assigned incremental VSLs, it appropriate for Requirement R8 to also be assigned an incremental VSL.
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:</p> <p>N/A</p> <p>Guideline 2b:</p> <p>The proposed VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSLs use the same terminology as used in the associated requirement, and are, therefore, consistent with the requirement.</p>
<p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSLs are based on a single violation and not cumulative violations.</p>

VRF Justifications – COM-001-2, R9	
Proposed VRF	Medium
NERC VRF Discussion	
FERC VRF G1 Discussion	
FERC VRF G2 Discussion	<p>Guideline 2- Consistency within a Reliability Standard:</p> <p>The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.</p>
FERC VRF G3 Discussion	<p>Guideline 3- Consistency among Reliability Standards:</p> <p>COM-001-2, Requirement R9 is a requirement for entities to test their Alternative Interpersonal Communication capability and to take restorative action should the test fail and is a replacement requirement for COM-001-1.1, R2, which has an approved VRF of Medium.</p>
FERC VRF G4 Discussion	<p>COM-001-2, Requirement R9 is a requirement for entities to test their Alternative Interpersonal Communication capability and to take restorative action should the test fail. The act of testing in and of itself is not likely to “directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures...” Therefore, this requirement is assigned a Medium VRF.</p>
FERC VRF G5 Discussion	<p>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</p> <p>The requirement contains only one objective; therefore, only one VRF was assigned.</p>



Proposed VSLs for COM-001-2, R9				
R#	Lower	Moderate	High	Severe
R9	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 2 hours and less than or equal to 4 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 4 hours and less than or equal to 6 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 6 hours and less than or equal to 8 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to test the Alternative Interpersonal Communication capability once each calendar month.  OR The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 8 hours upon an unsuccessful test.
VSL Justifications – COM-001-2, R9				
NERC VSL Guidelines		Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.		

Proposed VSLs for COM-001-2, R9	
<p>FERC VSL G1</p> <p>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>The proposed requirement is a new and there are no comparable VSLs.</p>
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: N/A</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</p>
<p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations.</p>

VRF Justifications – COM-001-2, R10	
Proposed VRF	Medium
NERC VRF Discussion	
FERC VRF G1 Discussion	
FERC VRF G2 Discussion	<p>Guideline 2- Consistency within a Reliability Standard:</p> <p>The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.</p>
FERC VRF G3 Discussion	<p>Guideline 3- Consistency among Reliability Standards:</p> <p>COM-001-2, Requirement R10 is a new requirement that was assigned a Medium VRF. When evaluating the VRF to be assigned to this requirement, the SDT took into account that this requirement is a notification item, not an actual action that has a direct impact on the Bulk Power System. Therefore, the simple act of failing to notify another entity of the failure of Interpersonal Communication capability, while it may impair the entity’s ability communicate, does not, in itself, lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a Medium VRF.</p>
FERC VRF G4 Discussion	<p>Guideline 4- Consistency with NERC Definitions of VRFs:</p> <p>COM-001-2, Requirement R10 mandates that entities notify entities of a failure of Interpersonal Communications capability. Bulk Power System instability, separation, or cascading failures are not likely to occur due to a failure to notify another entity of the failure. Therefore, this requirement is assigned a Medium VRF.</p>
FERC VRF G5 Discussion	<p>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</p> <p>The requirement contains only one objective; therefore, only one VRF was assigned.</p>

Proposed VSLs for COM-001-2, R10				
R#	Lower	Moderate	High	Severe
R10	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 60 minutes but less than or equal to 70 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 70 minutes but less than or equal to 80 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 80 minutes but less than or equal to 90 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 90 minutes.
VSL Justifications – COM-001-2, R10				
NERC VSL Guidelines		Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.		
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance		The proposed requirement is new and there are no comparable VSLs.		
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary"		Guideline 2a: N/A Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar		

Proposed VSLs for COM-001-2, R10	
Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	penalties for similar violations.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

VRF Justifications – COM-001-2, R11	
Proposed VRF	Medium
NERC VRF Discussion	
FERC VRF G1 Discussion	
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, Requirement R11 is a new requirement that was assigned a Medium VRF. When evaluating the VRF to be assigned to this requirement, the SDT took into account that this requirement is a consultation item, not an actual action that has a direct impact on the Bulk Power System. Therefore, the simple act of failing to consult with another entity on the failure of Interpersonal Communications capability and its restoration, while it may

VRF Justifications – COM-001-2, R11	
Proposed VRF	Medium
	impair the entity’s ability communicate, does not, in itself, lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a Medium VRF.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: COM-001-2, Requirement R11 mandates that entities consult with other entities regarding restoration of Interpersonal Communication capability. Bulk Power System instability, separation, or cascading failures are not likely to occur due to a failure to consult with another entity on restoration times. Therefore, this requirement is assigned a Medium VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:  The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R11				
R#	Lower	Moderate	High	Severe
R11	N/A	N/A	N/A	The Distribution Provider or Generator Operator that detected a failure of its Interpersonal Communication capability failed to consult with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of the Interpersonal Communication capability.
VSL Justifications – COM-001-2, R11				
NERC VSL Guidelines			Meets NERC’s VSL guidelines. This is a binary requirement and the VSL is severe.	
FERC VSL G1 Violation Severity Level			The proposed requirement is new and there are no comparable existing VSLs.	

Proposed VSLs for COM-001-2, R11	
Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:</p> <p>N/A</p> <p>Guideline 2b:</p> <p>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</p>
<p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations.</p>

# Violation Risk Factor and Violation Severity Level Justifications

## COM-001-2 - Communications

### Violation Risk Factor and Violation Severity Level Justifications

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in: COM-001-2 – Communications

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Reliability Coordination Standard Drafting Team (SDT) applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSL for the requirements under this project.

#### **NERC Criteria – Violation Risk Factors**

##### ***High Risk Requirement***

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

##### ***Medium Risk Requirement***

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.



***Lower Risk Requirement***

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

**FERC Violation Risk Factor Guidelines**

The SDT also considered consistency with the FERC Violation Risk Factor Guidelines for setting VRFs:<sup>1</sup>

***Guideline 1 – Consistency with the Conclusions of the Final Blackout Report***

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:<sup>2</sup>

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities

<sup>1</sup> North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh'g and compliance filing, 120 FERC ¶ 61,145 (2007) ("VRF Rehearing Order").

<sup>2</sup> Id. at footnote 15.

- Appropriate use of transmission loading relief

***Guideline 2 – Consistency within a Reliability Standard***

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

***Guideline 3 – Consistency among Reliability Standards***

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

***Guideline 4 – Consistency with NERC’s Definition of the Violation Risk Factor Level***

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC’s definition of that risk level.

***Guideline 5 – Treatment of Requirements that Co-mingle More Than One Obligation***

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC’s VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC’s Reliability Standards and implies that these requirements should be assigned a “High” VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

There are eleven requirements in the standard. None of the eleven requirements were assigned a “Lower” VRF. Requirements R1-R8 are assigned a “High” VRF while the other three requirements are assigned a “Medium” VRF.

**NERC Criteria – Violation Severity Levels**

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance, and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
<p>Missing a minor element (or a small percentage) of the required performance</p> <p>The performance or product measured has significant value as it almost meets the full intent of the requirement.</p>	<p>Missing at least one significant element (or a moderate percentage) of the required performance.</p> <p>The performance or product measured still has significant value in meeting the intent of the requirement.</p>	<p>Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component.</p> <p>The performance or product has limited value in meeting the intent of the requirement.</p>	<p>Missing most or all of the significant elements (or a significant percentage) of the required performance.</p> <p>The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.</p>

**FERC Order of Violation Severity Levels**

FERC’s VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in the standard meet the FERC Guidelines for assessing VSLs:

***Guideline 1 – Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance***

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

***Guideline 2 – Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties***

A violation of a “binary” type requirement must be a “Severe” VSL.

Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

***Guideline 3 – Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement***

VSLs should not expand on what is required in the requirement.

***Guideline 4 – Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations***

... unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

**VRF and VSL Justifications**

VRF Justifications – COM-001-2, R1-R6	
Proposed VRF	High
NERC VRF Discussion	
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report: N/A
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: Each requirement specifies which functional entities that are required to have Interpersonal Communication capability and Alternative Interpersonal Communication capability. The VRFs for each requirement are consistent with each other and are only applied at the Requirement level.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: These requirements are facility requirements that provide communications capability between functional entities. There are no similar facility requirements in the standards. The approved VRF for COM-001-1.1, R1 (which proposed R1-R6 replaces) is High and therefore the proposed VRF for R1-R6 is consistent.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to have Interpersonal Communication capability and Alternative Interpersonal Communication capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the Bulk Power System and could lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
FERC VRF G5	Guideline 5- Treatment of Requirements that Co-mingle More than One

VRF Justifications – COM-001-2, R1-R6	
Proposed VRF	High
Discussion	Obligation: Each of the six requirements, R1-R6, contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R1-R6				
R#	Lower	Moderate	High	Severe
R1	N/A	N/A	<u>The Reliability Coordinator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u> N/A	The Reliability Coordinator failed to <del>have</del> designate Alternative Interpersonal Communication capability with <del>two</del> or more of the entities listed in Requirement <del>R1</del> R2, Parts <del>1.1</del> or <del>1.2</del> , except when the Reliability Coordinator detected a failure of its Interpersonal Communication capability in accordance with Requirement <del>R10</del> 2.2.
R2	N/A	N/A	<u>The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R2, Parts 2.1 or 2.2.</u> N/A	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with <del>two</del> or more of the entities listed in Requirement R2, Parts 2.1 or 2.2.
R3	N/A	N/A	<u>The Transmission Operator failed to have Interpersonal</u>	The Transmission Operator failed to have Interpersonal Communication capability with <del>two</del> or more of the

Proposed VSLs for COM-001-2, R1-R6				
			<p><u>Communication capability with one of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Transmission Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u> N/A</p>	<p>entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, <u>except when the Transmission Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u></p>
R4	N/A	N/A	<p><u>The Transmission Operator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.</u> N/A</p>	<p>The Transmission Operator failed to designate Alternative Interpersonal Communication capability with <del>two</del> or more of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.</p>
R5	N/A	N/A	<p><u>The Balancing Authority failed to have Interpersonal Communication capability with one of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Balancing Authority detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u> N/A</p>	<p>The Balancing Authority failed to have Interpersonal Communication capability with <del>two</del> or more of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, <u>except when the Balancing Authority detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u></p>

Proposed VSLs for COM-001-2, R1-R6				
R6	N/A	N/A	<u>The Balancing Authority failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.</u> N/A	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with <del>two</del> or more of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.
VSL Justifications – COM-001-2, R1-R6				
NERC VSL Guidelines				Meets NERC’s VSL guidelines. <u>There is an incremental aspect to</u> <del>Severe: The performance or product measured does not substantively meet the violation and intent of the VSLs follow the guidelines for incremental violations requirement.</del>
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance				The proposed requirement is a revision of COM-001-1.1, R1 and its sub-requirements. Each sub-requirement was separated out into a new stand-alone requirement. The VSLs for the approved sub-requirements are binary; <u>however, proposed in these VSLs are increments because each entity may have multiple entities for which it must have an Interpersonal Communication capability.</u> <del>and this is reflected in the proposed VSLs.</del>
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is			Guideline 2a: N/A Guideline 2b:	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency

Proposed VSLs for COM-001-2, R1-R6	
Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	in the determination of similar penalties for similar violations.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

VRF Justifications – COM-001-2, R7	
<b>Proposed VRF</b>	<b><u>MediumHigh</u></b>
NERC VRF Discussion	
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report: N/A
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF is assigned, so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: <u>COM-001-2, the Distribution Provider VRF is Medium because is not required to have an Alternative Interpersonal Communication and is not subject to Blackstart situations like that of the Generator Owner in Requirement R8. COM 001 2, Requirement R7 is an analog to Parts 3.3 and 5.3 and they have the same VRF (High).</u>
FERC VRF G4	Guideline 4- Consistency with NERC Definitions of VRFs:



VRF Justifications – COM-001-2, R7	
Proposed VRF	<u>MediumHigh</u>
Discussion	Failure to have Interpersonal Communication capability could limit or prevent communication between entities and directly; <del>however, affect the electrical state or the capability of the Bulk Power System and could lead to</del> Bulk Power System instability, separation, or cascading failures <u>are not likely to occur due to a failure to notify another entity of the failure.</u> Therefore, this requirement is assigned a <u>MediumHigh</u> VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:  The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R7				
R#	Lower	Moderate	High	Severe
R7	N/A	N/A	<u>The Distribution Provider failed to have Interpersonal Communication capability with one of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u> N/A	The Distribution Provider failed to have Interpersonal Communication capability with <del>two</del> or more of the entities listed in Requirement R7, Parts 7.1 or 7.2, <u>except when the Distribution Provider detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>

VSL Justifications – COM-001-2, R7	
NERC VSL Guidelines	Meets NERC’s VSL guidelines. <u>There is an incremental aspect to</u> <del>Severe: The performance or product measured does not substantively meet</del> the <u>violation and intent of the VSLs follow the guidelines for incremental violations</u> requirement.

Proposed VSLs for COM-001-2, R7	
<p>FERC VSL G1</p> <p>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>The proposed requirement is a revision of COM-001-1.1, R1 and its sub-requirements. Each sub-requirement was separated out into a new stand-alone requirement. The VSLs for the approved sub-requirements are <u>incremental</u> <del>binary</del> and this is reflected in the proposed VSLs.</p>
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: N/A</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</p>
<p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations.</p>

VRF Justifications – COM-001-2, R8	
Proposed VRF	High

VRF Justifications – COM-001-2, R8	
Proposed VRF	High
NERC VRF Discussion	
FERC VRF G1 Discussion	<u>Guideline 1- Consistency w/ Blackout Report:</u> <u>N/A</u>
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, Requirement R8 is an analog to Parts 3.4 and 5.4 and they have the same VRF (High). <u>The Generator Owner may be subject to Blackstart plans and system restoration.</u>
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to have Interpersonal Communication capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the Bulk Power System and could lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation: The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R8				
R#	Lower	Moderate	High	Severe
R8	N/A	N/A	<u>The Generator Operator failed to have Interpersonal Communication capability</u>	The Generator Operator failed to have Interpersonal Communication capability with

Proposed VSLs for COM-001-2, R8				
			<u>with one of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u> <del>N/A</del>	<del>two</del> <u>one</u> or more of the entities listed in Requirement R8, Parts 8.1 or 8.2, <u>except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>
VSL Justifications – COM-001-2, R8				
NERC VSL Guidelines		Meets NERC’s VSL guidelines. <u>There is an incremental aspect to</u> <del>Severe: The performance or product measured does not substantively meet the violation and intent of the VSLs follow the guidelines for incremental violations..</del> <u>requirement.</u>		
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance		The most comparable VSLs for a similar requirement are for the proposed analog requirement and its parts COM-001-2, Part 3.4 and Part 5.4. This requirement specifies the two-way nature of entities having Interpersonal Communications capability. In other words, if one entity is required to have Interpersonal Communications capability with another entity, then the reciprocal should also be required or the onus would be exclusively on one entity. Since Requirement R3 and R5 are assigned <u>incremental</u> <del>binary</del> VSLs, it appropriate for Requirement <del>R3R5</del> to also be assigned <u>an incremental</u> <del>a binary</del> VSL.		
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity		Guideline 2a: N/A Guideline 2b: The proposed VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.		

Proposed VSLs for COM-001-2, R8	
Level Assignments that Contain Ambiguous Language	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSLs use the same terminology as used in the associated requirement, and are, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSLs are based on a single violation and not cumulative violations.

VRF Justifications – COM-001-2, R9	
Proposed VRF	Medium
NERC VRF Discussion	
FERC VRF G1 Discussion	
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, Requirement R9 is a requirement for entities to test their Alternative Interpersonal Communication capability and to take restorative action should the test fail and is a replacement requirement for COM-001-1.1, R2, which has an approved VRF of Medium.
FERC VRF G4	COM-001-2, Requirement R9 is a requirement for entities to test their

VRF Justifications – COM-001-2, R9	
Proposed VRF	Medium
Discussion	Alternative Interpersonal Communication capability and to take restorative action should the test fail. The act of testing in and of itself is not likely to “directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures...” Therefore, this requirement is assigned a Medium VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:  The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R9				
R#	Lower	Moderate	High	Severe
R9	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 2 hours and less than or equal to 4 hours	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 4 hours and less than or equal to 6 hours	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 6 hours and less than or equal to 8 hours	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to test the Alternative Interpersonal Communication capability once each calendar month.  OR  The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the

Proposed VSLs for COM-001-2, R9				
	upon an unsuccessful test.	upon an unsuccessful test.	upon an unsuccessful test.	Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 8 hours upon an unsuccessful test.
VSL Justifications – COM-001-2, R9				
NERC VSL Guidelines		Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.		
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance		The proposed requirement is a new and there are no comparable VSLs.		
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties  Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent  Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language		Guideline 2a: N/A  Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.		
FERC VSL G3 Violation Severity Level Assignment Should		The proposed VSL uses the same terminology as used in the associated requirement, and is,		

Proposed VSLs for COM-001-2, R9	
Be Consistent with the Corresponding Requirement	therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

VRF Justifications – COM-001-2, R10	
Proposed VRF	Medium
NERC VRF Discussion	
FERC VRF G1 Discussion	
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, Requirement R10 is a new requirement that was assigned a Medium VRF. When evaluating the VRF to be assigned to this requirement, the SDT took into account that this requirement is a notification item, not an actual action that has a direct impact on the Bulk Power System. Therefore, the simple act of failing to notify another entity of the failure of Interpersonal Communication capability, while it may impair the entity’s ability to communicate, does not, in itself, lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a Medium VRF.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: COM-001-2, Requirement R10 mandates that entities notify entities of a failure of Interpersonal Communications capability. Bulk Power System



VRF Justifications – COM-001-2, R10	
<b>Proposed VRF</b>	<b>Medium</b>
	instability, separation, or cascading failures are not likely to occur due to a failure to notify another entity of the failure. Therefore, this requirement is assigned a Medium VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:  The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R10				
R#	Lower	Moderate	High	Severe
R10	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, <u>respectively</u> upon the detection of a failure of its Interpersonal Communication capability in more than 60 minutes but less than or equal to 70 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, <u>respectively</u> upon the detection of a failure of its Interpersonal Communication capability in more than 70 minutes but less than or equal to 80 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, <u>respectively</u> upon the detection of a failure of its Interpersonal Communication capability in more than 80 minutes but less than or equal to 90 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the <del>identified</del> entities identified in Requirements R1, R3, and R5, <u>respectively</u> upon the detection of a failure of its Interpersonal Communication capability in more than 90 minutes.
VSL Justifications – COM-001-2, R10				
NERC VSL Guidelines		Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.		

Proposed VSLs for COM-001-2, R10	
<p>FERC VSL G1</p> <p>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>The proposed requirement is new and there are no comparable VSLs.</p>
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: N/A</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</p>
<p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations.</p>

VRF Justifications – COM-001-2, R11	
<b>Proposed VRF</b>	<b>Medium</b>
NERC VRF Discussion	

VRF Justifications – COM-001-2, R11	
Proposed VRF	Medium
FERC VRF G1 Discussion	
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, Requirement R11 is a new requirement that was assigned a Medium VRF. When evaluating the VRF to be assigned to this requirement, the SDT took into account that this requirement is a consultation item, not an actual action that has a direct impact on the Bulk Power System. Therefore, the simple act of failing to consult with another entity on the failure of Interpersonal Communications capability and its restoration, while it may impair the entity’s ability communicate, does not, in itself, lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a Medium VRF.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: COM-001-2, Requirement R11 mandates that entities consult with other entities regarding restoration of Interpersonal Communication capability. Bulk Power System instability, separation, or cascading failures are not likely to occur due to a failure to consult with another entity on restoration times. Therefore, this requirement is assigned a Medium VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation: The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R11				
R#	Lower	Moderate	High	Severe

Proposed VSLs for COM-001-2, R11				
R11	N/A	N/A	N/A	The Distribution Provider or Generator Operator <u>that detected a failure of its Interpersonal Communication capability</u> failed to consult with <u>each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator's Transmission Operator, and Balancing Authority</u> to determine a mutually agreeable action for the restoration of the Interpersonal Communication capability.
VSL Justifications – COM-001-2, R11				
NERC VSL Guidelines		Meets NERC’s VSL guidelines. This is a binary requirement and the VSL is severe.		
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance		The proposed requirement is new and there are no comparable existing VSLs.		
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language		Guideline 2a: N/A Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.		
FERC VSL G3 Violation Severity Level		The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the		

Proposed VSLs for COM-001-2, R11	
Assignment Should Be Consistent with the Corresponding Requirement	requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

**Exhibit L**

**Analysis of Violation Risk Factors and Violation Security Levels COM-002-4**

## Project 2007-02 – Operating Personnel Communications Protocols

### VRF and VSL Justifications

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in COM-002-4 Operating Personnel Communications Protocols.

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Operations Personnel Communications Protocol Standard Drafting Team applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSLs for the requirements under this project:

### NERC Criteria - Violation Risk Factors

#### **High Risk Requirement**

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a

cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

### **Medium Risk Requirement**

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

### **Lower Risk Requirement**

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

## **FERC Violation Risk Factor Guidelines**

### **Guideline (1) — Consistency with the Conclusions of the Final Blackout Report**

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.



In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief

#### **Guideline (2) — Consistency within a Reliability Standard**

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

#### **Guideline (3) — Consistency among Reliability Standards**

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

#### **Guideline (4) — Consistency with NERC's Definition of the Violation Risk Factor Level**

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC's definition of that risk level.

**Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation**

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC's VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC's Reliability Standards and implies that these requirements should be assigned a "High" VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

VRFs for COM-002-4:

There are seven requirements in COM-002-4, draft 2. Requirements R1,R2, and R3 are assigned a "Low" VRF. R1 now reads: *"Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum:"* R2 now reads: *" Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall conduct initial training for each of its operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System on the documented communications protocols developed in Requirement R1 prior to that individual operator issuing an Operating Instruction."* R3 now reads: *" Each Distribution Provider and Generator Operator shall conduct initial training for each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction to either:"* Requirement R4 is assigned a "Medium" VRF. R4 now reads: *"Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall at least once every twelve (12) calendar months:* This Requirement warrants a VRF of "Medium" because R4 is a requirement in an operations planning time frame that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, a violation of this requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. *" Requirement R5, R6 and R7 are assigned a "High" VRF. R5 now reads: *" Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either:"* R6 is a new requirement which reads *"Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that receives an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either:"* R7 is a new requirement which reads *"Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency shall confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction."* These Requirements warrant VRFs of "High" because failure to use the communications protocols during an emergency could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures.*

### **NERC Criteria - Violation Severity Levels**

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
<p>Missing a minor element (or a small percentage) of the required performance</p> <p>The performance or product measured has significant value as it almost meets the full intent of the requirement.</p>	<p>Missing at least one significant element (or a moderate percentage) of the required performance.</p> <p>The performance or product measured still has significant value in meeting the intent of the requirement.</p>	<p>Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component.</p> <p>The performance or product has limited value in meeting the intent of the requirement.</p>	<p>Missing most or all of the significant elements (or a significant percentage) of the required performance.</p> <p>The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.</p>

**FERC Order on Violation Severity Levels**

In its June 19, 2008 Order on Violation Severity Levels, FERC indicated it would use the following four guidelines for determining whether to approve VSLs:

### **Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance**

Compare the VSLs to any prior Levels of Non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when Levels of Non-compliance were used.

### **Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties**

Guideline 2a: A violation of a “binary” type requirement must be a “Severe” VSL.

Guideline 2b: Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

### **Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement**

VSLs should not expand on what is required in the requirement.

### **Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations**

. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

The drafting team will complete the following table, providing of analysis and justification for each VRF and VSL, for each requirement.

VRF and VSL Justifications – COM-002-4, R1	
Proposed VRF	Low
NERC VRF Discussion	R1 is a requirement in a Long-term Planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system The VRF for this requirement is “Low,” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R1 establishes communications protocols, which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for the development of documented communications protocols by entities that will both issue and receive “Operating Instructions” that reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of the bulk electric system.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “ Low,” which is consistent with NERC guidelines for similar requirements.
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-002-4 Requirement R1 contains only one objective which is to document clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could

VRF and VSL Justifications – COM-002-4, R1			
		lead to action or inaction harmful to the reliability of the bulk electric system. Since the requirement has only one objective, only one VRF was assigned.	
Proposed VSL			
Lower	Moderate	High	Severe
<p>The responsible entity did not specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification, as required in Requirement R1, Part 1.5</p> <p>OR</p> <p>The responsible entity did not specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction, as required in Requirement R1, Part 1.6.</p>	<p>The responsible entity did not require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise, as required in Requirement R1, Part 1.1. An alternate language may be used for internal operations.</p>	<p>The responsible entity did not include Requirement R1, Part 1.4 in its documented communication protocols.</p>	<p>The responsible entity did not include Requirement R1, Part 1.2 in its documented communications protocols</p> <p>OR</p> <p>The responsible entity did not include Requirement R1, Part 1.3 in its documented communications protocols</p> <p>OR</p> <p>The responsible entity did not develop any documented communications protocols as required in Requirement R1.</p>

VRF and VSL Justifications – COM-002-4, R1

VRF and VSL Justifications – COM-002-4, R1			



**VRF and VSL Justifications – COM-002-4, R1**

<b>VRF and VSL Justifications – COM-002-4, R1</b>	
<p><b>FERC VSL G1</b>            Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of common communication protocols, with varied VSLs based on the severity of the potential risk to the bulk electric system if the protocols were not used. If no communication protocols were addressed at all then the VSL is Severe.</p>
<p><b>FERC VSL G2</b>            Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties            Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent            Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:            The VSL assignment for R1 is not binary.</p> <p>Guideline 2b:            The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>

**VRF and VSL Justifications – COM-002-4, R1**

<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement. In addition, the VSLs are consistent with Requirement R1.</p>
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	<p>Non CIP</p>

VRF and VSL Justifications – COM-002-4, R1	
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	<p>Non CIP</p>

VRF and VSL Justifications – COM-002-4, R2	
<b>Proposed VRF</b>	Low
NERC VRF Discussion	R2 is a requirement in a Long-term Planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system The VRF for this requirement is “Low,” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<p><b>Guideline 1- Consistency w/ Blackout Report:</b> R2 establishes that entities who issue and receive Operating Instructions shall conduct initial training with their operating personnel to ensure that all applicable operators will be trained on their documented communication protocols established in Requirement R1. This training reduces the possibility of a miscommunication, which could eventually lead to action or inaction harmful to the reliability of the Bulk Electric System, which is consistent with FERC guideline G1.</p>
FERC VRF G2 Discussion	<p><b>Guideline 2- Consistency within a Reliability Standard :</b> Only one VRF is assigned for this requirement.</p>

VRF and VSL Justifications – COM-002-4, R2			
FERC VRF G3 Discussion	<p><b>Guideline 3- Consistency among Reliability Standards:</b>                      This requirement establishes that each Balancing Authority, Reliability Coordinator and Transmission Operator conduct initial training with each of its operating personnel responsible for the Real-time operation of the BES on documented communication protocols to reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of the bulk electric system. This VRF is consistent with other training requirements within the body of NERC Reliability Standards, including CIP-004-5.1 Requirements R1 and R2.</p>		
FERC VRF G4 Discussion	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b>                      Violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Low,” which is consistent with NERC guidelines for similar requirements.</p>		
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>                      COM-002-4 Requirement R2 contains only one objective which is to conduct initial training for each of its operating personnel responsible for the Real-time operation of the BES. Since the requirement has only one objective, only one VRF was assigned.</p>		
Proposed VSL			
Lower	Moderate	High	Severe
N/A	N/A	An individual operator responsible for the Real-time operation of the interconnected Bulk Electric System at the responsible entity issued an Operating Instruction, prior to being trained on the	An individual operator responsible for the Real-time operation of the interconnected Bulk Electric System at the responsible entity issued an Operating Instruction during an Emergency prior to

## VRF and VSL Justifications – COM-002-4, R2

VRF and VSL Justifications – COM-002-4, R2			
		documented communications protocols developed in Requirement R1.	being trained on the documented communications protocols developed in Requirement R1.

## VRF and VSL Justifications – COM-002-4, R2

**FERC VSL G1**

Violation Severity Level  
Assignments Should Not Have  
the Unintended Consequence  
of Lowering the Current Level  
of Compliance

Based on the VSL Guidance, the SDT developed two VSLs. These VSLs were determined based on the potential consequences of an operator issuing an Operating Instruction without having first received training on the communication protocols. An operator who is not trained on the communication protocols could miscommunicate an Operating Instruction, which could put the BES in an undesirable state. This warrants a High VSL. An operator who is not trained on the communication protocols could miscommunicate an Operating Instruction during an Emergency, which could directly put the BES in an undesirable state. This warrants a Severe VSL.

Since training requirements were not in prior versions of COM-002, the introduction of this training requirement will not have the unintended consequence of lowering the current level of compliance.

**VRF and VSL Justifications – COM-002-4, R2**

<p><b>FERC VSL G2</b>          Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties          Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent          Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:          The VSL assignment is not R2 binary.</p> <p>Guideline 2b:          The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b>          Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement. In addition, the VSLs are consistent with Requirement R3.</p>
<p><b>FERC VSL G4</b>          Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>

VRF and VSL Justifications – COM-002-4, R2	
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 002-4, R3	
<b>Proposed VRF</b>	Low
NERC VRF Discussion	R3 is a requirement in a Long-term Planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system. The VRF for this requirement is “Low,” which is consistent with NERC guidelines.



VRF and VSL Justifications – COM 002-4, R3	
FERC VRF G1 Discussion	<p><b>Guideline 1- Consistency w/ Blackout Report:</b>                      R3 establishes that entities who only receive Operating Instructions shall conduct initial training with their operating personnel to ensure that all applicable operators will be trained in three part communication. This training reduces the possibility of a miscommunication, which could eventually lead to action or inaction harmful to the reliability of the Bulk Electric System, which is consistent with FERC guideline G1.</p>
FERC VRF G2 Discussion	<p><b>Guideline 2- Consistency within a Reliability Standard :</b>                      The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.</p>
FERC VRF G3 Discussion	<p><b>Guideline 3- Consistency among Reliability Standards:</b>                      This requirement establishes that Distribution Providers and Generator Operators conduct initial training with each of its operating personnel responsible for the Real-time operation of the BES on three part communication to reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of the bulk electric system. This VRF is consistent with other training requirements within the body of NERC Reliability Standards, including CIP-004-5.1 Requirements R1 and R2.</p>
FERC VRF G4 Discussion	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b>                      Failure to conduct initial training for individual operators on three part communication could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Low,” which is consistent with NERC guidelines for similar requirements.</p>
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>                      COM-002-4 Requirement R3 contains only one objective which to conduct initial training with individual system operators on three part communication. Since the requirement has only one objective, only one VRF was assigned.</p>

**VRF and VSL Justifications – COM 002-4, R3**

**Proposed VSL**

<b>Lower</b>	<b>Moderate</b>	<b>High</b>	<b>Severe</b>
N/A	N/A	An individual operator at the responsible entity received an Operating Instruction prior to being trained.	An individual operator at the responsible entity received an Operating Instruction during an Emergency prior to being trained.

**VRF and VSL Justifications – COM 002-4, R3**

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed two VSLs. These VSLs were determined based on the potential consequences of an operator receiving an Operating Instruction without having first received training on the communication protocols. An operator who is not trained on three part communication could miscommunicate an Operating Instruction, which could put the BES in an undesirable state. This warrants a High VSL. An operator who is not trained on three part communication could miscommunicate an Operating Instruction during an Emergency, which could directly put the BES in an undesirable state. This warrants a Severe VSL.</p> <p>Since training requirements were not in prior versions of COM-002, the introduction of this training requirement will not have the unintended consequence of lowering the current level of compliance.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R3 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>

**VRF and VSL Justifications – COM 002-4, R3**

<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	<p>Non CIP</p>

VRF and VSL Justifications – COM 002-4, R3	
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	<p>Non CIP</p>

VRF and VSL Justifications – COM 002-4, R4	
<b>Proposed VRF</b>	Medium
NERC VRF Discussion	R4 is a requirement in an Operations planning requirement time frame that, if violated, could directly affect the ability to effectively monitor and control the bulk electric system. However, a violation of this requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium,” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<p><b>Guideline 1- Consistency w/ Blackout Report:</b> This requirement establishes that responsible entities from R1 to periodically assess their operator’s adherence to the entity’s documented communication protocols and provide feedback to those operators. It also requires entities to assess the effectiveness of these protocols and modify them where necessary. The requirement addresses Recommendation 26 of the Blackout Report. The VRF for this requirement is “Medium,” which is consistent with FERC guideline G1.</p>
FERC VRF G2 Discussion	<p><b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.</p>

VRF and VSL Justifications – COM 002-4, R4			
FERC VRF G3 Discussion	<p><b>Guideline 3- Consistency among Reliability Standards:</b>                      This requirement calls for responsible entities from R1 to periodically assess their operator’s adherence to the entity’s documented communication protocols and provide feedback to those operators. It also requires entities to assess the effectiveness of these protocols and modify them where necessary. This VRF is consistent with similar requirements within the body of NERC Reliability Standards, including PER-005-1 Requirements R1 and R2.</p>		
FERC VRF G4 Discussion	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b>                      R4 is a requirement in an Operations planning requirement time frame that, if violated, could directly affect the ability to effectively monitor and control the bulk electric system. However, a violation of this requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium,” which is consistent with NERC guidelines.</p>		
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>                      COM-002-4 Requirement R4 contains only one objective which is to implement clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of the bulk electric system. Since the requirement has only one objective, only one VRF was assigned.</p>		
Proposed VSL			
Lower	Moderate	High	Severe
The responsible entity assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions and provided	The responsible entity assessed adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, but did not	The responsible entity did not assess adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions OR	The responsible entity did not assess adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions AND

VRF and VSL Justifications – COM 002-4, R4

<p>feedback to those operating personnel and took corrective action, as appropriate AND The responsible entity assessed the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modified its documented communication protocols, as necessary AND The responsible entity exceeded twelve (12) calendar months between assessments.</p>	<p>provide feedback to those operating personnel OR The responsible entity assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions and provided feedback to those operating personnel but did not take corrective action, as appropriate OR The responsible entity assessed the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions, but did not modify its documented communication protocols, as necessary.</p>	<p>The responsible entity did not assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions.</p>	<p>The responsible entity did not assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions.</p>
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VRF and VSL Justifications – COM 002-4, R4



**FERC VSL G1**

Violation Severity Level  
Assignments Should Not Have  
the Unintended Consequence  
of Lowering the Current Level  
of Compliance

Based on the VSL Guidance, the SDT developed four VSLs to establish the severity of an entity not assessing their operator's adherence to the entity's communications protocols and/or not assessing the effectiveness of those protocols at least once every 12 calendar months. If an entity evaluated the documented communications protocols developed in Requirement R1, but exceeded twelve (12) calendar months between evaluations then it is a "Low" VSL, since the performance or product measured has significant value as it almost meets the full intent of the requirement.

If an entity assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions but did not provide feedback to those operating personnel it is a "Medium" VSL. If an entity assessed adherence to the communications protocols by its operating personnel and provided feedback to those personnel but did not take corrective action, as appropriate, it is also a "Medium" VSL. If an entity assessed the effectiveness of its protocols for its operating personnel but did not modify its documented communication protocols, as necessary, it is also a "Medium" VSL. The value of "Medium" is justified based one significant element (or a moderate percentage) of the required performance is missing but the performance or product measured still has significant value in meeting the intent of the requirement.

If an entity did not assess adherence to the documented communications protocols in Requirements R1 by its operating personnel then it is a "High" VSL. If an entity did not assess the effectiveness of its documented communications protocols in Requirements R1 for its operating personnel it is a "High" VSL. The value of "High" is justified because the entity is missing more than one significant element (or is missing a high percentage) of the required performance.

If an entity did not assess adherence to the documented communications protocols by its operating personnel and it did not assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel, then it is a "Severe" VSL. The value of "Severe" is justified because the performance measured does not meet the intent of the requirement.

VRF and VSL Justifications – COM 002-4, R4

**VRF and VSL Justifications – COM 002-4, R4**

<p><b>FERC VSL G2</b>          Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties          Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent          Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:          The VSL assignment for R4 is not binary.</p> <p>Guideline 2b:          The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b>          Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</p>
<p><b>FERC VSL G4</b>          Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>

VRF and VSL Justifications – COM 002-4, R4	
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 002-4, R5	
<b>Proposed VRF</b>	High
NERC VRF Discussion	R5 is a requirement in a Real-time Operations time frame that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability,

VRF and VSL Justifications – COM 002-4, R5	
	separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.
FERC VRF G1 Discussion	<p><b>Guideline 1- Consistency w/ Blackout Report:</b> R5 requires entities who issue an Operating Instruction during an Emergency to use three part communication or take an alternative action if the receiver does not respond. The requirement addresses Recommendation 26 of the Blackout Report. The VRF for this requirement is “High,” which is consistent with FERC guideline G1.</p>
FERC VRF G2 Discussion	<p><b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has no sub-requirements and only one VRF was assigned therefore, there is no conflict.</p>
FERC VRF G3 Discussion	<p><b>Guideline 3- Consistency among Reliability Standards:</b> This requirement mandates the use of three part communication for entities that issue Operating Instructions during an Emergency in order to reduce the possibility of miscommunication. A miscommunication could lead to action or inaction harmful to the reliability of the bulk electric system.</p>
FERC VRF G4 Discussion	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> R5 is a requirement in an Operations Planning time frame that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures. The VRF for this requirement is “High,” which is consistent with NERC guidelines.</p>
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-002-4 Requirement R5 contains only one objective which is for entities that issue Operating Instructions to use three part communication or take an alternative action if the receiver does not respond to reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of the bulk electric system. Since the requirement has only one objective, only one VRF was assigned.</p>

VRF and VSL Justifications – COM 002-4, R5			
Proposed VSL			
Lower	Moderate	High	Severe
N/A	<p>The responsible entity that issued an Operating Instruction during an Emergency did not take one of the following actions:</p> <ul style="list-style-type: none"> <li>Confirmed the receiver’s response if the repeated information was correct (in accordance with Requirement R6).</li> <li>Reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver.</li> <li>Took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver.</li> </ul>	N/A	<p>The responsible entity that issued an Operating Instruction during an Emergency did not take one of the following actions:</p> <ul style="list-style-type: none"> <li>Confirmed the receiver’s response if the repeated information was correct (in accordance with Requirement R6).</li> <li>Reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver.</li> <li>Took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver.</li> </ul> <p>AND</p>

## VRF and VSL Justifications – COM 002-4, R5

			Instability, uncontrolled separation, or cascading failures occurred as a result.
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VRF and VSL Justifications – COM 002-4, R5

**FERC VSL G1**

Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Based on the VSL Guidance, the SDT developed two VSLs based on the failure to use three part communication when issuing an Operating Instruction during an Emergency.

If an entity, when issuing an Operating Instruction during an Emergency, did not use three part communication or take an alternative action if the receiver does not respond, yet instability, uncontrolled separation, or cascading failures did not occur as a result, the entity violated the Requirement with a “Medium” VSL. The value of “Medium” is justified based one significant element (or a moderate percentage) of the required performance is missing but the performance or product measured still has significant value in meeting the intent of the requirement, which is to avoid action or inaction that is harmful to the reliability of the Bulk Electric System.

If an entity, when issuing an Operating Instruction during an Emergency, did not use three part communication or take an alternative action if the receiver does not respond, and instability, uncontrolled separation, or cascading failures occurred as a result, the entity violated the Requirement with a “Severe” VSL. The value of “Severe” is justified because the performance outcome does not meet the intent of the requirement.



**VRF and VSL Justifications – COM 002-4, R5**

<p><b>FERC VSL G2</b>          Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties          Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent          Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:          The VSL assignment for R5 is not binary.</p> <p>Guideline 2b:          The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b>          Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>
<p><b>FERC VSL G4</b>          Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>

VRF and VSL Justifications – COM 002-4, R5	
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 002-4, R6	
<b>Proposed VRF</b>	High
NERC VRF Discussion	R6 is a requirement in a Real-time Operations time frame that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability,

VRF and VSL Justifications – COM 002-4, R6	
	separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.
FERC VRF G1 Discussion	<p><b>Guideline 1- Consistency w/ Blackout Report:</b>                      R6 requires entities who receive an Operating Instruction during an Emergency to repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction. The requirement addresses Recommendation 26 of the Blackout Report. The VRF for this requirement is “High,” which is consistent with FERC guideline G1.</p>
FERC VRF G2 Discussion	<p><b>Guideline 2- Consistency within a Reliability Standard :</b>                      The requirement has no sub-requirements and only one VRF was assigned therefore, there is no conflict.</p>
FERC VRF G3 Discussion	<p><b>Guideline 3- Consistency among Reliability Standards:</b>                      This requirement mandates the use of three part communication for entities that receive Operating Instructions during an Emergency in order to reduce the possibility of miscommunication. A miscommunication could lead to action or inaction harmful to the reliability of the bulk electric system.</p>
FERC VRF G4 Discussion	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b>                      R6 is a requirement in an Operations Planning time frame that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures. The VRF for this requirement is “High,” which is consistent with NERC guidelines.</p>
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>                      COM-002-4 Requirement R6 contains only one objective which is for entities that receive Operating Instructions during an Emergency to repeat, not necessarily verbatim, the Operating Instruction in order to reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of the bulk electric system. Since the requirement has only one objective, only one VRF was assigned.</p>

VRF and VSL Justifications – COM 002-4, R6			
Proposed VSL			
Lower	Moderate	High	Severe
N/A	The responsible entity did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction.	N/A	The responsible entity did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction  AND Instability, uncontrolled separation, or cascading failures occurred as a result.

VRF and VSL Justifications – COM 002-4, R6

**FERC VSL G1**

Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Based on the VSL Guidance, the SDT developed two VSLs based on the failure of the recipient of an Operating Instruction to use three part communication after receiving an Operating Instruction during an Emergency.

If an entity, when receiving an Operating Instruction during an Emergency, did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction, yet instability, uncontrolled separation, or cascading failures did not occur as a result, the entity violated the Requirement with a “Medium” VSL. The value of “Medium” is justified based one significant element (or a moderate percentage) of the required performance is missing but the performance or product measured still has significant value in meeting the intent of the requirement, which is to avoid action or inaction that is harmful to the reliability of the Bulk Electric System.

If an entity, when receiving an Operating Instruction during an Emergency, did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction, and instability, uncontrolled separation, or cascading failures occurred as a result, the entity violated the Requirement with a “Severe” VSL. The value of “Severe” is justified because the performance outcome does not meet the intent of the requirement.

**VRF and VSL Justifications – COM 002-4, R6**

<p><b>FERC VSL G2</b>          Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties          Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent          Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:          The VSL assignment for R6 is not binary.</p> <p>Guideline 2b:          The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b>          Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>
<p><b>FERC VSL G4</b>          Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>

VRF and VSL Justifications – COM 002-4, R6	
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 002-4, R7	
<b>Proposed VRF</b>	High
NERC VRF Discussion	R7 is a requirement in a Real-time Operations time frame that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative

VRF and VSL Justifications – COM 002-4, R7	
	conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.
FERC VRF G1 Discussion	<p><b>Guideline 1- Consistency w/ Blackout Report:</b>                      R7 requires entities that issue a written or oral single-party to multiple-party burst Operating Instruction during an Emergency to confirm or verify that the Operating Instruction was received by at least one receiver. The requirement addresses Recommendation 26 of the Blackout Report. The VRF for this requirement is “High,” which is consistent with FERC guideline G1.</p>
FERC VRF G2 Discussion	<p><b>Guideline 2- Consistency within a Reliability Standard :</b>                      The requirement has no sub-requirements and only one VRF was assigned therefore, there is no conflict.</p>
FERC VRF G3 Discussion	<p><b>Guideline 3- Consistency among Reliability Standards:</b>                      This requirement mandates entities that issue a written or oral single-party to multiple-party burst Operating Instruction during an Emergency to confirm or verify that the Operating Instruction was received by at least one receiver . A miscommunication could lead to action or inaction harmful to the reliability of the bulk electric system.</p>
FERC VRF G4 Discussion	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b>                      R7 is a requirement in a Real-time Operations time frame that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures. The VRF for this requirement is “High,” which is consistent with NERC guidelines.</p>
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>                      COM-002-4 Requirement R7 contains only one objective which requires entities that issue a written or oral single-party to multiple-party burst Operating Instruction during an Emergency confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. Since the requirement has only one objective, only one VRF was assigned.</p>



VRF and VSL Justifications – COM 002-4, R7			
Proposed VSL			
Lower	Moderate	High	Severe
N/A	The responsible entity that that issued a written or oral single-party to multiple-party burst Operating Instruction during an Emergency did not confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.	N/A	The responsible entity that that issued a written or oral single-party to multiple-party burst Operating Instruction during an Emergency did not confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction  AND  Instability, uncontrolled separation, or cascading failures occurred as a result.

VRF and VSL Justifications – COM 002-4, R7

**FERC VSL G1**

Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Based on the VSL Guidance, the SDT developed two VSLs based on the failure of the issuer of a written or oral single-party to multiple-party burst Operating Instruction during an Emergency to confirm or verify that the Operating Instruction was received by at least one receiver.

If an entity, when issuing a written or oral single-party to multiple-party burst Operating Instruction during an Emergency, did not confirm or verify that the Operating Instruction was received by at least one receiver, yet instability, uncontrolled separation, or cascading failures did not occur as a result, the entity violated the Requirement with a “Medium” VSL. The value of “Medium” is justified based one significant element (or a moderate percentage) of the required performance is missing but the performance or product measured still has significant value in meeting the intent of the requirement, which is to avoid action or inaction that is harmful to the reliability of the Bulk Electric System.

If an entity, when issuing a written or oral single-party to multiple-party burst Operating Instruction during an Emergency, did not confirm or verify that the Operating Instruction was received by at least one receiver, and instability, uncontrolled separation, or cascading failures occurred as a result, the entity violated the Requirement with a “Severe” VSL. The value of “Severe” is justified because the performance outcome does not meet the intent of the requirement.

**VRF and VSL Justifications – COM 002-4, R7**

<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R7 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>

## VRF and VSL Justifications – COM 002-4, R7

<b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the 'weakest link' characteristic, should apply binary VSLs	Non CIP
<b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence	Non CIP

VRF and VSL Justifications – COM 002-4, R7

for their interdependence	
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**Exhibit M**

**Summary of Development History and Complete Record of Development COM-001-2**

## **Summary of Development History**

### **Project 2006-06 – Reliability Coordination**

The development record for proposed Reliability Standard COM-001-2 is summarized below.

#### **I. Overview of the Standard Drafting Team**

When evaluating a proposed Reliability Standard, the Commission is expected to give “due weight” to the technical expertise of the ERO.<sup>1</sup> The technical expertise of the ERO is derived from the reliability coordination standard drafting team (“SDT”). For this project, the standard drafting team consisted of industry experts, all with a diverse set of experiences. A roster of the team members is included in Exhibit P.

#### **II. Standard Development History**

##### **A. Standard Authorization Request Development**

Project 2006-06 – Reliability Coordination was initiated on December 18, 2006 as a SAR for revisions to existing standards. The SAR was posted for a 30-day comment period from January 15, 2007 to February 14, 2007. NERC received 11 sets of comments from more than 31 different individuals from more than 15 companies representing 9 of the 10 industry segments. Most commenters disagreed with the broad scope of the SAR since it included revisions to 27 standards. In response to the comments, NERC revised the purpose statement of the SAR and reduced the number of standards considered for revision from 27 to 10, narrowing the scope of the project.

A second draft of the SAR was posted for a comment period from March 19, 2007 to April 17, 2007. NERC received 19 sets of comments from 52 different individuals from

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<sup>1</sup> Section 215(d)(2) of the Federal Power Act; 16 U.S.C. §824(d)(2) (2012).

approximately 40 companies in 8 of the 10 industry segments. In response to comments, NERC corrected references of “FERC NOPR” to “Order No. 693” and made small changes to the detailed and brief description of proposed changes. The SAR was approved by the Standards Committee and moved forward into development.

### **B. First Posting – Comment Period**

COM-001-2 was first posted for a 45-day comment period from August 5, 2008 to September 16, 2008. NERC received 29 sets of comments from more than 70 different individuals, including 50 companies and representing 8 of the 10 industry segments.<sup>2</sup> In response to comments, the SDT made the following changes to the draft COM-001-2 standard:

- Replaced “telecommunications facilities” with “interpersonal communications capabilities” to better reflect the intent of the SDT.
- Added the Transmission Service Provider (TSP), Load-serving Entity (LSE), and Purchasing-Selling Entity (PSE) to the list of entities in Requirement R3 that must use English Language for inter-entity communications.
- Added a time requirement to Requirement R2.
- Removed informational sentence from end of Requirement R3.
- Reworded the violation severity levels (VSLs) to match changes in the Requirements.
- Made other general language improvements to the Requirements and Measures.

### **C. Second Posting – Comment Period**

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<sup>2</sup> COM-001-2 was posted along with six IRO (Interconnection Reliability Operations and Coordination) Reliability Standards that will be filed in a separate petition.



Second draft of the COM-001-2 standard was posted again for a 30-day public comment period from July 10, 2009 to August 9, 2009. NERC received 31 sets of comments from more than 87 different individuals from over 62 companies in 8 of the 10 industry segments. The SDT made the following changes to COM-001-2:

- Proposed definitions for “Interpersonal Communication” and “Alternative Interpersonal Communication.
- Revised the wording of Requirement R2 to add clarity and revised Requirement R3 to include the phrase “unless dictated by law...” to address legal requirements in some areas.
- Removed the mitigation plan from Requirement R1 and Measure M1.
- Added more VSLs for Requirement R2.
- Removed Distribution Provider and Generator Operator from the Data Retention section of Requirement R1.

#### **D. Third Posting – Comment Period**

The draft of the Reliability Coordination standard was posted for a third comment period from January 4, 2010 to February 18, 2010. There were 42 sets of comments from more than 150 different individuals from 50 companies representing all 10 of NERC’s industry segments. In response to comments, the SDT revised the definitions “Interpersonal Communication” and “Alternative Interpersonal Communication.” The SDT also extensively revised Requirement R1 (now R9), to more specifically delineate Interpersonal and Alternative Interpersonal Communication in tandem with the revisions of the definitions, and to specify the applicable entity responsibility. The VRF for this Requirement was changed to “Medium.”

#### **E. Fourth Posting – Formal Comment Period Initial Ballot**

A fourth draft of the standard was posted for a formal comment period from January 18, 2011 to March 7, 2011, with an initial ballot held from February 25, 2011 to March 7, 2011. All of the Reliability Coordination standards in Project 2006-06 were balloted together, and the standards received a quorum of 87.10% and an approval of 49.54%. During the formal comment period, 41 sets of comments were received from 168 different individuals from 112 companies representing 9 of the 10 industry segments. In response to comments, the SDT made the following changes to the standards:

- Addressed the applicability of the standards and implementation plans by aligning COM-001-2 to include the same entities and by removing LSE, PSE and TSP from the COM standards.
- Removed the phrase "to exchange Interconnection and operating information" in Requirements R1 through R8 to clarify that the intent of the capability is NOT for the exchange of data.
- Added a new Requirement R11 to COM-001 for clarity regarding responsibilities of the Distribution Provider and the Generator Operator when either entity experiences a failure of its Interpersonal Communication capability.
- Removed PSE and LSE from the COM-001-2 implementation plan.

As a result of the revisions, the SDT moved COM-001-2 to a successive ballot.

#### **F. Fifth Posting – Comment Period, Successive Ballot, and Non-Binding Poll**

Fifth draft of the COM-001-2 standard was posted for a comment period and non-binding poll of the VRFs and VSLs from January 9, 2012 to February 9, 2012, with a successive ballot and non-binding poll held from January 30, 2012 to February 9, 2012. COM-001-2 received a quorum of 81.82% and an approval of 54.64% with a 71.35% approval for the VRFs and VSLs.

The SDT received 62 sets of comments from 170 different individuals from approximately 106 companies representing 9 of 10 industry segments. In response to comments, the SDT made the following changes to COM-001-2:

- Removed “for the exchange of Interconnection and operating information” from the purpose statement.
- Made effective date language consistent with the current Standard Drafting Guidelines.
- Added a part to Requirements R3 and R4 to address synchronous and asynchronous connections.
- Changed wording in Requirement R11 from “Mutually agreeable time” to “mutually agreeable action.”
- Made conforming word changes and capitalizations and fixed typos.
- Made conforming changes to VSLs.

#### **G. Sixth Posting – Comment Period, Successive Ballot and Non-binding Poll, and Recirculation Ballot and Non-Binding Poll**

In the sixth posting, COM-001-2 was posted for a comment period and non-binding poll of the VRFs and VSLs from June 7, 2012 to July 6, 2012, with a successive ballot and non-binding poll of the VRFs and VSLs. COM-001-2 received a 75.37% quorum, and an approval of 72.16%, with a 73.71% approval for the VRFs and VSLs. The SDT received 41 sets of comments from 136 different individuals from 90 companies representing 9 of the 10 industry segments. Slight wording changes were made to the COM-001-2 Requirements and Measures, but none of the changes were substantive.

#### **H. Seventh Posting – Recirculation Ballot**

For the seventh and final posting, COM-001-2 was posted for a recirculation ballot from September 6, 2012 to September 17, 2012. COM-001-2 received industry approval with a quorum of 80.35% and an approval of 75.01%.

#### **I. Board of Trustees Approval**

The final drafts of the COM-001-2 and COM-002-3 standards were presented to NERC's Board of Trustees for approval on November 7, 2012. The Board of Trustees approved the standards, and NERC staff recommended that they be filed with applicable regulatory authorities.

Related Files

**Status:**  
 The Board of Trustees (BOT) adopted the IRO-002, IRO-005, and IRO-014 standards at their August 4, 2011 meeting. The standard IRO-001-3 was adopted by the BOT at their August 16, 2012 meeting. Standards COM-001-2 and COM-002-3 were BOT adopted on November 7, 2012. IRO-002-3, IRO-005-4, and IRO-014-2 were filed with applicable regulatory authorities for approval on April 16, 2013. NERC staff is preparing the filing for COM-001-2 and COM-002-3.

**Purpose/Industry Need:**  
 To ensure that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System.

Documents to be submitted for the FERC Filing of standards for Project 2006-06 - Reliability Coordination - IRO-002-3, IRO-005-4, IRO-014-2 (April 16, 2013)				
Final Exhibit				
DRAFT	ACTION	DATES	RESULTS	CONSIDERATION OF COMMENTS
<b>Draft 7</b> COM-001-2 Clean (82)   Redline to Last Posting (83)   Redline to Last Approved (84)  Implementation Plan and Mapping Document Clean (85)   Redline to Last Posting (86)  VRF/VSL Justification Clean (87)   Redline to Last Posting (88)	Recirculation Ballot  Info>> (89)  Vote>>	09/06/12 - 09/17/12 (closed)	Summary>> (90)  Ballot Results>> (91)	
<b>Draft 6</b> COM-001-2 Clean (65)   Redline to last posting (66)  Implementation Plan and Mapping Document Clean (67)   Redline to last posting (68)  COM-002-3 Clean   Redline to last posting   Redline to last	Recirculation Ballots and Non-binding Polls:  COM-002-3  IRO-001-3  Ballot Extension>> (73)  Updated Info>> (74)	06/27/12 - 07/06/12 (closed)	Summary>> (77) Updated  <b>Ballot Results:</b>  COM-002-3  IRO-001-3  <b>Non-binding Poll</b>	

<p>approved</p> <p>Implementation Plan and Mapping Document Clean   Redline to last posting</p>	<p>Info&gt;&gt; (75)</p> <p>Vote&gt;&gt;</p>		<p><b>Results:</b></p> <p>COM-002-3</p> <p>IRO-001-3</p>	
<p><b>IRO-001-3</b> Clean   Redline to last posting</p> <p>Implementation Plan and Mapping Document Clean   Redline to last posting</p> <p><b>Supporting Materials:</b> Comment Form (Word) (69)</p>	<p>Successive Ballot and Non-binding Poll:</p> <p>COM-001-2</p> <p>Info&gt;&gt; (76)</p> <p>Vote&gt;&gt;</p>	<p>06/27/12 - 07/11/12 (closed)</p>	<p><b>Ballot Results:</b></p> <p>COM-001-2 (78)</p> <p><b>Non-binding Poll Results:</b></p> <p>COM-001-2 (79)</p>	
<p>COM-001-1.1 (70)</p> <p>COM-002-2</p> <p>VRF/VSL Justification for COM-001-1 Clean (71)   Redline (72)</p> <p>VRF/VSL Justification for COM-002-3 Clean   Redline</p> <p>VRF/VSL Justification for IRO-001-3 Clean   Redline</p>	<p>Comment Period</p> <p>Submit Comments&gt;&gt;</p>	<p>06/07/12 - 07/06/12 (closed)</p>	<p>Comments Received&gt;&gt; (80)</p>	<p>Consideration of Comments&gt;&gt; (81)</p>
<p><b>Draft 5</b></p> <p><b>COM-001-2</b> Clean (50)   Redline to last posting (51)</p> <p>Implementation Plan and Mapping Document Clean (52)   Implementation Plan Redline to last posting (53)   Mapping Document Redline to last posting (54)</p>	<p>Successive Ballots and Non-Binding Polls</p> <p>Extension&gt;&gt; (58)</p> <p>Updated Info&gt;&gt; (59)</p> <p>Info&gt;&gt; (60)</p> <p>Vote&gt;&gt;</p>	<p>01/30/12 - 02/09/12 (closed)</p>	<p><b>Full Records:</b></p> <p>IRO-001-3</p> <p>COM-001-2 (61)</p> <p>COM-002-3</p> <p><b>Non-Binding Poll Results:</b></p> <p>IRO-001-3</p> <p>COM-001-2 (62)</p> <p>COM-002-3</p>	
<p><b>COM-002-3</b> Clean   Redline to last posting</p> <p>Implementation Plan and Mapping Document Clean   Implementation Plan Redline to last posting   Mapping Document Redline to last posting</p> <p><b>IRO-001-3</b> Clean   Redline to last posting   Redline to last approved</p>	<p>Comment Period</p> <p>Submit Comments&gt;&gt;</p>	<p>01/09/12 - 02/09/12 (closed)</p>	<p>Comments Received&gt;&gt; (63)</p>	

<p>Implementation Plan and Mapping Document Clean   Implementation Plan Redline to last posting   Mapping Document Redline to last posting</p> <p><b>Supporting Materials:</b> Comment Form (Word) <b>(55)</b></p> <p>COM-001-1.1 <b>(56)</b></p> <p>COM-002-2</p> <p>VRF/VSL Justification for COM-001-1 <b>(57)</b></p> <p>VRF/VSL Justification for COM-002-3</p> <p>VRF/VSL Justification for IRO-001-3</p>				<p>Consideration of Comments&gt;&gt; <b>(64)</b></p>
<p><b>Draft 5</b></p> <p><b>IRO-002-3</b> Clean   Redline to last posting   Redline to last approval <b>Implementation Plan</b> Clean   Redline VRFs and VSLs for IRO-002-3</p> <p><b>IRO-005-4</b> Clean   Redline to last posting   Redline to last approval <b>Implementation Plan</b> Clean   Redline VRFs and VSLs for IRO-005-4</p> <p>Definition of Adverse Reliability Impact</p> <p>Information on Revision of Definition of Adverse Reliability Impact</p> <p><b>IRO-014-2</b> Clean   Redline to last posting   Redline to last approval <b>Implementation Plan</b> Clean   Redline VRFs and VSLs for IRO-014-2</p> <p><b>Supporting Materials:</b> <b>IRO-001-2</b> Clean   Redline to last approval</p>	<p>Recirculation Ballot</p> <p>Info&gt;&gt;</p> <p>Vote&gt;&gt;</p>	<p>07/15/11 - 07/25/11 (closed)</p>	<p>Summary&gt;&gt;</p> <p>Full Record - IRO-002</p> <p>Full Record - IRO-005</p> <p>Full Record - IRO-014</p> <p>Non-Binding Results - IRO-002</p> <p>Non-Binding Results - IRO-005</p> <p>Non-Binding Results - IRO-01 4</p>	

<p><b>Draft 4 Reliability Coordination Standards</b></p> <p><b>COM-001-2</b>  <a href="#">Clean (37)</a>   <a href="#">Redline to last posting (38)</a>  <b>Implementation Plan</b>  <a href="#">Clean (39)</a>   <a href="#">Redline to last posting (40)</a></p> <p><b>COM-002-3</b>  <a href="#">Clean</a>   <a href="#">Redline to last posting</a>  <b>Implementation Plan</b>  <a href="#">Clean</a>   <a href="#">Redline to last posting</a></p> <p><b>IRO-001-2</b>  <a href="#">Clean</a>   <a href="#">Redline to last posting</a>  <b>Implementation Plan</b>  <a href="#">Clean</a>   <a href="#">Redline to last posting</a></p> <p><b>IRO-002-2</b>  <a href="#">Clean</a>   <a href="#">Redline</a>  Implementation Plan</p> <p><b>IRO-005-2</b>  <a href="#">Clean</a>   <a href="#">Redline to last posting</a>   <a href="#">Redline to first posting</a></p> <p><b>Implementation Plan</b>  <a href="#">Clean</a>   <a href="#">Redline to last posting</a></p> <p><b>IRO-014-2</b>  <a href="#">Clean</a>   <a href="#">Redline to last posting</a>  <b>Implementation Plan</b>  <a href="#">Clean</a>   <a href="#">Redline to last posting</a></p> <p><b>IRO-015-1</b>  <a href="#">Redline</a>  Implementation Plan</p> <p><b>IRO-016-1</b>  <a href="#">Redline</a>  Implementation Plan</p> <p><b>Supporting Materials:</b>  <a href="#">Comment Form (Word)</a></p>	<p>Initial Ballot</p> <p><a href="#">Updated Info&gt;&gt; (41)</a></p> <p><a href="#">Info&gt;&gt; (42)</a>   <a href="#">Vote&gt;&gt;</a></p> <p>Ballot Pool</p> <p><a href="#">Join&gt;&gt;</a></p> <p>Formal Comment Period</p> <p><a href="#">Current Info&gt;&gt; (43)</a></p> <p><a href="#">Info&gt;&gt; (44)</a></p> <p><a href="#">Submit Comments&gt;&gt;</a></p>	<p>02/25/11 - 03/07/11 (closed)</p> <p>01/25/11 - 02/25/11 (closed)</p> <p>01/18/11 - 03/07/11 (closed)</p> <p>08/04/10 - 09/03/10 (closed)</p>	<p><a href="#">Summary&gt;&gt; (45)</a></p> <p><a href="#">Full Record&gt;&gt; (46)</a></p> <p><a href="#">Comments Received&gt;&gt; (47)</a></p>	<p><a href="#">Consideration of Comments&gt;&gt; (48)</a></p> <p><a href="#">Consideration of Comments&gt;&gt; (49)</a></p>
<p>Supplemental SAR</p>	<p>Formal Comment Period</p>	<p>08/04/10 - 09/03/10 (closed)</p>	<p><a href="#">Comments Received&gt;&gt;</a></p>	



<p><b>Supporting Materials:</b>  <a href="#">Comment Form (Word)</a></p>	<p><a href="#">Submit Comments&gt;&gt;</a>   <a href="#">Info&gt;&gt;</a></p>			
<p>Draft 3 Reliability Coordination Standards</p> <p><b>COM-001-2</b>  <a href="#">Clean (28)</a>   <a href="#">Redline to last posting (29)</a>  <b>Implementation Plan</b>  <a href="#">Clean (30)</a>   <a href="#">Redline to last posting (31)</a></p> <p><b>COM-002-3</b>  <a href="#">Clean</a>   <a href="#">Redline to last posting</a>  <b>Implementation Plan</b>  <a href="#">Clean</a>   <a href="#">Redline to last posting</a></p> <p><b>IRO-001-2</b>  <a href="#">Clean</a>   <a href="#">Redline to last posting</a>  <b>Implementation Plan</b>  <a href="#">Clean</a>   <a href="#">Redline to last posting</a></p> <p><b>IRO-014-2</b>  <a href="#">Clean</a>   <a href="#">Redline to last posting</a>  <b>Implementation Plan</b>  <a href="#">Clean</a>   <a href="#">Redline to last posting</a></p> <p><b>Supporting Materials:</b>  <a href="#">Comment Form (Word) (32)</a></p>	<p>Comment Period</p> <p><a href="#">Info&gt;&gt; (33)</a></p> <p><a href="#">Submit Comments&gt;&gt;</a></p>	<p>01/04/10 - 02/18/10  (closed)</p> <p><a href="#">Info on Extension of Comment Period&gt;&gt; (34)</a></p>	<p><a href="#">Comments Received&gt;&gt; (35)</a></p>	<p><a href="#">Consideration of Comments&gt;&gt; (36)</a></p>
<p>Draft 2 Reliability Coordination Standards</p> <p>COM-001-2  <a href="#">Clean (20)</a>   <a href="#">Redline to first posting (21)</a></p> <p>COM-002-3  <a href="#">Clean</a>   <a href="#">Redline to first posting</a></p> <p>IRO-001-2  <a href="#">Clean</a>   <a href="#">Redline to first posting</a></p> <p>IRO-014-2  <a href="#">Clean</a>   <a href="#">Redline to first posting</a></p> <p><b>Supporting Materials:</b>  <a href="#">Comment Form (Word) (22)</a></p> <p>COM-001-2 Implementation Plan</p>	<p>Comment Period</p> <p><a href="#">Info&gt;&gt; (25)</a></p> <p><a href="#">Submit Comments&gt;&gt;</a></p>	<p>07/10/09 - 08/09/09  (closed)</p>	<p><a href="#">Comments Received&gt;&gt; (26)</a></p>	<p><a href="#">Consideration of Comments&gt;&gt; (27)</a></p>

<p>Clean (23)   Redline to first posting (24)</p> <p>COM-002-3 Implementation Plan Clean   Redline to first posting</p> <p>IRO-001-2 Implementation Plan Clean   Redline to first posting</p> <p>IRO-014-2 Implementation Plan Clean   Redline to first posting</p>				
<p>Draft 1 Reliability Coordination Standards</p> <p><b>Supporting Materials:</b> Comment Form (Word) (16)</p> <p>Comments (17)</p>	<p>Comment Period</p> <p>Submit Comments&gt;&gt;</p>	<p>08/05/08 - 09/16/08 (closed)</p>	<p>Comments Received&gt;&gt; (18)</p>	<p>Consideration of Comments&gt;&gt; (19)</p>
<p>Project 2006-06 ? Reliability Coordination ? How Scope of Work was Addressed</p>				
<p>COM-001-2 Clean (13)   Redline to last approval (14)</p> <p>COM-002-3 Clean   Redline to last approval</p> <p><b>Supporting Materials:</b> Implementation Plan (001) (15)</p> <p>Implementation Plan (002)</p>				
<p>IRO-001-2 Clean   Redline to last approval</p> <p>IRO-002-2 Clean   Redline to last approval</p> <p>IRO-005-1 Clean   Redline to last approval</p> <p><b>Supporting Materials:</b> Implementation Plan (001)</p> <p>Implementation Plan (002)</p> <p>Implementation Plan (005)</p>				
<p>IRO-014-2 Clean   Redline to last approval</p>				

<b>Supporting Materials:</b> Implementation Plan (014)  Implementation Plan (015)  Implementation Plan (016)				
Final SAR Approved by SC (9) Clean (10)   Redline to last posted (11)	Nominations for Standard Drafting Team  <a href="#">Info&gt;&gt; (12)</a>  <a href="#">Submit Nomination&gt;&gt;</a>	05/14/07 - 05/25/07 (closed)		
Draft SAR Version 2 Reliability Coordination Standards Draft SAR Version 2 (5)	Comment Period  <a href="#">Info&gt;&gt; (6)</a>  <a href="#">Submit Comments&gt;&gt;</a>	03/19/07 - 04/17/07 (closed)	<a href="#">Comments Received&gt;&gt; (7)</a>	<a href="#">Consideration of Comments&gt;&gt; (8)</a>
Draft SAR Version 1 Reliability Coordination Standards Draft SAR Version 1 (1)	Comment Period  <a href="#">Info&gt;&gt; (2)</a>  <a href="#">Submit Comments&gt;&gt;</a>	01/15/07 - 02/14/07 (closed)	<a href="#">Comments Received&gt;&gt; (3)</a>	<a href="#">Consideration of Comments&gt;&gt; (4)</a>

# Standard Authorization Request Form

Title of Proposed Standard	Reliability Coordination (Project 2006-06)
Request Date	December 18, 2006

<b>SAR Requestor Information</b>	<b>SAR Type</b> <i>(Check a box for each one that applies.)</i>
Name            Ellis Rankin	<input type="checkbox"/> New Standard
Primary Contact    Ellis Rankin	<input checked="" type="checkbox"/> Revision to existing Standards – see list below
Telephone        214-743-6828 Fax                972-263-6710	<input type="checkbox"/> Withdrawal of existing Standard
E-mail            erankin@txued.com	<input type="checkbox"/> Urgent Action

**Purpose**  
The purpose of this set of standards is to ensure that the reliability coordinator has processes, procedures, plans, and can use their tools and authorities to support real-time operating reliability within its own reliability area and between reliability coordinator areas in support of reliability of the interconnected bulk power systems.

COM-001 — Telecommunications  
COM-002 — Communications and Coordination  
IRO-001 — Reliability Coordination – Responsibilities and Authorities  
IRO-002 — Reliability Coordination – Facilities  
IRO-003 — Reliability Coordination – Wide Area View  
IRO-004 — Reliability Coordination – Operations Planning  
IRO-005 — Reliability Coordination – Current Day Operations  
IRO-007 — Monitoring the Wide Area  
IRO-008 — Reliability Coordinator Analyses and Assessments  
IRO-009 — Reliability Coordinator Actions to Operate Within IROLs  
IRO-010 — Reliability Coordinator Data Specification and Collection  
IRO-011 — Providing Data to the Reliability Coordinator  
IRO-012 — Procedures, Processes or Plans for Preventing and Mitigating IROLs  
IRO-013 — Reliability Coordinator Directives Relative to IROLs  
IRO-014 — Procedures to Support Coordination between Reliability Coordinators  
IRO-015 — Notifications and Information Exchange Between Reliability Coordinators  
IRO-016 — Coordination of Real-time Activities between Reliability Coordinators  
ORG-020 — Reliability Coordinator Certification - Certification  
ORG-021 — Reliability Coordinator Certification - Agreements  
ORG-022 — Reliability Coordinator Certification - Personnel  
ORG-023 — Reliability Coordinator Certification - Data Acquisition and Monitoring  
ORG-024 — Reliability Coordinator Certification – System Analysis  
ORG-025 — Reliability Coordinator Certification – Emergency Operations  
ORG-026 — Reliability Coordinator Certification – Loss of Control Center Functionality  
ORG-027 — Reliability Coordinator Certification – Restoration

## Standards Authorization Request Form

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PER-004 — Reliability Coordination – Staffing  
PRC-001 — System Protection Coordination

Several of the standards in this set are Version 0 standards. As the electric reliability organization begins enforcing compliance with reliability standards under Section 215 of the Federal Power Act in the United States and applicable statutes and regulations in Canada, the industry needs a set of clear, measurable, and enforceable reliability standards. The Version 0 standards, while a good foundation, were translated from historical operating and planning policies and guides that were appropriate in an era of voluntary compliance. The Version 0 standards and recent updates were put in place as a temporary starting point to stand up the electric reliability organization and begin enforcement of mandatory standards. However, it is important to update the standards in a timely manner, incorporating improvements to make the standards more suitable for enforcement and to capture prior recommendations that were deferred during the Version 0 translation.

### Industry Need

1. Provide an adequate level of reliability for the North American bulk power systems — the standards are complete and the requirements are set at an appropriate level to ensure reliability.
2. Ensure they are enforceable as mandatory reliability standards with financial penalties — the applicability to bulk power system owners, operators, and users, and as appropriate particular classes of facilities, is clearly defined; the purpose, requirements, and measures are results-focused and unambiguous; the consequences of violating the requirements are clear.
3. Consider comments received during the initial development of this set of standards and other comments received from ERO regulatory authorities and stakeholders (Attachment 1)
4. Bring the standards into conformance with the latest version of the Reliability Standards Development Procedure and the ERO Rules of Procedure. (Attachment 2)
5. Satisfy the standards procedure requirement for five-year review of the standards.

### Brief Description

The drafting team will review all of the requirements in this set of standards and eliminate all of the requirements that are redundant. There are redundancies between requirements in the IRO-sequence of standards and also redundancies between requirements in the IRO-sequence of standards and the ORG-sequence of standards, and redundancies with PER-004, COM-001, COM-002, and PRC-001. Note that there will be a new standard to address communication protocols (Project 2007-02) and requirements for real-time communication protocols need to be transferred to that new standard.

The drafting team also needs to review requirements and ensure that the distinctions between the functional entity and the real-time system operator are clear and distinct. The requirements should be written for the functional entity.

The drafting team also needs to clarify the responsibilities and authorities in the requirements when comparing the “reliability coordinator” and the “transmission operator.”

The drafting team needs to verify that requirements exempt the real time-operator from

## Standards Authorization Request Form

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liability when making a good faith effort at preserving reliability.

A challenge has been to require that entities have 'facilities' in place and available to the real-time system operators. These facilities are reviewed during certification, and unless there is a specific requirement to review these facilities, they may not be reviewed after the initial certification. To eliminate redundancy between the 'certification' standards and the standards that are aimed more at real-time operations, the certification standards could be phrased to clarify that entities are required to 'have and maintain' the specified facilities. This would enable the compliance monitor to check facilities on a periodic basis. While checking the facilities that are used on a daily basis may not be necessary, making periodic checks of the facilities that are infrequently would motivate entities to maintain these facilities, e.g., "Shall have a back up power supply for critical operations, and shall maintain and test at least once per year."

The results of the Operating Committee study on operator situational awareness tools should be used to verify that the requirements in the certification standards will meet reliability needs.

This project also needs to be coordinated with the project for developing Transmission Operator and Balancing Authority standards (2007-06).

IRO-001 has some 'fill-in-the-blank' components to eliminate.

The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.

***Reliability Functions***

<b>The Standard will Apply to the Following Functions</b> <i>(Check box for each one that applies.)</i>		
<input checked="" type="checkbox"/>	Reliability Coordinator	The entity that is the highest level of authority who is responsible for the reliable operation of the Bulk Electric System, has the Wide Area view of the Bulk Electric System, and has the operating tools, processes and procedures, including the authority to prevent or mitigate emergency operating situations in both next-day analysis and real-time operations. The Reliability Coordinator has the purview that is broad enough to enable the calculation of Interconnection Reliability Operating Limits, which may be based on the operating parameters of transmission systems beyond any Transmission Operator's vision.
<input checked="" type="checkbox"/>	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within its metered boundary and supports system frequency in real time.
<input checked="" type="checkbox"/>	Interchange Authority	Authorizes valid and balanced Interchange Schedules.
<input checked="" type="checkbox"/>	Planning Authority	Plans the Bulk Electric System.
<input checked="" type="checkbox"/>	Resource Planner	Develops a long-term (>one year) plan for the resource adequacy of specific loads within a Planning Authority area.
<input checked="" type="checkbox"/>	Transmission Planner	Develops a long-term (>one year) plan for the reliability of transmission systems within its portion of the Planning Authority area.
<input checked="" type="checkbox"/>	Transmission Service Provider	Provides transmission services to qualified market participants under applicable transmission service agreements
<input checked="" type="checkbox"/>	Transmission Owner	Owens transmission facilities.
<input checked="" type="checkbox"/>	Transmission Operator	Operates and maintains the transmission facilities, and executes switching orders.
<input checked="" type="checkbox"/>	Distribution Provider	Provides and operates the "wires" between the transmission system and the customer.
<input checked="" type="checkbox"/>	Generator Owner	Owens and maintains generation unit(s).
<input checked="" type="checkbox"/>	Generator Operator	Operates generation unit(s) and performs the functions of supplying energy and Interconnected Operations Services.
<input type="checkbox"/>	Purchasing-Selling Entity	The function of purchasing or selling energy, capacity, and all necessary Interconnected Operations Services as required.

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<input type="checkbox"/>	Market Operator	Integrates energy, capacity, balancing, and transmission resources to achieve an economic, reliability-constrained dispatch.
<input checked="" type="checkbox"/>	Load-Serving Entity	Secures energy and transmission (and related generation services) to serve the end user.



**Reliability and Market Interface Principles**

<b>Applicable Reliability Principles</b> <i>(Check box for all that apply.)</i>	
<input checked="" type="checkbox"/>	1. Interconnected bulk electric systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
<input checked="" type="checkbox"/>	2. The frequency and voltage of interconnected bulk electric systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
<input checked="" type="checkbox"/>	3. Information necessary for the planning and operation of interconnected bulk electric systems shall be made available to those entities responsible for planning and operating the systems reliably.
<input checked="" type="checkbox"/>	4. Plans for emergency operation and system restoration of interconnected bulk electric systems shall be developed, coordinated, maintained and implemented.
<input checked="" type="checkbox"/>	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk electric systems.
<input checked="" type="checkbox"/>	6. Personnel responsible for planning and operating interconnected bulk electric systems shall be trained, qualified, and have the responsibility and authority to implement actions.
<input checked="" type="checkbox"/>	7. The security of the interconnected bulk electric systems shall be assessed, monitored and maintained on a wide area basis.
<b>Does the proposed Standard comply with all of the following Market Interface Principles?</b> <i>(Select 'yes' or 'no' from the drop-down box.)</i>	
1. The planning and operation of bulk electric systems shall recognize that reliability is an essential requirement of a robust North American economy. Yes	
2. An Organization Standard shall not give any market participant an unfair competitive advantage. Yes	
3. An Organization Standard shall neither mandate nor prohibit any specific market structure. Yes	
4. An Organization Standard shall not preclude market solutions to achieving compliance with that Standard. Yes	
5. An Organization Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

***Related Standards – Listed under description***

Standard No.	Explanation

***Related SARs***

SAR ID	Explanation

***Regional Differences***

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	
SPP	
WECC	

**The drafting team will assist stakeholders in considering these comments in determining what changes to make to the standards:**

**COM-001-0 Telecommunications**

FERC NOPR

- Include Measures and Levels of Non-Compliance;
- Include generator operators and distribution provider as applicable entities; and
- Include requirements for communication facilities for use during emergency situations.

FERC Staff Report

- Lacks adequacy, redundancy and routing requirements
- Generation owners missing
- Expect new standard in November

V0 Industry Comments

- Redundant with Policy 5A, R1
- Many players missing
- Apply R1 to all but smallest entities

Violation Risk Factor Drafting Team Comments

- R6 – administrative requirement

**COM-002-1 Communications and Coordination**

FERC NOPR

- Include Measures and Levels of Non-Compliance;
- Include a Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area views of transmission operators or balancing authorities;
- Include distribution providers as applicable entities; and
- Require tightened communications protocols, especially for communications during alerts and emergencies.

FERC Staff Report

- Missing requirement for approval of actions
- Lack of compliance and measures
- Expect November update

V0 Industry Comments

- Voice with generators not required
- R1 – include reliability authority
- R2 – include sabotage and security
- R4 – clarify repeat back requirement with regard to emergency

**IRO-001-0 Reliability Coordination – Responsibilities and Authorities**

FERC NOPR

- Reflect the process set forth in the NERC Rules of Procedures; and
- Eliminate the regional reliability organization as an applicable entity.

FERC Staff Report

- RC not explicitly mentioned in Purpose

Regional Fill-in-the-Blank Team Comments

- Remove ", sub-region, or interregional coordinating group" from R1

## **SAR for Project 2006-06 Reliability Coordination – Attachment 1**

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- Consider removing "Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another." from the Purpose section of the standard.

### V0 Industry Comments

- Inability to perform needs to be communicated
- What is meant by 'interest of other entity'?

### Violation Risk Factor Drafting Team Comments

- R6 - Since the RC must be NERC certified, it stands to reason that anyone performing RC tasks should be certified. However, since the RC still retains the accountability for actions, and requirement 4 handles the agreements, this requirement is a medium risk.

## **IRO-002-0 Reliability Coordination – Facilities**

### FERC NOPR

- Include Measures and Levels of Non-Compliance and
- Modify Requirement R7 to explicitly require a minimum set of tools for the reliability coordinator.

### FERC Staff Report

- Lack of Measures & Compliance
- Expect new standard in November

### V0 Industry Comments

- R5 – define synchronized information system
- R7 – define 'adequate' tools and 'wide-area'
- Words such as 'easily understood' and 'particular emphasis' need to be tightened

## **IRO-005-1 Reliability Coordination – Current Day Operations**

### FERC NOPR

- Include Measures and Levels of Non-Compliance. We propose that the Measures and Levels of Non-Compliance specific to IROL violations should be commensurate with the magnitude, duration, frequency and causes of the violation.
- Further, as discussed above, we propose that the ERO conduct a survey on IROL practices and experiences.
- The Commission may propose further modifications to IRO-005-1 based on the survey results.

### FERC Staff Report

- Concern with timing of critical outage during initial correction period
- Ambiguous with respect to IROL limits
- Lack of Measures & Compliance

### Regional Fill-in-the-Blank Team Comments

- R14 has regional reference

### V0 Industry Comments

- R10, 11 & 12 – RA not empowered to do this

**SAR for Project 2006-06 Reliability Coordination – Attachment 1**

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**IRO-014-1** Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators

FERC NOPR

- o No changes identified.

**IRO-015-1** Notifications and Information Exchange Between Reliability Coordinators

FERC NOPR

- o No changes identified.

**IRO-016-1** Coordination of Real-Time Activities Between Reliability Coordinators

FERC NOPR

- o No changes identified.

Violation Risk Factors Drafting Team Comments

- o R1.2.1 & R2 – ambiguous

**PER-004-0 Reliability Coordination – Staffing**

FERC NOPR

- o Include formal training requirements for reliability coordinators similar to those addressed under the personnel training Reliability Standard PER-002-0;
- o Include requirements pertaining to personnel credentials for reliability coordinators similar to those in PER-003-0; and
- o Include Levels of Non-Compliance and Measures that address staffing requirements and the requirement for five days of emergency training.

FERC Staff Report

- o Min. expectations and # of hours per year missing
- o Blackout Report items not addressed
- o Formal program not specified
- o Measures & Compliance missing

V0 Industry Comments

- o Calendar year timing increment
- o Other training needs to be defined

**PRC-001-0 System Protection Coordination**

FERC NOPR

- o Include Measures and Levels of Non-Compliance;
- o Include a requirement that relevant transmission operators and generator operators must be informed immediately upon the detection of failures in relays or protection system elements on the Bulk-Power System that would threaten reliable operation, so that these entities can carry out the appropriate corrective control actions consistent with those used in mitigating IROL violations; and
- o Clarify that, after being informed of failures in relays or protection system elements on the Bulk-Power System, transmission operators or generator operators shall carry out corrective control actions, i.e., returning the system to a stable state that respects system requirements as soon as possible and no longer than 30 minutes.

FERC Staff Report

- o Max. time period for corrective actions missing
- o Expect new standard in November

V0 Industry Comments

## **SAR for Project 2006-06 Reliability Coordination – Attachment 1**

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- Effects on reliability may not be known
- Consistent terminology as to neighbor vs. affected
- Not all criteria moved over from policies

The following standards have been proposed for retirement because they will be displaced by IRO-007 and IRO-008 but are included here in the event their retirement is not approved:

### **IRO-003-1 — Reliability Coordination – Wide-Area View**

FERC NOPR

- Include Measures and Levels of Non-Compliance; and
- Include criteria to define the term “critical facilities” in a reliability coordinator’s area and its adjacent systems.

FERC Staff Report

- Need to define critical facilities
- Lack of Measures & Compliance
- Expect new standard in November

### **IRO-004-1 — Reliability Coordination – Operations Planning**

FERC NOPR

- Require the next-day analysis to identify effective control actions that can be implemented within 30 minutes during contingency conditions.

FERC Staff Report

- No system assessment required

VO Industry Comments

- Change ‘particular attention to’ to ‘to monitor’

The following standards are under development and have not yet been approved, so there are no FERC comments or stakeholder comments on a ‘finished’ standard. These standards will be reviewed and may be modified as needed to meet the goals identified in the purpose statement of this SAR:

IRO-007 — Monitoring the Wide Area

IRO-008 — Reliability Coordinator Operational Analyses and Real-Time Assessments

IRO-009 — Reliability Coordinator Actions to Operate Within IROLs

IRO-010 — Reliability Coordinator Data Specification and Collection

IRO-012 — Reliability Coordinator Processes, Procedures, or Plans for Preventing and Mitigating Reliability Operating Limits

ORG-020 — Reliability Coordinator Certification - Certification

ORG-021 — Reliability Coordinator Certification - Agreements

ORG-022 — Reliability Coordinator Certification - Personnel

ORG-023 — Reliability Coordinator Certification - Data Acquisition and Monitoring

ORG-024 — Reliability Coordinator Certification – System Analysis

ORG-025 — Reliability Coordinator Certification – Emergency Operations

ORG-026 — Reliability Coordinator Certification – Loss of Control Center Functionality

ORG-027 — Reliability Coordinator Certification – Restoration

The drafting team will reference these guidelines in determining what changes to make to the standards to bring them into conformance with the *Reliability Standards Development Procedure Manual, Version 6* and the *ERO Rules of Procedure*:

## **Standard Review Guidelines**

### **Applicability**

Does this reliability standard clearly identify the functional classes of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted? Where multiple functional classes are identified is there a clear line of responsibility for each requirement identifying the functional class and entity to be held accountable for compliance? Does the requirement allow overlapping responsibilities between Registered Entities possibly creating confusion for who is ultimately accountable for compliance?

Does this reliability standard identify the geographic applicability of the standard, such as the entire North American bulk power system, an interconnection, or within a regional entity area? If no geographic limitations are identified, the default is that the standard applies throughout North America.

Does this reliability standard identify any limitations on the applicability of the standard based on electric facility characteristics, such as generators with a nameplate rating of 20 MW or greater, or transmission facilities energized at 200 kV or greater or some other criteria? If no functional entity limitations are identified, the default is that the standard applies to all identified functional entities.

### **Purpose**

Does this reliability standard have a clear statement of purpose that describes how the standard contributes to the reliability of the bulk power system? Each purpose statement should include a value statement.

### **Performance Requirements**

Does this reliability standard state one or more performance requirements, which if achieved by the applicable entities, will provide for a reliable bulk power system, consistent with good utility practices and the public interest?

Does each requirement identify who shall do what under what conditions and to what outcome?

### **Measurability**

Is each performance requirement stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by that requirement?

Does each performance requirement have one or more associated measures used to objectively evaluate compliance with the requirement?

If performance results can be practically measured quantitatively, are metrics provided within the requirement to indicate satisfactory performance?

## **Technical Basis in Engineering and Operations**

Is this reliability standard based upon sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in that particular field?

**Completeness**

Is this reliability standard complete and self-contained? Does the standard depend on external information to determine the required level of performance?

**Consequences for Noncompliance**

In combination with guidelines for penalties and sanctions, as well as other ERO and regional entity compliance documents, are the consequences of violating a standard clearly known to the responsible entities?

**Clear Language**

Is the reliability standard stated using clear and unambiguous language? Can responsible entities, using reasonable judgment and in keeping with good utility practices, arrive at a consistent interpretation of the required performance?

**Practicality**

Does this reliability standard establish requirements that can be practically implemented by the assigned responsible entities within the specified effective date and thereafter?

**Capability Requirements versus Performance Requirements**

In general, requirements for entities to have 'capabilities' (this would include facilities for communication, agreements with other entities, etc.) should be located in the standards for certification. The certification requirements should indicate that entities have a responsibility to 'maintain' their capabilities.

**Consistent Terminology**

To the extent possible, does this reliability standard use a set of standard terms and definitions that are approved through the NERC reliability standards development process?

If the standard uses terms that are included in the NERC Glossary of Terms Used in Reliability Standards, then the term must be capitalized when it is used in the standard. New terms should not be added unless they have a 'unique' definition when used in a NERC reliability standard. Common terms that could be found in a college dictionary should not be defined and added to the NERC Glossary.

Are the verbs on the 'verb list' from the DT Guidelines? If not – do new verbs need to be added to the guidelines or could you use one of the verbs from the verb list?

**Violation Risk Factors (Risk Factor)**

**High Risk Requirement**

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures;



or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

**Medium Risk Requirement**

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures;

or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

**Lower Risk Requirement**

A requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. A requirement that is administrative in nature;

or a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

**Mitigation Time Horizon**

The drafting team should also indicate the time horizon available for mitigating a violation to the requirement using the following definitions:

- **Long-term Planning** — a planning horizon of one year or longer.
- **Operations Planning** — operating and resource plans from day-ahead up to and including seasonal.
- **Same-day Operations** — routine actions required within the timeframe of a day, but not real-time.
- **Real-time Operations** — actions required within one hour or less to preserve the reliability of the bulk electric system.
- **Operations Assessment** — follow-up evaluations and reporting of real time operations.

### **Violation Severity Levels**

The drafting team should indicate a set of violation severity levels that can be applied for the requirements within a standard. ('Violation severity levels' replace existing 'levels of non-compliance.')

The violation severity levels may be applied for each requirement or combined to cover multiple requirements, as long as it is clear which requirements are included.

#### **The violation severity levels should be based on the following definitions:**

- **Lower: mostly compliant with minor exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more minor details. Equivalent score: 95% to 99% compliant.
- **Moderate: mostly compliant with significant exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more significant elements. Equivalent score: 85% to 94% compliant.
- **High: marginal performance or results** — The responsible entity has only partially achieved the reliability objective of the requirement and is missing one or more significant elements. Equivalent score: 70% to 84% compliant.
- **Severe: poor performance or results** — The responsible entity has failed to meet the reliability objective of the requirement. Equivalent score: less than 70% compliant.

### **Compliance Monitor**

Replace, 'Regional Reliability Organization' with 'Electric Reliability Organization'

### **Fill-in-the-blank Requirements**

Do not include any 'fill-in-the-blank' requirements. These are requirements that assign one entity responsibility for developing some performance measures without requiring that the performance measures be included in the body of a standard – then require another entity to comply with those requirements.

Every reliability objective can be met, at least at a threshold level, by a North American standard. If we need regions to develop regional standards, such as in under-frequency load shedding, we can always write a uniform North American standard for the applicable functional entities as a means of encouraging development of the regional standards.

### **Requirements for Regional Reliability Organization**

Do not write any requirements for the Regional Reliability Organization. Any requirements currently assigned to the RRO should be re-assigned to the applicable functional entity.

**Effective Dates**

Must be 1<sup>st</sup> day of 1<sup>st</sup> quarter after entities are expected to be compliant – must include time to file with regulatory authorities and provide notice to responsible entities of the obligation to comply. If the standard is to be actively monitored, time for the Compliance Monitoring and Enforcement Program to develop reporting instructions and modify the Compliance Data Management System(s) both at NERC and Regional Entities must be provided in the implementation plan.

**Associated Documents**

If there are standards that are referenced within a standard, list the full name and number of the standard under the section called, 'Associated Documents'.

**Functional Model Version 3**

Review the requirements against the latest descriptions of the responsibilities and tasks assigned to functional entities as provided in pages 13 through 53 of the draft Functional Model Version 3.

January 15, 2007

TO: REGISTERED BALLOT BODY

Ladies and Gentlemen:

**Announcement: Comment Periods Open for SAR to Modify Vegetation Management, SAR for Reliability Coordination and SAR and Standard to Modify Facility Ratings Standards**

The Standards Committee (SC) announces the following standards actions:

**SAR to Modify the Vegetation Management Standard FAC-003-1 Posted for 30-day Comment Period January 15–February 14, 2007**

The SAR for [Project 2007-07](#) proposes modifying the Vegetation Management standard FAC-003-1 to address concerns raised by FERC and stakeholders and to bring the standard into conformance with the ERO Rules of Procedure and the latest version of the *Reliability Standards Development Procedure*. Please use the [comment form](#) to provide comments on this SAR.

**SAR to Modify the Reliability Coordinator Standards Posted for 30-day Comment Period January 15–February 14, 2007**

The SAR for [Project 2006-06](#) proposes retiring, modifying, or adding to existing requirements for the reliability coordinator to ensure that the complete set of requirements addresses all the processes, procedures, plans, tools, and authorities the reliability coordinator needs to support the reliable operation of the interconnected bulk power systems. This project involves addressing concerns raised by FERC and stakeholders and also involves bringing the set of standards into conformance with the ERO Rules of Procedure and the latest version of the *Reliability Standards Development Procedure*. Please use the [comment form](#) to provide comments on this SAR.

**SAR and Standard to Modify the Facility Ratings Standards Posted for 45-day Comment Period January 15–February 28, 2007**

The SAR for [Project 2006-09](#) proposes modifying two Facility Ratings standards, FAC-008-1 and FAC-009-1, to address concerns raised by FERC and stakeholders and to bring the standard into conformance with the ERO Rules of Procedure and the latest version of the *Reliability Standards Development Procedure*. Because there were relatively few technical changes recommended for this set of standards, the revised standard, which combines FAC-008-1 and FAC-009-1, is posted for comment along with an implementation plan. Please use the [comment form](#) to provide comments on this SAR, standard and implementation plan.

**Standards Development Process**

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. If you have any questions, please contact me at 813-468-5998 or [maureen.long@nerc.net](mailto:maureen.long@nerc.net).

Sincerely,

*Maureen E. Long*

cc: Registered Ballot Body Registered Users  
Standards Mailing List  
NERC Roster

## Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR

Please use this form to submit comments on the Reliability Coordination SAR. Comments must be submitted by **February 14, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with the words "Reliability Coordination" in the subject line. If you have questions, please contact Maureen Long at [maureen.long@nerc.net](mailto:maureen.long@nerc.net) or by telephone at 813-468-5998.

<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
Name:	Brian Thumm	
Organization:	ITC Transmission	
Telephone:	248.374.7846	
E-mail:	bthumm@itctransco.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input checked="" type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations, Regional Entities



### Background Information

The purpose of this SAR is to review the set of standards that includes reliability coordinator requirements with the intent of eliminating duplicate requirements and upgrading and reorganizing the requirements to ensure that there are requirements that address the reliability coordinator's processes, procedures, plans, tools, and authorities to support real-time operating reliability within its own reliability area and between reliability coordinator areas in support of reliability of the interconnected bulk power systems.

The scope of the SAR includes the following:

- The drafting team will review all of the requirements in this set of standards and eliminate all of the requirements that are redundant. There are redundancies between requirements in the IRO-sequence of standards and also redundancies between requirements in the IRO-sequence of standards and the ORG-sequence of standards, and redundancies with PER-004, COM-001, COM-002, and PRC-001. Note that there will be a new standard to address communication protocols (Project 2007-02) and requirements for real-time communication protocols need to be transferred to that new standard.
- The drafting team also needs to review requirements and ensure that the distinctions between the functional entity and the real-time system operator are clear and distinct. The requirements should be written for the functional entity.
- The drafting team also needs to clarify the responsibilities and authorities in the requirements when comparing the "reliability coordinator" and the "transmission operator."
- The drafting team needs to verify that requirements exempt the real time-operator from liability when making a good faith effort at preserving reliability.
- The drafting team needs to address the reliability coordinator's facilities. A challenge has been to require that entities have "facilities" in place and available to the real-time system operators. These facilities are reviewed during certification, and unless there is a specific requirement to review these facilities, they may not be reviewed after the initial certification. To eliminate redundancy between the "certification" standards and the standards that are aimed more at real-time operations, the certification standards could be phrased to clarify that entities are required to "have and maintain" the specified facilities. This would enable the compliance monitor to check facilities on a periodic basis. While checking the facilities that are used on a daily basis may not be necessary, making periodic checks of the facilities that are infrequently would motivate entities to maintain these facilities, e.g., "Shall have a back-up power supply for critical operations, and shall maintain and test at least once per year."
- The results of the Operating Committee's study on operator situational awareness tools should be used to verify that the requirements in the certification standards will meet reliability needs.
- This project also needs to be coordinated with the project for developing transmission operator and balancing authority standards (2007-06).
- IRO-001 has some "fill-in-the-blank" components to eliminate.

## **Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR**

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- The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.



## Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR

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**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

Yes

No

Comments: Yes, there is a reliability need to revise the Standards identified in this SAR. Not all of the revisions described, however, are reliability related and in fact should not be included in the standards (e.g., exempting an operator from liability).

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

Yes

No

Comments: The Standard Drafting Team should not be given latitude to "include other improvements to the standards deemed appropriate by the drafting team." The purpose of the SAR is to identify the changes contemplated by the need for the Standard Revision. If there are changes that the SAR requestor would like to make to the Standard, they should be spelled out in the SAR. If the SAR requestor does not really know the changes that should be made to the standard, then the SAR should be withdrawn until the need for a SAR can be adequately justified.

The remainder of the SAR is very broad; perhaps too broad. The requestor should consider reducing the scope of the SAR to make specific changes to the standards, rather than try to consolidate all of the Standards in one swift stroke.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments: Uncertain to say what they would be at this point.

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations, Regional Entities



### Background Information

The purpose of this SAR is to review the set of standards that includes reliability coordinator requirements with the intent of eliminating duplicate requirements and upgrading and reorganizing the requirements to ensure that there are requirements that address the reliability coordinator's processes, procedures, plans, tools, and authorities to support real-time operating reliability within its own reliability area and between reliability coordinator areas in support of reliability of the interconnected bulk power systems.

The scope of the SAR includes the following:

- The drafting team will review all of the requirements in this set of standards and eliminate all of the requirements that are redundant. There are redundancies between requirements in the IRO-sequence of standards and also redundancies between requirements in the IRO-sequence of standards and the ORG-sequence of standards, and redundancies with PER-004, COM-001, COM-002, and PRC-001. Note that there will be a new standard to address communication protocols (Project 2007-02) and requirements for real-time communication protocols need to be transferred to that new standard.
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- The drafting team also needs to clarify the responsibilities and authorities in the requirements when comparing the "reliability coordinator" and the "transmission operator."
- The drafting team needs to verify that requirements exempt the real time-operator from liability when making a good faith effort at preserving reliability.
- The drafting team needs to address the reliability coordinator's facilities. A challenge has been to require that entities have "facilities" in place and available to the real-time system operators. These facilities are reviewed during certification, and unless there is a specific requirement to review these facilities, they may not be reviewed after the initial certification. To eliminate redundancy between the "certification" standards and the standards that are aimed more at real-time operations, the certification standards could be phrased to clarify that entities are required to "have and maintain" the specified facilities. This would enable the compliance monitor to check facilities on a periodic basis. While checking the facilities that are used on a daily basis may not be necessary, making periodic checks of the facilities that are infrequently would motivate entities to maintain these facilities, e.g., "Shall have a back-up power supply for critical operations, and shall maintain and test at least once per year."
- The results of the Operating Committee's study on operator situational awareness tools should be used to verify that the requirements in the certification standards will meet reliability needs.
- This project also needs to be coordinated with the project for developing transmission operator and balancing authority standards (2007-06).
- IRO-001 has some "fill-in-the-blank" components to eliminate.

## **Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR**

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- The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.

## Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR

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**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

Yes

No

Comments: The IRC agrees with the objective but does not agree with the process.

We agree there is a general need to clean up the standards and where appropriate consolidate the standards. However, this SAR covers too large a swath of standards, and as a consequence the resulting standard has the potential of being too large for reasoned comments.

The SRC believes that the wide perspective proposed by this SAR could compromise the internal consistency within individual standards. Subject Matter experts created interrelated requirements in given areas. This SAR proposes to impose a vertically integrated prospective, linking standards in widely dispersed areas of operational expertise. While a review of the vertical integration is useful and in places needed, it is recommended that the results of the review should themselves be sent as recommended SARs for industry consideration by the SMEs for the individual standards, and not as a proposed ad hoc standard. Grouping them as proposed in the SAR may result in unintended disconnects within the other standards, and in the worst case result in an ongoing series of iterative SARs.

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

Yes

No

Comments: We do agree the standards should be consolidated and redundancies eliminated where appropriate.

However, it is not appropriate to include standards in this SAR that have not yet been approved. For example, it is not necessary to expand on the requirement to have facilities in place by adding a testing requirement. If an entity is required to have facilities in place and they are not maintained and available, they do not meet the requirement.

The "boiler plate" language that this "development may include other improvements deemed appropriate by the drafting team" is too vague and essentially opens the scope to include anything the drafting team wants to do with the standard. This is not appropriate. The scope should be specific and the drafting team should only focus on those specifics.

The SRC supports the approach of prioritizing and revising individual standards to include FERC's comments as part of the consideration process. Only a few standards should be revised at a time to make the process more manageable.

## Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR

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3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments:

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<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
Name:	David Kiguel	
Organization:	Hydro One Networks Inc.	
Telephone:	416-345-5313	
E-mail:	David.Kiguel@HydroOne.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
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*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

Yes

No

Comments:

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

Yes

No

Comments: Please see our answer to question No. 3.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments: This project involves the revision of 27 NERC Standards, not a small task by any measure. The extent of the proposed work and the necessary expertise is beyond what can be found in one single SAR team and drafting team.

We respectfully submit that the project be divided into as many SARs and teams as necessary with the work directed and monitored by the Standards Committee.

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
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NERC Region		Registered Ballot Body Segment
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**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

Yes

No

Comments: We agree there is a general need to consolidate where necessary and clean up the standards. However, this SAR covers too large a swath of standards. It very confusing what the overall goal is. Additionally, we are concerned that the range of expertise required by this SAR will result in a drafting team that is too large and will result in little to no progress unless the drafting team is subdivided. If the drafting team is subdivided, then this SAR should be subdivided into other SARs.

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

Yes

No

Comments: We do agree the standards should be consolidated and redundancies eliminated where appropriate. However, it is not appropriate to include standards in this SAR that have not yet been approved.

It is not necessary to expand on the requirement to have facilities in place by adding a testing requirement. If an entity is required to have facilities in place and they are not maintained and available, they do not meet he requirement of having facilities in place.

The "boiler plate" language that this "development may include other improvements deemed appropriate by the drafting team is too vague and essentially opens the scope to include anything the drafting team wants to do with the standard. This is not appropriate. The scope should be specific and the drafting team should only focus on those specifics.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments: Because of the overbroad nature of this SAR, the answer is likely yes. However, it is nearly impossible to determine all the additional required changes without missing important items. This SAR needs to be broken down to address individual standards.

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<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
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E-mail:	kgoodman@iso-ne.com	
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/>	2 — RTOs, ISOs,
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input checked="" type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
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<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
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*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

Yes

No

Comments: ISO New England supports the objective but does not agree with the process.

We agree there is a general need to clean up the standards and where appropriate consolidate the standards. However, this SAR covers too large a swath of standards, and as a consequence the resulting standard has the potential of being too large for reasoned comments.

We are concerned that the wide perspective proposed by this SAR could compromise the internal consistency within individual standards. Subject Matter Experts created interrelated requirements in given areas. This SAR proposes to impose a vertically integrated prospective, linking standards in widely dispersed areas of operational expertise. While a review of the vertical integration is useful and in places needed, it is recommended that the results of the review should themselves be sent as recommended SARs for industry consideration by the SMEs for the individual standards, and not as a proposed ad hoc standard. Grouping them as proposed in the SAR may result in unintended disconnects within the other standards, and in the worst case result in an ongoing series of iterative SARs.

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

Yes

No

Comments: We do agree the standards should be consolidated and redundancies eliminated where appropriate.

However, it is not appropriate to include standards in this SAR that have not yet been approved. For example, it is not necessary to expand on the requirement to have facilities in place by adding a testing requirement. If an entity is required to have facilities in place and they are not maintained and available, they do not meet the requirement.

The "boiler plate" language that this "development may include other improvements deemed appropriate by the drafting team" is too vague and essentially opens the scope to include anything the drafting team wants to do with the standard. This is not appropriate. The scope should be specific and the drafting team should only focus on those specifics.

ISO New England supports the approach of prioritizing and revising individual standards to include FERC's comments as part of the consideration process. We also support the

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consideration of non-FERC industry comments submitted previously in the commenting process where the requirements were not available for commenting.

Only a few standards should be revised at a time to make the process more manageable.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments:

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<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
Name:	Mike Gentry	
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Telephone:	602-236-6408	
E-mail:	Mike.Gentry@srpnet.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
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Yes

No

Comments:

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

Yes

No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

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Yes

No

Comments:

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

Yes

No

Comments: We believe that the drafting needs to verify that requirements exempt the reliability coordinator real-time supervision, as well as the real-time operator from liability when making a good faith effort at preserving reliability.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments:

The WECC RCCWG believes that the FERC Staff Report suggestion that COM-001 "generation owners missing" should not translate to addition of generation owners in the applicability. "Generator Operator" is an applicable entity, but not "Generator Owner".

The WECC RCCWG believes the Reliability Coordination SAR should address those VO comments on requirements, when those specific are no longer part of the standard referenced in the VO comments identified in Attachment 1 of the SAR if those comments were not previously addressed. One example: posted "VO Industry Comments" suggest inclusion of sabotage and security in R2 of COM-002. That comment is no longer applicable to COM-002 R2 - the standard requirements have changed. That said, the comment intent should not be lost.

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Yes

No

Comments:

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

Yes

No

Comments:

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Yes

No

Comments:

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<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
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NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
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- The drafting team needs to address the reliability coordinator's facilities. A challenge has been to require that entities have "facilities" in place and available to the real-time system operators. These facilities are reviewed during certification, and unless there is a specific requirement to review these facilities, they may not be reviewed after the initial certification. To eliminate redundancy between the "certification" standards and the standards that are aimed more at real-time operations, the certification standards could be phrased to clarify that entities are required to "have and maintain" the specified facilities. This would enable the compliance monitor to check facilities on a periodic basis. While checking the facilities that are used on a daily basis may not be necessary, making periodic checks of the facilities that are infrequently would motivate entities to maintain these facilities, e.g., "Shall have a back-up power supply for critical operations, and shall maintain and test at least once per year."
- The results of the Operating Committee's study on operator situational awareness tools should be used to verify that the requirements in the certification standards will meet reliability needs.
- This project also needs to be coordinated with the project for developing transmission operator and balancing authority standards (2007-06).
- IRO-001 has some "fill-in-the-blank" components to eliminate.

## **Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR**

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- The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.

## Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR

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**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

Yes

No

Comments:

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

Yes

No

Comments: Please see our answer to question No. 3.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments: This project involves the revision of 27 NERC Standards, not a small task by any measure. The extent of the proposed work and the necessary expertise is beyond what can be found in one single SAR team and drafting team.

We respectfully submit that the project be divided into as many SARs and teams as necessary with the work directed and monitored by the Standards Committee.

Also, coordination with the Standards in development IRO-007-1 to IRO-010-1 that are also the object of a separate revision and commentary period should be taken care of.

## Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR

Please use this form to submit comments on the Reliability Coordination SAR. Comments must be submitted by **February 14, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with the words "Reliability Coordination" in the subject line. If you have questions, please contact Maureen Long at [maureen.long@nerc.net](mailto:maureen.long@nerc.net) or by telephone at 813-468-5998.

<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
Name:	Ron Falsetti	
Organization:	IESO	
Telephone:	905-855-6187	
E-mail:	ron.falsetti@ieso.ca	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/>	2 — RTOs, ISOs,
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input checked="" type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations, Regional Entities



### Background Information

The purpose of this SAR is to review the set of standards that includes reliability coordinator requirements with the intent of eliminating duplicate requirements and upgrading and reorganizing the requirements to ensure that there are requirements that address the reliability coordinator's processes, procedures, plans, tools, and authorities to support real-time operating reliability within its own reliability area and between reliability coordinator areas in support of reliability of the interconnected bulk power systems.

The scope of the SAR includes the following:

- The drafting team will review all of the requirements in this set of standards and eliminate all of the requirements that are redundant. There are redundancies between requirements in the IRO-sequence of standards and also redundancies between requirements in the IRO-sequence of standards and the ORG-sequence of standards, and redundancies with PER-004, COM-001, COM-002, and PRC-001. Note that there will be a new standard to address communication protocols (Project 2007-02) and requirements for real-time communication protocols need to be transferred to that new standard.
- The drafting team also needs to review requirements and ensure that the distinctions between the functional entity and the real-time system operator are clear and distinct. The requirements should be written for the functional entity.
- The drafting team also needs to clarify the responsibilities and authorities in the requirements when comparing the "reliability coordinator" and the "transmission operator."
- The drafting team needs to verify that requirements exempt the real time-operator from liability when making a good faith effort at preserving reliability.
- The drafting team needs to address the reliability coordinator's facilities. A challenge has been to require that entities have "facilities" in place and available to the real-time system operators. These facilities are reviewed during certification, and unless there is a specific requirement to review these facilities, they may not be reviewed after the initial certification. To eliminate redundancy between the "certification" standards and the standards that are aimed more at real-time operations, the certification standards could be phrased to clarify that entities are required to "have and maintain" the specified facilities. This would enable the compliance monitor to check facilities on a periodic basis. While checking the facilities that are used on a daily basis may not be necessary, making periodic checks of the facilities that are infrequently would motivate entities to maintain these facilities, e.g., "Shall have a back-up power supply for critical operations, and shall maintain and test at least once per year."
- The results of the Operating Committee's study on operator situational awareness tools should be used to verify that the requirements in the certification standards will meet reliability needs.
- This project also needs to be coordinated with the project for developing transmission operator and balancing authority standards (2007-06).
- IRO-001 has some "fill-in-the-blank" components to eliminate.

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- The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.

## Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR

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**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

Yes

No

Comments: The IESO agrees with the objective but does not agree with the process. There is a general need to clean up the standards and where appropriate consolidate the standards. However, this SAR covers too large a swath of standards, and as a consequence the resulting standard has the potential of being too large for reasoned comments.

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

Yes

No

Comments:

We agree with the intent to fill in the gaps and eliminate duplications among standards, and applaud the SDT for taking on this huge and challenging task. We are concerned, however, that the scope itself is too wide but yet not wide enough. Some of the listed standards are still being commented on, for example: IROL-007 to IRO-010, while some others had been commented on but are now in a dormant state, for example: the organization certification standards. These standards are not yet approved, and hence are subject to change and become moving targets for this holistic review task. The scope description does not suggest an approach to deal with ongoing changes to the standards identified. We are concerned that the wide scope and the massive task may not ensure that a one time change will cover all affected standards - those approved and those under development.

We suggest the SDT compare this approach to an alternative approach which is to revise a few standards at a time, on a priority basis and considering FERC's views on the status of the standards, thereby limiting the corresponding changes within a more manageable scope. Overtime, when all standards have gone through revisions, all corresponding changes will be duly made.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments:



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There are likely additional standard revisions beyond those identified, but we find it's almost impossible to pre-determine which other standards will be affected as a result of changes to those identified in this SAR.

For example, changes currently proposed for IRO-007 to IRO-010 will precipitate corresponding changes to other affected standards, e.g. TOP-003, TOP-005, etc. However, we are unable to provide any specific list of standards that will require corresponding changes not knowing what changes will be made to the standards listed in the SAR.

Given the above, it should not be taken for granted that the list is exhaustive in terms of revisions required.

## Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR

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<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
Name:	Jason Shaver	
Organization:	American Transmission Co.	
Telephone:	262 506 6885	
E-mail:	jshaver@atcllc.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
<input checked="" type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input checked="" type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations, Regional Entities



### Background Information

The purpose of this SAR is to review the set of standards that includes reliability coordinator requirements with the intent of eliminating duplicate requirements and upgrading and reorganizing the requirements to ensure that there are requirements that address the reliability coordinator's processes, procedures, plans, tools, and authorities to support real-time operating reliability within its own reliability area and between reliability coordinator areas in support of reliability of the interconnected bulk power systems.

The scope of the SAR includes the following:

- The drafting team will review all of the requirements in this set of standards and eliminate all of the requirements that are redundant. There are redundancies between requirements in the IRO-sequence of standards and also redundancies between requirements in the IRO-sequence of standards and the ORG-sequence of standards, and redundancies with PER-004, COM-001, COM-002, and PRC-001. Note that there will be a new standard to address communication protocols (Project 2007-02) and requirements for real-time communication protocols need to be transferred to that new standard.
- The drafting team also needs to review requirements and ensure that the distinctions between the functional entity and the real-time system operator are clear and distinct. The requirements should be written for the functional entity.
- The drafting team also needs to clarify the responsibilities and authorities in the requirements when comparing the "reliability coordinator" and the "transmission operator."
- The drafting team needs to verify that requirements exempt the real time-operator from liability when making a good faith effort at preserving reliability.
- The drafting team needs to address the reliability coordinator's facilities. A challenge has been to require that entities have "facilities" in place and available to the real-time system operators. These facilities are reviewed during certification, and unless there is a specific requirement to review these facilities, they may not be reviewed after the initial certification. To eliminate redundancy between the "certification" standards and the standards that are aimed more at real-time operations, the certification standards could be phrased to clarify that entities are required to "have and maintain" the specified facilities. This would enable the compliance monitor to check facilities on a periodic basis. While checking the facilities that are used on a daily basis may not be necessary, making periodic checks of the facilities that are infrequently would motivate entities to maintain these facilities, e.g., "Shall have a back-up power supply for critical operations, and shall maintain and test at least once per year."
- The results of the Operating Committee's study on operator situational awareness tools should be used to verify that the requirements in the certification standards will meet reliability needs.
- This project also needs to be coordinated with the project for developing transmission operator and balancing authority standards (2007-06).
- IRO-001 has some "fill-in-the-blank" components to eliminate.

## **Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR**

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- The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.

## Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR

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**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

Yes

No

Comments:

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

Yes

No

Comments: ATC agrees with the spirit of the SAR but believes that more details should be provided.

Identify which of the redundant requirements will be deleted.

Lastly ATC does not understand how a SDT can tackle the ORG -020 – 027 when these standards have not been approved by the board. In other words how can the SDT move forward on the scope when eight of the standards are still in being worked on? To approve the scope of the SAR references to ORG-020 – 027 should be deleted and considered out of bounds for the SDT.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments:

## Consideration of Comments on 1<sup>st</sup> Posting of Reliability Coordination SAR

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The Reliability Coordination SAR Requesters thank all commenters who submitted comments on Draft 1 of the Reliability Coordination SAR. This SAR was posted for a 30- day public comment period from January 15 through February 14, 2007. The requesters asked stakeholders to provide feedback on the standard through a special standard Comment Form. There were 11 sets of comments, including comments from more than 31 different people from more than 15 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

While most stakeholders agreed with the reliability-related need to modify the standards addressed by this SAR, most stakeholders disagreed with the proposed scope of the original SAR and the drafting team made the following revisions to reduce the scope:

- Revised the purpose statement to more narrowly focus on the reliability-related purpose of revising the set of standards addressed by the SAR
- Removed the standards that were listed in the original SAR that are still under development, including the certification standards (ORG-020-1 through ORG-027-1), the Version 1 IROL Standards that are still under development (IRO-007-1 through IRO-013-1) and the standards that are identified in the Version 1 IROL Implementation Plan as proposed for retirement when the Version 1 IROL Standards become effective (IRO-003-1, IRO-004-1).
- Removed the paragraph that referenced facilities.
- Removed the paragraph that would have allowed the standard drafting team to make 'any' additions to requirements as long as those additions met stakeholder approval.
- Added more specificity to the drafting team's approach to modifying the set of standards identified in the SAR.

Based on the comments received, the drafting team is posting the revised SAR for another comment period.

In this "Consideration of Comments" document stakeholder comments have been organized so that it is easier to see the responses associated with each question. All comments received on the standards can be viewed in their original format at:

[http://www.nerc.com/~filez/standards/Reliability-Coordination\\_Project\\_2006-6.html](http://www.nerc.com/~filez/standards/Reliability-Coordination_Project_2006-6.html)

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Director of Standards, Gerry Adamski, at 609-452-8060 or at [gerry.adamski@nerc.net](mailto:gerry.adamski@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

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<sup>1</sup> The appeals process is in the Reliability Standards Development Procedures: <http://www.nerc.com/standards/newstandardsprocess.html>.

**Consideration of Comments on 1<sup>st</sup> Posting of Reliability Coordination SAR**

Commenter		Organization	Industry Segment											
			1	2	3	4	5	6	7	8	9	10		
1.	Jason Shaver	American Transmission Co.	✓											
2.	David Kiguel	Hydro One Networks, Inc.	✓											
3.	Roger Champagne	Hydro Québec TransÉnergie	✓											
4.	Ron Falsetti	Independent Electricity System Operator		✓										
5.	Kathleen Goodman	ISO New England		✓										
6.	Charles Yeung (SPP)	ISO/RTO Council		✓										
7.	Mike Calimano (NYISO)	ISO/RTO Council		✓										
8.	Alicia Daughtery (PJM)	ISO/RTO Council		✓										
9.	Ron Falsetti (IESO)	ISO/RTO Council		✓										
10.	Matt Goldberg (ISONE)	ISO/RTO Council		✓										
11.	Brent Kingsford (CAISO)	ISO/RTO Council		✓										
12.	Anita Lee (AESO)	ISO/RTO Council		✓										
13.	Steve Myers (ERCOT)	ISO/RTO Council		✓										
14.	Bill Phillips (MISO)	ISO/RTO Council		✓										
15.	Brian Thumm	ITC Transmission	✓											
16.	Jim Cyrulewski	JDRJC Associates									✓			
17.	Jason Marshall	Midwest ISO Stakeholders Standards Collaboration Participants		✓										
18.	Phil Riley	PSC of South Carolina											✓	
19.	Mignon L. Clyburn	PSC of South Carolina											✓	
20.	Elizabeth B. Fleming	PSC of South Carolina											✓	
21.	G. O'Neal Hamilton	PSC of South Carolina											✓	
22.	John E. Howard	PSC of South Carolina											✓	
23.	Randy Mitchell	PSC of South Carolina											✓	
24.	C. Robert Moseley	PSC of South Carolina											✓	
25.	David A. Wright	PSC of South Carolina											✓	
26.	Mike Gentry	Salt River Project	✓											✓
27.	Nancy Bellows (WACM)	WECC Reliability Coordination Comments Work Group												✓
28.	Jack Bernhardsen (PNSC)	WECC Reliability Coordination Comments Work Group												✓
29.	Bob Johnson (PSC)	WECC Reliability Coordination Comments Work Group												✓
30.	Frank McElvain (RDRC)	WECC Reliability Coordination Comments Work Group												✓
31.	Greg Tillitson (CMRC)	WECC Reliability Coordination Comments Work Group												✓



**Index to Questions, Comments, and Responses**

- 1. Do you agree that there is a reliability-related need for the proposed revisions to this set of standards? If not, please explain in the comment area. .... 4
- 2. Do you agree with the scope of the SAR? If not, please explain in the comment area. 6
- 3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project? .....11

**Consideration of Comments on 1<sup>st</sup> Draft of the Reliability Coordination SAR**

1. Do you agree that there is a reliability-related need for the proposed revisions to this set of standards? If not, please explain in the comment area.

**Summary Consideration:** Most commenters indicated that they do believe that there is a reliability-related need for the proposed revisions to the standards.

Question #1			
Commenter	Yes	No	Comment
ISO/RTO Council ISO New England	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The IRC and ISO-NE agrees with the objective but does not agree with the process.</p> <p>We agree there is a general need to clean up the standards and where appropriate consolidate the standards. However, this SAR covers too large a swath of standards, and as a consequence the resulting standard has the potential of being too large for reasoned comments.</p> <p>The SRC believes that the wide perspective proposed by this SAR could compromise the internal consistency within individual standards. Subject Matter experts created interrelated requirements in given areas. This SAR proposes to impose a vertically integrated prospective, linking standards in widely dispersed areas of operational expertise. While a review of the vertical integration is useful and in places needed, it is recommended that the results of the review should themselves be sent as recommended SARs for industry consideration by the SMEs for the individual standards, and not as a proposed ad hoc standard. Grouping them as proposed in the SAR may result in unintended disconnects within the other standards, and in the worst case result in an ongoing series of iterative SARs.</p>
<p><b>Response:</b>                      The intent is not to develop a single standard from the list of standards.                      The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards.                      The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.</p>			
Midwest ISO Stakeholders Standards Collaboration Participants	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>We agree there is a general need to consolidate where necessary and clean up the standards. However, this SAR covers too large a swath of standards. It very confusing what the overall goal is. Additionally, we are concerned that the range of expertise required by this SAR will result in a drafting team that is too large and will result in little to no progress unless the drafting team is subdivided. If the drafting team is subdivided,</p>

**Consideration of Comments on 1<sup>st</sup> Draft of the Reliability Coordination SAR**

<b>Question #1</b>			
<b>Commenter</b>	<b>Yes</b>	<b>No</b>	<b>Comment</b>
			then this SAR should be subdivided into other SARs.
<p><b>Response:</b> The SAR was revised to more clearly define the scope of work. The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.</p>			
Independent Electricity System Operator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	The IESO agrees with the objective but does not agree with the process. There is a general need to clean up the standards and where appropriate consolidate the standards. However, this SAR covers too large a swath of standards, and as a consequence the resulting standard has the potential of being too large for reasoned comments.
<p><b>Response:</b> The SAR was revised to more clearly define the scope of work. The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.</p>			
ITC Transmission	<input checked="" type="checkbox"/>		Yes, there is a reliability need to revise the Standards identified in this SAR. Not all of the revisions described, however, are reliability related and in fact should not be included in the standards (e.g., exempting an operator from liability).
<p><b>Response:</b> The SAR was revised to omit the reference to the liability exemption.</p>			
American Transmission Co.	<input checked="" type="checkbox"/>		
Hydro One Networks, Inc. Hydro Québec TransÉnergie	<input checked="" type="checkbox"/>		
Salt River Project	<input checked="" type="checkbox"/>		
WECC Reliability Coordination Comments Work Group	<input checked="" type="checkbox"/>		
PSC of South Carolina	<input checked="" type="checkbox"/>		

Consideration of Comments on 1<sup>st</sup> Draft of the Reliability Coordination SAR

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

**Summary Consideration:** Most commenters disagreed with the scope of the original SAR and the drafting team made major modifications to reduce the scope of the SAR to only include standards that are already approved and to identify more specifically the range of changes contemplated to the standards that remain in the revised SAR.

Question #2			
Commenter	Yes	No	Comment
Hydro One Networks, Inc. Hydro Québec TransÉnergie		<input checked="" type="checkbox"/>	Please see our answer to question No. 3.
<b>Response:</b> Please see the response to question 3.			
ITC		<input checked="" type="checkbox"/>	<p>The Standard Drafting Team should not be given latitude to "include other improvements to the standards deemed appropriate by the drafting team." The purpose of the SAR is to identify the changes contemplated by the need for the Standard Revision. If there are changes that the SAR requestor would like to make to the Standard, they should be spelled out in the SAR. If the SAR requestor does not really know the changes that should be made to the standard, then the SAR should be withdrawn until the need for a SAR can be adequately justified.</p> <p>The remainder of the SAR is very broad; perhaps too broad. The requestor should consider reducing the scope of the SAR to make specific changes to the standards, rather than try to consolidate all of the Standards in one swift stroke.</p>
<p><b>Response:</b> The intent is not to develop a single standard from the list of standards. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.</p> <p>The intent of the <i>original</i> SAR was to give the Standard Drafting Team enough latitude to address requirements that fall within a list of performance requirements. Looking to the future, the Standard Drafting Team cannot expand on the scope of its SAR but may develop a set of requirements that is smaller than the scope of the SAR. Based on stakeholder comments, the scope has been revised and is more clearly and more narrowly defined.</p>			
ISO/RTO Council ISO New England		<input checked="" type="checkbox"/>	<p>We do agree the standards should be consolidated and redundancies eliminated where appropriate.</p> <p>However, it is not appropriate to include standards in this SAR that have not yet been approved. For example, it is not necessary to expand on the requirement to have facilities in place by adding a testing requirement. If an entity is required to</p>

Consideration of Comments on 1<sup>st</sup> Draft of the Reliability Coordination SAR

Question #2			
Commenter	Yes	No	Comment
			<p>have facilities in place and they are not maintained and available, they do not meet the requirement.</p> <p>The "boiler plate" language that this "development may include other improvements deemed appropriate by the drafting team" is too vague and essentially opens the scope to include anything the drafting team wants to do with the standard. This is not appropriate. The scope should be specific and the drafting team should only focus on those specifics.</p> <p>The SRC supports the approach of prioritizing and revising individual standards to FERC's comments as part of the consideration process. Only a few standards should be revised at a time to make the process more manageable.</p>
<p><b>Response:</b> The SAR was revised to omit all of the standards that were listed in the original SAR but weren't approved (draft IROL Standards and the draft Certification Standards).</p> <p>The SAR was revised to omit the paragraph that referenced facilities. Note that there is a new performance objective in the revised SAR that indicates the resultant standards will have requirements to address the RC's facility capabilities.</p> <p>The intent of the <i>original</i> SAR was to give the Standard Drafting Team enough latitude to address requirements that fall within a list of performance requirements. Looking to the future, the Standard Drafting Team cannot expand on the scope of its SAR but may develop a set of requirements that is smaller than the scope of the SAR. Based on stakeholder comments, the scope has been revised and is more clearly and more narrowly defined. The drafting team revised the SAR to omit the 'boiler plate' language.</p> <p>The intent is not to develop a single standard from the list of standards. The SAR DT can recommend that the standards be revised in a specific sequence but the final determination of which standards are revised or developed first is a decision that belongs to the Standards Committee. The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards.</p>			
Midwest ISO Stakeholders Standards Collaboration Participants		<input checked="" type="checkbox"/>	<p>We do agree the standards should be consolidated and redundancies eliminated where appropriate. However, it is not appropriate to include standards in this SAR that have not yet been approved.</p> <p>It is not necessary to expand on the requirement to have facilities in place by</p>

**Consideration of Comments on 1<sup>st</sup> Draft of the Reliability Coordination SAR**

Question #2			
Commenter	Yes	No	Comment
			<p>adding a testing requirement. If an entity is required to have facilities in place and they are not maintained and available, they do not meet the requirement of having facilities in place.</p> <p>The "boiler plate" language that this "development may include other improvements deemed appropriate by the drafting team is too vague and essentially opens the scope to include anything the drafting team wants to do with the standard. This is not appropriate. The scope should be specific and the drafting team should only focus on those specifics.</p>
<p><b>Response:</b> The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.</p> <p>The SAR was revised to omit the paragraph that referenced facilities. Note that there is a new performance objective in the revised SAR that indicates the resultant standards will have requirements to address the RC's facility capabilities.</p> <p>The intent of the <i>original</i> SAR was to give the Standard Drafting Team enough latitude to address requirements that fall within a list of performance requirements. Looking to the future, the Standard Drafting Team cannot expand on the scope of its SAR but may develop a set of requirements that is smaller than the scope of the SAR. Based on stakeholder comments, the scope has been revised and is more clearly and more narrowly defined. The drafting team revised the SAR to omit the 'boiler plate' language.</p>			
American Transmission Co.		<input checked="" type="checkbox"/>	<p>ATC agrees with the spirit of the SAR but believes that more details should be provided.</p> <p>Identify which of the redundant requirements will be deleted.</p> <p>Lastly ATC does not understand how a SDT can tackle the ORG -020 – 027 when these standards have not been approved by the board. In other words how can the SDT move forward on the scope when eight of the standards are still in being worked on? To approve the scope of the SAR references to ORG-020 – 027 should be deleted and considered out of bounds for the SDT.</p>
<p><b>Response:</b> The SAR drafting team will let the standard drafting team determine what requirements will be deleted.</p> <p>The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.</p>			

**Consideration of Comments on 1<sup>st</sup> Draft of the Reliability Coordination SAR**

Question #2			
Commenter	Yes	No	Comment
Independent Electricity System Operator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>We agree with the intent to fill in the gaps and eliminate duplications among standards, and applaud the SDT for taking on this huge and challenging task. We are concerned, however, that the scope itself is too wide but yet not wide enough.</p> <p>Some of the listed standards are still being commented on, for example: IROL-007 to IRO-010, while some others had been commented on but are now in a dormant state, for example: the organization certification standards. These standards are not yet approved, and hence are subject to change and become moving targets for this holistic review task.</p> <p>The scope description does not suggest an approach to deal with ongoing changes to the standards identified. We are concerned that the wide scope and the massive task may not ensure that a one time change will cover all affected standards - those approved and those under development.</p> <p>We suggest the SDT compare this approach to an alternative approach which is to revise a few standards at a time, on a priority basis and considering FERC's views on the status of the standards, thereby limiting the corresponding changes within a more manageable scope. Overtime, when all standards have gone through revisions, all corresponding changes will be duly made.</p>
<p><b>Response:</b> The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.</p> <p>The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards. The SAR was modified to state that the standard drafting team will work with stakeholders to:</p> <ul style="list-style-type: none"> <li>- Eliminate redundancy in the requirements.</li> <li>- Identify requirements that should be moved into other SARs</li> <li>- Eliminate requirements that do not support bulk power system reliability</li> <li>- Transfer requirements that need to be in place before an entity begins operation as an RC to certification.</li> <li>- Fill identified gaps in the requirements for Reliability Coordination</li> </ul> <p>The intent is not to develop a single standard from the list of standards. The SAR DT can recommend that the standards be revised in a specific sequence but the final determination of which standards are revised or developed first is a decision that belongs to the Standards Committee.</p>			

**Consideration of Comments on 1<sup>st</sup> Draft of the Reliability Coordination SAR**

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Question #2			
Commenter	Yes	No	Comment
<p>The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards.</p>			
WECC Reliability Coordination Comments Work Group	<input checked="" type="checkbox"/>		We believe that the drafting needs to verify that requirements exempt the reliability coordinator real-time supervision, as well as the real-time operator from liability when making a good faith effort at preserving reliability.
<p><b>Response:</b> The drafting team removed the reference to liability from the SAR.</p>			
Salt River Project	<input checked="" type="checkbox"/>		
PSC of South Carolina	<input checked="" type="checkbox"/>		



**Consideration of Comments on 1<sup>st</sup> Draft of the Reliability Coordination SAR**

**3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?**

Question #3			
Commenter	Yes	No	Comment
ITC Transmission			Uncertain to say what they would be at this point.
Hydro One Networks, Inc. Hydro Québec TransÉnergie	<input checked="" type="checkbox"/>		<p>This project involves the revision of 27 NERC Standards, not a small task by any measure. The extent of the proposed work and the necessary expertise is beyond what can be found in one single SAR team and drafting team.</p> <p>We respectfully submit that the project be divided into as many SARs and teams as necessary with the work directed and monitored by the Standards Committee.</p>
<p><b>Response:</b> The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.</p> <p>The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards.</p>			
Independent Electricity System Operator	<input checked="" type="checkbox"/>		<p>There are likely additional standard revisions beyond those identified, but we find it's almost impossible to pre-determine which other standards will be affected as a result of changes to those identified in this SAR.</p> <p>For example, changes currently proposed for IRO-007 to IRO-010 will precipitate corresponding changes to other affected standards, e.g. TOP-003, TOP-005, etc. However, we are unable to provide any specific list of standards that will require corresponding changes not knowing what changes will be made to the standards listed in the SAR.</p> <p>Given the above, it should not be taken for granted that the list is exhaustive in terms of revisions required.</p>
<p><b>Response:</b> The intent of the <i>original</i> SAR was to give the Standard Drafting Team enough latitude to address requirements that fall within a list of performance requirements. Looking to the future, the Standard Drafting Team cannot expand on the scope of its SAR but may develop a set of requirements that is smaller than the scope of the SAR. Based on stakeholder comments, the SAR DT eliminated the paragraph that would have allowed the Standard Drafting Team to expand the scope of activities to address new issues that may come up after the SAR is finalized. If new ideas are identified during standard drafting, the standard drafting team will need to revise its SAR or develop a new SAR to address those additional ideas.</p>			

**Consideration of Comments on 1<sup>st</sup> Draft of the Reliability Coordination SAR**

<b>Question #3</b>			
<b>Commenter</b>	<b>Yes</b>	<b>No</b>	<b>Comment</b>
WECC Reliability Coordination Comments Work Group	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The WECC RCCWG believes that the FERC Staff Report suggestion that COM-001 "generation owners missing" should not translate to addition of generation owners in the applicability. "Generator Operator" is an applicable entity, but not "Generator Owner".</p> <p>The WECC RCCWG believes the Reliability Coordination SAR should address those V0 comments on requirements, when those specific are no longer part of the standard referenced in the V0 comments identified in Attachment 1 of the SAR if those comments were not previously addressed. One example: posted "V0 Industry Comments" suggest inclusion of sabotage and security in R2 of COM-002. That comment is no longer applicable to COM-002 R2 - the standard requirements have changed. That said, the comment intent should not be lost</p>
<p><b>Response:</b> The FERC comments are 'issues to consider' but are not directives for changes to the standards. The SAR was revised and any outdated V0 comments (or other organization or committee comments) comments have been removed.</p>			
Midwest ISO Stakeholders Standards Collaboration Participants	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Because of the overbroad nature of this SAR, the answer is likely yes. However, it is nearly impossible to determine all the additional required changes without missing important items. This SAR needs to be broken down to address individual standards.</p>
<p><b>Response:</b> The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.</p> <p>The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards. The SAR was modified to state that the standard drafting team will work with stakeholders to:</p> <ul style="list-style-type: none"> <li>- Eliminate redundancy in the requirements.</li> <li>- Identify requirements that should be moved into other SARs</li> <li>- Eliminate requirements that do not support bulk power system reliability</li> <li>- Transfer requirements that need to be in place before an entity begins operation as an RC to certification.</li> <li>- Fill identified gaps in the requirements for Reliability Coordination</li> </ul>			
ISO/RTO Council ISO New England		<input checked="" type="checkbox"/>	
American Transmission Co.		<input checked="" type="checkbox"/>	

**Consideration of Comments on 1<sup>st</sup> Draft of the Reliability Coordination SAR**

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<b>Question #3</b>			
<b>Commenter</b>	<b>Yes</b>	<b>No</b>	<b>Comment</b>
Salt River Project	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
PSC of South Carolina	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

## Standard Authorization Request Form

Title of Proposed Standard	Reliability Coordination (Project 2006-06)
Request Date	December 18, 2006

<b>SAR Requestor Information</b>	<b>SAR Type</b> <i>(Check a box for each one that applies.)</i>
Name            Ellis Rankin	<input type="checkbox"/> New Standard
Primary Contact    Ellis Rankin	<input checked="" type="checkbox"/> Revision to existing Standards – see list below  COM-001 — Telecommunications COM-002 — Communications and Coordination IRO-001 — Reliability Coordination – Responsibilities and Authorities IRO-002 — Reliability Coordination – Facilities IRO-005 — Reliability Coordination – Current Day Operations IRO-014 — Procedures to Support Coordination between Reliability Coordinators IRO-015 — Notifications and Information Exchange Between Reliability Coordinators IRO-016 — Coordination of Real-time Activities between Reliability Coordinators PER-004 — Reliability Coordination – Staffing PRC-001 — System Protection Coordination
Telephone    214-743-6828 Fax            972-263-6710	<input checked="" type="checkbox"/> Withdrawal of existing Standard  Some requirements in the above standards
E-mail            erankin@txued.com	<input type="checkbox"/> Urgent Action

<p><b>Purpose</b>          To ensure that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System.</p>
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## Standards Authorization Request Form

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### Brief Description

Most of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process. There have been suggestions for improving these requirements, and the drafting team will consider comments submitted by stakeholders, drafting teams and FERC in determining what changes should be proposed to stakeholders.

The drafting team will review all of the requirements in this set of standards and make a determination, with stakeholders, on whether to:

- Modify the requirement to improve its quality
- Move the requirement (into another SAR or Standard or to the certification process or standards)
- Eliminate the requirement (either because it is redundant or because it doesn't support bulk power system reliability).

### Detailed Description

The drafting team will review all of the requirements in the following set of standards:

- COM-001 — Telecommunications
- COM-002 — Communications and Coordination
- IRO-001 — Reliability Coordination – Responsibilities and Authorities
- IRO-002 — Reliability Coordination – Facilities
- IRO-005 — Reliability Coordination – Current Day Operations
- IRO-014 — Procedures to Support Coordination between Reliability Coordinators
- IRO-015 — Notifications and Information Exchange Between Reliability Coordinators
- IRO-016 — Coordination of Real-time Activities between Reliability Coordinators
- PER-004 — Reliability Coordination – Staffing
- PRC-001 — System Protection Coordination

For each existing requirement, the drafting team will work with stakeholders and:

- Eliminate redundancy in the requirements.
- Identify requirements that should be moved into other SARs
- Eliminate requirements that do not support bulk power system reliability
- Transfer requirements that need to be in place before an entity begins operation as an RC to certification.

The standard drafting team will also:

- Coordinate with the drafting teams working on the SAR and standards for Transmission Operator and Balancing Authority standards (Project 2007-06).
- Consider comments received during the initial development of this set of standards and other comments received from ERO regulatory authorities and stakeholders (Attachment 1)
- Bring the standards into conformance with the latest version of the Reliability Standards Development Procedure and the ERO Rules of Procedure. (Attachment 2)

This review of the set of identified standards will satisfy the standards procedure requirement to review each approved standard at least once every five years.

**Standards Authorization Request Form**

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***Reliability Functions***

<b>The Standard will Apply to the Following Functions</b> <i>(Check box for each one that applies.)</i>		
<input checked="" type="checkbox"/>	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
<input checked="" type="checkbox"/>	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports system frequency in real time.
<input checked="" type="checkbox"/>	Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
<input checked="" type="checkbox"/>	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
<input checked="" type="checkbox"/>	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator Area.
<input checked="" type="checkbox"/>	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.
<input checked="" type="checkbox"/>	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
<input checked="" type="checkbox"/>	Transmission Owner	Owns and maintains transmission facilities.
<input checked="" type="checkbox"/>	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
<input checked="" type="checkbox"/>	Distribution Provider	Delivers electrical energy to the End-use customer.
<input checked="" type="checkbox"/>	Generator Owner	Owns and maintains generation facilities.
<input checked="" type="checkbox"/>	Generator Operator	Operates generation unit(s) to provide real and reactive power.
<input type="checkbox"/>	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
<input type="checkbox"/>	Market Operator	Interface point for reliability functions with commercial functions.
<input checked="" type="checkbox"/>	Load-Serving Entity	Secures energy and transmission service (and related reliability-related services) to serve the end-use customer.

**Reliability and Market Interface Principles**

<b>Applicable Reliability Principles</b> <i>(Check box for all that apply.)</i>	
<input checked="" type="checkbox"/>	1. Interconnected bulk electric systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
<input checked="" type="checkbox"/>	2. The frequency and voltage of interconnected bulk electric systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
<input checked="" type="checkbox"/>	3. Information necessary for the planning and operation of interconnected bulk electric systems shall be made available to those entities responsible for planning and operating the systems reliably.
<input checked="" type="checkbox"/>	4. Plans for emergency operation and system restoration of interconnected bulk electric systems shall be developed, coordinated, maintained and implemented.
<input checked="" type="checkbox"/>	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk electric systems.
<input checked="" type="checkbox"/>	6. Personnel responsible for planning and operating interconnected bulk electric systems shall be trained, qualified, and have the responsibility and authority to implement actions.
<input checked="" type="checkbox"/>	7. The security of the interconnected bulk electric systems shall be assessed, monitored and maintained on a wide area basis.
<b>Does the proposed Standard comply with all of the following Market Interface Principles?</b> <i>(Select 'yes' or 'no' from the drop-down box.)</i>	
1. The planning and operation of bulk electric systems shall recognize that reliability is an essential requirement of a robust North American economy. Yes	
2. An Organization Standard shall not give any market participant an unfair competitive advantage. Yes	
3. An Organization Standard shall neither mandate nor prohibit any specific market structure. Yes	
4. An Organization Standard shall not preclude market solutions to achieving compliance with that Standard. Yes	
5. An Organization Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

**Standards Authorization Request Form**

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***Related Standards – Listed under description***

<b>Standard No.</b>	<b>Explanation</b>

***Related SARs***

<b>SAR ID</b>	<b>Explanation</b>

***Regional Differences***

<b>Region</b>	<b>Explanation</b>
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	
SPP	
WECC	



**The drafting team will assist stakeholders in considering these comments in determining what changes to make to the standards:**

**COM-001-0 Telecommunications**

FERC NOPR

- Include generator operators and distribution provider as applicable entities; and
- Include requirements for communication facilities for use during emergency situations.

V0 Industry Comments

- Many players missing
- Apply R1 to all but smallest entities

Violation Risk Factor Drafting Team Comments

- R6 – administrative requirement

**COM-002-1 Communications and Coordination**

FERC NOPR

- Include a Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area views of transmission operators or balancing authorities;
- Include distribution providers as applicable entities; and
- Require tightened communications protocols, especially for communications during alerts and emergencies.

V0 Industry Comments

- Voice with generators not required
- R1 – include reliability authority
- R2 – include sabotage and security
- R4 – clarify repeat back requirement with regard to emergency

**IRO-001-0 Reliability Coordination – Responsibilities and Authorities**

FERC NOPR

- Reflect the process set forth in the NERC Rules of Procedures; and
- Eliminate the regional reliability organization as an applicable entity.

Regional Fill-in-the-Blank Team Comments

- Remove ", sub-region, or interregional coordinating group" from R1
- Consider removing "Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another." from the Purpose section of the standard.

V0 Industry Comments

- Inability to perform needs to be communicated
- What is meant by 'interest of other entity'?

Violation Risk Factor Drafting Team Comments

- R6 - Since the RC must be NERC certified, it stands to reason that anyone performing RC tasks should be certified. However, since the RC still retains the accountability for actions, and requirement 4 handles the agreements, this requirement is a medium risk.

## **SAR for Project 2006-06 Reliability Coordination – Attachment 1**

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### **IRO-002-0 Reliability Coordination – Facilities**

FERC NOPR

- Modify Requirement R7 to explicitly require a minimum set of tools for the reliability coordinator.

V0 Industry Comments

- R5 – define synchronized information system
- R7 – define ‘adequate’ tools and ‘wide-area’
- Words such as ‘easily understood’ and ‘particular emphasis’ need to be tightened

### **IRO-005-1 Reliability Coordination – Current Day Operations**

FERC NOPR

- Propose that the ERO conduct a survey on IROL practices and experiences.
- The Commission may propose further modifications to IRO-005-1 based on the survey results.

V0 Industry Comments

- R10, 11 & 12 – RA not empowered to do this

### **IRO-016-1 Coordination of Real-Time Activities Between Reliability Coordinators**

Violation Risk Factors Drafting Team Comments

- R1.2.1 & R2 – ambiguous

### **PER-004-0 Reliability Coordination – Staffing**

FERC NOPR

- Include formal training requirements for reliability coordinators similar to those addressed under the personnel training Reliability Standard PER-002-0;
- Include requirements pertaining to personnel credentials for reliability coordinators similar to those in PER-003-0; and

V0 Industry Comments

- Calendar year timing increment
- Other training needs to be defined

### **PRC-001-0 System Protection Coordination**

FERC NOPR

- Include a requirement that relevant transmission operators and generator operators must be informed immediately upon the detection of failures in relays or protection system elements on the Bulk-Power System that would threaten reliable operation, so that these entities can carry out the appropriate corrective control actions consistent with those used in mitigating IROL violations; and
- Clarify that, after being informed of failures in relays or protection system elements on the Bulk-Power System, transmission operators or generator operators shall carry out corrective control actions, i.e., returning the system to a stable state that respects system requirements as soon as possible and no longer than 30 minutes.

V0 Industry Comments

- Effects on reliability may not be known
- Consistent terminology as to neighbor vs. affected
- Not all criteria moved over from policies

The drafting team will reference these guidelines in determining what changes to make to the standards to bring them into conformance with the *Reliability Standards Development Procedure Manual, Version 6* and the *ERO Rules of Procedure*:

## **Standard Review Guidelines**

### **Applicability**

Does this reliability standard clearly identify the functional classes of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted? Where multiple functional classes are identified is there a clear line of responsibility for each requirement identifying the functional class and entity to be held accountable for compliance? Does the requirement allow overlapping responsibilities between Registered Entities possibly creating confusion for who is ultimately accountable for compliance?

Does this reliability standard identify the geographic applicability of the standard, such as the entire North American bulk power system, an interconnection, or within a regional entity area? If no geographic limitations are identified, the default is that the standard applies throughout North America.

Does this reliability standard identify any limitations on the applicability of the standard based on electric facility characteristics, such as generators with a nameplate rating of 20 MW or greater, or transmission facilities energized at 200 kV or greater or some other criteria? If no functional entity limitations are identified, the default is that the standard applies to all identified functional entities.

### **Purpose**

Does this reliability standard have a clear statement of purpose that describes how the standard contributes to the reliability of the bulk power system? Each purpose statement should include a value statement.

### **Performance Requirements**

Does this reliability standard state one or more performance requirements, which if achieved by the applicable entities, will provide for a reliable bulk power system, consistent with good utility practices and the public interest?

Does each requirement identify who shall do what under what conditions and to what outcome?

### **Measurability**

Is each performance requirement stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by that requirement?

Does each performance requirement have one or more associated measures used to objectively evaluate compliance with the requirement?

If performance results can be practically measured quantitatively, are metrics provided within the requirement to indicate satisfactory performance?

## **Technical Basis in Engineering and Operations**

Is this reliability standard based upon sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in that particular field?

**Completeness**

Is this reliability standard complete and self-contained? Does the standard depend on external information to determine the required level of performance?

**Consequences for Noncompliance**

In combination with guidelines for penalties and sanctions, as well as other ERO and regional entity compliance documents, are the consequences of violating a standard clearly known to the responsible entities?

**Clear Language**

Is the reliability standard stated using clear and unambiguous language? Can responsible entities, using reasonable judgment and in keeping with good utility practices, arrive at a consistent interpretation of the required performance?

**Practicality**

Does this reliability standard establish requirements that can be practically implemented by the assigned responsible entities within the specified effective date and thereafter?

**Capability Requirements versus Performance Requirements**

In general, requirements for entities to have ‘capabilities’ (this would include facilities for communication, agreements with other entities, etc.) should be located in the standards for certification. The certification requirements should indicate that entities have a responsibility to ‘maintain’ their capabilities.

**Consistent Terminology**

To the extent possible, does this reliability standard use a set of standard terms and definitions that are approved through the NERC reliability standards development process?

If the standard uses terms that are included in the NERC Glossary of Terms Used in Reliability Standards, then the term must be capitalized when it is used in the standard. New terms should not be added unless they have a ‘unique’ definition when used in a NERC reliability standard. Common terms that could be found in a college dictionary should not be defined and added to the NERC Glossary.

Are the verbs on the ‘verb list’ from the DT Guidelines? If not – do new verbs need to be added to the guidelines or could you use one of the verbs from the verb list?

**Violation Risk Factors (Risk Factor)**

**High Risk Requirement**

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures;

or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or

contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

**Medium Risk Requirement**

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures;

or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

**Lower Risk Requirement**

A requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. A requirement that is administrative in nature;

or a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

**Time Horizon**

The drafting team should also indicate the time horizon available for mitigating a violation to the requirement using the following definitions:

- **Long-term Planning** — a planning horizon of one year or longer.
- **Operations Planning** — operating and resource plans from day-ahead up to and including seasonal.
- **Same-day Operations** — routine actions required within the timeframe of a day, but not real-time.
- **Real-time Operations** — actions required within one hour or less to preserve the reliability of the bulk electric system.
- **Operations Assessment** — follow-up evaluations and reporting of real time operations.

**Violation Severity Levels**

The drafting team should indicate a set of violation severity levels that can be applied for the requirements within a standard. ('Violation severity levels' replace existing 'levels of non-compliance.')

The violation severity levels must be applied for each requirement and may be combined to cover multiple requirements, as long as it is clear which requirements are included and that all requirements are included.

**The violation severity levels should be based on the following definitions:**

- **Lower: mostly compliant with minor exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more minor details. Equivalent score: 95% to 99% compliant.
- **Moderate: mostly compliant with significant exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more significant elements. Equivalent score: 85% to 94% compliant.
- **High: marginal performance or results** — The responsible entity has only partially achieved the reliability objective of the requirement and is missing one or more significant elements. Equivalent score: 70% to 84% compliant.
- **Severe: poor performance or results** — The responsible entity has failed to meet the reliability objective of the requirement. Equivalent score: less than 70% compliant.

**Compliance Monitor**

Replace, ‘Regional Reliability Organization’ with ‘Regional Entity’

**Fill-in-the-blank Requirements**

Do not include any ‘fill-in-the-blank’ requirements. These are requirements that assign one entity responsibility for developing some performance measures without requiring that the performance measures be included in the body of a standard – then require another entity to comply with those requirements.

Every reliability objective can be met, at least at a threshold level, by a North American standard. If we need regions to develop regional standards, such as in under-frequency load shedding, we can always write a uniform North American standard for the applicable functional entities as a means of encouraging development of the regional standards.

**Requirements for Regional Reliability Organization**

Do not write any requirements for the Regional Reliability Organization. Any requirements currently assigned to the RRO should be re-assigned to the applicable functional entity.

**Effective Dates**

Must be 1<sup>st</sup> day of 1<sup>st</sup> quarter after entities are expected to be compliant – must include time to file with regulatory authorities and provide notice to responsible entities of the obligation to comply. If the standard is to be actively monitored, time for the Compliance Monitoring and Enforcement Program to develop reporting instructions and modify the Compliance Data Management System(s) both at NERC and Regional Entities must be provided in the implementation plan.

**Associated Documents**

If there are standards that are referenced within a standard, list the full name and number of the standard under the section called, ‘Associated Documents’.

**Functional Model Version 3**

Review the requirements against the latest descriptions of the responsibilities and tasks assigned to functional entities as provided in pages 13 through 53 of the draft Functional Model Version 3.

March 19, 2007

TO: REGISTERED BALLOT BODY

Ladies and Gentlemen:

**Announcement: Comment Periods Open for SAR for Reliability Coordination, SAR for Operating Personnel Communications Protocols, and Relay Loadability Standard**

**The Standards Committee (SC) announces the following standards actions:**

**SAR to Modify the Reliability Coordinator Standards (March 19–April 17, 2007)**

The Reliability Coordination SAR drafting team posted the second draft of its SAR for [Project 2006-06](#) for a 30-day comment period from March 19 through April 17, 2007.

The SAR proposes retiring, modifying or moving to other standards the Reliability Coordinator requirements contained within a set of ten already approved standards. The purpose of making these modifications is to ensure that the remaining requirements are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System. This project also involves addressing concerns raised by FERC and stakeholders and involves bringing the set of standards into conformance with the ERO Rules of Procedure and the latest version of the Reliability Standards Development Procedure. Please use the [comment form](#) to provide comments on this SAR.

**SAR for Project 2007-02 Operating Personnel Communications Protocols (March 19–April 17, 2007)**

The Operating Personnel Communications Protocols SAR for [Project 2007-02](#) is posted for a 30-day comment period from March 19 through April 17, 2007.

This SAR calls for the development of communications protocols for use by real-time system operators to improve situational awareness and shorten response time. The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Please use the [comment form](#) to provide comments on this SAR.

**Transmission Relay Loadability Standard (March 19–April 17, 2007)**

The [Transmission Relay Loadability](#) drafting team posted the third draft of its standard for a 30-day comment period from March 19 through April 17, 2007. The drafting team is seeking comments on a change in the requirements that assigns responsibility for identifying certain critical facilities to the planning coordinator, in support of the latest approved version of the [Functional Model](#).

The standard codifies the relay loadability criteria embodied in the NERC Recommendation 8a, *Improve System Protection to Slow or Limit the Spread of Future Cascading Outages*, and U.S.–Canada Power System Outage Task Force Recommendation 21A, *Make More Effective and*



REGISTERED BALLOT BODY

March 19, 2007

Page Two

*Wider Use of System Protection Measures.* Please use the [comment form](#) to provide comments on this standard.

### **Standards Development Process**

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. If you have any questions, please contact me at 813-468-5998 or [maureen.long@nerc.net](mailto:maureen.long@nerc.net).

Sincerely,

*Maureen E. Long*

cc: Registered Ballot Body Registered Users  
Standards Mailing List  
NERC Roster

## Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR

Please use this form to submit comments on the second draft of the Reliability Coordination SAR. Comments must be submitted by **April 17, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the words "Reliability Coordination" in the subject line. If you have questions please contact Maureen Long at [maureen.long@nerc.net](mailto:maureen.long@nerc.net) or by telephone at 813-468-5998.

<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations, Regional Entities

Group Comments (Complete this page if comments are from a group.)

**Group Name:**

**Lead Contact:**

**Contact Organization:**

**Contact Segment:**

**Contact Telephone:**

**Contact E-mail:**

<b>Additional Member Name</b>	<b>Additional Member Organization</b>	<b>Region*</b>	<b>Segment*</b>

\*If more than one Region or Segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

### Background Information

The purpose of this SAR is to review a set of standards that includes reliability coordinator requirements with the intent of eliminating duplicate requirements and upgrading and reorganizing the requirements.

Based on stakeholder comments, the drafting team made several significant changes to the first draft of the SAR, including the following:

- Reduced the number of standards addressed in this project by eliminating consideration of standards that have not been approved, and standards expected to be retired as part of the IROL Implementation Plan.
- Revised the Descriptions to state more clearly the approach the standard drafting team will take in determining what action to take with each requirement in the set of standards. The drafting team will work with stakeholders to determine whether to:
  - o Modify the requirement to improve its quality
  - o Move the requirement (into another SAR or Standard or to the certification process or standards)
  - o Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).
- Revised the descriptions of the 'Reliability Functions' to reflect the latest version of the Functional Model (V3).

The SAR Drafting Team asks that you review the revised SAR and then answer the questions on the following page.

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

- Modify the requirement to improve its quality
- Move the requirement (into another SAR or Standard or to the certification process or standards)
- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Yes

No

Comments: However, this is a large scope (a large amount of work) for the standard drafting team. Wherever possible, it is recommended that the drafting team list and explain the criteria it is using so that it may be easier to achieve stakeholder consensus where many related changes are made. With such a large scope the drafting team should consider carefully how the changes are balloted so ballots don't fail because stakeholders object to a minor subset of issues in a particular ballot.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments:

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this

## Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR

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set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

Yes

No

Comments:

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

No additional comments

Comments:

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E-mail:		
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**Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR**

Group Comments (Complete this page if comments are from a group.)

**Group Name:** Midwest Standards Collaboration Group  
**Lead Contact:** Terry Bilke  
**Contact Organization:** Midwest ISO  
**Contact Segment:** 2  
**Contact Telephone:** 317-249-5463  
**Contact E-mail:** tbilke@midwestiso.org

<b>Additional Member Name</b>	<b>Additional Member Organization</b>	<b>Region*</b>	<b>Segment*</b>
David Lemmons	Xcel Energy	MRO	6
Jim Cyrulewski	JDRJC Associates	RFC	8

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**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

- Modify the requirement to improve its quality
- Move the requirement (into another SAR or Standard or to the certification process or standards)
- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Yes

No

Comments: We agree with improving the quality of the requirements, removing redundancies and those things that do not contribute to reliability.

It isn't clear what stakeholders will be involved to improve these standards. Is it the ballot body as a whole or some other forum? Since there is no drafting team roster, we are not sure who is working on this project and who are the stakeholders suggesting the changes to requirements.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments: The FERC NOPR should not be used to change the standards. Items in the final order should be given due consideration.

Several of VO comments items are not clear. They are primarily bullet notes with no context. Is there additional information about these comments somewhere?

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

Yes

No

Comments:

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

No additional comments

Comments: We disagree with the assignment of Violation Severity Levels (VSL). The drafting team should assess the likely bounds of performance and the VSLs should be divided into four relatively equal portions. Yes/No requirements should not arbitrarily be counted as Severe violations. The proposed VSL breakdown in the SAR is not part of the Sanctions Guidelines and the proposed process has not been vetted in the industry.

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Group Comments (Complete this page if comments are from a group.)

**Group Name:** Midwest Reliability Organization  
**Lead Contact:** Terry Bilke  
**Contact Organization:** MRO for Group (Midwest ISO for Lead)  
**Contact Segment:** 2  
**Contact Telephone:** 317-249-5463  
**Contact E-mail:** tbilke@midwestiso.org

Additional Member Name	Additional Member Organization	Region*	Segment*
Neal Balu	WPSR	MRO	10
Joe Knight	GRE	MRO	10
Al Boesch	NPPD	MRO	10
Robert Coish, Chair	MHEB	MRO	10
Carol Gerou	MP	MRO	10
Ken Goldsmith	ALT	MRO	10
Todd Gosnell	OPPD	MRO	10
Jim Haigh	WAPA	MRO	10
Pam Oreschnik	XEL	MRO	10
Dave Rudolph	BEPC	MRO	10
Eric Ruskamp	LES	MRO	10
Mike Brytowski, Secretary	MRO	MRO	10
27 Additional MRO Members	Not Named Above	MRO	10

\*If more than one Region or Segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

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*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments: We agree with excluding standards still under development.

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

- Modify the requirement to improve its quality
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- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Yes

No

Comments: We agree with improving the quality of the requirements, removing redundancies and those things that do not contribute to reliability. We do not see a listing of the drafting team members and it is unclear what stakeholders will be involved to improve these standards.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments: The FERC NOPR should not be used to change the standards. Items in the final order should be considered.

Several of VO comments items are not clear. It would help if these fill comments were posted somewhere for reference.

We disagree with the assignment of Violation Severity Levels (VSL). VSLs should not be skewed to inflate the sanctions associated with a requirement. The drafting team should assess the likely bounds of performance and the VSLs should be divided into four relatively equal portions. The proposed breakdown in the SAR is not part of the Sanctions Guidelines and has not been vetted in the industry.

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

Yes

No

Comments:

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

No additional comments

Comments:



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E-mail:		
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<input checked="" type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
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**Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR**

Group Comments (Complete this page if comments are from a group.)

**Group Name:** NPCC CP9 Reliability Standards Working Group  
**Lead Contact:** Guy V. Zito  
**Contact Organization:** Northeast Power Coordinating Council  
**Contact Segment:** 10  
**Contact Telephone:** 212-840-1070  
**Contact E-mail:** gzito@npcc.org

<b>Additional Member Name</b>	<b>Additional Member Organization</b>	<b>Region*</b>	<b>Segment*</b>
Ralph Rufrano	New York Power Authority	<b>NPCC</b>	1
Ron Falsetti	The IESO, Ontario	<b>NPCC</b>	2
Roger Champagne	TransEnergie HydroQuebec	<b>NPCC</b>	1
Randy Macdonald	New Brunswick System Operator	<b>NPCC</b>	2
Herb Schrayshuen	National Grid US	<b>NPCC</b>	1
Al Adamson	New York State Reliability Council	<b>NPCC</b>	10
Kathleen Goodman	ISO-New England	<b>NPCC</b>	2
David Kiguel	Hydro One Networks	<b>NPCC</b>	1
William Shemley	ISO-New England	<b>NPCC</b>	2
Murale Gopinathan	Northeast Utilities	<b>NPCC</b>	1
Michael Schiavone	National Grid US	<b>NPCC</b>	1
Greg Campoli	New York ISO	<b>NPCC</b>	2
Donald Nelson	MA Dept of Tel.and Energy	<b>NPCC</b>	9
Ed Thompson	ConEd	<b>NPCC</b>	1
Guy V. Zito	NPCC	<b>NPCC</b>	10
Michael Rinalli	National Grid US	<b>NPCC</b>	1

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Yes

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<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
Name:	Michael Calimano	
Organization:	New York Independent System Operator	
Telephone:	518-356-6129	
E-mail:	mcalimano@nyiso.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
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1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

- Modify the requirement to improve its quality
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- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Yes

No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments:

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

Yes

No

Comments:

## Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR

---

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

No additional comments

Comments:

## Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR

Please use this form to submit comments on the Reliability Coordination SAR. Comments must be submitted by **February 14, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.com](mailto:sarcomm@nerc.com) with the words "Reliability Coordination" in the subject line. If you have questions, please contact Maureen Long at [maureen.long@nerc.net](mailto:maureen.long@nerc.net) or by telephone at 813-468-5998.

<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
Name:	Mike Gentry	
Organization:	Salt River Project	
Telephone:	602-236-6408	
E-mail:	Mike.Gentry@srpnet.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input checked="" type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations, Regional Entities

**Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR**

Group Comments (Complete this page if comments are from a group.)

**Group Name:**

**Lead Contact:**

**Contact Organization:**

**Contact Segment:**

**Contact Telephone:**

**Contact E-mail:**

Additional Member Name	Additional Member Organization	Region*	Segment*

\*If more than one region or segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

### Background Information

The purpose of this SAR is to review the set of standards that includes reliability coordinator requirements with the intent of eliminating duplicate requirements and upgrading and reorganizing the requirements to ensure that there are requirements that address the reliability coordinator's processes, procedures, plans, tools, and authorities to support real-time operating reliability within its own reliability area and between reliability coordinator areas in support of reliability of the interconnected bulk power systems.

The scope of the SAR includes the following:

- The drafting team will review all of the requirements in this set of standards and eliminate all of the requirements that are redundant. There are redundancies between requirements in the IRO-sequence of standards and also redundancies between requirements in the IRO-sequence of standards and the ORG-sequence of standards, and redundancies with PER-004, COM-001, COM-002, and PRC-001. Note that there will be a new standard to address communication protocols (Project 2007-02) and requirements for real-time communication protocols need to be transferred to that new standard.
- The drafting team also needs to review requirements and ensure that the distinctions between the functional entity and the real-time system operator are clear and distinct. The requirements should be written for the functional entity.
- The drafting team also needs to clarify the responsibilities and authorities in the requirements when comparing the "reliability coordinator" and the "transmission operator."
- The drafting team needs to verify that requirements exempt the real time-operator from liability when making a good faith effort at preserving reliability.
- The drafting team needs to address the reliability coordinator's facilities. A challenge has been to require that entities have "facilities" in place and available to the real-time system operators. These facilities are reviewed during certification, and unless there is a specific requirement to review these facilities, they may not be reviewed after the initial certification. To eliminate redundancy between the "certification" standards and the standards that are aimed more at real-time operations, the certification standards could be phrased to clarify that entities are required to "have and maintain" the specified facilities. This would enable the compliance monitor to check facilities on a periodic basis. While checking the facilities that are used on a daily basis may not be necessary, making periodic checks of the facilities that are infrequently would motivate entities to maintain these facilities, e.g., "Shall have a back-up power supply for critical operations, and shall maintain and test at least once per year."
- The results of the Operating Committee's study on operator situational awareness tools should be used to verify that the requirements in the certification standards will meet reliability needs.
- This project also needs to be coordinated with the project for developing transmission operator and balancing authority standards (2007-06).
- IRO-001 has some "fill-in-the-blank" components to eliminate.

## **Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR**

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- The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.

## Comment Form — 1<sup>st</sup> Posting of Reliability Coordination SAR

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**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

Yes

No

Comments:

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

Yes

No

Comments: The FERC NOPR and FERC Staff comments under Standard PRC-001-0, System Protection Coordination, do not apply to Reliability Coordination. In fact, the current Standard, PRC-001-1, does not apply to Reliability Coordinators. This Standard should be removed from the scope of this SAR.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments:



## Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations, Regional Entities

**Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR**

---

Group Comments (Complete this page if comments are from a group.)

**Group Name:** WECC Reliability Coordination Comments Work Group  
**Lead Contact:** Nancy Bellows  
**Contact Organization:** WECC  
**Contact Segment:** 10  
**Contact Telephone:** 970-461-7246  
**Contact E-mail:** bellows@wapa.gov

Additional Member Name	Additional Member Organization	Region*	Segment*
Mike Gentry	SRP	<b>WECC</b>	10
Robert Johnson	Xcel - PSC	<b>WECC</b>	10
Frank McElvain	RDRC	<b>WECC</b>	10
Greg Tillitson	CMRC	<b>WECC</b>	10

\*If more than one Region or Segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

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  - o Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).
- Revised the descriptions of the 'Reliability Functions' to reflect the latest version of the Functional Model (V3).

The SAR Drafting Team asks that you review the revised SAR and then answer the questions on the following page.

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

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1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

- Modify the requirement to improve its quality
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- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Yes

No

Comments: The WECC RCCWG agrees with the overall approach. That said, there is currently another SAR in process that addresses communications protocols and paths. The referenced SAR, "Operating Personnel Communications Protocols" is also meant to address FERC comments relative to communications protocols. Having two separate SARs that address the same comment seems redundant.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments:

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

## Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR

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Yes

No

Comments:

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

No additional comments

Comments: The WECC RCCWG believes that revision to each existing Standard, as a result of this SAR, should be individually balloted, instead of grouped together in one ballot on the entire group of changes.

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<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
Name:	Jeff Hackman	
Organization:	Ameren Services	
Telephone:	314.554.2839	
E-mail:	jhackman@ameren.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input checked="" type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
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<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations, Regional Entities

**Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR**

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Group Comments (Complete this page if comments are from a group.)

**Group Name:**  
**Lead Contact:**  
**Contact Organization:**  
**Contact Segment:**  
**Contact Telephone:**  
**Contact E-mail:**

Additional Member Name	Additional Member Organization	Region*	Segment*

\*If more than one Region or Segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

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  - o Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).
- Revised the descriptions of the 'Reliability Functions' to reflect the latest version of the Functional Model (V3).

The SAR Drafting Team asks that you review the revised SAR and then answer the questions on the following page.



**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

- Modify the requirement to improve its quality
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- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Yes

No

Comments: We agree with improving the quality of the requirements, removing redundancies and those things that do not contribute to reliability.

It isn't clear what stakeholders will be involved to improve these standards. Is it the ballot body as a whole or some other forum? Since there is no drafting team roster, we are not sure who is working on this project and who are the stakeholders suggesting the changes to requirements.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments: The FERC NOPR should not be used to change the standards. Items in the final order should be given due consideration.

Several of VO comments items are not clear. They are primarily bullet notes with no context. Is there additional information about these comments somewhere?

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

Yes

No

Comments:

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

No additional comments

Comments: We disagree with the assignment of Violation Severity Levels (VSL). The drafting team should assess the likely bounds of performance and the VSLs should be divided into four relatively equal portions. Yes/No requirements should not arbitrarily be counted as Severe violations. The proposed VSL breakdown in the SAR is not part of the Sanctions Guidelines and the proposed process has not been vetted in the industry.

To the extent that requirements are modified or moved, care should be taken to make sure that the two-way exchange of information between RC and TOP and RC and BA should be preserved.

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<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
Name:	Jason Shaver	
Organization:	American Transmission Company	
Telephone:	262 506 6885	
E-mail:	jshaver@atcllc.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
<input checked="" type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
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<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
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**Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR**

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Group Comments (Complete this page if comments are from a group.)

**Group Name:**

**Lead Contact:**

**Contact Organization:**

**Contact Segment:**

**Contact Telephone:**

**Contact E-mail:**

<b>Additional Member Name</b>	<b>Additional Member Organization</b>	<b>Region*</b>	<b>Segment*</b>

\*If more than one Region or Segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

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- Revised the descriptions of the 'Reliability Functions' to reflect the latest version of the Functional Model (V3).

The SAR Drafting Team asks that you review the revised SAR and then answer the questions on the following page.

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*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

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- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Yes

No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments: The SAR needs to be further refined to identify those specific requirements that will be:

- 1) Reviewed as being duplicative
- 2) Considered being relocated
- 3) Considered being eliminated

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

## Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR

---

Yes

No

Comments: The SAR identified standards IRO-014 and IRO-015 on its first page but does not address these standards in Attachment 1. The SAR needs to be updated to either acknowledge that these two standards will not be changed or identify what needs to be corrected.

Attachment 1:

COM-001-0

NERC has a current effort to address communication facilities in standard EOP-008. This group needs to be aware of that effort and should insure that any change to COM-001 does not counter that effort of EOP-008.

How will this effort differ from the other NERC effort?

COM-002-1

NERC has a current effort to address communication protocol in emergencies with "Operating Personnel Communications Protocols." Similar to our previous comment this group needs to be aware of that effort and should insure that any change to COM-002 does not counter that groups efforts.

How will this effort differ from the other NERC effort?

IRO-001-0

Please provide additional information on the following bullet point:

"Reflect the process set forth in the NERC Rules of Procedures"

What specific sections of NERC Rules of Procedure will be reflected in IRO-001-0?

IRO-005-1

The first bullet point does not seem to fall within the goal of this SAR.

"Propose that the ERO conduct a survey of IROL practices and experiences."

This effort does not need to go through NERC Reliability Standards Development Process to be performed. NERC could take up this effort at any time and it will slow down this process if it is going to be included in this SAR.

PER-004-0

NERC has another group that is looking into to these concerns.

How will this effort differ from that effort?

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<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
Name:	Susan Renne	
Organization:	Bonneville Power Administration	
Telephone:	(360) 418-2912	
E-mail:	smrenne@bpa.gov	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
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Additional Member Name	Additional Member Organization	Region*	Segment*

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1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments: No comments

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

- Modify the requirement to improve its quality
- Move the requirement (into another SAR or Standard or to the certification process or standards)
- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Yes

No

Comments: No comments

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments: No comments at this time. We will comment when the standards are up for comment.

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

Yes

No

## Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR

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Comments: No comments

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

No additional comments

Comments: No comments at this time. We will comment when the standards are up for comment.

## Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR

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<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
Name:	CJ Ingersoll	
Organization:	Constellation	
Telephone:	713-332-2906	
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NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
<input type="checkbox"/> MRO	<input checked="" type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations, Regional Entities

**Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR**

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Group Comments (Complete this page if comments are from a group.)

**Group Name:**

**Lead Contact:**

**Contact Organization:**

**Contact Segment:**

**Contact Telephone:**

**Contact E-mail:**

Additional Member Name	Additional Member Organization	Region*	Segment*

\*If more than one Region or Segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

### Background Information

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- Revised the Descriptions to state more clearly the approach the standard drafting team will take in determining what action to take with each requirement in the set of standards. The drafting team will work with stakeholders to determine whether to:
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  - o Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).
- Revised the descriptions of the 'Reliability Functions' to reflect the latest version of the Functional Model (V3).

The SAR Drafting Team asks that you review the revised SAR and then answer the questions on the following page.



**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments: CECD feels that given the number of standards that IRO-007-1 and IRO-010-1 may impact [IRO-002-1 R2, IRO-002-1 R6, IRO-003-2, IRO-004-1 R4 and R5, IRO-005-2 R1, TOP-003-0 R1.2, TOP-005-1 R1] CECD disagrees with removing them from consideration. We do agree with the decision to exclude ORG-027-1.

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

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- Move the requirement (into another SAR or Standard or to the certification process or standards)
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Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Yes

No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments:

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

Yes

## Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR

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No

Comments:

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

No additional comments

Comments:

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Ed Davis	
Organization:	Entergy Services	
Telephone:	504-576-3029	
E-mail:	edavis@entergy.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input checked="" type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations, Regional Entities

## Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR

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Group Comments (Complete this page if comments are from a group.)

**Group Name:**

**Lead Contact:**

**Contact Organization:**

**Contact Segment:**

**Contact Telephone:**

**Contact E-mail:**

<b>Additional Member Name</b>	<b>Additional Member Organization</b>	<b>Region*</b>	<b>Segment*</b>

\*If more than one Region or Segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

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  - o Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).
- Revised the descriptions of the 'Reliability Functions' to reflect the latest version of the Functional Model (V3).

The SAR Drafting Team asks that you review the revised SAR and then answer the questions on the following page.

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments:

We agree with the reduction of standards to be included in this body of work. However, we suggest PRC-001 should also be eliminated from this SAR.

The title of the SAR is Reliability Coordination, but the purpose is to ensure requirements applicable to the Reliability Coordinator are clear, etc., etc. The second part of the Purpose is to ensure that "this set of requirements" is sufficient... , referring back to the first part of the sentence. PRC-001 does not apply to the Reliability Coordinators and is out of place in this SAR.

PRC-001 should not be included in this SAR nor the resulting standard development work under this SAR. First, PRC-001 does not apply to Reliability Coordinators and there is already a significantly large amount of work related to Reliability Coordinators under this SAR. Second, the SDT's attention should not be redirected to system protection coordination among BAs, TOPs, and GOPs. We disagree if the intent of the Requestor is to make PRC-001 applicable to Reliability Coordinators under this SAR; If that is the intent we suggest it be done in a separate SAR activity.

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

- Modify the requirement to improve its quality
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- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Yes

No

Comments:

## Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR

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3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments:

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Yes

No

Comments:

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

No additional comments

Comments:

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Dave Folk	
Organization:	FirstEnergy Corp.	
Telephone:	330-384-4668	
E-mail:	folkd@firstenergycorp.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
<input type="checkbox"/> MRO	<input checked="" type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input checked="" type="checkbox"/> RFC	<input checked="" type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input checked="" type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations, Regional Entities



**Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR**

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Group Comments (Complete this page if comments are from a group.)

**Group Name:**

**Lead Contact:**

**Contact Organization:**

**Contact Segment:**

**Contact Telephone:**

**Contact E-mail:**

Additional Member Name	Additional Member Organization	Region*	Segment*

\*If more than one Region or Segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

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  - o Modify the requirement to improve its quality
  - o Move the requirement (into another SAR or Standard or to the certification process or standards)
  - o Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).
- Revised the descriptions of the 'Reliability Functions' to reflect the latest version of the Functional Model (V3).

The SAR Drafting Team asks that you review the revised SAR and then answer the questions on the following page.

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments: While IRO-007-1 through IRO-010-1 are currently open for a 30-day comment period until 4/20/07, this standards work plan effort should leave no stone unturned in developing quality standards. Consequently, IRO-007-1 through IRO-010-1 may contain requirements that are valuable and easily consolidated with the standards under review by this SAR. In addition, they may also contain duplicative requirements that could be consolidated as part of the review process of this SAR.

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

- Modify the requirement to improve its quality
- Move the requirement (into another SAR or Standard or to the certification process or standards)
- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Yes

No

Comments: Rather than using the word quality to describe the outcome, the first bullet point above should say, "Modify the requirement to improve clarity and measureability while removing ambiguity." This way the drafting team could use a check list against each requirement to test whether it is clear, measureable, and unambiguous.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments: Under the detailed description in the second paragraph, the SAR should be modified to include a line item to include "Improve clarity of, improve measureability of, and remove ambiguity from the requirements."

## Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR

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4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

Yes

No

Comments: This effort should leave no stone unturned in developing quality standards within the expertise and domain of this effort. Therefore, every effort must be made to ensure this round of work plan related standard revisions is as complete and all encompassing as is humanly possible to ensure to the extent possible that this standards process reaches a point that these standards are complete, accurate and only minor revisions are required to maintain them going forward. Tying the hands of the drafting team as suggested by "Several stakeholders" will only prolong the industry's work to achieve good, high quality requirements and standards. In addition, we should be using our resources as efficiently as possible. Allowing some latitude to the drafting teams to find and fix issues with standards that are related to the standards within their area of expertise and charge is a good thing to do at this point in the standards evolution process and conducive to the efficient use of resources. As a practical matter this process may never end, but it should reach a point that is much more manageable sooner rather than later.

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

No additional comments

Comments:

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<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
Name:	Roger Champagne	
Organization:	Hydro-Québec TransÉnergie	
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E-mail:	champagne.roger.2@hydro.qc.ca	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
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**Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR**

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Group Comments (Complete this page if comments are from a group.)

**Group Name:****Lead Contact:****Contact Organization:****Contact Segment:****Contact Telephone:****Contact E-mail:**

Additional Member Name	Additional Member Organization	Region*	Segment*

\*If more than one Region or Segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

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1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

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Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Yes

No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments:

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

Yes

No

Comments:



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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Ron Falsetti	
Organization:	IESO	
Telephone:	905-855-6187	
E-mail:	ron.falsetti@ieso.ca	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/>	2 — RTOs, ISOs,
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Yes

No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

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Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Yes

No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments:

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Yes

No

Comments:

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5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

No additional comments

Comments:

## Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR

Please use this form to submit comments on the second draft of the Reliability Coordination SAR. Comments must be submitted by **April 17, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the words "Reliability Coordination" in the subject line. If you have questions please contact Maureen Long at [maureen.long@nerc.net](mailto:maureen.long@nerc.net) or by telephone at 813-468-5998.

<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 — Regional Reliability Organizations, Regional Entities

**Comment Form — 2<sup>nd</sup> Posting of Reliability Coordination SAR**

Group Comments (Complete this page if comments are from a group.)

**Group Name:** IRC Standards Review Committee

**Lead Contact:** Charles Yeung

**Contact Organization:** SPP

**Contact Segment:** 2

**Contact Telephone:** 832-724-6142

**Contact E-mail:** cyeung@spp.org

<b>Additional Member Name</b>	<b>Additional Member Organization</b>	<b>Region*</b>	<b>Segment*</b>
Mike Calimano	NYISO	NPCC	2
Alicia Daugherty	PJM	RFC	2
Ron Falsetti	IESO	NPCC	2
Matt Goldberg	ISO-NE	NPCC	2
Brent Kingsford	CAISO	WECC	2
Anita Lee	AESO	WECC	2
Steve Myers	ERCOT	ERCOT	2
William Phillips	MISO	RFC+SERC+MRO	2

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- Revised the descriptions of the 'Reliability Functions' to reflect the latest version of the Functional Model (V3).

The SAR Drafting Team asks that you review the revised SAR and then answer the questions on the following page.

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

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Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Yes

No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Yes

No

Comments:

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

Yes

No

Comments:

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5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

No additional comments

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<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
Name:	Kathleen Goodman	
Organization:	ISO New England	
Telephone:	(413) 535-4111	
E-mail:	kgoodman@iso-ne.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/>	2 — RTOs, ISOs,
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input checked="" type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
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Group Comments (Complete this page if comments are from a group.)

**Group Name:**

**Lead Contact:**

**Contact Organization:**

**Contact Segment:**

**Contact Telephone:**

**Contact E-mail:**

Additional Member Name	Additional Member Organization	Region*	Segment*

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**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments:

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Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Yes

No

Comments:

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Yes

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Comments:

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Yes

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No additional comments

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<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
Name:	Brian F Thumm	
Organization:	ITC Transmission	
Telephone:	248-374-7846	
E-mail:	bthumm@itctransco.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
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**Lead Contact:**

**Contact Organization:**

**Contact Segment:**

**Contact Telephone:**

**Contact E-mail:**

Additional Member Name	Additional Member Organization	Region*	Segment*

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Yes

No

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<b>Individual Commenter Information</b>		
<b>(Complete this page for comments from one organization or individual.)</b>		
Name:	Michael Gammon	
Organization:	Kansas City Power & Light	
Telephone:	816-654-1242	
E-mail:	816-654-1245	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs,
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**Contact E-mail:**

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Yes

No

Comments:

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No additional comments

Comments:

## **Consideration of Comments for SAR to Modify Reliability Coordinator Standards**

The SAR to Modify Reliability Coordinator standards requesters thank all commenters who submitted comments on Draft 1 of the SAR. This SAR was posted for a 30-day public comment period from March 19 through April 17, 2007. The requesters asked stakeholders to provide feedback on the SAR through a special SAR Comment Form. There were 19 sets of comments, including comments from 52 different people from more than 40 companies representing 8 of the 10 Industry Segments as shown in the table on the following pages.

Based on comments received, the drafting team made two changes to the SAR:

- Replaced references to the FERC NOPR with references to the FERC Order 693
- Added a bullet to the detailed description that says, "Improve clarity of, improve measureability of, and remove abiguity from the requirement" and revised the bullets in the brief description to match this language.

The drafting team is recommending that the Standards Committee authorize moving the SAR forward to the standard drafting stage of the standards process.

In this "Consideration of Comments" document stakeholder comments have been organized so that it is easier to see the responses associated with each question. All comments received on the standards can be viewed in their original format at:

[http://www.nerc.com/~filez/standards/Reliability-Coordination\\_Project\\_2006-6.html](http://www.nerc.com/~filez/standards/Reliability-Coordination_Project_2006-6.html)

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Director of Standards, Gerry Adamski, at 609-452-8060 or at [gerry.adamski@nerc.net](mailto:gerry.adamski@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

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<sup>1</sup> The appeals process is in the Reliability Standards Development Procedures: <http://www.nerc.com/standards/newstandardsprocess.html>.

## Consideration of Comments for SAR to Modify Reliability Coordinator Standards

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
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Commenter		Organization	Industry Segment											
			1	2	3	4	5	6	7	8	9	10		
1.	Anita Lee (G1)	AESO		✓										
2.	Ken Goldsmith (G4)	ALT												✓
3.	Jeff Hackman	Ameren Services		✓										
4.	Jason Shaver	American Transmission Co.	✓											
5.	Dave Rudolph (G4)	BEPC												✓
6.	Susan Renne	BPA	✓											
7.	Brent Kingsford (G1)	CAISO		✓										
8.	Greg Tillitson (G5)	CMRC												✓
9.	Ed Thompson (G2)	ConEd	✓											
10.	CJ Ingersoll	Constellation			✓									
11.	Ed Davis	Entergy Services, Inc.	✓											
12.	Steve Myers (G1)	ERCOT		✓										
13.	David Folk	FirstEnergy Corp.	✓		✓		✓	✓						
14.	Joe Knight (G4)	GRE												✓
15.	David Kiguel (G2)	Hydro One Networks	✓											
16.	Roger Champagne (I) (G2)	Hydro-Québec TransÉnergie	✓											
17.	Ron Falsetti (I) (G1) (G2)	IESO		✓										
18.	Matt Goldbert (G1)	ISO-NE		✓										
19.	Kathleen Goodman (I) (G2)	ISO-NE		✓										
20.	William Shemley (G2)	ISO-NE		✓										
21.	Brian F. Thumm	ITC Transco	✓											
22.	Jim Cyrulewski (G3)	JDRJC Associates										✓		
23.	Michael Gammon	Kansas City Power & Light	✓											
24.	Eric Ruskamp (G4)	LES												✓
25.	Donald Nelson (G2)	MA Dept. of Tel. and Energy											✓	
26.	Robert CoisH (I) (G4)	Manitoba Hydro	✓		✓		✓	✓						
27.	William Phillips (G1)	MISO		✓										
28.	Terry Bilke (G3) (G4)	MISO		✓										

## Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Commenter		Organization	Industry Segment										
			1	2	3	4	5	6	7	8	9	10	
29.	Carol Gerou (G4)	MP											✓
30.	Mike Brytowski (G4)	MRO											✓
31.	Randy Macdonald (G2)	NBSO		✓									
32.	Herb Schrayshuen(G2)	NGRID	✓										
33.	Michael Schiavone (G2)	NGRID	✓										
34.	Michael Rinalli (G2)	NGRID	✓										
35.	Guy V. Zito(G2)	NPCC											✓
36.	Al Boesch (G4)	NPPC											✓
37.	Murale Gopinathan (G2)	NU	✓										
38.	Mike Calimano (I) (G1)	NYISO		✓									
39.	Greg Campoli (G2)	NYISO		✓									
40.	Ralph Rufrano (G2)	NYPA	✓										
41.	Al Adamson (G2)	NYSRC											✓
42.	Todd Gosnell (G4)	OPPD											✓
43.	Alicia Daugherty (G1)	PJM		✓									
44.	Frank McElvain (G5)	RDRC											✓
45.	Charles Yeung (G1)	SPP		✓									
46.	Mike Gentry (I) G5)	SRP	✓										
47.	Jim Haigh (G4)	WAPA											✓
48.	Nancy Bellows (G5)	WECC											✓
49.	Neal Balu (G4)	WPSR											✓
50.	Robert Johnson (G5)	Xcel – PSC											✓
51.	David Lemmons (G3)	Xcel Energy							✓				✓
52.	Pam Oreschnik (G4)	XEL											✓

I – Indicates that individual comments were submitted in addition to comments submitted as part of a group

- G1 – IRC Standards Review Committee
- G2 – NPCC CP9 Reliability Standards Working Group (NPCC CP9)
- G3 – Midwest Standards Collaboration Group
- G4 – MRO Members
- G5 – WECC Reliability Coordination Comments Work Group

**Index to Questions, Comments, and Responses**

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**Summary Consideration:** Most stakeholders agreed with the modifications made to reduce the scope of this SAR.

Question #1			
Commenter	Yes	No	Comment
Entergy		<input checked="" type="checkbox"/>	<p>We agree with the reduction of standards to be included in this body of work. However, we suggest PRC-001 should also be eliminated from this SAR.</p> <p>The title of the SAR is Reliability Coordination, but the purpose is to ensure requirements applicable to the Reliability Coordinator are clear, etc., etc. The second part of the Purpose is to ensure that "this set of requirements" is sufficient... , referring back to the first part of the sentence. PRC-001 does not apply to the Reliability Coordinators and is out of place in this SAR.</p> <p>PRC-001 should not be included in this SAR nor the resulting standard development work under this SAR. First, PRC-001 does not apply to Reliability Coordinators and there is already a significantly large amount of work related to Reliability Coordinators under this SAR. Second, the SDT's attention should not be redirected to system protection coordination among BAs, TOPs, and GOPs. We disagree if the intent of the Requestor is to make PRC-001 applicable to Reliability Coordinators under this SAR; If that is the intent we suggest it be done in a separate SAR activity.</p>
<p><b>Response:</b> Requirement 2.2 in PRC-001 states:                      If a protective relay or equipment failure reduces system reliability, the Transmission Operator shall notify its Reliability Coordinator and affected Transmission Operators and Balancing Authorities. The Transmission Operator shall take corrective action as soon as possible.</p> <p>This is 'incomplete' because there is no requirement for the RC to use that information. The intent in including PRC-001 in this SAR was to 'complete' this requirement. As envisioned, the new requirement may go in one of the existing RC standards, or may go into a new standard – but because it is something for the RC to do, it seems appropriate to include the consideration of this requirement as part of the RC SAR.</p>			
FirstEnergy		<input checked="" type="checkbox"/>	<p>While IRO-007-1 through IRO-010-1 are currently open for a 30-day comment period until 4/20/07, this standards work plan effort should leave no stone unturned in developing quality standards. Consequently, IRO-007-1 through IRO-010-1 may contain requirements that are valuable and easily consolidated with the standards under review</p>

## Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #1			
Commenter	Yes	No	Comment
			by this SAR. In addition, they may also contain duplicative requirements that could be consolidated as part of the review process of this SAR.
<p><b>Response:</b> The Implementation Plan posted with IRO-007 through IRO-010 already calls for modification to some of the standards included in this SAR. However, the changes identified with the implementation plan for IRO-007 through IRO-011 are limited to those changes resulting from adoption of the proposed standards. If changes are needed to IRO-007 through IRO-010, they can be addressed with a new SAR.</p>			
Constellation	<input checked="" type="checkbox"/>		CECD feels that given the number of standards that IRO-007-1 and IRO-010-1 may impact [IRO-002-1 R2, IRO-002-1 R6, IRO-003-2, IRO-004-1 R4 and R5, IRO-005-2 R1, TOP-003-0 R1.2, TOP-005-1 R1] CECD disagrees with removing them from consideration. We do agree with the decision to exclude ORG-027-1.
<p><b>Response:</b> Please review the Implementation Plan posted with IRO-007 through IRO-010. The proposed changes to the list of standards you identified are limited to those changes resulting from adoption of the proposed standards. . If changes are needed to IRO-007 through IRO-010, they can be addressed with a new SAR.</p>			
MRO	<input checked="" type="checkbox"/>		We agree with excluding standards still under development.
<p><b>Response:</b> Thank you for your support – most commenters agreed with omitting all standards still under development.</p>			
Ameren Services	<input checked="" type="checkbox"/>		
ATC LLC	<input checked="" type="checkbox"/>		
BPA	<input checked="" type="checkbox"/>		
Hydro-Québec TransÉnergie	<input checked="" type="checkbox"/>		
IESO	<input checked="" type="checkbox"/>		
IRC SRC	<input checked="" type="checkbox"/>		
ISO-NE	<input checked="" type="checkbox"/>		
ITC Transco	<input checked="" type="checkbox"/>		
KCPL	<input checked="" type="checkbox"/>		
Manitoba Hydro	<input checked="" type="checkbox"/>		
Midwest SCG	<input checked="" type="checkbox"/>		
NPCC CP9 RSWG	<input checked="" type="checkbox"/>		
NYISO	<input checked="" type="checkbox"/>		



**Consideration of Comments for SAR to Modify Reliability Coordinator Standards**

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<b>Question #1</b>			
<b>Commenter</b>	<b>Yes</b>	<b>No</b>	<b>Comment</b>
SRP	<input checked="" type="checkbox"/>		
WECC RCCWG	<input checked="" type="checkbox"/>		

**Consideration of Comments for SAR to Modify Reliability Coordinator Standards**

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:
- Modify the requirement to improve its quality
  - Move the requirement (into another SAR or Standard or to the certification process or standards)
  - Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

**Summary Consideration:** Most stakeholders agreed with this approach to reviewing the requirements in the standards associated with this SAR.

Question #2			
Commenter	Yes	No	Comment
SRP		<input checked="" type="checkbox"/>	The FERC NOPR and FERC Staff comments under Standard PRC-001-0, System Protection Coordination, do not apply to Reliability Coordination. In fact, the current Standard, PRC-001-1, does not apply to Reliability Coordinators. This Standard should be removed from the scope of this SAR.
<p><b>Response:</b> The FERC NOPR has now been replaced with FERC Order 693 and includes the following language regarding PRC-001-1:</p> <p>1449. The Commission approves Reliability Standard PRC-001-1 as mandatory and enforceable. In addition, the Commission directs the ERO to develop modifications to PRC-001-1 through the Reliability Standards development process that:</p> <p>(1) correct the references for Requirements and</p> <p>(2) include a requirement that upon the detection of failures in relays or protection system elements on the Bulk-Power System that threaten reliable operation, relevant transmission operators must be informed promptly, but within a specified period of time that is developed in the Reliability Standards development process, whereas generator operators must also promptly inform their transmission operators and</p> <p>(3) clarifies that, after being informed of failures in relays or protection system elements that threaten reliability of the Bulk-Power System, transmission operators must carry out corrective control actions, i.e., return a system to a stable state that respects system requirements as soon as possible and no longer than 30 minutes after they receive notice of the failure.</p> <p>The existing PRC-001-1 Requirement 2.2 states:</p> <p>If a protective relay or equipment failure reduces system reliability, the Transmission Operator shall notify its Reliability Coordinator and affected Transmission Operators and Balancing Authorities. The Transmission Operator shall take corrective action as soon as possible.</p>			

**Consideration of Comments for SAR to Modify Reliability Coordinator Standards**

Question #2			
Commenter	Yes	No	Comment
<p>This is 'incomplete' because there is no requirement for the RC to use that information. The intent in including PRC-001 in this SAR was to 'complete' this requirement. As envisioned, the new requirement may go in one of the existing RC standards, or may go into a new standard – but because it is something for the RC to do, it seems appropriate to include the consideration of this requirement as part of the RC SAR.</p>			
Ameren Services Midwest SCG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>We agree with improving the quality of the requirements, removing redundancies and those things that do not contribute to reliability.</p> <p>It isn't clear what stakeholders will be involved to improve these standards. Is it the ballot body as a whole or some other forum? Since there is no drafting team roster, we are not sure who is working on this project and who are the stakeholders suggesting the changes to requirements.</p>
<p><b>Response:</b> The Reliability Standards Development Procedure will be used to collect stakeholder feedback. If the Standards Committee (SC) accepts this SAR, then the SC can either appoint the existing drafting team to work with stakeholders to make revisions to the standards, or the SC can have the standards staff send a notice to all members of the RBB as well as all entities who have indicated they want to receive email notices of standards actions to let everyone know that the SC is seeking volunteers to work on a new drafting team. In either case, the drafting team will 'propose' revisions and post those for comment. NERC's standards staff will send an email notice to all members of the RBB as well as all entities who have indicated they want to receive email notices of standards actions – the notice will tell people that some proposed revisions have been posted for comment and will seek feedback on the proposed revisions through a comment form – the same process as used to collect feedback on this SAR. The drafting team will use the responses to the questions on the comment form to determine which changes are supported by stakeholders, and will continue to make modifications until the drafting team feels that they have a set of proposed changes that meets the consensus of the stakeholders who participated in the comment periods.</p> <p>The drafting team that is working on the IROL standards submitted this Reliability Coordination SAR – the SC did not assign a separate drafting team to address the SAR comments. The roster for this team is posted on the related files page of the IROL standards. Here is a link to the roster: <a href="ftp://www.nerc.com/pub/sys/all_updl/standards/dt/GroupRoster_IROLSDT.pdf">ftp://www.nerc.com/pub/sys/all_updl/standards/dt/GroupRoster_IROLSDT.pdf</a></p>			
MRO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>We agree with improving the quality of the requirements, removing redundancies and those things that do not contribute to reliability. We do not see a listing of the drafting team members and it is unclear what stakeholders will be involved to improve these standards.</p>
<p><b>Response:</b> The Reliability Standards Development Procedure will be used to collect stakeholder feedback. If the Standards Committee (SC) accepts this SAR, then the SC can either appoint the existing drafting team to work with stakeholders to make revisions to the standards, or the SC can have the standards staff send a notice to all members of the RBB as well as all entities who have indicated they want to receive email notices of standards actions to let everyone know that the SC is seeking volunteers to work on a new drafting team. In either case, the drafting team will 'propose' revisions and post those</p>			

**Consideration of Comments for SAR to Modify Reliability Coordinator Standards**

Question #2			
Commenter	Yes	No	Comment
<p>for comment. NERC's standards staff will send an email notice to all members of the RBB as well as all entities who have indicated they want to receive email notices of standards actions – the notice will tell people that some proposed revisions have been posted for comment and will seek feedback on the proposed revisions through a comment form – the same process as used to collect feedback on this SAR. The drafting team will use the responses to the questions on the comment form to determine which changes are supported by stakeholders, and will continue to make modifications until the drafting team feels that they have a set of proposed changes that meets the consensus of the stakeholders who participated in the comment periods.</p> <p>The drafting team that is working on the IROL standards submitted this Reliability Coordination SAR – the SC did not assign a separate drafting team to address the SAR comments. The roster for this team is posted on the related files page of the IROL standards. Here is a link to the roster: <a href="ftp://www.nerc.com/pub/sys/all_updl/standards/dt/GroupRoster_IROLSDT.pdf">ftp://www.nerc.com/pub/sys/all_updl/standards/dt/GroupRoster_IROLSDT.pdf</a></p>			
FirstEnergy	<input checked="" type="checkbox"/>		Rather than using the word quality to describe the outcome, the first bullet point above should say, "Modify the requirement to improve clarity and measureability while removing ambiguity." This way the drafting team could use a check list against each requirement to test whether it is clear, measureable, and unambiguous.
<p><b>Response:</b> The drafting team has adopted this suggestion and modified the SAR so that the revised bullet now says:                      – <b>Modify the requirement to improve its clarity and measureability while removing ambiguity</b></p>			
Manitoba Hydro	<input checked="" type="checkbox"/>		However, this is a large scope (a large amount of work) for the standard drafting team. Wherever possible, it is recommended that the drafting team list and explain the criteria it is using so that it may be easier to achieve stakeholder consensus where many related changes are made. With such a large scope the drafting team should consider carefully how the changes are balloted so ballots don't fail because stakeholders object to a minor subset of issues in a particular ballot.
<p><b>Response:</b> Agreed.</p>			
WECC RCCWG	<input checked="" type="checkbox"/>		The WECC RCCWG agrees with the overall approach. That said, there is currently another SAR in process that addresses communications protocols and paths. The referenced SAR, "Operating Personnel Communications Protocols" is also meant to address FERC comments relative to communications protocols. Having two separate SARs that address the same comment seems redundant.
<p><b>Response:</b> There are a couple of standards that are in more than one 'project' in the Reliability Standards Work Plan 2007-2009. The coordinators working with the drafting teams for these projects are aware of this duplication and will 'hand off' requirements between one another to ensure that each requirement is addressed and that only one drafting team works on modifying each requirement.</p>			
ATC LLC	<input checked="" type="checkbox"/>		
BPA	<input checked="" type="checkbox"/>		

**Consideration of Comments for SAR to Modify Reliability Coordinator Standards**

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<b>Question #2</b>			
<b>Commenter</b>	<b>Yes</b>	<b>No</b>	<b>Comment</b>
Constellation	<input checked="" type="checkbox"/>		
Entergy	<input checked="" type="checkbox"/>		
Hydro-Québec TransÉnergie	<input checked="" type="checkbox"/>		
IESO	<input checked="" type="checkbox"/>		
IRC SRC	<input checked="" type="checkbox"/>		
ISO-NE	<input checked="" type="checkbox"/>		
ITC Transco	<input checked="" type="checkbox"/>		
KCPL	<input checked="" type="checkbox"/>		
NPCC CP9 RSWG	<input checked="" type="checkbox"/>		
NYISO	<input checked="" type="checkbox"/>		

**Consideration of Comments for SAR to Modify Reliability Coordinator Standards**

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

**Summary Consideration: The drafting team made the following modifications to the SAR based on stakeholder suggestions for additional revisions:**

- Replaced references to the FERC NOPR with references to the FERC Order 693
- Added a bullet to the detailed description that says, "Improve clarity of, improve measureability of, and remove abiguity from the requirement"

Question #3			
Commenter	Yes	No	Comment
MRO	<input checked="" type="checkbox"/>		<p>The FERC NOPR should not be used to change the standards. Items in the final order should be considered.</p> <p>Several of V0 comments items are not clear. It would help if these fill comments were posted somewhere for reference.</p> <p>We disagree with the assignment of Violation Severity Levels (VSL). VSLs should not be skewed to inflate the sanctions associated with a requirement. The drafting team should assess the likely bounds of performance and the VSLs should be divided into four relatively equal portions. The proposed breakdown in the SAR is not part of the Sanctions Guidelines and has not be vetted in the industry.</p>
<p><b>Response:</b> Agreed. The drafting team has modified the SAR to replace the references to the NOPR with references to FERC Order 693.</p> <p>The Version 0 comments are posted on the Approved Standards web page – here is the link to that set of comments: <a href="ftp://www.nerc.com/pub/sys/all_updl/standards/rs/Standards_V0_Industry_Comments_20060105.pdf">ftp://www.nerc.com/pub/sys/all_updl/standards/rs/Standards_V0_Industry_Comments_20060105.pdf</a></p> <p>The proposed breakdown in VSLs was not included in the Sanctions Guidelines – but it was supported by both the Standards Committee and the Compliance and Certification Committee on December 14, 2006. The Stanards Committee supported having drafting teams use the breakdown that appears in the SAR – and that breakdown was included in the Reliability Standards Development Work Plan 2007-2009.</p>			
Ameren Services Midwest SCG	<input checked="" type="checkbox"/>		<p>The FERC NOPR should not be used to change the standards. Items in the final order should be given due consideration.</p> <p>Several of V0 comments items are not clear. They are primarily bullet notes with no context. Is there additional information about these comments somewhere?</p>
<p><b>Response:</b> Agreed. The drafting team has modified the SAR to replace the references to the NOPR with references to FERC Order 693.</p>			

**Consideration of Comments for SAR to Modify Reliability Coordinator Standards**

<b>Question #3</b>			
<b>Commenter</b>	<b>Yes</b>	<b>No</b>	<b>Comment</b>
The Version 0 comments are posted on the Approved Standards web page – here is the link to that set of comments: <a href="ftp://www.nerc.com/pub/sys/all_updl/standards/rs/Standards_V0_Industry_Comments_20060105.pdf">ftp://www.nerc.com/pub/sys/all_updl/standards/rs/Standards_V0_Industry_Comments_20060105.pdf</a>			
ATC LLC	<input checked="" type="checkbox"/>		The SAR needs to be further refined to identify those specific requirements that will be: 1) Reviewed as being duplicative 2) Considered being relocated 3) Considered being eliminated
<b>Response:</b> As envisioned, the standard drafting team will work with stakeholders (using the comment process) to propose and obtain stakeholder feedback on whether each requirement should be retired, moved, enhanced, etc.			
FirstEnergy	<input checked="" type="checkbox"/>		Under the detailed description in the second paragraph, the SAR should be modified to include a line item to include "Improve clarity of, improve measureability of, and remove ambiguity from the requirements."
<b>Response:</b> The drafting team adopted your suggestion and added the proposed bullet to the detailed description of the SAR.			
BPA	<input checked="" type="checkbox"/>		No comments at this time. We will comment when the standards are up for comment.
Constellation	<input checked="" type="checkbox"/>		
Entergy		<input checked="" type="checkbox"/>	
Hydro-Québec TransÉnergie		<input checked="" type="checkbox"/>	
IESO		<input checked="" type="checkbox"/>	
IRC SRC		<input checked="" type="checkbox"/>	
ISO-NE		<input checked="" type="checkbox"/>	
ITC Transco		<input checked="" type="checkbox"/>	
KCPL		<input checked="" type="checkbox"/>	
Manitoba Hydro		<input checked="" type="checkbox"/>	
NPCC CP9 RSWG		<input checked="" type="checkbox"/>	
NYISO		<input checked="" type="checkbox"/>	
SRP		<input checked="" type="checkbox"/>	
WECC RCCWG		<input checked="" type="checkbox"/>	

**Consideration of Comments for SAR to Modify Reliability Coordinator Standards**

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

**Summary Consideration:** Stakeholders who responded to this question overwhelmingly indicated support for having firm boundaries on what could be changed with the associated standards by removing the open-ended language from the original SAR.

Question #4			
Commenter	Yes	No	Comment
BPA		<input checked="" type="checkbox"/>	
FirstEnergy	<input checked="" type="checkbox"/>		This effort should leave no stone unturned in developing quality standards within the expertise and domain of this effort. Therefore, every effort must be made to ensure this round of work plan related standard revisions is as complete and all encompassing as is humanly possible to ensure to the extent possible that this standards process reaches a point that these standards are complete, accurate and only minor revisions are required to maintain them going forward. Tying the hands of the drafting team as suggested by "Several stakeholders" will only prolong the industry's work to achieve good, high quality requirements and standards. In addition, we should be using our resources as efficiently as possible. Allowing some latitude to the drafting teams to find and fix issues with standards that are related to the standards within their area of expertise and charge is a good thing to do at this point in the standards evolution process and conducive to the efficient use of resources. As a practical matter this process may never end, but it should reach a point that is much more manageable sooner rather than later.
<b>Response:</b> Stakeholders overwhelmingly indicated support for having firm boundaries on what could be changed with the associated standards.			
ATC LLC	<input checked="" type="checkbox"/>		The SAR identified standards IRO-014 and IRO-015 on its first page but does not address these standards in Attachment 1. The SAR needs to be updated to either acknowledge that these two standards will not be changed or identify what needs to be corrected.  Attachment 1: COM-001-0 NERC has a current effort to address communication facilities in standard EOP-008. This



**Consideration of Comments for SAR to Modify Reliability Coordinator Standards**

Question #4			
Commenter	Yes	No	Comment
			<p>group needs to be aware of that effort and should insure that any change to COM-001 does not counter that effort of EOP-008.</p> <p>How will this effort differ from the other NERC effort?</p> <p>COM-002-1                      NERC has a current effort to address communication protocol in emergencies with "Operating Personnel Communications Protocols." Similar to our previous comment this group needs to be aware of that effort and should insure that any change to COM-002 does not counter that groups efforts.                      How will this effort differ from the other NERC effort?</p> <p>IRO-001-0                      Please provide additional information on the following bullet point:                      "Reflect the process set forth in the NERC Rules of Procedures"                      What specific sections of NERC Rules of Procedure will be reflected in IRO-001-0?</p> <p>IRO-005-1                      The first bullet point does not seem to fall within the goal of this SAR.                      "Propose that the ERO conduct a survey of IROL practices and experiences."                      This effort does not need to go through NERC Reliability Standards Development Process to be performed. NERC could take up this effort at any time and it will slow down this process if it is going to be included in this SAR.</p> <p>PER-004-0                      NERC has another group that is looking into to these concerns.                      How will this effort differ from that effort?</p>
<p><b>Response:</b>                      The two coordinate operations standards highlighted (IRO-014 and IRO-015), did not have any suggestions from FERC for improvements, and they were not part of Version 0 so there were no suggestions for improvements to these standards from the Version 0 process.</p> <p>COM-001 and COM-002 both contain requirements that are assigned to several different functions – and both include a mix of 'preparedness' requirements as well as some 'real-time' notification requirements as well as some requirements that may end up being converted into a new standard for 'communications protocols'. The intent in including the standards in multiple projects was to ensure that each requirement was fully addressed and ended up where it belonged. The coordinators</p>			

**Consideration of Comments for SAR to Modify Reliability Coordinator Standards**

<b>Question #4</b>			
<b>Commenter</b>	<b>Yes</b>	<b>No</b>	<b>Comment</b>
			<p>supporting these projects are aware of this duplication and are working to ensure that there is a 'hand off' of requirements between teams to eliminate gaps and duplication.</p> <p>IRO-001 In Order 693, FERC explains what it meant by the bullet, 'Reflect the process set forth in the NERC Rules of Procedure':</p> <p style="padding-left: 40px;">896. In the NOPR, the Commission proposed to approve the Reliability Standard as mandatory and enforceable. In addition, as a separate action under section 215(d)(5), the NOPR proposed to direct the ERO to develop modifications to Requirement R1 to substitute "Regional Entity" for "regional reliability organization" and reflect NERC's Rules of Procedure for registering, certifying and verifying entities, including reliability coordinators.</p> <p>IRO-005-1 The bullet point you've highlighted may or may not be addressed by the drafting team. As envisioned, the results of a survey may prove useful in determining a need for additional modifications to the standards. Note that FERC Order 693 has replaced the NOPR and the SAR has been updated to reflect this. The survey is still identified in Order 693 – and FERC clarified that the intent of the survey is to determine if additional modifications to IRO-005 are necessary.</p> <p>PER-004 includes a mix of preparation and real-time requirements. The intent in placing the standard in more than one project is to ensure that each requirement is reviewed by an appropriate team, and that all requirements that are needed end up in an appropriate standard.</p>
Ameren Services	<input checked="" type="checkbox"/>		
Constellation	<input checked="" type="checkbox"/>		
Entergy	<input checked="" type="checkbox"/>		
Hydro-Québec TransÉnergie	<input checked="" type="checkbox"/>		
IESO	<input checked="" type="checkbox"/>		
IRC SRC	<input checked="" type="checkbox"/>		
ISO-NE	<input checked="" type="checkbox"/>		
ITC Transco	<input checked="" type="checkbox"/>		
KCPL	<input checked="" type="checkbox"/>		
Manitoba Hydro	<input checked="" type="checkbox"/>		

**Consideration of Comments for SAR to Modify Reliability Coordinator Standards**

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<b>Question #4</b>			
<b>Commenter</b>	<b>Yes</b>	<b>No</b>	<b>Comment</b>
Midwest SCG	<input checked="" type="checkbox"/>		
MRO	<input checked="" type="checkbox"/>		
NPCC CP9 RSWG	<input checked="" type="checkbox"/>		
NYISO	<input checked="" type="checkbox"/>		
WECC RCCWG	<input checked="" type="checkbox"/>		

## Consideration of Comments for SAR to Modify Reliability Coordinator Standards

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

**Summary Consideration:** The drafting team did not make any conforming changes to the SAR based on comments provided in response to question 5.

Question #5			
Commenter	Yes	No	Comment
Ameren Services			<p>We disagree with the assignment of Violation Severity Levels (VSL). The drafting team should assess the likely bounds of performance and the VSLs should be divided into four relatively equal portions. Yes/No requirements should not arbitrarily be counted as Severe violations. The proposed VSL breakdown in the SAR is not part of the Sanctions Guidelines and the proposed process has not been vetted in the industry.</p> <p>To the extent that requirements are modified or moved, care should be taken to make sure that the two-way exchange of information between RC and TOP and RC and BA should be preserved.</p>
<p><b>Response:</b> Violation Severity Levels identify how badly you missed the intent of a requirement – not all requirements lend themselves to 4 different VSLs. The guidelines for determining a VSL are just ‘guidelines’ – however these guidelines were endorsed by the SC and the CCC and the SDT would need a strong reason for not using these guidelines.</p>			
Midwest SCG			<p>We disagree with the assignment of Violation Severity Levels (VSL). The drafting team should assess the likely bounds of performance and the VSLs should be divided into four relatively equal portions. Yes/No requirements should not arbitrarily be counted as Severe violations. The proposed VSL breakdown in the SAR is not part of the Sanctions Guidelines and the proposed process has not been vetted in the industry.</p>
<p><b>Response:</b> Violation Severity Levels identify how badly you missed the intent of a requirement – not all requirements lend themselves to 4 different VSLs. The guidelines for determining a VSL are just ‘guidelines’ – however these guidelines were endorsed by the SC and the CCC and the SDT would need a strong reason for not using these guidelines.</p>			
BPA		<input checked="" type="checkbox"/>	No comments at this time. We will comment when the standards are up for comment.
<p><b>Response:</b></p>			
WECC RCCWG			<p>The WECC RCCWG believes that revision to each existing Standard, as a result of this SAR, should be individually balloted, instead of grouped together in one ballot on the entire group of changes.</p>
<p><b>Response:</b> The SDT appointed to work on the standards will identify how to ballot the standards modified as part of this set of standards.</p>			

## Standard Authorization Request Form

Title of Proposed Standard	Reliability Coordination (Project 2006-06)
Request Date	December 18, 2006
Revised Date	May 1, 2007

SAR Requestor Information	SAR Type <i>(Check a box for each one that applies.)</i>
<b>Name</b> Ellis Rankin	<input type="checkbox"/> New Standard
<b>Primary Contact</b> Ellis Rankin	<input checked="" type="checkbox"/> Revision to existing Standards – see list below  COM-001 – Telecommunications COM-002 – Communications and Coordination IRO-001 – Reliability Coordination – Responsibilities and Authorities IRO-002 – Reliability Coordination – Facilities IRO-005 – Reliability Coordination – Current Day Operations IRO-014 – Procedures to Support Coordination between Reliability Coordinators IRO-015 – Notifications and Information Exchange Between Reliability Coordinators IRO-016 – Coordination of Real-time Activities between Reliability Coordinators PER-004 – Reliability Coordination – Staffing PRC-001 – System Protection Coordination
<b>Telephone</b> 214-743-6828 <b>Fax</b> 972-263-6710	<input checked="" type="checkbox"/> Withdrawal of existing Standard  Some requirements in the above standards
<b>E-mail</b> erankin@txued.com	<input type="checkbox"/> Urgent Action

## Standards Authorization Request Form

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### **Purpose**

To ensure that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System.

### **Brief Description**

Most of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process. There have been suggestions for improving these requirements, and the drafting team will consider comments submitted by stakeholders, drafting teams and FERC in determining what changes should be proposed to stakeholders.

The drafting team will review all of the requirements in this set of standards and make a determination, with stakeholders, on whether to:

- Modify the requirement to improve its clarity and measureability while removing ambiguity
- Move the requirement (into another SAR or Standard or to the certification process or standards)
- Eliminate the requirement (either because it is redundant or because it doesn't support bulk power system reliability).

### **Detailed Description**

The drafting team will review all of the requirements in the following set of standards:

- COM-001 — Telecommunications
- COM-002 — Communications and Coordination
- IRO-001 — Reliability Coordination – Responsibilities and Authorities
- IRO-002 — Reliability Coordination – Facilities
- IRO-005 — Reliability Coordination – Current Day Operations
- IRO-014 — Procedures to Support Coordination between Reliability Coordinators
- IRO-015 — Notifications and Information Exchange Between Reliability Coordinators
- IRO-016 — Coordination of Real-time Activities between Reliability Coordinators
- PER-004 — Reliability Coordination – Staffing
- PRC-001 — System Protection Coordination

For each existing requirement, the drafting team will work with stakeholders and:

- Eliminate redundancy in the requirements.
- Identify requirements that should be moved into other SARs
- Eliminate requirements that do not support bulk power system reliability
- Transfer requirements that need to be in place before an entity begins operation as an RC to certification.
- Improve clarity of, improve measureability of, and remove ambiguity from the requirement

The standard drafting team will also:

- Coordinate with the drafting teams working on the SAR and standards for Transmission Operator and Balancing Authority standards (Project 2007-06).
- Consider comments received during the initial development of this set of standards and other comments received from ERO regulatory authorities and stakeholders (Attachment 1)
- Bring the standards into conformance with the latest version of the Reliability Standards Development Procedure and the ERO Rules of Procedure. (Attachment 2)

This review of the set of identified standards will satisfy the standards procedure requirement to review each approved standard at least once every five years.

**Standards Authorization Request Form**

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***Reliability Functions***

<b>The Standard will Apply to the Following Functions</b> <i>(Check box for each one that applies.)</i>		
<input checked="" type="checkbox"/>	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
<input checked="" type="checkbox"/>	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports system frequency in real time.
<input checked="" type="checkbox"/>	Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
<input checked="" type="checkbox"/>	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
<input checked="" type="checkbox"/>	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator Area.
<input checked="" type="checkbox"/>	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.
<input checked="" type="checkbox"/>	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
<input checked="" type="checkbox"/>	Transmission Owner	Owens and maintains transmission facilities.
<input checked="" type="checkbox"/>	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
<input checked="" type="checkbox"/>	Distribution Provider	Delivers electrical energy to the End-use customer.
<input checked="" type="checkbox"/>	Generator Owner	Owens and maintains generation facilities.
<input checked="" type="checkbox"/>	Generator Operator	Operates generation unit(s) to provide real and reactive power.
<input type="checkbox"/>	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
<input type="checkbox"/>	Market Operator	Interface point for reliability functions with commercial functions.
<input checked="" type="checkbox"/>	Load-Serving Entity	Secures energy and transmission service (and related reliability-related services) to serve the end-use customer.

**Reliability and Market Interface Principles**

<b>Applicable Reliability Principles</b> <i>(Check box for all that apply.)</i>	
<input checked="" type="checkbox"/>	1. Interconnected bulk electric systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
<input checked="" type="checkbox"/>	2. The frequency and voltage of interconnected bulk electric systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
<input checked="" type="checkbox"/>	3. Information necessary for the planning and operation of interconnected bulk electric systems shall be made available to those entities responsible for planning and operating the systems reliably.
<input checked="" type="checkbox"/>	4. Plans for emergency operation and system restoration of interconnected bulk electric systems shall be developed, coordinated, maintained and implemented.
<input checked="" type="checkbox"/>	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk electric systems.
<input checked="" type="checkbox"/>	6. Personnel responsible for planning and operating interconnected bulk electric systems shall be trained, qualified, and have the responsibility and authority to implement actions.
<input checked="" type="checkbox"/>	7. The security of the interconnected bulk electric systems shall be assessed, monitored and maintained on a wide area basis.
<b>Does the proposed Standard comply with all of the following Market Interface Principles?</b> <i>(Select 'yes' or 'no' from the drop-down box.)</i>	
1. The planning and operation of bulk electric systems shall recognize that reliability is an essential requirement of a robust North American economy. Yes	
2. An Organization Standard shall not give any market participant an unfair competitive advantage. Yes	
3. An Organization Standard shall neither mandate nor prohibit any specific market structure. Yes	
4. An Organization Standard shall not preclude market solutions to achieving compliance with that Standard. Yes	
5. An Organization Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	



**Standards Authorization Request Form**

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***Related Standards – Listed under description***

<b>Standard No.</b>	<b>Explanation</b>

***Related SARs***

<b>SAR ID</b>	<b>Explanation</b>

***Regional Differences***

<b>Region</b>	<b>Explanation</b>
ERCOT	
FRCC	
MRO	
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SERC	
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**The drafting team will assist stakeholders in considering these comments in determining what changes to make to the standards:**

**COM-001-0 Telecommunications**

FERC Order 693

- Include generator operators and distribution provider as applicable entities and include requirements for their telecommunications
- Include requirements for telecommunication facilities for use during normal and emergency conditions that reflect the roles of the applicable entities and their impact on reliable operation
- Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions

V0 Industry Comments

- Many players missing
- Apply R1 to all but smallest entities

Violation Risk Factor Drafting Team Comments

- R6 – administrative requirement

**COM-002-1 Communications and Coordination**

FERC Order 693

- Include a Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area views of transmission operators or balancing authorities;
- Include distribution providers as applicable entities; and
- Require tightened communications protocols, especially for communications during alerts and emergencies.

V0 Industry Comments

- Voice with generators not required
- R1 – include reliability authority
- R2 – include sabotage and security
- R4 – clarify repeat back requirement with regard to emergency

**IRO-001-0 Reliability Coordination – Responsibilities and Authorities**

FERC Order 693

- Reflect the process set forth in the NERC Rules of Procedures; and
- Eliminate the regional reliability organization as an applicable entity.

Regional Fill-in-the-Blank Team Comments

- Remove ", sub-region, or interregional coordinating group" from R1
- Consider removing "Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another." from the Purpose section of the standard.

V0 Industry Comments

- Inability to perform needs to be communicated
- What is meant by 'interest of other entity'?

Violation Risk Factor Drafting Team Comments

- R6 - Since the RC must be NERC certified, it stands to reason that anyone performing RC tasks should be certified. However, since the RC still retains the

## **SAR for Project 2006-06 Reliability Coordination – Attachment 1**

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accountability for actions, and requirement 4 handles the agreements, this requirement is a medium risk.

### **IRO-002-0 Reliability Coordination – Facilities**

FERC Order 693

- Require a minimum set of tools that should be made available to reliability coordinators.

V0 Industry Comments

- R5 – define synchronized information system
- R7 – define ‘adequate’ tools and ‘wide-area’
- Words such as ‘easily understood’ and ‘particular emphasis’ need to be tightened

### **IRO-005-1 Reliability Coordination – Current Day Operations**

FERC Order 693

- Measures and Levels of Non-Compliance specific to IROL violations must be commensurate with the magnitude, duration, frequency and causes of the violations and whether these occur during normal or contingency conditions.
- Conduct a survey on IROL practices and experiences; the Commission may propose further modifications to IRO-005-1 based on the survey results.

V0 Industry Comments

- R10, 11 & 12 – RA not empowered to do this

### **IRO-016-1 Coordination of Real-Time Activities Between Reliability Coordinators**

Violation Risk Factors Drafting Team Comments

- R1.2.1 & R2 – ambiguous

### **PER-004-0 Reliability Coordination – Staffing**

FERC Order 693

- Include formal training requirements for reliability coordinators similar to those addressed under the personnel training Reliability Standard PER-002-0;
- Include requirements pertaining to personnel credentials for reliability coordinators similar to those in PER-003-0
- Consider the suggestions of FirstEnergy and Xcel:  
1413. FirstEnergy seeks revisions to the terms “shall have a comprehensive understanding” and “shall have extensive knowledge.” It states that it will be difficult for entities to demonstrate compliance with these terms. In addition, FirstEnergy suggests that the reliability coordinator staffing requirements should be located in the IRO Reliability Standards.  
1414. Xcel states that emergency training requirements should be expressed in hour increments rather than days to allow for flexibility in scheduling training and coordinating with rotating shift schedules.

V0 Industry Comments

- Calendar year timing increment
- Other training needs to be defined

### **PRC-001-0 System Protection Coordination**

FERC Order 693

## **SAR for Project 2006-06 Reliability Coordination – Attachment 1**

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- Correct the references for Requirements
- Include a requirement that upon the detection of failures in relays or protection system elements on the Bulk-Power System that threaten reliable operation, relevant transmission operators must be informed promptly, but within a specified period of time whereas generator operators must also promptly inform their transmission operators
- Clarify that, after being informed of failures in relays or protection system elements that threaten reliability of the Bulk-Power System, transmission operators must carry out corrective control actions, i.e., return the system to a stable state that respects system requirements as soon as possible and no longer than 30 minutes after they receive notice of the failure

### **V0 Industry Comments**

- Effects on reliability may not be known
- Consistent terminology as to neighbor vs. affected
- Not all criteria moved over from policies

The drafting team will reference these guidelines in determining what changes to make to the standards to bring them into conformance with the *Reliability Standards Development Procedure Manual, Version 6* and the *ERO Rules of Procedure*:

## **Standard Review Guidelines**

### **Applicability**

Does this reliability standard clearly identify the functional classes of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted? Where multiple functional classes are identified is there a clear line of responsibility for each requirement identifying the functional class and entity to be held accountable for compliance? Does the requirement allow overlapping responsibilities between Registered Entities possibly creating confusion for who is ultimately accountable for compliance?

Does this reliability standard identify the geographic applicability of the standard, such as the entire North American bulk power system, an interconnection, or within a regional entity area? If no geographic limitations are identified, the default is that the standard applies throughout North America.

Does this reliability standard identify any limitations on the applicability of the standard based on electric facility characteristics, such as generators with a nameplate rating of 20 MW or greater, or transmission facilities energized at 200 kV or greater or some other criteria? If no functional entity limitations are identified, the default is that the standard applies to all identified functional entities.

### **Purpose**

Does this reliability standard have a clear statement of purpose that describes how the standard contributes to the reliability of the bulk power system? Each purpose statement should include a value statement.

### **Performance Requirements**

Does this reliability standard state one or more performance requirements, which if achieved by the applicable entities, will provide for a reliable bulk power system, consistent with good utility practices and the public interest?

Does each requirement identify who shall do what under what conditions and to what outcome?

### **Measurability**

Is each performance requirement stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by that requirement?

Does each performance requirement have one or more associated measures used to objectively evaluate compliance with the requirement?

If performance results can be practically measured quantitatively, are metrics provided within the requirement to indicate satisfactory performance?

### **Technical Basis in Engineering and Operations**

Is this reliability standard based upon sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in that particular field?

### **Completeness**

Is this reliability standard complete and self-contained? Does the standard depend on external information to determine the required level of performance?

**Consequences for Noncompliance**

In combination with guidelines for penalties and sanctions, as well as other ERO and regional entity compliance documents, are the consequences of violating a standard clearly known to the responsible entities?

**Clear Language**

Is the reliability standard stated using clear and unambiguous language? Can responsible entities, using reasonable judgment and in keeping with good utility practices, arrive at a consistent interpretation of the required performance?

**Practicality**

Does this reliability standard establish requirements that can be practically implemented by the assigned responsible entities within the specified effective date and thereafter?

**Capability Requirements versus Performance Requirements**

In general, requirements for entities to have ‘capabilities’ (this would include facilities for communication, agreements with other entities, etc.) should be located in the standards for certification. The certification requirements should indicate that entities have a responsibility to ‘maintain’ their capabilities.

**Consistent Terminology**

To the extent possible, does this reliability standard use a set of standard terms and definitions that are approved through the NERC reliability standards development process?

If the standard uses terms that are included in the NERC Glossary of Terms Used in Reliability Standards, then the term must be capitalized when it is used in the standard. New terms should not be added unless they have a ‘unique’ definition when used in a NERC reliability standard. Common terms that could be found in a college dictionary should not be defined and added to the NERC Glossary.

Are the verbs on the ‘verb list’ from the DT Guidelines? If not – do new verbs need to be added to the guidelines or could you use one of the verbs from the verb list?

**Violation Risk Factors (Risk Factor)**

**High Risk Requirement**

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures;

or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

**Medium Risk Requirement**

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures;

or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or

restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

**Lower Risk Requirement**

A requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. A requirement that is administrative in nature;

or a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

**Time Horizon**

The drafting team should also indicate the time horizon available for mitigating a violation to the requirement using the following definitions:

- **Long-term Planning** — a planning horizon of one year or longer.
- **Operations Planning** — operating and resource plans from day-ahead up to and including seasonal.
- **Same-day Operations** — routine actions required within the timeframe of a day, but not real-time.
- **Real-time Operations** — actions required within one hour or less to preserve the reliability of the bulk electric system.
- **Operations Assessment** — follow-up evaluations and reporting of real time operations.

**Violation Severity Levels**

The drafting team should indicate a set of violation severity levels that can be applied for the requirements within a standard. ('Violation severity levels' replace existing 'levels of non-compliance.')

The violation severity levels must be applied for each requirement and may be combined to cover multiple requirements, as long as it is clear which requirements are included and that all requirements are included.

**The violation severity levels should be based on the following definitions:**

- **Lower: mostly compliant with minor exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more minor details. Equivalent score: 95% to 99% compliant.
- **Moderate: mostly compliant with significant exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more significant elements. Equivalent score: 85% to 94% compliant.
- **High: marginal performance or results** — The responsible entity has only partially achieved the reliability objective of the requirement and is missing one or more significant elements. Equivalent score: 70% to 84% compliant.
- **Severe: poor performance or results** — The responsible entity has failed to meet the reliability objective of the requirement. Equivalent score: less than 70% compliant.

Replace, ‘Regional Reliability Organization’ with ‘Regional Entity’

**Fill-in-the-blank Requirements**

Do not include any ‘fill-in-the-blank’ requirements. These are requirements that assign one entity responsibility for developing some performance measures without requiring that the performance measures be included in the body of a standard – then require another entity to comply with those requirements.

Every reliability objective can be met, at least at a threshold level, by a North American standard. If we need regions to develop regional standards, such as in under-frequency load shedding, we can always write a uniform North American standard for the applicable functional entities as a means of encouraging development of the regional standards.

**Requirements for Regional Reliability Organization**

Do not write any requirements for the Regional Reliability Organization. Any requirements currently assigned to the RRO should be re-assigned to the applicable functional entity.

**Effective Dates**

Must be 1<sup>st</sup> day of 1<sup>st</sup> quarter after entities are expected to be compliant – must include time to file with regulatory authorities and provide notice to responsible entities of the obligation to comply. If the standard is to be actively monitored, time for the Compliance Monitoring and Enforcement Program to develop reporting instructions and modify the Compliance Data Management System(s) both at NERC and Regional Entities must be provided in the implementation plan. The effective date should be linked to the NERC BOT adoption date.

**Associated Documents**

If there are standards that are referenced within a standard, list the full name and number of the standard under the section called, ‘Associated Documents’.

**Functional Model Version 3**

Review the requirements against the latest descriptions of the responsibilities and tasks assigned to functional entities as provided in pages 13 through 53 of the draft Functional Model Version 3.



## Standard Authorization Request Form

Title of Proposed Standard	Reliability Coordination (Project 2006-06)
Request Date	December 18, 2006
Revised Date	May 1, 2007

SAR Requestor Information	SAR Type <i>(Check a box for each one that applies.)</i>
<b>Name</b> Ellis Rankin	<input type="checkbox"/> New Standard
<b>Primary Contact</b> Ellis Rankin	<input checked="" type="checkbox"/> Revision to existing Standards – see list below  COM-001 – Telecommunications COM-002 – Communications and Coordination IRO-001 – Reliability Coordination – Responsibilities and Authorities IRO-002 – Reliability Coordination – Facilities IRO-005 – Reliability Coordination – Current Day Operations IRO-014 – Procedures to Support Coordination between Reliability Coordinators IRO-015 – Notifications and Information Exchange Between Reliability Coordinators IRO-016 – Coordination of Real-time Activities between Reliability Coordinators PER-004 – Reliability Coordination – Staffing PRC-001 – System Protection Coordination
<b>Telephone</b> 214-743-6828 <b>Fax</b> 972-263-6710	<input checked="" type="checkbox"/> Withdrawal of existing Standard  Some requirements in the above standards
<b>E-mail</b> erankin@txued.com	<input type="checkbox"/> Urgent Action

## Standards Authorization Request Form

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### **Purpose**

To ensure that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System.

### **Brief Description**

Most of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process. There have been suggestions for improving these requirements, and the drafting team will consider comments submitted by stakeholders, drafting teams and FERC in determining what changes should be proposed to stakeholders.

The drafting team will review all of the requirements in this set of standards and make a determination, with stakeholders, on whether to:

- Modify the requirement to improve its clarity and measureability while removing ambiguity
- Move the requirement (into another SAR or Standard or to the certification process or standards)
- Eliminate the requirement (either because it is redundant or because it doesn't support bulk power system reliability).

### **Detailed Description**

The drafting team will review all of the requirements in the following set of standards:

COM-001 — Telecommunications  
COM-002 — Communications and Coordination  
IRO-001 — Reliability Coordination – Responsibilities and Authorities  
IRO-002 — Reliability Coordination – Facilities  
IRO-005 — Reliability Coordination – Current Day Operations  
IRO-014 — Procedures to Support Coordination between Reliability Coordinators  
IRO-015 — Notifications and Information Exchange Between Reliability Coordinators  
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Bring the standards into conformance with the latest version of the Reliability Standards Development Procedure and the ERO Rules of Procedure. (Attachment 2)

This review of the set of identified standards will satisfy the standards procedure requirement to review each approved standard at least once every five years.

**Standards Authorization Request Form**

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***Reliability Functions***

<b>The Standard will Apply to the Following Functions</b> <i>(Check box for each one that applies.)</i>		
<input checked="" type="checkbox"/>	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
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**Reliability and Market Interface Principles**

<b>Applicable Reliability Principles</b> (Check box for all that apply.)	
<input checked="" type="checkbox"/>	1. Interconnected bulk electric systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
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1. The planning and operation of bulk electric systems shall recognize that reliability is an essential requirement of a robust North American economy. Yes	
2. An Organization Standard shall not give any market participant an unfair competitive advantage. Yes	
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5. An Organization Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

**Standards Authorization Request Form**

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***Related Standards – Listed under description***

<b>Standard No.</b>	<b>Explanation</b>

***Related SARs***

<b>SAR ID</b>	<b>Explanation</b>

***Regional Differences***

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FERC Order 693

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FERC Order 693

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## **SAR for Project 2006-06 Reliability Coordination – Attachment 1**

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- Conduct a survey on IROL practices and experiences; the Commission may propose further modifications to IRO-005-1 based on the survey results.

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- Include requirements pertaining to personnel credentials for reliability coordinators similar to those in PER-003-0
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1413. FirstEnergy seeks revisions to the terms “shall have a comprehensive understanding” and “shall have extensive knowledge.” It states that it will be difficult for entities to demonstrate compliance with these terms. In addition, FirstEnergy suggests that the reliability coordinator staffing requirements should be located in the IRO Reliability Standards.  
1414. Xcel states that emergency training requirements should be expressed in hour increments rather than days to allow for flexibility in scheduling training and coordinating with rotating shift schedules.

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- Calendar year timing increment
- Other training needs to be defined

### **PRC-001-0 System Protection Coordination**

FERC Order 693

## **SAR for Project 2006-06 Reliability Coordination – Attachment 1**

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- Correct the references for Requirements
- Include a requirement that upon the detection of failures in relays or protection system elements on the Bulk-Power System that threaten reliable operation, relevant transmission operators must be informed promptly, but within a specified period of time whereas generator operators must also promptly inform their transmission operators
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### **V0 Industry Comments**

- Effects on reliability may not be known
- Consistent terminology as to neighbor vs. affected
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The drafting team will reference these guidelines in determining what changes to make to the standards to bring them into conformance with the *Reliability Standards Development Procedure Manual, Version 6* and the *ERO Rules of Procedure*:

## **Standard Review Guidelines**

### **Applicability**

Does this reliability standard clearly identify the functional classes of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted? Where multiple functional classes are identified is there a clear line of responsibility for each requirement identifying the functional class and entity to be held accountable for compliance? Does the requirement allow overlapping responsibilities between Registered Entities possibly creating confusion for who is ultimately accountable for compliance?

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Are the verbs on the ‘verb list’ from the DT Guidelines? If not – do new verbs need to be added to the guidelines or could you use one of the verbs from the verb list?

**Violation Risk Factors (Risk Factor)**

**High Risk Requirement**

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures;

or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

**Medium Risk Requirement**

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures;

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restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

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Replace, ‘Regional Reliability Organization’ with ‘Regional Entity’

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Must be 1<sup>st</sup> day of 1<sup>st</sup> quarter after entities are expected to be compliant – must include time to file with regulatory authorities and provide notice to responsible entities of the obligation to comply. If the standard is to be actively monitored, time for the Compliance Monitoring and Enforcement Program to develop reporting instructions and modify the Compliance Data Management System(s) both at NERC and Regional Entities must be provided in the implementation plan. The effective date should be linked to the NERC BOT adoption date.

**Associated Documents**

If there are standards that are referenced within a standard, list the full name and number of the standard under the section called, ‘Associated Documents’.

**Functional Model Version 3**

Review the requirements against the latest descriptions of the responsibilities and tasks assigned to functional entities as provided in pages 13 through 53 of the draft Functional Model Version 3.

## Standard Authorization Request Form

Title of Proposed Standard	Reliability Coordination (Project 2006-06)
Request Date	December 18, 2006
Revised Date	May 1, 2007

SAR Requestor Information	SAR Type <i>(Check a box for each one that applies.)</i>
<b>Name</b> Ellis Rankin	<input type="checkbox"/> New Standard
<b>Primary Contact</b> Ellis Rankin	<input checked="" type="checkbox"/> Revision to existing Standards – see list below  COM-001 – Telecommunications COM-002 – Communications and Coordination IRO-001 – Reliability Coordination – Responsibilities and Authorities IRO-002 – Reliability Coordination – Facilities IRO-005 – Reliability Coordination – Current Day Operations IRO-014 – Procedures to Support Coordination between Reliability Coordinators IRO-015 – Notifications and Information Exchange Between Reliability Coordinators IRO-016 – Coordination of Real-time Activities between Reliability Coordinators PER-004 – Reliability Coordination – Staffing PRC-001 – System Protection Coordination
<b>Telephone</b> 214-743-6828 <b>Fax</b> 972-263-6710	<input checked="" type="checkbox"/> Withdrawal of existing Standard  Some requirements in the above standards
<b>E-mail</b> erankin@txued.com	<input type="checkbox"/> Urgent Action

**Purpose**

To ensure that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System.

**Brief Description**

Most of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process. There have been suggestions for improving these requirements, and the drafting team will consider comments submitted by stakeholders, drafting teams and FERC in determining what changes should be proposed to stakeholders.

The drafting team will review all of the requirements in this set of standards and make a determination, with stakeholders, on whether to:

- Modify the requirement to improve its **clarity and measureability while removing ambiguity**
- ~~Move the requirement (into another SAR or Standard or to the certification process or standards)~~
- Eliminate the requirement (either because it is redundant or because it doesn't support bulk power system reliability).

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**Detailed Description**

The drafting team will review all of the requirements in the following set of standards:

- COM-001 — Telecommunications
- COM-002 — Communications and Coordination
- IRO-001 — Reliability Coordination – Responsibilities and Authorities
- IRO-002 — Reliability Coordination – Facilities
- IRO-005 — Reliability Coordination – Current Day Operations
- IRO-014 — Procedures to Support Coordination between Reliability Coordinators
- IRO-015 — Notifications and Information Exchange Between Reliability Coordinators
- IRO-016 — Coordination of Real-time Activities between Reliability Coordinators
- PER-004 — Reliability Coordination – Staffing
- PRC-001 — System Protection Coordination

For each existing requirement, the drafting team will work with stakeholders and:

- Eliminate redundancy in the requirements.
- Identify requirements that should be moved into other SARs
- Eliminate requirements that do not support bulk power system reliability
- Transfer requirements that need to be in place before an entity begins operation as an RC to certification.
- **Improve clarity of, improve measureability of, and remove ambiguity from the requirement**

The standard drafting team will also:

- Coordinate with the drafting teams working on the SAR and standards for Transmission Operator and Balancing Authority standards (Project 2007-06).
- Consider comments received during the initial development of this set of standards and other comments received from ERO regulatory authorities and stakeholders (Attachment 1)
- Bring the standards into conformance with the latest version of the Reliability Standards Development Procedure and the ERO Rules of Procedure. (Attachment 2)

This review of the set of identified standards will satisfy the standards procedure requirement to review each approved standard at least once every five years.

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**Reliability Functions**

<b>The Standard will Apply to the Following Functions</b> <i>(Check box for each one that applies.)</i>		
<input checked="" type="checkbox"/>	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
<input checked="" type="checkbox"/>	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports system frequency in real time.
<input checked="" type="checkbox"/>	Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
<input checked="" type="checkbox"/>	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
<input checked="" type="checkbox"/>	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator Area.
<input checked="" type="checkbox"/>	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.
<input checked="" type="checkbox"/>	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
<input checked="" type="checkbox"/>	Transmission Owner	Owns and maintains transmission facilities.
<input checked="" type="checkbox"/>	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
<input checked="" type="checkbox"/>	Distribution Provider	Delivers electrical energy to the End-use customer.
<input checked="" type="checkbox"/>	Generator Owner	Owns and maintains generation facilities.
<input checked="" type="checkbox"/>	Generator Operator	Operates generation unit(s) to provide real and reactive power.
<input type="checkbox"/>	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
<input type="checkbox"/>	Market Operator	Interface point for reliability functions with commercial functions.
<input checked="" type="checkbox"/>	Load-Serving Entity	Secures energy and transmission service (and related reliability-related services) to serve the end-use customer.

**Reliability and Market Interface Principles**

<b>Applicable Reliability Principles</b> (Check box for all that apply.)	
<input checked="" type="checkbox"/>	1. Interconnected bulk electric systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
<input checked="" type="checkbox"/>	2. The frequency and voltage of interconnected bulk electric systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
<input checked="" type="checkbox"/>	3. Information necessary for the planning and operation of interconnected bulk electric systems shall be made available to those entities responsible for planning and operating the systems reliably.
<input checked="" type="checkbox"/>	4. Plans for emergency operation and system restoration of interconnected bulk electric systems shall be developed, coordinated, maintained and implemented.
<input checked="" type="checkbox"/>	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk electric systems.
<input checked="" type="checkbox"/>	6. Personnel responsible for planning and operating interconnected bulk electric systems shall be trained, qualified, and have the responsibility and authority to implement actions.
<input checked="" type="checkbox"/>	7. The security of the interconnected bulk electric systems shall be assessed, monitored and maintained on a wide area basis.
<b>Does the proposed Standard comply with all of the following Market Interface Principles?</b> (Select 'yes' or 'no' from the drop-down box.)	
1. The planning and operation of bulk electric systems shall recognize that reliability is an essential requirement of a robust North American economy. Yes	
2. An Organization Standard shall not give any market participant an unfair competitive advantage. Yes	
3. An Organization Standard shall neither mandate nor prohibit any specific market structure. Yes	
4. An Organization Standard shall not preclude market solutions to achieving compliance with that Standard. Yes	
5. An Organization Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	



***Related Standards – Listed under description***

Standard No.	Explanation

***Related SARs***

SAR ID	Explanation

***Regional Differences***

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	
SPP	
WECC	

The drafting team will assist stakeholders in considering these comments in determining what changes to make to the standards:

**COM-001-0 Telecommunications**

**FERC Order 693**

- o Include generator operators and distribution provider as applicable entities and **and include requirements for their telecommunications**
- o Include requirements for telecommunication facilities for use during **normal and emergency conditions that reflect the roles of the applicable entities and their impact on reliable operation**
- o **Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions**

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V0 Industry Comments

- o Many players missing
- o Apply R1 to all but smallest entities

Violation Risk Factor Drafting Team Comments

- o R6 – administrative requirement

**COM-002-1 Communications and Coordination**

**FERC Order 693**

- o Include a Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area views of transmission operators or balancing authorities;
- o Include distribution providers as applicable entities; and
- o Require tightened communications protocols, especially for communications during alerts and emergencies.

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V0 Industry Comments

- o Voice with generators not required
- o R1 – include reliability authority
- o R2 – include sabotage and security
- o R4 – clarify repeat back requirement with regard to emergency

**IRO-001-0 Reliability Coordination – Responsibilities and Authorities**

**FERC Order 693**

- o Reflect the process set forth in the NERC Rules of Procedures; and
- o Eliminate the regional reliability organization as an applicable entity.

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Regional Fill-in-the-Blank Team Comments

- o Remove ", sub-region, or interregional coordinating group" from R1
- o Consider removing "Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another." from the Purpose section of the standard.

V0 Industry Comments

- o Inability to perform needs to be communicated
- o What is meant by 'interest of other entity'?

Violation Risk Factor Drafting Team Comments

- o R6 - Since the RC must be NERC certified, it stands to reason that anyone performing RC tasks should be certified. However, since the RC still retains the

**SAR for Project 2006-06 Reliability Coordination – Attachment 1**

accountability for actions, and requirement 4 handles the agreements, this requirement is a medium risk.

**IRO-002-0 Reliability Coordination – Facilities**

FERC Order 693

- o Require a minimum set of tools that should be made available to reliability coordinators.

V0 Industry Comments

- o R5 – define synchronized information system
- o R7 – define ‘adequate’ tools and ‘wide-area’
- o Words such as ‘easily understood’ and ‘particular emphasis’ need to be tightened

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**IRO-005-1 Reliability Coordination – Current Day Operations**

FERC Order 693

- o Measures and Levels of Non-Compliance specific to IROL violations must be commensurate with the magnitude, duration, frequency and causes of the violations and whether these occur during normal or contingency conditions.
- o Conduct a survey on IROL practices and experiences; the Commission may propose further modifications to IRO-005-1 based on the survey results.

V0 Industry Comments

- o R10, 11 & 12 – RA not empowered to do this

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**IRO-016-1 Coordination of Real-Time Activities Between Reliability Coordinators**

Violation Risk Factors Drafting Team Comments

- o R1.2.1 & R2 – ambiguous

**PER-004-0 Reliability Coordination – Staffing**

FERC Order 693

- o Include formal training requirements for reliability coordinators similar to those addressed under the personnel training Reliability Standard PER-002-0;
- o Include requirements pertaining to personnel credentials for reliability coordinators similar to those in PER-003-0.
- o Consider the suggestions of FirstEnergy and Xcel:  
1413. FirstEnergy seeks revisions to the terms “shall have a comprehensive understanding” and “shall have extensive knowledge.” It states that it will be difficult for entities to demonstrate compliance with these terms. In addition, FirstEnergy suggests that the reliability coordinator staffing requirements should be located in the IRO Reliability Standards.  
1414. Xcel states that emergency training requirements should be expressed in hour increments rather than days to allow for flexibility in scheduling training and coordinating with rotating shift schedules.

V0 Industry Comments

- o Calendar year timing increment
- o Other training needs to be defined

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**PRC-001-0 System Protection Coordination**

FERC Order 693

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SAR for Project 2006-06 Reliability Coordination – Attachment 1

- o Correct the references for Requirements
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Must be 1<sup>st</sup> day of 1<sup>st</sup> quarter after entities are expected to be compliant – must include time to file with regulatory authorities and provide notice to responsible entities of the obligation to comply. If the standard is to be actively monitored, time for the Compliance Monitoring and Enforcement Program to develop reporting instructions and modify the Compliance Data Management System(s) both at NERC and Regional Entities must be provided in the implementation plan. **The effective date should be linked to the NERC BOT adoption date.**

**Associated Documents**

If there are standards that are referenced within a standard, list the full name and number of the standard under the section called, 'Associated Documents'.

**Functional Model Version 3**

Review the requirements against the latest descriptions of the responsibilities and tasks assigned to functional entities as provided in pages 13 through 53 of the draft Functional Model Version 3.



May 11, 2007

TO: REGISTERED BALLOT BODY

Ladies and Gentlemen:

**Announcement**  
**Nomination Periods Open for Two Drafting Teams**

**The Standards Committee (SC) announces the following standards actions:**

**Nominations for Project 2006-06 Reliability Coordination Standard Drafting Team (May 14–25, 2007)**

The Standards Committee authorized moving the [SAR for Reliability Coordination](#) forward to standard drafting and is seeking industry experts to serve on the Reliability Coordination Standard Drafting Team. This drafting team will work on modifications to the following standards:

- COM-001 — Telecommunications
- COM-002 — Communications and Coordination
- IRO-001 — Reliability Coordination – Responsibilities and Authorities
- IRO-002 — Reliability Coordination – Facilities
- IRO-005 — Reliability Coordination – Current Day Operations
- IRO-014 — Procedures to Support Coordination between Reliability Coordinators
- IRO-015 — Notifications and Information Exchange Between Reliability Coordinators
- IRO-016 — Coordination of Real-time Activities between Reliability Coordinators
- PER-004 — Reliability Coordination – Staffing
- PRC-001 — System Protection Coordination

If you are interested in serving on this standard drafting team, please complete this [nomination form](#) and return it to [sarcomm@nerc.netnet](mailto:sarcomm@nerc.netnet) by May 25, 2007 with “RC SDT Nomination” in the subject line.

**Nominations for Project 2007-18 Reliability-based Control SAR Drafting Team (May 14–25, 2007)**

The Standards Committee authorized posting the [SAR for Reliability-based Control](#) and is seeking industry experts to serve on the Reliability-based Control SAR Drafting Team. This SAR proposes to develop requirements to achieve the following objectives:

- To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection. (Work brought into this SAR from BAL-007 though BAL-011.)

REGISTERED BALLOT BODY

May 11, 2007

Page Two

- To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”). (Could be a separate and individually balloted Standard.)
- To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions. (Could be a separate and individually balloted Standard.)
- To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures. (Could be a separate and individually balloted Standard.)
- To address the directives of FERC Order 693.

If you are interested in serving on this SAR drafting team, please complete this [nomination form](#) and return it to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) by May 25, 2007 with “RB Control SARDT Nomination” in the subject line.

**Standards Development Process**

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. If you have any questions, please contact me at 813-468-5998 or [maureen.long@nerc.net](mailto:maureen.long@nerc.net).

Sincerely,

*Maureen E. Long*

cc: Registered Ballot Body Registered Users  
Standards Mailing List  
NERC Roster

**A. Introduction**

1. **Title:** **Telecommunications**
2. **Number:** COM-001-2
3. **Purpose:** Each Reliability Coordinator, Transmission Operator and Balancing Authority needs adequate and reliable telecommunications facilities internally and with others for the exchange of Interconnection and operating information necessary to maintain reliability.
4. **Applicability:**
  - 4.1. Transmission Operators.
  - 4.2. Balancing Authorities.
  - 4.3. Reliability Coordinators.
  - 4.4. Distribution Providers.
  - 4.5. Generator Operators.
5. **Effective Date:** **TBD**

**B. Requirements**

- R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall operationally test, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. [*Violation Risk Factor: Medium*][*Time Horizon: Real-time Operations*]
- R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities of the failure of its normal telecommunications facilities, and shall verify that alternate means of telecommunications are functional. [*Violation Risk Factor: Medium*][*Time Horizon: Real-time Operations*]
- R3. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]
- R4. Each Distribution Provider and Generation Operator shall have telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations and Operations Planning*]

**C. Measures**

- M1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall provide evidence that it operationally tested, on a quarterly basis at a minimum,

alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail.

- M2.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide evidence that it notified impacted entities of failure of their normal telecommunications facilities, and verified the alternate means of telecommunications were functional.
- M3.** The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES.
- M4.** Each Distribution Provider and Generation Operator has telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information.

#### **D. Compliance**

##### **1. Compliance Monitoring Process**

###### **1.1. Compliance Enforcement Authority**

Regional Entity

###### **1.2. Compliance Monitoring and Enforcement Processes**

Compliance Audits

Self-Certifications

- Spot Checking
- Compliance Violation Investigations

Self-Reporting

Complaints

###### **1.3. Data Retention**

The Reliability Coordinator, Transmission Operator and Balancing Authority shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

For the Measures, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall each keep the most recent three months of historical data (evidence).

If a Reliability Coordinator, Transmission Operator and Balancing Authority is found non-compliant it shall keep information related to the noncompliance until found compliant.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

**1.4. Additional Compliance Information**

**None**

2. Violation Severity Levels

Requirement	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last quarter.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 2 quarters.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 3 quarters.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 4 quarters.
R2	The Reliability Coordinator, Transmission Operator or Balancing Authority notified all impacted entities of the failure of their normal telecommunications facilities, but failed to verify the alternate means of telecommunications are functional.	The Reliability Coordinator, Transmission Operator or Balancing Authority notified some, but not all, impacted entities of the failure of their normal telecommunications facilities, and failed to verify the alternate means of telecommunications are functional.	N/A	The Reliability Coordinator, Transmission Operator or Balancing Authority failed to notify any impacted entities of the failure of their normal telecommunications facilities, and failed verify the alternate means of telecommunications are functional.

**Standard COM-001-2 — Telecommunications**

Requirement	Lower VSL	Moderate VSL	High VSL	Severe VSL
R3	N/A	N/A	N/A	The responsible entity failed to provide evidence of concurrence to use a language other than English for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System.
R4	N/A	N/A	N/A	The Distribution Provider or Generation Operator failed to have telecommunications facilities with its Transmission Operator and Balancing Authority

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## E. Regional Differences

None identified.

## F. Associated Documents

### Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
2	TBD	Revised per SAR for Project 2006-06, RCSDT	Revised



**A. Introduction**

1. **Title:** **Telecommunications**
2. **Number:** COM-001-~~24~~
3. **Purpose:** Each Reliability Coordinator, Transmission Operator and Balancing Authority needs adequate and reliable telecommunications facilities internally and with others for the exchange of Interconnection and operating information necessary to maintain reliability.
4. **Applicability:**
  - 4.1. Transmission Operators.
  - 4.2. Balancing Authorities.
  - 4.3. Reliability Coordinators.
  - 4.4. Distribution Providers.
  - 4.5. Generator Operators.
  - ~~4.4. NERCNet User Organizations.~~
5. **Effective Date:** TBD ~~January 1, 2007~~

**B. Requirements**

~~R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information:~~

~~R1.1. Internally.~~

~~R1.2. Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities.~~

~~R1.3. With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability.~~

~~R1.4. Where applicable, these facilities shall be redundant and diversely routed.~~

~~R2. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall operationally test, on a quarterly basis at a minimum, alternative manage, alarm, test and/or actively monitor vital telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations]~~

R1.

R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities of the failure of its normal telecommunications facilities, and

The RC SDT contends that COM-001-1, R1 and its subrequirements are low level facilitating requirements that are more appropriately and inherently monitored under various higher-level performance-based reliability requirements for each entity throughout the body of standards. (See Implementation Plan for examples.)

~~shall verify that alternate means of telecommunications are functional. provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]*~~

**R3.** Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, ~~and~~ Balancing Authority, Generator Operator and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected ~~Bulk Electric System~~ BES. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*

Requirement R3 is being incorporated into COM-003-1 by the Operations Personnel Communications Protocols SDT (Project 2007-02). It will be retired from this standard upon approval of COM-003-1.

~~**R4.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities.~~

The RC SDT is recommending that R4 be retired as it is redundant with EOP-008-0.

~~**R5.** Each NERCNet User Organization shall adhere to the requirements in Attachment 1 COM-001, "NERCNet Security Policy."~~

The RC SDT is recommending that R5 be retired. This is an ERO procedural issue and should not be in a reliability standard. It should be retired and included in the NERC Rules of Procedure.

**R4.** Each Distribution Provider and Generation Operator shall have telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. *[Violation Risk Factor: High][Time Horizon: Real-time Operations and Operations Planning]*

The new R4 was written to meet a FERC Directive from Order 693.

### C. Measures

~~**M1.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to communication facility test procedure documents, records of testing, and maintenance records for communication facilities or equivalent that will be used to confirm that it manages, alarms, tests and/or actively monitors vital telecommunications facilities. (Requirement 2 part 1)~~

**M1.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall provide evidence that it operationally tested, on a quarterly basis at a minimum,

alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail.

**M2.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide evidence that it notified impacted entities of failure of their normal telecommunications facilities, and verified the alternate means of telecommunications were functional.

**M3.** The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES compliance to Requirement 4.

~~**M3.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request its current operating instructions and procedures, either electronic or hard copy that will be used to confirm that it meets Requirement 5.~~

~~**M4.** The NERCnet User Organization shall have and provide upon request evidence that could include, but is not limited to documented procedures, operator logs, voice recordings or transcripts of voice recordings, electronic communications, etc that will be used to determine if it adhered to the (User Accountability and Compliance) requirements in Attachment 1 COM-001. (Requirement 6)~~

**M4.** Each Distribution Provider and Generation Operator has telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information.

## D. Compliance

### 1. Compliance Monitoring Process

#### 1.1. Compliance Enforcement Authority

#### ~~1.1. Compliance Monitoring Responsibility~~

~~NERC shall be responsible for compliance monitoring of the Regional Entity Reliability Organizations~~

~~Regional Reliability Organizations shall be responsible for compliance monitoring of all other entities~~

#### 1.2. Compliance Monitoring and Enforcement Processes ~~Reset Time Frame~~

Compliance Audits

Self-Certifications

~~One or more of the following methods will be used to assess compliance:~~

~~— Self-certification (Conducted annually with submission according to schedule.)~~

- Spot ~~Checking~~ Check Audits (Conducted anytime with up to 30 days notice given to prepare.)
- ~~Compliance Violation~~ Periodic Audit (Conducted once every three years according to schedule.)
- ~~Triggered~~ Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 calendar days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)

### Self-Reporting

### Complaints

~~The Performance Reset Period shall be 12 months from the last finding of non-compliance.~~

## 1.3. Data Retention

~~The~~ For Measure 1 each Reliability Coordinator, Transmission Operator and, Balancing Authority shall keep data or evidence to show of compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

For the Measures, ~~previous two calendar years plus the current year.~~

~~For Measure 2~~ each Reliability Coordinator, Transmission Operator, and Balancing Authority shall each keep the most recent three months ~~90 days~~ of historical data (evidence).

~~If a~~ For Measure 3, each Reliability Coordinator, Transmission Operator and, Balancing Authority ~~shall have its current operating instructions and procedures to confirm that it meets Requirement 5.~~

~~For Measure 4,~~ each Reliability Coordinator, Transmission Operator, Balancing Authority ~~and NERCnet User Organization shall keep 90 days of historical data (evidence).~~

~~If an entity~~ is found non-compliant it the entity shall keep information related to the noncompliance until found compliant, ~~or for two years plus the current year, whichever is longer.~~

~~Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor.~~

The Compliance Enforcement Authority ~~Monitor~~ shall keep the last periodic ~~audit records~~ report and all requested and submitted subsequent audit ~~compliance~~ records.

**1.4. Additional Compliance Information**

None

2. Violation Severity Levels

<u>Requirement</u>	<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
<u>R1</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last quarter.</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 2 quarters.</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 3 quarters.</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 4 quarters.</u>
<u>R2</u>	<u>The Reliability Coordinator, Transmission Operator or Balancing Authority notified all impacted entities of the failure of their normal telecommunications facilities, but failed to verify the alternate means of telecommunications are functional.</u>	<u>The Reliability Coordinator, Transmission Operator or Balancing Authority notified some, but not all, impacted entities of the failure of their normal telecommunications facilities, and failed to verify the alternate means of telecommunications are functional.</u>	<u>N/A</u>	<u>The Reliability Coordinator, Transmission Operator or Balancing Authority failed to notify any impacted entities of the failure of their normal telecommunications facilities, and failed verify the alternate means of telecommunications are functional.</u>

<u>Requirement</u>	<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
<u>R3</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<p><u>The responsible entity failed to provide evidence of concurrence to use a language other than English for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System.</u></p>
<u>R4</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<p><u>The Distribution Provider or Generation Operator failed to have telecommunications facilities with its Transmission Operator and Balancing Authority</u></p>

Attachment 1 COM-001 — NERCnet Security Policy

~~2. Levels of Non-Compliance for Transmission Operator, Balancing Authority or Reliability Coordinator~~

~~2.1. Level 1: Not applicable.~~

~~2.2. Level 2: Not applicable.~~

~~2.3. Level 3: There shall be a separate Level 3 non-compliance, for every one of the following requirements that is in violation:~~

~~2.3.1 The Transmission Operator, Balancing Authority or Reliability Coordinator used a language other than English without agreement as specified in R4.~~

~~2.3.2 There are no written operating instructions and procedures to enable continued operation of the system during the loss of telecommunication facilities as specified in R5.~~

~~2.4. Level 4: Telecommunication systems are not actively monitored, tested, managed or alarmed as specified in R2.~~

~~3. Levels of Non-Compliance — NERCnet User Organization~~

~~3.1. Level 1: Not applicable.~~

~~3.2. Level 2: Not applicable.~~

~~3.3. Level 3: Not applicable.~~

~~3.4. Level 4: Did not adhere to the requirements in Attachment 1 COM-001, NERCnet Security Policy.~~

**E. Regional Differences**

None identified.

**F. Associated Documents**

None Identified.

**Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
<u>1</u>	<u>April 4, 2007</u>	<u>Regulatory Approval — Effective Date</u>	<u>New</u>
<u>1</u>	<u>April 6, 2007</u>	<u>Requirement 1, added the word “for”</u>	<u>Errata</u>



**Standard COM-001-1 — Telecommunications**

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		<u>between “facilities” and “the exchange.”</u>	
<u>2</u>	<u>TBD</u>	<u>Revised per SAR for Project 2006-06, RCSDT</u>	<u>Revised</u>

## **Attachment 1-COM-001 — NERCnet Security Policy**

### **Policy Statement**

The purpose of this NERCnet Security Policy is to establish responsibilities and minimum requirements for the protection of information assets, computer systems and facilities of NERC and other users of the NERC frame relay network known as “NERCnet.” The goal of this policy is to prevent misuse and loss of assets.

For the purpose of this document, information assets shall be defined as processed or unprocessed data using the NERCnet Telecommunications Facilities including network documentation. This policy shall also apply as appropriate to employees and agents of other corporations or organizations that may be directly or indirectly granted access to information associated with NERCnet.

The objectives of the NERCnet Security Policy are:

- To ensure that NERCnet information assets are adequately protected on a cost effective basis and to a level that allows NERC to fulfill its mission.
- To establish connectivity guidelines for a minimum level of security for the network.
- To provide a mandate to all Users of NERCnet to properly handle and protect the information that they have access to in order for NERC to be able to properly conduct its business and provide services to its customers.

### **NERC’s Security Mission Statement**

NERC recognizes its dependency on data, information, and the computer systems used to facilitate effective operation of its business and fulfillment of its mission. NERC also recognizes the value of the information maintained and provided to its members and others authorized to have access to NERCnet. It is, therefore, essential that this data, information, and computer systems, and the manual and technical infrastructure that supports it, are secure from destruction, corruption, unauthorized access, and accidental or deliberate breach of confidentiality.

### **Implementation and Responsibilities**

———— This section identifies the various roles and responsibilities related to the protection of NERCnet resources.

#### **NERCnet User Organizations**

Users of NERCnet who have received authorization from NERC to access the NERC network are considered users of NERCnet resources. To be granted access, users shall complete a User Application Form and submit this form to the NERC Telecommunications Manager.

#### **Responsibilities**

It is the responsibility of NERCnet User Organizations to:

- Use NERCnet facilities for NERC authorized business purposes only.
- Comply with the NERCnet security policies, standards, and guidelines, as well as any procedures specified by the data owner.

- ~~Prevent unauthorized disclosure of the data.~~
- ~~Report security exposures, misuse, or non-compliance situations via Reliability Coordinator Information System or the NERC Telecommunications Manager.~~
- ~~Protect the confidentiality of all user IDs and passwords.~~
- ~~Maintain the data they own.~~
- ~~Maintain documentation identifying the users who are granted access to NERCnet data or applications.~~
- ~~Authorize users within their organizations to access NERCnet data and applications.~~
- ~~Advise staff on NERCnet Security Policy.~~
- ~~Ensure that all NERCnet users understand their obligation to protect these assets.~~
- ~~Conduct self assessments for compliance.~~
- ~~User Accountability and Compliance~~
- ~~All users of NERCnet shall be familiar and ensure compliance with the policies in this document.~~
- ~~Violations of the NERCnet Security Policy shall include, but not be limited to any act that:~~
- ~~Exposes NERC or any user of NERCnet to actual or potential monetary loss through the compromise of data security or damage.~~
- ~~Involves the disclosure of trade secrets, intellectual property, confidential information or the unauthorized use of data.~~
- ~~Involves the use of data for illicit purposes, which may include violation of any law, regulation or reporting requirement of any law enforcement or government body.~~

## **Implementation Plan for COM-001-2 Telecommunications**

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### **Prerequisite Approvals**

- IRO-002-2
- IRO-005-3

### **Conforming Changes to Requirements in Already Approved Standards**

- None

### **Revision Summary**

- The RC SDT revised the standard and is proposing retiring three requirements (R1, R5 and R6). Changes were made to eliminate redundancies between standards (existing and proposed), to align with the ERO Rules of Procedure and to address issues in FERC Order 693.

### **Effective Dates**

To be determined.

**Implementation Plan for COM-001-2  
Telecommunications**

**Revisions or Retirements to Already Approved Standards**

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></p>	<p>The RC SDT contends that COM-001-1, R1 and its subrequirements are low level facilitating requirements that are more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards. Examples include:</p> <p>IRO-001-1, R3 requires adequate telecommunication for the Reliability Coordinator to direct actions of multiple entities, including TOPs and BAs.</p> <p>TOP-005-1, R1 and R3 require adequate telecommunications for BAs and TOPs to provide each other with operating data as well as providing data to the RC.</p> <p>TOP-001-1, R3 requires adequate telecommunications facilities for the TOP, BA, and GOP to be able to receive directives from the RC.</p> <p>TOP-006-1, R1 requires adequate telecommunications for the GOP to inform the BA and TOP of resources. The BA and TOP will then inform the RC, other TOP and BAs of all transmission and generation available for use.</p> <p>The retirement of this requirement also facilitates one of the FERC Order 693 directives for COM-001-1 to “includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions”.</p>
<p><b>Notes:</b> Based on the above information, the RC SDT recommends retiring R1 and its subrequirements.</p>	

**Implementation Plan for COM-001-2  
Telecommunications**

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R2.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall <b>manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.</b> <i>[Violation Risk Factor: Medium]</i></p>	<p><b>COM-001-2:</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall operationally test, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. <del>manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.</del> <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b> The RC SDT contends that the first sentence of COM-001-1, R2 is a low level facilitating requirements that is more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards as described in R1 above. We propose revising R2 as shown above.</p>	

**Implementation Plan for COM-001-2  
Telecommunications**

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b>  <b>R3.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>COM-001-2</b>  <b>R2.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities of failure of their normal telecommunications facilities, and verify the alternate means of telecommunications are functional. <b>provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas.</b> <i>[Violation Risk Factor: Medium Lower][Time Horizon: Real-time Operations]</i></p>

**Implementation Plan for COM-001-2  
Telecommunications**

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R4.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. <i>[Violation Risk Factor: Medium]</i></p>	<p><b>COM-001-2</b></p> <p><b>R3.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, <del>and</del> Balancing Authority, Generator Operator and Distribution Provider shall use English as the language for <b>all inter-entity Bulk Electric System reliability</b> communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b> COM-001 Requirement R3 is being incorporated into COM-003-1 by the Operations Personnel Communications Protocols SDT (Project 2007-02). It will be retired from this standard upon approval of COM-003-1.</p>	



**Implementation Plan for COM-001-2  
Telecommunications**

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R5.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>EOP-008-0</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements:</p> <p><b>R1.1.</b> The contingency plan shall not rely on data or voice communication from the primary control facility to be viable.</p> <p><b>R1.2.</b> The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules.</p> <p><b>R1.3.</b> The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities.</p> <p><b>R1.4.</b> The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas.</p> <p><b>R1.5.</b> The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.</p> <p><b>R1.6.</b> The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans.</p> <p><b>R1.7.</b> The plan shall be reviewed and updated annually.</p> <p><b>R1.8.</b> Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.</p>
<p><b>Notes:</b> The RC SDT proposes retiring COM-001-1 R5 as it is redundant with EOP-008-0 Requirement R1.</p>	

**Implementation Plan for COM-001-2  
Telecommunications**

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R6.</b> Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, "NERCNet Security Policy." <i>[Violation Risk Factor: Lower]</i></p>	<p><b>None - retire</b></p>
<p><b>Notes:</b> The RC SDT is recommending that R6 be retired. This is an ERO procedural issue and should not be in a reliability standard. It should be included in the ERO Rules of Procedure.</p>	

Already Approved Standard	Proposed Replacement Requirement(s)
	<p><b>COM-001-2</b></p> <p><b>R4.</b> <u>Each Distribution Provider and Generation Operator shall have telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Operations Planning]</i></u></p>
<p>Notes: This is a new requirement based on the following FERC Order 693 directive:</p> <p>“expands the applicability to include generator operators and distribution providers and includes Requirements for their telecommunications facilities”</p>	

**Implementation Plan for COM-001-2  
Telecommunications**

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**Functions that Must Comply with the Requirements in the Standards**

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Interchange Authority	Transmission Operator	Transmission Owner	Generator Owner	Generator Operator	Distribution Provider
COM-001-2 Telecommunications	X	X		X			X	X

## **Comment Background and Questions for Reliability Coordination — Project 2006-06**

Comments must be submitted by **September 16, 2008**. If you have questions please contact Stephen Crutchfield at [stephen.crutchfield@nerc.net](mailto:stephen.crutchfield@nerc.net) or by telephone at 609-651-9455.

### **Background Information:**

The Reliability Coordination Standards Drafting Team was tasked with ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System. The SAR also called for revisions to the group of Standards based on FERC Order 693.

During the course of the project, the NERC Standard Staff revised the Reliability Standards Work Plan and noted several areas of overlapping scope between certain projects. The original SAR for Project 2006-6 called for revisions to PER-004 (Reliability Coordination – Staffing) and PRC-001 (System Protection Coordination). Based on the scope overlap of the teams involved, it was determined that PER-004 would best be served by moving all of the proposed scope to Project 2006-1, System Personnel Training. Similarly, it was determined that PER-004 would best be served by moving all of the proposed scope to Project 2007-6, System Protection.

The RC SDT has Standards that are impacted by the work of the IROL Standards Drafting Team and the standards that they have developed and the modifications they've proposed to some of the IRO standards. The RC SDT is recommending further revisions to the IRO standards and coordinated these changes with the IROL SDT. We have noted revisions made to the standards by the IROL SDT in our documents.

A summary of the proposed revisions to the Standards remaining in Project 2006-06 is:

### **COM-001-2**

The RC SDT revised the standard and is proposing retiring three requirements (R1, R5 and R6). Changes were made to eliminate redundancies between standards (existing and proposed), align with NERC's Rules of Procedure and to address issues in FERC Order 693.

### **COM-002-3**

The RC SDT proposes retiring this standard. The RC SDT contends that COM-002-2, R1 and its subrequirements are low level facilitating requirements that are more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards. The Operations Communications Protocols SDT is addressing R2. They plan to modify the requirement and place the modified requirement in a new standard, COM-003-1. Requirement 2 will remain in place until COM-003-1 is approved.

### **IRO-001-2**

The RC SDT revised the standard and is proposing retiring several requirements (R1, R2, R4, R5, R6, R7 and R10). Changes were made to eliminate redundancies between standards (existing and proposed), align with NERC's Rules of Procedure and to address issues in FERC Order 693.

### **IRO-002-2**

The RC SDT revised the standard and is proposing retiring several requirements (R1, R3, R4, R5, R6, R7 and R8). Changes were made to eliminate redundancies between standards (existing and proposed), to align with NERC's Rules of Procedure and to address issues in FERC Order 693.

### **IRO-005-2**

Many of the requirements in this standard will be retired under the IROL SDT work plan. The RC SDT proposes retiring other requirements and moving R6 and R15 to IRO-001-2. This will retire or move all requirements in this standard. The RC SDT proposes retiring the standard.

### **IRO-014-2**

The RC SDT revised the standard and is proposing retiring two requirements (R3 and R4). New requirements were brought into this standard from IRO-015-1 (R1-R3) and IRO-016-1 (R1 and its sub requirements). Changes were made to eliminate redundancies between standards (existing and proposed), eliminate administrative items, align with NERC's Rules of Procedure and to address issues in FERC Order 693.

### **IRO-015-2**

The RC SDT recommends retiring Standard IRO-015 and moving all requirements to IRO-014-2.

### **IRO-016-2**

The RC SDT recommends retiring this Standard. The requirements listed in R1 and its sub-requirements were incorporated into IRO-014-2 as new requirements. The RC SDT recommends retiring R2 because it is a measure of performance of R1.

The Reliability Coordination Drafting Team would like to receive industry comments on the Requirements, Measures and Violation Severity Levels of this group of standards. Accordingly, we request that you submit your comments electronically by **September 16, 2008**.

## Comment Form — Reliability Coordination Project 2006-06

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1. Do you agree with the revisions to the Requirements in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Yes

No

Comments:

2. Do you agree with the revisions to the Measures in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Yes

No

Comments:

3. Do you agree with the Violation Severity Levels proposed in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Yes

No

Comments:

4. Do you agree with the revisions to the Requirements in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Yes

No

Comments:

5. Do you agree with the revisions to the Measures in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Yes

No

Comments:

6. Do you agree with the Violation Severity Levels proposed in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Yes

No

Comments:

7. Do you agree with the revisions to the Requirements in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Yes

No

Comments:

8. Do you agree with the revisions to the Measures in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Yes

## Comment Form — Reliability Coordination Project 2006-06

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No

Comments:

9. Do you agree with the Violation Severity Levels proposed in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Yes

No

Comments:

10. Do you agree with the revisions to the Requirements in IRO-002-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Yes

No

Comments:

11. Do you agree with the revisions to the Measures in IRO-002-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Yes

No

Comments:

12. Do you agree with the Violation Severity Levels proposed in IRO-002-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Yes

No

Comments:

13. Do you agree with the revisions to IRO-005-1 as shown in the posted Standard and Implementation Plan? The RC SDT is recommending retiring or moving all of the requirements and retiring this standard. If not, please explain in the comment area.

Yes

No

Comments:

14. Do you agree with the revisions to the Requirements in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Yes

No

Comments:

15. Do you agree with the revisions to the Measures in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Yes

No

Comments:

## Comment Form — Reliability Coordination Project 2006-06

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16. Do you agree with the Violation Severity Levels proposed in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Yes

No

Comments:

17. Do you agree with the RC SDT recommendation to retire IRO-015-2 and move the requirements into IRO-014-2? If not, please explain in the comment area.

Yes

No

Comments:

18. Do you agree with the revisions to IRO-016-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Yes

No

Comments:

19. If you have any other comments, not expressed in questions above, on this set of revisions, please provide your comments here.

Comments:



Individual or group. (29 Responses)  
     Name (17 Responses)  
     Organization (17 Responses)  
     Group Name (12 Responses)  
     Lead Contact (12 Responses)  
 Contact Organization (12 Responses)  
     Question 1 (25 Responses)  
 Question 1 Comments (29 Responses)  
     Question 2 (25 Responses)  
 Question 2 Comments (29 Responses)  
     Question 3 (21 Responses)  
 Question 3 Comments (29 Responses)  
     Question 4 (22 Responses)  
 Question 4 Comments (29 Responses)  
     Question 5 (21 Responses)  
 Question 5 Comments (29 Responses)  
     Question 6 (20 Responses)  
 Question 6 Comments (29 Responses)  
     Question 7 (23 Responses)  
 Question 7 Comments (29 Responses)  
     Question 8 (21 Responses)  
 Question 8 Comments (29 Responses)  
     Question 9 (21 Responses)  
 Question 9 Comments (29 Responses)  
     Question 10 (20 Responses)  
 Question 10 Comments (29 Responses)  
     Question 11 (19 Responses)  
 Question 11 Comments (29 Responses)  
     Question 12 (19 Responses)  
 Question 12 Comments (29 Responses)  
     Question 13 (21 Responses)  
 Question 13 Comments (29 Responses)  
     Question 14 (20 Responses)  
 Question 14 Comments (29 Responses)  
     Question 15 (19 Responses)  
 Question 15 Comments (29 Responses)  
     Question 16 (19 Responses)  
 Question 16 Comments (29 Responses)  
     Question 17 (20 Responses)  
 Question 17 Comments (29 Responses)  
     Question 18 (20 Responses)  
 Question 18 Comments (29 Responses)  
     Question 19 (29 Responses)

Individual
Kris Manchur
Manitoba Hydro
Yes
Yes
Yes
Yes

Yes
Yes
No
<p>I do not agree with the way IRO-001-2 R1 is written. In the present form the requirement may infer that directing action is not an action. It may also infer that the RC is only required to do "act "or "direct actions" but not both. The way it is written also leads to problems with the VSLs. Perhaps R1 can be edited along the lines of: R1. The Reliability Coordinator shall act to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. When required, the actions initiated by the Reliability Coordinator will include, but is not limited to, directing the actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area. I agree with the other Requirements in IRO-001-2 with the exception of the "High" Violation Risk Factor assigned to IRO-001-2 requirement R5. This should be a "Medium" VRF at the most. If the emergency has been mitigated, and the entities are not aware, they will still be operating to restrictions which means the grid is operating well within limits. Not notifying the entities that the problem has been mitigated may have some financial implications but it should not place the grid at risk.</p>
Yes
No
<p>IRO-001-2 R1 VSLs: You can not split "shall act" and "or direct actions" into separate VSLs. They are one and same. If the RC directs action then they have acted. If the RC failed to direct action or have failed to other wise act then they have failed to act appropriately. Perhaps the VSLs can be drafted along the lines of the following: IRO-001-2 R1 High VSL... The Reliability Coordinator's action was incomplete in that it failed to demonstrate a specific action to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts. IRO-001-2 R1 Severe VSL... The Reliability Coordinator failed to act to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts. IRO-001-2 R2 VSLs: (1) Entities may be justified in an intentional delay in respnding to an RC directive. A justified intential delay may due be equipment problems, a generators ramp rate or system voltage adjustments prior to large system reconfiguration or large transmission loading changes. (2) An entity cannot be faulted for not following an RC directive because to it would violate safety, equipment, regulatory or statutory requirements. Perhaps the VSLs can be drafted along the lines of the following: Moderate VSL... should be deleted. High VSL... The responsible enity followed the Reliability Coordinators directive but with an unjustified delay. Severe VSL... no edits required. IRO-001-2 R5 VSLs: Perhaps the VSLs can be drafted along the lines of the following to reflect to what degree the RC missed the mark: Lower VSL...The Reliability Coordinator failed to notify &lt;25% of its impacted Transmission Operators and Balancing Authorities when the transmission system problem had been mitigated. Moderate VSL... The Reliability Coordinator failed to notify &gt;24% but &lt;50% of its impacted Transmission</p>

Operators and Balancing Authorities when the transmission system problem had been mitigated. High VSL... The Reliability Coordinator failed to notify >49% but <75% of its impacted Transmission Operators and Balancing Authorities when the transmission system problem had been mitigated. Severe VSL... The Reliability Coordinator failed to notify >74% of its impacted Transmission Operators and Balancing Authorities when the transmission system problem had been mitigated.

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Group

NPCC

Guy Zito

NPCC

No

There is inconsistency between R3 and M3. In R3, there is a provision for agreement between entities (RC, TOP, BA, GOP, DP) to use a language other than English in their communications. In M3, that option is not presented. M3 should reflect what is written in R3.

No

There is inconsistency between R3 and M3. In R3, there is a provision for agreement between entities (RC, TOP, BA, GOP, DP) to use a language other than English in their communications. In M3, that option is not presented. M3 should reflect what is written in R3.

Yes

Yes

Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Individual
Jeffrey V Hackman
Ameren
Yes
Yes
Yes
Yes

Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes and No
While we agree that most of the requirements are redundancies that properly belong elsewhere, we are concerned that Requirement 4 and Requirement 8 are not properly represented elsewhere and should not be retired until they re-surface in another standard explicitly. We believe it is still very important for an RC to monitor their respective BAs reserves and CPS performance. Likewise in R8, while the frequency monitoring is a BA function, we think that it is important enough to also be included as an RC function explicitly.
Yes
Yes
Yes
Yes
Yes
Individual
Dan Rochester
Independent Electricity System Operator - Ontario
Yes
No

M3: The evidence to show that concurrence is in place to allow communication using a language other than English is missing. The Measure as written merely asks for evidence that communication in a different language has occurred.

No

(i) R1: Suggest to revise the conditions for all levels to read "...failed to operationally test the alternative communication facilities within the last..... (ii) R2: The second part under Severe is not needed since failing to notify any impacted entities would imply no communication to the affected entities anyway. If verification of the functionality of the alternate means of telecommunications is also critical even without communicating to the affected entities, then the second condition should be an "OR". (iii) R3: Failure to having concurrence to use a language other than English for communications between and among operating personnel responsible for real-time operations by itself does not constitute a violation of any requirements; it is the absence of such a concurrence AND having used a language other than English that would constitute a violation. Suggest to revise this condition.

Yes

Yes

Yes

Yes

No

(i) R2: the phrase "act without intentional delay" is not necessary since the urgency of taking any actions as directed by the RC's are generally understood to be conveyed in the RC's directives. (ii) R3: Given R2 requires the responsible entities to comply with the RC directives, the part that says "immediately confirm the ability to comply with the directive or" is not needed. R3 should simply require the responsible entities to notify the RC upon recognition of the inability to perform the directive. (iii) The VRF for R5 should not be High. Failure to notify others when potential threats to system reliability have been mitigated does not constitute a high risk to the interconnected system. We suggest it be reduced to a Medium (i.e., that it affects control of the BES).

No

Wording in some of the Measures needs to be revised to reflect changes to R2 and/or R3, if our proposed changes are accepted. Also, we suggest the Requirement numbers be referenced in the Measures.

No

(i) R1: There should not be any distinction made between an RC acting and an RC directing others to act. Failure to mitigate adverse reliability impacts a severe violation of the requirement. We therefore suggest to revise the High and Severe levels as: High if the RC did not act or direct actions to prevent an Adverse Reliability Impact; Severe if the RC did not act or direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact. (ii) R2: The High VSL seems contradictory to the requirement, which already has provision of not fully complying with the RC directives due to safety, equipment, or regulatory or statutory requirements. (iii) R3: We have proposed some wording change to R3, which if adopted, would precipitate a need to revise the VSLs for R3 accordingly. (iv) R4 and R5: The VSLs for these

two requirements could be graded by assessing the number and/or timing of notifying the affected entities.
No
(i) R1: There is a duplicating requirement in TOP-005 R1.1. Suggest to eliminate one of the two. (ii) We do not agree with eliminating all of R5 to R8. There is a fundamental need for RCs to monitor its area, and even some portion of its adjacent areas to be aware of situations that require preventive and mitigating actions. While arguments can be made that requiring RCs to prevent and mitigate adverse reliability impacts would imply monitoring, the latter is a fundamental duty of any RCs to ensure system reliability. If monitoring is not explicitly stated as a requirement, then the same argument may be extended to training and operational facilities. We do not agree with the drafting team's conclusion that it is not practical to measure real-time monitoring. Measuring can be illustrated, for example, by a compliance audit to review system logs and assess the extent to which an RC follows and assesses system conditions.
No
(i) M1: We suggest to change the word "letter" to "documented request" (ii) If our recommendations to retain some of R5 to R9, some measures will need to be provided.
No
(i) R1: The wording for Low VSL is contradictory (e.g. it determined and requested in the first part but did not request in the second part). Suggest to revise it. (ii) R1: We suggest to grade the VSLs according to the extent to which the percentage of data specification and/or the number of entities not requested. (iii) R2: The RC either has the right or it doesn't, and hence it's a binary requirement. The VSL should be developed accordingly. Further, the wording for the Severe VSL does not correspond to the requirement and measure. The condition should simply be that the Reliability Coordinator failed to demonstrate that it had the authority to veto planned outages to analysis tools, including final approvals for planned maintenance.
No
(i) R1: We not not agree with removing this requirement for the same reason given for the proposal to remove R5 to R8 from IRO-002 (see comments on 10 (ii), above). (ii) R8: We do not agree with completely removing this requirement, especially that part that requires an RC to monitor system frequency. While DCS and CPS are largely a BA's responsibility, the RC is the last line of defence for abnormal system performance and needs to monitor its BAs' performance including their ability to address large frequency deviations, and direct or take corrective actions as needed including requesting emergency assistance on the BAs' behalf and directing load shedding. (iii) R9: The second part of this requirement needs to be retained. IRO-004 covers operational planning, not current day operations. Coordinating pending generator and transmission facility outages is an essential and necessary task by the RC to ensure reliability. (iv) R11: The RC needs to monitor ACE, detect and identify the cause of any abnormal ACE, and direct its BAs to take necessary actions to return ACE to within a normal range. (v) R13: We do not agree with removing the latter part of R13. The FAC standards cover the methodology used in calculating SOLs and IROLs. Regardless of how these limits are calculated, in practice there always exists the possibility that different entities come up with SOLs/IROLs, especially of the inter-ties, that could be different. Operating to the lowest SOLs/IROLs when more than one set exists is a necessary requirement for reliable operation.

No
We suggest to replace the word "impacted" with "other" since there is a preconception that the concerred RC makes an assessment of which other RCs are impacted by the coordinatred actions, which may not be the perspective of the other RCs who may in fact be impacted by any coordinated actions among other RCs.
No
Measure 1 actually contains a number of subrequirements that should be stipulated in R1, not M1. If indeed these are required, they should be stipulated in the Requirement section, not the Measures Section.
No
(i) R2: the High and Severe VSLs contradict with the requirement. We believe all of the "nots" should be removed. (ii) R6: The Low VSL should be a High since not agreeing to a plan but implementing one that has not been agreed to is a high violation of the requirement. (iii) The VSLs for R1 may need to be revised if our comments on M1 are adopted.
Yes
Yes
Group
Reliability Coordinator Comment Working Group
Linda Perez
WECC
Yes
No
on Measure 3 need to remove the word "all" in reference to voice logs. Measure needs to include evidence of concurrence for using a language other than English
Yes
Yes
Yes
Yes
Yes
No
measures do not align with VSL's (see question 9)
No



R1 talks about "ahall act or direct actions to be taken". High VSL - failure to act. Severe VSL - failure to act and direct. Does "act" mean any action taken short of issuing a directive? Change Severe VSL to failure to act or direct and eliminate the High VSL all together. R2 delay in issuing a directive due to equipmnet problems should be included in the moderate VSL and the body of the requirement and in the measure. The High VSL should be removed because not following the directive for equipment failure is allowed per R2. R5 - Severe VSL should be changed to moderate VSL since the problem has been mitigated and the system is stable and it does not adversely impact reliability. M3 talks about the ability of reliability entities to meet a directive. What constitutes evidence that confirms you are able to immeidately comply with the directive? If the entity agrees to the directive and then is unable to comply due to events outside of their control, such as a CT not starting, do they meet the measure? If the entity, based on the circumstances at the time of the directive, agrees to comply in good faith are they compliant? The Lower VSL should be made N/A because it is not practical for an entity to immediately confirm they are able to meet the directive in all cases.

No

for R1, this should be 2 separate requirments and measures. R1 should have a methodology for determining what data is needed and then a R2 should be a requirement to request this data from the reliability entities.

Yes

add measures for R1 & R2 see question 10

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Individual

Fred Young

Northern California Power Agency

No

R3 should include in the last sentence that the Generator Operator and Distribution Provider may use alternate language for internal operations.

No

M3 should include Generator Operator and Distribution Provider in the applicability.
Yes
Yes and No
Remove Generator Operator from the Purpose Statement. The re-written standard no longer applies to GOP.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Individual
Denise Roeder
ElectriCities of North Carolina, Inc.
No

We are a joint action agency registered on behalf of our member municipalities, who are all TDUs, neither own nor operate any Bulk Electric System facilities, and perform no real-time operations or operations planning for the BES. There are currently other standards that already apply to us that require us to have processes and means to communicate with our RC, BA, TOP, etc. The proposed modifications to this standard would now make our members subject to this standard as well, based on the DP registration designation. Given that, we believe there needs to be additional clarification of specifically what type of "telecommunications facilities" are required to be considered compliant with this standard. Maybe in the past when this standard applied to TOPs, BAs, and RCs, it was intuitive what type of telecommunications facilities they needed to communicate with each other. However, when you bring in small DPs, it doesn't seem so clear. Obviously we already communicate with our TOP and BA, and have done so for years. As written, the standard is ambiguous in terms of what more, if anything, we would have to put in place to satisfy this standard.

No

See comments on Question 1

No

Depends of what is meant by "telecommunications facilities"

Individual

Karl Bryan

US Army Corps of Engineers, Northwestern Division

No

R3 needs to have the last sentence revised to allow the Generator Operator and Distribution Provider to use an alternate language for internal operations.

No

M3 needs to include the GO and DP in its requirement for interutility communications in English.

Yes

Group

PPL Supply Group

Annette Bannon

PPL Generation, LLC

Yes

Yes

Yes

PPL agrees with the changes to COM-002-3. However, for clarity PPL suggests that Generator Operator should be removed from the purpose statement of this standard.

Group
Standards Interface Subcommittee/Compliance Elements Drafting
John Blazekovich
Commonwealth Edison Co.

Standard – IRO-001 R1 Requirement (including sub-requirements) The Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. [Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations] Proposed Measure Each Reliability Coordinator shall have evidence that it acted, or issued directives, to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordinator Area Attributes of the requirement Binary Timing X Omission X Communication X Quality Other Discussion – 1. As currently worded it can be interpreted that any time an event occurs the RC would be in violation of the standard simply because they had failed “to prevent” an event. 2. This requirement does not have a “timing”

element included, although it implies timing based on the “duration of the event”. Including that “duration of the event” is problematic – it appears to imply that human intervention may provide a more timely response than relay operation, we would suggest more clarification about what the “duration” element of the requirement is intended to address (e.g. generation re-dispatch?). 3. There also appears to be a “quality” element included based on the mitigation of magnitude of the event. As a result we believe that timeliness, effectiveness and communication should be the basis of the VSLs. 4. The VSLs as differentiate between directing actions and acting. Practically, there is no difference. The RC is still giving the directive. It is just a matter of who is carrying it out. This is not a valid basis for differentiating between VSLs. We suggest the VSLs be defined based on actual system impact (i.e. Was the RC acting or directing actions to prevent or to mitigate?) and to either modify the requirement to remove timing aspects or to add the timing aspects to the VSLs. SDT Proposed Lower VSL N/A CEDRP Proposed VSL No Comment SDT Proposed Moderate VSL N/A CEDRP Proposed VSL No Comment SDT Proposed High VSL The Reliability Coordinator failed to act to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts. CEDRP Proposed VSL The Reliability Coordinator failed to act to prevent the magnitude or duration of Adverse Reliability Impacts. SDT Proposed Severe VSL The Reliability Coordinator failed to act and direct actions to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts CEDRP Proposed VSL The Reliability Coordinator failed to act and direct actions to mitigate the magnitude or duration of Adverse Reliability Impacts FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a “binary” requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Additional Compliance Elements Compliance Enforcement Authority NERC shall be responsible for compliance monitoring of the Regional Entity. Regional Entities shall be responsible for compliance monitoring of the Reliability Coordinators, Transmission Operators, Generator Operators, Distribution Providers, and Load Serving Entities. Compliance Monitoring Period and Reset Time Frame N/A Compliance Monitoring and Enforcement Processes: Compliance Audits Self-Certifications Spot Checking Compliance Violation Investigations Self-Reporting Complaints Data Retention Each applicable entity shall retain data and evidence for a rolling 12 months unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation. The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent compliance records. Additional Compliance Information None CAE Resource Pool Comments The Enforcement Authority Statement, “NERC shall be responsible for compliance monitoring of the Regional Entity.” Is not clear, if it is intended to encompass Regional Entities that perform RC functions is should be clearly stated, if not it should not be included in the Enforcement Authority section. Standard – IRO-001 R2 Requirement (including sub-requirements) Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers, and Purchasing-Selling Entities shall act without intentional delay to comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations

and Same Day Operations] Proposed Measure Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without delay to comply with the Reliability Coordinator's directives. Attributes of the requirement Binary Timing X Omission X Communication X Quality X Other The team would suggest “intentional delay” be eliminated from the requirement – e.g. “shall act to...”). To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful disregard of the requirement. The measure and VSLs do not consider the exceptions for not following the RC objective. The drafting team should consider combining requirements R2 and R3. Thus, one VSL would become failure to notify the RC of the inability to comply. The drafting team could consider applying the numerical category of VSLs for some directives such as an order to redispatch. Obviously, it would not work well if the directive was to reconfigure the system. SDT Proposed Lower VSL N/A CEDRP Proposed VSL No Comment SDT Proposed Moderate VSL The responsible entity followed the Reliability Coordinators directive with a delay not caused by equipment problems. CEDRP Proposed VSL The team does not agree that this is a valid VSL. SDT Proposed High VSL The responsible entity followed the majority of the Reliability Coordinators directive but did not fully follow the directive because it would violate safety, equipment, statutory or regulatory requirements. CEDRP Proposed VSL The team does not agree that this is a valid VSL. The word majority implies some ability to numerically measure the response to the directive. Thus, the drafting team should consider applying the numerical category of the VSL guidelines. SDT Proposed Severe VSL The responsible entity did not follow the Reliability Coordinators directive. CEDRP Proposed VSL The responsible entity did not follow the Reliability Coordinators directive, the directive would not have violated safety, equipment, regulatory, or statutory requirements, and responsible entity did not communicate the inability to follow the directive to the Reliability Coordinator. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a “binary” requirement? N/A 4. If yes, is the VSL assignment consistent with other binary requirement assignments? N/A 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? No Standard - IRO-001 R3 Requirement (including sub-requirements) The Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider or Purchasing-Selling Entity shall immediately confirm the ability to comply with the directive or inform the Reliability Coordinator upon recognition of the inability to perform the directive. [Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations] Proposed Measure Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it confirmed its ability to comply with the Reliability Coordinator's directives, or if for safety, equipment, regulatory or statutory requirements it could not comply, informed the Reliability Coordinator upon recognition of the inability to comply. Attributes of the requirement Binary Timing Omission Communication X Quality Other Discussion – The requirement appears to be based on communication and can be problematic by including the requirement to immediately

confirm the ability to comply, a directive can be issued to one entity or several entities at one time (e.g. conference call, all call, electronic notification) that may create several issues when attempting to process all confirmations, the requirement language presents a risk of being found out of compliance for following a directive but not providing an “immediate” confirmation to the RC. The CEDRP believes it to be a reasonable expectation that all entities will comply with reliability directives and notification should be made only on exception. The SDT should consider combining this requirement with R2. SDT Proposed Lower VSL The responsible entity failed to immediately confirm the ability to comply with the directive issued by the Reliability Coordinator. CEDRP Proposed VSL See above discussion note SDT Proposed Moderate VSL N/A CEDRP Proposed VSL No comment SDT Proposed High VSL N/A CEDRP Proposed VSL No comment SDT Proposed Severe VSL The responsible entity failed to inform the Reliability Coordinator upon recognition of the inability to perform the directive. CEDRP Proposed VSL No comment FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a “binary” requirement? N/A 4. If yes, is the VSL assignment consistent with other binary requirement assignments? N/A 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? As currently worded the CEDRP believe that the requirement should be changed to eliminate that “immediate confirmation” portion of the requirement 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? No Standard - IRO-001 R4 Requirement (including sub-requirements) Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have evidence that it notified, without intentional delay, all impacted Transmission Operators and balancing Authorities in its Reliability Coordinator Area when it identified a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area. Attributes of the requirement Binary Timing X Omission Communication X Quality Other Discussion – To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful disregard of the requirement. This requirement appears to fit the numerical category of the VSL guidelines best. SDT Proposed Lower VSL N/A CEDRP Proposed VSL The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify 25% or less of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. SDT Proposed Moderate VSL N/A CEDRP Proposed VSL The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 25% but less than or equal to 50% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. SDT Proposed High VSL N/A CEDRP Proposed VSL The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 50% but less than or equal to 75% of the Transmission Operators and Balancing Authorities within its Reliability



Coordination Area. SDT Proposed Severe VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. CEDRP Proposed Severe VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 75% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a “binary” requirement? N/A 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard - IRO-001 R5 Requirement (including sub-requirements) Each Reliability Coordinator who identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have evidence that it notified, without intentional delay, all impacted Transmission Operators and balancing Authorities in its Reliability Coordinator Area when the real or potential threat with Adverse Reliability Impacts within its Reliability Coordinator Area has been mitigated. Attributes of the requirement Binary Timing X Omission Communication X Quality Other Discussion – To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful disregard of the requirement. Measure 5 is written implying that there is an Adverse Reliability Impact. The drafting team should consider wording the measurement to consider that there may not be an Adverse Reliability Impact requiring a directive. The Commission in paragraph 27 of the VSL order has stated that multiple VSLs are preferable where possible. Suggest applying the numerical category of the VSL Guidelines based on the number of entities notified.. SDT Proposed Lower VSL: N/A CEDRP Proposed Lower VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify 25% or less of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. SDT Proposed Moderate VSL: N/A CEDRP Proposed Moderate VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 25% but less than or equal to 50% of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. SDT Proposed High VSL: N/A CEDRP Proposed High VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 50% but less than or equal to 75% of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. SDT Proposed Severe VSL: The Reliability

Coordinator failed to notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated. CEDRP Proposed Severe VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 75% of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a “binary” requirement? N/A 4. If yes, is the VSL assignment consistent with other binary requirement assignments? N/A 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard – IRO-002-2 R1 Requirement (including sub-requirements) Each Reliability Coordinator shall determine the data requirements to support its reliability coordination tasks and shall request such data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load- Serving Entities, or adjacent Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a letter to Transmission Operators, Balancing Authorities, Transmission Owners, Generator Owners, Generator Operators, and Load-Serving Entities, or adjacent Reliability Coordinators, or other equivalent evidence that will be used to confirm that the Reliability Coordinator has requested the data required to support its reliability coordination tasks. Attributes of the requirement Binary Timing Omission X Communication X Quality Other Discussion – The VSLs attempt to measure the quality of the data requirements. They require the compliance auditor to judge if another RC has material impact and what data is administrative and what data is substantial. Given the typical length of a compliance audit, it is doubtful that the compliance auditor can make these types of judgments about the quality of the data and the material impact of another RC. The drafting team should consider applying numerical category of VSLs based on the number of entities the data request is made from. It is interesting that the measure also does not require any documentation of a data specification. SDT Proposed Lower VSL: The Reliability Coordinator demonstrated that it 1) determined its data requirements and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with a material impact on the Bulk Electric System in its Reliability Coordination Area but did not request the data from Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with minimal impact on the Bulk Electric System in its Reliability Coordination Area orr 2) determined its data requirements necessary to perform its reliability functions with the exceptions of data that may be needed for administrative purposes such as data reporting. CEDRP Proposed Lower VSL: The Reliability Coordinator failed to request data to support its reliability coordination tasks from 25% or less of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. SDT Proposed Moderate VSL: The Reliability Coordinator demonstrated that it determined the majority but not all of its data

requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators. CEDRP Proposed Moderate VSL: The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 25% but less than or equal to 50% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. SDT Proposed High VSL: The Reliability Coordinator demonstrated that it determined 1) some but less than the majority of its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators Or 2) all of its data requirements necessary to support its reliability coordination functions but failed to demonstrate that it requested data from two of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators. CEDRP Proposed High VSL: The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 50% but less than or equal to 75% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. SDT Proposed Severe VSL: The Reliability Coordinator failed to demonstrate that it 1) determined its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators Or 2) requested the data from three or more of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators. CEDRP Proposed Severe VSL: The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 75% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators, Or, The Reliability Coordinator failed to determine data requirements to support its reliability coordination tasks. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a “binary” requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-002-2 R2 Requirement (including sub-requirements) Each Reliability Coordinator shall have the authority to veto planned outages to analysis tools, including final approvals for planned maintenance. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has the authority to veto planned outages to analysis tools, including final approvals for planned maintenance as specified in Requirement 2. Attributes of the requirement Binary Timing Omission Communication Quality Other X Is this

requirement needed? R1 IRO-001-2 requires the RC to mitigate Adverse Reliability Impacts. R2 IRO-001-2 requires responsible entities to comply with the RC directives. Wouldn't the RC thus have the right to cancel all types of outages (i.e. analysis tools, transmission equipment, etc). FERC has stated in paragraph 112 of Order 693-A that an RC does not derive their authority from agreements but rather from FERC's approval of the standards. Barring the team's decision to remove this requirement, the Severe VSL is confusing. We have suggested different wording. SDT Proposed Lower VSL Reliability Coordinator has approval rights for planned outages of analysis tools but does not have approval rights for maintenance on analysis tools. CEDRP Proposed VSL No Comment SDT Proposed Moderate VSL N/A CEDRP Proposed VSL No Comment SDT Proposed High VSL N/A CEDRP Proposed VSL No Comment SDT Proposed Severe VSL Reliability Coordinator approval is not required for planned maintenance or planned outages. CEDRP Proposed VSL Reliability Coordinator does not approve planned maintenance or planned outages. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a "binary" requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-014-2 R1 Requirement (including sub-requirements) R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: [Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning] R1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. R1.2. Energy and capacity shortages. R1.3. Planned or unplanned outage information. R1.4. Voltage control, including the coordination of reactive resources for voltage control. R1.5. Coordination of information exchange to support reliability assessments. R1.6. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. Proposed Measure M1. The Reliability Coordinator's System Operators shall have available for Real-time use, the latest approved version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators. M1.1 These Operating Procedures, Processes, or Plans shall address: M1.2 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. M1.3 Energy and capacity shortages. M1.4 Planned or unplanned outage information. M1.5 Voltage control, including the coordination of reactive resources for voltage control. M1.6 Coordination of information exchange to support reliability assessments. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. Attributes of the requirement Binary Timing Omission x Communication x Quality Other Discussion – The CEDRP has no recommendations regarding this requirement. SDT

Proposed Lower VSL: The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one or two of the subrequirements. CEDRP Proposed Lower VSL: No Comment SDT Proposed Moderate VSL: Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three or four of the subrequirements. CEDRP Proposed High VSL: No Comment SDT Proposed High VSL: The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address five of the subrequirements. CEDRP Proposed High VSL: No Comment SDT Proposed Severe VSL: The Reliability Coordinator failed to have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. CEDRP Proposed Severe VSL: No Comment FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a “binary” requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-014-2 R2 Requirement (including sub-requirements) R2. Each Reliability Coordinator’s Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: [Violation Risk Factor: Lower] [Time Horizon: Real-time Operations and Operations Planning] R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s). R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s). Proposed Measure M2. The Reliability Coordinator shall have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were: M2.1 Agreed to by all the Reliability Coordinators required to take the indicated action(s). M2.2 Distributed to all Reliability Coordinators that are required to take the indicated action(s). Attributes of the requirement Binary Timing Omission X Communication X Quality Other Discussion – The High and Severe VSLs appear to use “not” incorrectly. SDT Proposed Lower VSL N/A CEDRP Proposed VSL No Comment SDT Proposed Moderate VSL: The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take action. CEDRP Proposed Moderate VSL: The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take action. SDT Proposed High VSL: The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make

notifications, exchange information, or coordinate actions) were not agreed to by all Reliability Coordinators that are required to take action CEDRP Proposed High VSL: The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action SDT Proposed Severe VSL: The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were not agreed to by all Reliability Coordinators that are required to take action and were not distributed to all Reliability Coordinators that are required to take action CEDRP Proposed Severe VSL: The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action and were distributed to all Reliability Coordinators that are required to take action FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a “binary” requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-014-2 R3 XXX-XXX Requirement (including sub-requirements) R3. The Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning] Proposed Measure M3. The Reliability Coordinator shall have evidence it made notifications and exchanged reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. Attributes of the requirement Binary Timing Omission X Communication X Quality Other Discussion: The VSLs appear to be appropriate. Since the only difference is the use of the “and” and “or”, we suggest emphasizing those words in bold. We read this more than once before we noticed the difference. SDT Proposed Lower VSL N/A CEDRP Proposed VSL N/A SDT Proposed Moderate VSL N/A CEDRP Proposed VSL N/A SDT Proposed High VSL: The Reliability Coordinator failed to make notifications or exchange reliability-related information with impacted Reliability Coordinators. CEDRP Proposed High VSL: The Reliability Coordinator failed to make notifications or exchange reliability-related information with impacted Reliability Coordinators. SDT Proposed Severe VSL: The Reliability Coordinator failed to make notifications and exchange reliability-related information with impacted Reliability Coordinators. CEDRP Proposed Severe VSL: The Reliability Coordinator failed to make notifications and exchange reliability-related information with impacted Reliability Coordinators. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a “binary”

requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-014-2 R4 XXX-XXX Requirement (including sub-requirements)

R4. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with impacted Reliability Coordinators. [Violation Risk Factor: Lower][Time Horizon: Real-time Operations] The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. Proposed Measure M4. The Reliability Coordinator shall have evidence it participated in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators. Attributes of the requirement Binary Timing X Omission X Communication X Quality Other Discussion – This requirement is purely administrative and probably does not rise to a level of a reliability standard requirement. It is in essence redundant, with R1.1 IRO-014-2? It appears R1.1 addresses the same information that would be expected to be discussed in a weekly conference call. Should the drafting team disagree and retain this requirement, please consider applying multiple VSLs based on how often the RC participates in conference calls, how many they missed, or how many impacted RCs they participated in conference calls with. SDT Proposed Lower VSL: The Reliability Coordinator failed to participate in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators. CEDRP Proposed Lower VSL: The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators bi-weekly, Or the Reliability Coordinator failed to participate in one weekly conference call, Or the Reliability Coordinator agreed to participate in conference calls with 25% or less of the impacted Reliability Coordinators. SDT Proposed Moderate VSL: N/A CEDRP Proposed Moderate VSL: The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators every third week, Or the Reliability Coordinator failed to participate in two weekly conference calls, Or the Reliability Coordinator agreed to participate in conference calls with more than 25% but less than or equal to 50% of the impacted Reliability Coordinators. SDT Proposed High VSL: N/A CEDRP Proposed High VSL: The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators fourth week, Or the Reliability Coordinator failed to participate in three weekly conference calls, Or the Reliability Coordinator agreed to participate in conference calls with more than 50% but less than or equal to 75% of the impacted Reliability Coordinators. SDT Proposed Severe VSL: N/A CEDRP Proposed Severe VSL: The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators at least every fifth week, Or the Reliability Coordinator failed to participate in four weekly conference calls, Or the Reliability Coordinator failed to agree to participate in any conference calls, Or the Reliability Coordinator agreed to participate in conference calls with more than 75% but less than 100% of the impacted Reliability Coordinators. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a “binary” requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the

VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-014-2 R5 XXX-XXX Requirement (including sub-requirements) R5. When an expected or actual reliability issue is detected, the Reliability Coordinator shall confirm the existence of the issue with the impacted Reliability Coordinators. In the event that the issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] Proposed Measure The Reliability Coordinator shall have evidence that, in cases when an expected or actual reliability issue was detected, it has confirmed the existence of the issue with the impacted Reliability Coordinators. Attributes of the requirement Binary Timing Omission X Communication X Quality Other Discussion – This requirement is confusing in the way it is worded. We think it is trying to say that the RC should operate as though the reliability issue (should this be Adverse Reliability Impact) is detected until the issue is confirmed not to exist. The way it is worded might imply that if one doesn't confirm it to exist, operate as though it does. This leaves open the interpretation that a confirmation that it doesn't exist must still be operated to as though it does exist. The drafting team should consider splitting operating to prevent from operating to mitigate an existing event in the VSLs. SDT Proposed Lower VSL The Reliability Coordinator that detected an expected or actual reliability issue contacted the other Reliability Coordinator(s) to confirm that there was a problem but could not confirm that the problem existed and failed to operate as though the problem existed. CEDRP Proposed VSL N/A SDT Proposed Moderate VSL N/A CEDRP Proposed VSL N/A SDT Proposed High VSL N/A CEDRP Proposed VSL The Reliability Coordinator that detected an expected reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem. SDT Proposed Severe VSL The Reliability Coordinator that detected an expected or actual reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem. CEDRP Proposed VSL The Reliability Coordinator that detected an actual reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a “binary” requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-014-2 R6 XXX-XXX Requirement (including sub-requirements) When an expected or actual reliability issue exists and the impacted Reliability Coordinators cannot agree on a mitigation plan, all impacted Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] Proposed Measure The affected Reliability Coordinators shall have evidence that, in cases when an expected or actual reliability issue existed and the impacted Reliability Coordinators could not agree on a mitigation plan, they implemented the mitigation plan developed by the Reliability Coordinator who has the reliability issue. Attributes of the requirement Binary Timing Omission X Communication X Quality Other Discussion: We are concerned the validity of this requirement, it may force an RC to implement a solution that they don't agree with and ultimately result in an Adverse Reliability Impact. The RC may not agree with the solution because it may not be reliable for their



footprint. They need to have the ability to veto mitigation plans that cause Adverse Reliability Impacts in their footprint without incurring a compliance violation. SDT Proposed Lower VSL The Reliability Coordinator did not agree on a mitigation plan and implemented a plan other than the one developed by the Reliability Coordinator who had the reliability issue. CEDRP Proposed VSL N/A SDT Proposed Moderate VSL N/A CEDRP Proposed VSL N/A SDT Proposed High VSL N/A CEDRP Proposed VSL N/A SDT Proposed Severe VSL The Reliability Coordinator did not agree on a mitigation plan and did not implement a mitigation plan. CEDRP Proposed VSL What if the RC is correct in disagreeing and the mitigation plan would have caused an Adverse Reliability Impact on their system? FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a "binary" requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)?

Group

MRO NERC Standards Review Subcommittee

Terry Bilke

MidwestISO

No

The new R2 requirement is too verbose. We suggest that you strike the final clause: "and shall verify that alternate means of telecommunications are functional." It is obviated by the requirement to notify impacted parties. The responsible entity is already implicitly required to verify its alternate means of communication is functional since it is required to notify its impacted parties of the failure of its normal telecommunications. It can't notify its impacted parties if the alternate communications means are not functional. This clause is similar to the old requirement one that the drafting team appropriately struck. We tend to agree that striking R1 makes sense due to the drafting team's reasoning. However, we are not clear why the new R4 is necessary then. If the drafting team does not believe R1 is necessary shouldn't they respond to the FERC directive with the same reason why R4 is not really necessary? The VRF for new requirement 1 should be lower. It does not fit the definition of a medium VRF. A medium VRF requires that a violation of the requirement directly affect the state or capability or the ability to effectively monitor and control. Failure to test does not result in directly affecting the state or capability or the ability to effectively monitor and control. At a minimum, a failure of the alternative communication systems and primary communication systems must occur first. The failure to perform a single test in a given quarter does not mean that primary and alternative communication systems will fail. Thus, testing is really an administrative issue and should thus be a lower VRF. In the Data Retention section, Distribution Provider and Generation Operators should be added. Currently, there are no data retention requirements listed for them. Suggest modifying the language regarding data retention for compliance violations to: "... is found in violation of a requirement, it shall keep information related to the violation until it the Compliance Enforcement Authority finds it compliant."

No

M4 does not appear to be worded as a measurement. If R4 is kept, we suggest the following modification: "The Distribution Provider and Generation Operator shall demonstrate the existence of its telecommunication systems identified in R4."

No

The VSLs as defined for Requirement 1 appear to violate Guideline 4 that the Commission established in their "Order on Violation Severity Levels Proposed by the Electric Reliability Organization". Guideline 4 requires that a VSL should be based on a single violation. The VSLs as defined accumulate the number of consecutive quarters. This would imply that a single violation could last more than a year and that the compliance auditor could not determine sanctions until the entity becomes compliant or year has passed. A single violation appears to be the failure to test in a single quarter. This requirement is binary in nature in that it is either met or it isn't. We suggest that only a lower VSL should be defined as: "The RC, TOP, or BA failed to test the backup telecommunication facilities for a single calendar quarter." The Lower VSL for R2 is not possible. The act of notifying all impacted entities of the failure of their primary telecommunication system requires the use of the alternative telecommunications systems which is a form of verifying that the alternative telecommunications facilities are functional. The drafting team should consider applying the numeric performance category of the VSL Development Guideline Criteria for R2.

Yes

Yes

Yes

No

New requirement R2 should omit act without intentional delay. The desired outcome is for the responsible entity to comply with the RC directive. Adding act without intentional delay only confuses the situation and adds questions. What is an intentional delay? The word act implies that the requirement is met simply if the responsible entity attempted to meet the directive but was unable to do so. That is already considered in with the clause that begins "unless such actions would violate ...". Thus, the word act is not necessary. The word immediately should be removed from the new R3. This attempts to time frame the response of the responsible entity and remove the judgment from the compliance auditor. We agree with the concept of doing this but in reality it only confuses the issue and the compliance auditor will likely apply his judgment regarding what immediate is anyway. Additionally, the requirement attempts to separate the act of confirming that the responsible entity can take the action from notifying the RC that the entity can't take the action. This is not logical. What RC is going to request a responsible entity to take action that would violate safety, equipment, statutory, or regulatory requirements? The RC should already be aware of those requirements and likely won't direct actions that violate them. Thus, the likely scenario is that the responsible entity will attempt to take action and discover that equipment is not functioning properly and thus notify the RC. We suggest striking the "shall immediately confirm the ability to comply with the directive or" from the requirement. This part of the requirement is not needed because the responsible entity is already obligated to follow the RCs directive (see order 693.) Thus, the assumption is that

the order will be followed unless it can't be followed because it will violated safety, equipment, statutory, or regulatory requirements. Requirements R4 and R5 are unnecessary. New R1 requires the RC to direct actions to be taken by the TOP, BA, GOP, TSP, LSE, DP and PSE to prevent or mitigate the magnitude or duration of events that result in Adverst Reliability Impacts. The RC can't direct these actions without notifying all impacted TOPs and BAs. They would also have to notify them when actions are no longer necessary.

No

Some compliance auditors have been taking the need for evidence to the extreme. We have encountered actual situations where if a measure states evidence shall be provided for requirements that are event based, the compliance auditor expected evidence even if no event occurred. For example, some RCs rarely issue directives. As M1 is written, some compliance auditors would require the RC to provide evidence that no reliability directives were issued. This is not possible. We suggest modifying the measurement to: Each Reliability Coordinator shall have evidence that it acted, or issued directives, to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordiantor Area if needed. If there were no directives issues (assuming there are no complaints or evidence to the contrary of the need to issue a directive), no evidence is necessary."

No

The R1 High and Severe VSL appear to differ only by the inclusion of directing actions in Severe. From a practical perspective, what is the difference between directing actions and acting? We don't believe there is any. The actions are the result of the RC authority whether the RC takes the actions themselves or directs someone else to. We suggest a better alternative for the VSL levels would be for the High level to reflect that the RC did not act or direct actions to prevent an Adverse Reliability Impact and Severe would be that the RC did not act or direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact. The moderate VSL for R2 is not practical and too subjective. What constitutes a delay? What if the responsible entity takes five minutes to determine how to carry out the action or if their equipment currently is capable of carrying out the action? Is this a delay? We suggest striking this Moderate VSL. The High VSL does not agree with the requirement. It considers the inability to fully follow an RC directive due to a violation of the safety, equipment, statutory, or regulatory requirements a violation. This is in direct conflict with the requirement. We suggest that the High VSL should be struck. We suggest the Severe VSL should be that the responsible entity failed to follow the RC directive and it would not have violated the safety, equipment, statutory or regulatory requirements. Currently, the Severe category does not allow that the responsible entity may not be able to carry out the directive due to the violation of safety, equipment, statutory, or regulatory requirements. In question 7, we request that the drafting team strike part of requirement 3. The striking of that portion of requirement 3 obviates the lower VSL. In paragraph 27 of the ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION, the Commission expresses "that, as a general rule, gradated Violation Severity Levels, wherever possible, would be preferable to binary Violation Severity Levels". Given that it is possible to define gradated VSLs for R4 and R5, we suggest that the drafting team should consider applying the numeric performance category of the Violation Severity Levels Development Guidelines Criteria based on the number of impacted TOPs and BAs that were notified.

No

New Requirement R1 is duplicate to the requirement TOP-005-1 R1.1. If the drafting team can't delete TOP-005-1 R1.1, they should notify other appropriate drafting teams of the need to remove the requirement. We do not agree with eliminating requirements R5, R6, R7, and R8 in their entirety. The requirements as they are written are problematic. However, we do believe that there is a need for a basic requirement to monitor the system. The requirements should be that the RC should compare actual system flows to SOLs and IROLs. While some will argue SOLs are not the responsibility of the RC, failure to monitor SOLs could cause the RC to miss unknown IROLs since an SOL can become an IROL. Several SOL violations in a given area also can be indicative of a broader system problem the RC should be addressing. We also do not agree with the drafting team's conclusion that it is not practical to measure real-time monitoring. It is very easy to measure. As an example, a compliance auditor could select a day and an SOL or IROL and ask for the system flows from that day or hour etc. This is generally easy for any RC to produce with today's data archiving software. We believe that there should be a requirement that the RC have a state estimator and real-time contingency analysis as well (RTCA). The drafting team needs to be careful in the construction of these requirements to make them practical and measurable. For instance, making the requirement to have a state estimator and RTCA is measurable in that the compliance auditor can verify their existence but this is not stringent enough because they may only run once a week. At the same time, if we create a requirement that SE and RTCA must run every 5 minutes, we could inadvertently create a requirement that any missing 5 minute run of RTCA and SE could be construed as a violation. There also needs to be a requirement that there is a real-time assessment of voltage as well. New Requirement R2 is no longer needed as a result of paragraph 112 in Order 693-A. Since the RC's "authority to issue directives arises out of the Commission's approval of Reliability Standards" the RC already has veto authority or will have once R1 IRO-001-2 is approved. This requirement obligates the RC to take actions or direct actions to prevent Adverse Reliability Impacts. Veto outages of equipment and analysis tools would fall into this category even if the RC couldn't say for certain that an Adverse Reliability Impact was going to occur but rather they are concerned one could occur due to heavy loads for example.

No

Measure 1 should not focus on a letter as evidence. A more appropriate measure would be a data specification document and actual verification that data has been received. The letter or equivalent is only needed if data has not been supplied. Demonstration of the actual receipt the data would be easy. Requirement 2 is not needed and thus Measure 2 is not needed per paragraph 112 of Order 693-A. Additional measures are needed to address the proposed requirements in question 10.

No

For R1, the lower VSL contradicts itself. It states that RC demonstrated that it determined its data requirements and requested that data and then follows with that it didn't request that data. The second option in the Lower VSL category is not practical and a compliance auditor would not be in a position to determine this. In fact, if the administrative data is not requested, other administrative requirements for reporting would be violated. Additionally, it does not make sense that an RC would determine its data needs and then omit data for administrative reporting. Further, is it the compliance auditor's job to judge if the data the RC requests is sufficient or is it his job to see that the RC has met the requirement to define the data? The remaining VSLs imply that the RC may define only partial data requirements. This does not

seem likely. Why would the RC do this? This VSL appears to add to the requirement by making it appear that the compliance auditor is to judge the completeness of the data requirement. This violates Guideline 3 of the FERC ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION. Practically, it would not be enforceable anyway. It would require the RC to admit that they did not include administrative data in the their data requirements. It is doubtful this would happen because the RC likely believes they prepared a complete data requirement document. We suggest that the VSLs should be: Severe: The RC did not determine it data requirements or the RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be deomstrated for greater than 75 to 100% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. High: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be deomstrated for greater than 50 and less than or equal to 75% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Medium: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be deomstrated for greater than 25% and less than or eqal to 50% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Lower: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be deomstrated for greater than 0% and less than or equal to 25% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. R2 VSLs are not needed er paragraph 112 of Order 693-A. The Severe VSL contradicts the requirement.

No

R1 includes many requirements for monitoring the system that are important, measurable and should be retained. Monitoring is too critical to operating the system to completely eliminate these requirements. R4, R8 and R11 are problematic as currently written. However, there have been actual instances of a large BA intentionally operating short hundreds of MWs of energy. I believe this occurred during the summer of 1999. Thus, the RC should be monitoring the BAs ACE and directing the BA to correct it if it becomes too large. It is not necessary or even useful for the RC to monitor the BA CPS performance.

No

Please strike "as a minimum" in R1. By definition, the requirement defines the minimum. Please strike R1.6. RCs already have the authority to act per paragraph 112 of Order 693-A. Since R2 requires the RCs to agree, is the "mutually agreed to" clause in R1.1 necessary? Please strike requirements R4 and R4.1. It is duplicative to R1.1. Conference calls are a form of communication and should be address per R1.1. R5 is confusing. If a reliability issue isn't confirmed, doesn't this mean there is no reliability issue? Isn't this the point of confirming? Additionally, we suggest using validate instead of confirm. R6 appears to be a rewrite of requirements R1, R2 and their sub-requirements in IRO-016. We agree that those requirements do need to be written more succinctly or removed altogether. However, R6 does not accomplish the goal and only confuses that matter further. The reason the RCs may not be able to agree on a mitigation plan is that RC with the reliability issue may be requesting mitigations that the other RCs believe may cause them reliability issues. This requirement appears to suggest that the solution to a disagreement on the mitigation plan is cut and dried. Generally, the reason the disagreement arises is due to one RC not fully understanding the impact of their actions on another RC. The bottom line is that the RCs may have disagreements and there is no way to require a solution in these types of situations. Please revise R6 to require using the mitigation plan developed by the Reliability Coordinator who has the reliability issue provided

that the mitigation plan does not cause a reliability issue in the other region. As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance.

No

Measure 1 appears to add to the requirement. Requirement 1 does not mention anything about System Operators yet the measurement does. The measurement should just be to verify that the RC has have Operating Processes, Procedures, and Plans. The sub-measurements are not measurements at all. There should be the single measurement to verify the Operating Processes, Procedures, and Plans have been developed and address the sub-requirements. This really points out the problem with making the criteria that must be considered in the Operating Processes, Procedures, and Plans sub-requirements in the first place. They aren't requirements of any sort. They represent criteria. The drafting team should consider making them a bulleted list without the Rs, then the drafting team won't feel compelled to write sub-measures that don't measure anything. We do not agree with M6 because we don't agree with R6.

No

For R2, the High and Severe VSLs contradict the requirement. We believe all of the "nots" should be removed. We don't agree with the VSLs in R4 since we believe R4 should be struck. The Lower VSL for R6 should not even be a violation unless the impact was negative. If the RC implemented a different mitigation plan and resolved the issue, then the RC was likely correct to disagree.

Yes

Yes

We do agree with moving the requirement. However, the drafting team needs to revisit the wording of the requirement. The new wording is much more confusing. Until we reviewed IRO-016-2, it was not clear at all that R6 in IRO-014 was attempting to mimic R1 and its sub-requirements in IRO-016-2.

Group

Southern Company Transmission

Jim Busbin

Southern Company Services, Inc.

No

1.1 - In R1, we suggest that "operationally test by way of operator action" should be defined to remove any confusion regarding what the term requires. The word "ensure" needs to be changed to "assure" to more accurately convey the intent of the requirement. We also suggest changing the word "facilities" to "capabilities". 1.2 - R2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. The VSL

should be consistent with the language of the requirement. A very short, insignificant telecom outage with no notification could result in a severe violation as the requirement is presently written and VSL's applied. 1.3 - R1, R2 and R3 should be expanded to include the list of entities the RC needs to talk with as included in the Applicability section of IRO-001-2 (RC, TO, BA, GO, DP, TSP, LSE, PSE). These entities should also be included in the purpose statement and R4 and M4 can then be eliminated. 1.4 - In R3, we suggest that the last sentence of R3 should be changed to "entities may use an alternative language for internal operations" rather than allowing only TOs and BAs to have this option.

No

2.1 - A general comment regards the production of evidence - such language should be standardized as "have and provide upon request" and the authorized requestors identified. This comment should apply to all standards. 2.2 - M2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. 2.3 - The Drafting Team should coordinate the data retention time frame with the requirement measures for R1. DPs and GOs should also be included in the measures requirements.

Yes

3.1 - The expanded list of entities recommended in comment 1.3 and 1.4 need to be included the VSLs 3.2 - The Severe VSL for R2 should be corrected. Add the word 'to' as follows: "...and failed to verify the ..."

No

4.1 - We agree with the recommendation to retire COM-002-3 when COM-003-1 is approved; however we suggest the following changes should be made for the interim applicability of COM-002-3: 4.2 - The Purpose statement should be revised to re-align with the revisions in the Standard. 4.3 - The applicability of COM-002-3 should be consistent with the applicability of IRO-001-2. 4.4 - The words "clear, concise, and definitive manner" in R1 are ambiguous and impossible to measure. We suggest they be replaced with "the RC shall direct". 4.5 - An additional requirement, R2, should be added that requires the Operator to repeat the information back correctly (i.e., separate this requirement from R1). 4.6 - Grammatical changes are suggested. The revised requirement reads as follows: " To ensure Balancing Authorities, Transmission Operators, and Generator Operators have adequate communications; to ensure that these communication capabilities are staffed and available for addressing a real-time emergency condition; and to ensure effective communications by operating personnel." 4.7 - At the Data Retention section, the reference to 'Requirement 3, Measure 3' should be consistent with the modified standard. The revised standard only has one requirement. 4.8 - The use of calendar days in the Data Retention section is inconsistent with related standards where 'months' are used.

No

5.1 - The measures need to be revised to match the new requirements.

No

6.1 - The severity levels need to be revised to match the new requirements.

No

7.1 - Applicability 4.2 - Transmission Operator should be plural. 7.2 - The revised definition of "Adverse Reliability Impacts" (R1) should be included at the top of Standard IRO-001-2, per

Glossary of Terms Used in Standards: All defined terms used in reliability standards shall be defined in the glossary. Definitions may be approved as part of a standard action or as a separate action. All definitions must be approved in accordance with the standards process. 7.3 - In R2 insert the word "its" before Reliability Coordinator. 7.4 - In R3, replace "immediately" with "without intentional delay", replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator.

No

8.1 - In M2 and M3, Add Distribution Provider. 8.2 - In M2 add "intentional" between "without" and "delay". 8.3 - In M3 replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator's and Reliability Coordinator. 8.4 - In M5, change "has" to "had".

No

9.1 - R1 is a binary requirement and should have only a severe VSL. The RC either acts or he doesn't - If he fails to act, he fails to direct and mitigate the problem by default. 9.2 - R2 VSLs need to be rewritten to recognize that some directives may not be followed because of safety, regulatory or statutory requirements. 9.3 - Remove the Lower severity level in R3 to conform to changes in R3 and M3.

No

10.1 - We propose that R1 and R2 should be moved to the RC Certification Procedure and this standard retired. If this standard is not retired then we recommend Comments 10.2 and 10.3. 10.2 - At Requirement R2, the RC is given 'veto' authority. Is a standard an appropriate place to give this type of authority? 10.3 - The revised Purpose basically provides that the RC will have access to information and control of analysis tools. What is the correlation of information/control to veto authority/approval of planned maintenance?

No

11.1 - Moving R1 and R2 to the RC Certification Procedure, will eliminate measurement requirements.

No

12.1 - Moving R1 and R2 to the RC Certification Procedure, will eliminate VSL requirements.

Yes

13.1 - We agree with retiring this standard.

No

14.1 - R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC? 14.2 - We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows: R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken. 14.3 - We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly. 14.4 - R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous" or a



similar term. 14.5 - We suggest rewriting R5 to read: In the event that a reliability issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists. 14.6 - At Requirement R1, the use of the phrase "as a minimum" seems to add some flexibility for development of procedures, processes and plans. A negative consequence is that it introduces more ambiguity. The recommendation is to strike the phrase. 14.7 - At Requirement R1.6, consider the following: "Authority to act to prevent and mitigate instances 'that have the potential to cause' Adverse Reliability Impacts to other Reliability Coordinator Areas."
No
15.1 - In M1, delete "for Real-time use". 15.2 - Modify the measures to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
No
16.1 - In R2, severe should be "... and no action was taken by the RC". 16.2 - In R5, severe should also include "... or that the RC failed to operate as though the problem existed." 16.3 - Modify the VSLs to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
Yes
17.1 - We agree with the recommendation to retire IRO-015-2.
Yes
18.1 - We agree with the recommendation to retire IRO-016-2.
19.1 - We suggest the effective date for the retirement of R5 (NERC Net Security Policy) in the COM-001-2 Standard should be effective immediately upon regulatory approval. As written, the Policy is unenforceable, contains no measures and is not germane to BES Reliability.
Individual
Kathleen Goodman
ISO New England Inc.
No
ISO New England does not support the removal of Requirement 1. Also, we believe Requirement 3 is written such that it may pose an unnecessary requirement on the Hydro Quebec area given the terminology "inter-entity" and support further clarification.
No
See answer to #1.
No
ISO New England believes it is inefficient to have a (temporary) Standard with only one Requirement and recommend including this Requirement in COM-001, with COM-001 renamed to "Communications."
No
See response to Q#4
Yes and No
We believe the word "threat" should be replaced with "events" in Requirements 4 and 5.

Yes and No
Suggest changing with word "request" to "document" in Requirement 1.
Yes
Yes and No
As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance. Use of the term collectively may resolve this dilemma.
Yes
Yes
Individual
Edward Davis
Entergy Services, Inc
Yes
The drafting team should consider expanding the second sentence of R3 to apply to internal communications of any affected entity not just BAs and TOPs.
Yes
Yes
Yes
Yes
No
PER-003 R1 does not specifically address delegated functions; therefore, this requirement is not redundant with IRO-001 R6 without changes to PER-003 to specifically deal with employees performing delegated functions.
Yes

No
The VSL for R2 does not seem consistent with the language in the requirement. It is not clear why the entity should be subject to a high VSL if the entity did not comply with an RC directive due to safety or regulatory prohibition, and made the RC aware of same.
No
IRO-002-1 R9, the deleted language of the second sentence is not adequately covered by the language in EOP-008-0 R1, unless those outages are tied to the loss of a control center. EOP-008-0 is in the process of being revised and this language could be included in the revision, but it isn't adequately addressed by the version 0 standard.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Overall, we think the coordinated set of standards being developed by the RTOSDT and IROLSDT are good for reliability, crisp, and tightens up the reliability concepts.
Individual
Danny Dees
MEAG Power
No
Directives that are mandatory under R2 of IRO-001-2 should have boundaries consistent with the proper role of an RC. For example, if an RC directs an LSE with a 15% planning reserve margin to execute purchase power agreements until its reserve margin is at least 20% and the

LSE refuses, then the LSE may have violated this standard. Other examples of improper RC directives are directives to increase coal inventories, buy firm fuel transportation rights, reconductor transmission lines, purchase spare equipment, etc. Granted entities may be able to conjure up a regulatory or statutory basis for refusing many improper RC directives but in some instances there may be no permissible grounds to refuse. The appropriate solution is to modify the standard to ensure that improper directives are never mandatory in the first place. Specifically, NERC is urged to state that RC directives are mandatory only if they pertain to specific categories such as: switching orders to reconfigure the BES, orders to postpone scheduled outages of BES equipment, orders to change generator output, orders to curtail transactions or orders to curtail load.

No

The M2 measure should not mandate compliance with RC directives that are improper as defined in my response to question 7.

My other concerns are addressed in the comments of the SERC OC Standards Review Group.

Individual

Mike Gentry

Salt River Project

Yes

No

M3 should include providing evidence of concurrence to use a language other than English. This will better align the measure with the VSL language.

Yes

Yes

Yes

Yes

Yes

Yes
No
R1 states the RC must act OR direct. The R1 VSL's attempt to distinguish between act and direct. The requirement allows for either action. I suggest that the High VSL be removed and replaced by an N/A. The Severe VSL should be amended so that the words "act and direct" are replaced by the words "act OR direct" as is consistent with the requirement and the measure. R2: The moderate VSL introduces the phrase "equipment problems" for the first time in the Standard. "Equipment Problems" needs to be included in the Requirement, R2, and defined in the Measure for R2. R5: The Severe VSL needs to be moved to the Moderate category. This condition does not constitute an Adverse Reliability Impact that severely threatens the BES.
Yes
No
R1: The Requirement and VSL's mention that the RC will determine it's data needs. Yet the Measure for R1 does not mention this, it only mentions the RC requesting the data from it's member entities. This Measure needs to include a measure for how the RC determines it's data needs.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
I appreciate the new comment form in Word version. his allows me to comment on each requirement specifically addressing the requirement, measure or the VSL's
Group
SERC OC Standards Review Group
Jim Griffith
Southern Co.
Yes and No

1.1 - In R1, we suggest that "operationally test" should be defined to remove any confusion regarding what the term requires. The word "ensure" needs to be changed to "assure" to more accurately convey the intent of the requirement. We also suggest changing the word "facilities" to "capabilities". 1.2 - R2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. 1.3 - R1, R2 and R3 should be expanded to include the list of entities the RC needs to talk with as included in the Applicability section of IRO-001-2 (RC, TO, BA, GO, DP, TSP, LSE, PSE). These entities should also be included in the purpose statement and R4 and M4 can then be eliminated. 1.4 - In R3, we suggest that the last sentence of R3 should be changed to "entities may use an alternative language for internal operations" rather than allowing only TOs and BAs to have this option.

Yes and No

2.1 - A general comment regards the production of evidence - such language should be standardized as "have and provide upon request" and the authorized requestors identified. This comment should apply to all standards. 2.2 - M2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. 2.3 - The Drafting Team should coordinate the data retention time frame with the requirement measures for R1. DPs and GOs should also be included in the measures requirements

Yes and No

3.1 - The expanded list of entities recommended in comment 1.3 and 1.4 need to be included the VSLs

Yes and No

4.1 - We agree with the recommendation to retire COM-002-3 when COM-003-1 is approved; however we suggest the following changes should be made for the interim applicability of COM-002-3: 4.2 - The Purpose statement should be revised to re-align with the revisions in the Standard. 4.3 - The applicability of COM-002-3 should be consistent with the applicability of IRO-001-2. 4.4 - The words "clear, concise, and definitive manner" in R1 are ambiguous and impossible to measure. We suggest they be replaced with "the RC shall direct". 4.5 - An additional requirement, R2, should be added that requires the Operator to repeat the information back correctly (i.e., separate this requirement from R1).

No

5.1 - The measures need to be revised to match the new requirements.

No

6.1 - The severity levels need to be revised to match the new requirements

Yes and No

7.1 - Applicability 4.2 - Transmission Operator should be plural. 7.2 - The revised definition of "Adverse Reliability Impacts" (R1) should be included at the top of Standard IRO-001-2, per Glossary of Terms Used in Standards: All defined terms used in reliability standards shall be defined in the glossary. Definitions may be approved as part of a standard action or as a separate action. All definitions must be approved in accordance with the standards process. 7.3 - In R2 insert the word "its" before Reliability Coordinator 7.4 - In R3, replace "immediately" with "without intentional delay", replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator.

Yes and No
8.1 - In M2 and M3, Add Distribution Provider. 8.2 - In M2 add "intentional" between "without" and "delay". 8.3 - In M3 replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator's and Reliability Coordinator. 8.4 - In M5, change "has" to "had".
Yes and No
9.1 - R1 is a binary requirement and should have only a severe VSL. The RC either acts or he doesn't - If he fails to act, he fails to direct and mitigate the problem by default. 9.2 - R2 VSLs need to be rewritten to recognize that some directives may not be followed because of safety, regulatory or statutory requirements. 9.3 - Remove the Lower severity level in R3 to conform to changes in R3 and M3.
Yes and No
10.1 - We propose that R1 and R2 should be moved to the RC Certification Procedure and this standard retired.
Yes and No
11.1 - Moving R1 and R2 to the RC Certification Procedure, will eliminate measurement requirements.
Yes and No
12.1 - Moving R1 and R2 to the RC Certification Procedure, will eliminate VSL requirements.
Yes
13.1 - We agree with retiring this standard
Yes and No
14.1 - R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC? 14.2 - We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows: R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken. 14.3 - We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly. 14.4 - R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous". 14.5 - We suggest rewriting R5 to read: In the event that an operating issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists.
Yes and No
15.1 - In M1, delete "System Operator" and "for real-time use". 15.2 - Modify the measures to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
Yes and No
16.1 - In R2, severe should be "no action was taken by the RC". 16.2 - In R5, severe should also include that the RC failed to operate as though the problem existed. 16.3 - Modify the VSLs to be consistent with changes requested in R1, R2, R4, R4.1 and R5.

Yes
17.1 - We agree with the recommendation to retire IRO-015-2
Yes
18.1 - We agree with the recommendation to retire IRO-016-2
19.1 - We suggest the effective date for the retirement of R5 (NERC Net Security Policy) in the COM-001-2 Standard should be effective immediately upon regulatory approval. As written, the Policy is unenforceable, contains no measures and is not germane to BES Reliability
Individual
Jay Seitz
US Bureau of Reclamation
No
Purpose Distribution Providers and Generator Operators were added to the applicability; the Purpose should be revised to reflect that.
Yes
Yes
No
Purpose Since Generator Operators were deleted from the applicability; the Purpose should be revised to reflect that and include Reliability Coordinators. The language is somewhat redundant, recommend it be simplified to "To ensure Balancing Authorities, Reliability Coordinators, and Transmission Operators communicate in an effective manner."
Yes
Yes
No
R4. and R5. Both of these Requirements use the phrase "without intentional delay" to describe the urgency of the notification to impacted entities. In both requirements we recommend the language be changed from "notify, without intentional delay" to "immediately notify".
No
M4. and M5. In both Measures, recommend "without intentional delay" be changed as described above for R4. and R5.
Yes
No
R2. This requirement provides authority to the Reliability Coordinator to veto planned outages and approve planned maintenance to "analysis tools". It is not clear in this standard what these "analysis tools" are. Per FERC Order 693, NERC was to identify a minimum set of analysis tools and the task was assigned to the Real-Time Tools Best Practices Task Force. Until the



tools are identified, it is premature to insert a placeholder in a mandatory standard; this also applies to the violation severity levels table.
No
M2 again "analysis tools" have not been identified.
No
Until the tools are identified, it is premature to insert a placeholder in a mandatory standard; this also applies to the violation severity levels table.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Group
PJM Interconnection
Patrick Brown
PJM Intercinnection
Yes
We agree with the revisions, but recommend adding applicability to Distribution Providers and Generator Operators for data retention requirements.
Yes
M4 should be revised to reflect that each Distribution Provider and Generation Operator has evidence demonstrating the functionality of telecommunications facilities with the TOP and BA for the exchange of interconnection and operating information.
No
Recommend the following VSLs for R1: Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on at least one occasion. Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on two separate occasions. Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on three separate occasions. Proposed Severe VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three

months on more than three separate occasions. Recommend the following VSLs for R2: Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on at least one occasion. Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on two separate occasions. Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on three separate occasions. Proposed Severe VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on more than three separate occasions. Recommend the following VSLs for R4: Proposed High VSL: The Responsible Entity failed to establish telecommunications with either their Balancing Authority or Transmission Operator for the exchange of Interconnection and operating information. Proposed Severe VSL: The Responsible Entity failed to establish telecommunications with their Balancing Authority and Transmission Operator for the exchange of Interconnection and operating information.

Yes

We note that this requirement really is "3-part communication" and will be moved to the new communications standard, COM-003-1.

Yes

No

The word "clear" is redundantly used in the High and Severe columns. Recommend that "Moderate" should read: "The Responsible Entity provided a directive in a clear, concise and definitive manner, but did not require the recipient to repeat the directive back to the originator." Recommend that "High" should read: "The Responsible Entity failed to issue a directive in a clear, concise and definitive manner while ensuring the recipient of the directive repeated the information back correctly with acknowledgment by the originator that the response was correct." Recommend that "Severe" should read: "The Responsible Entity failed on more than one occasion to issue a directive in a clear, concise and definitive manner while ensuring the recipient of the directive repeated the information back correctly with acknowledgment by the originator that the response was correct."

Yes

Yes

Yes

Yes

Yes

Yes

Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Group
#2 Standards Interface Subcommittee/Compliance Elements Development Resource Pool
John Blazekovich
Commonwealth Edison Co.
Standard – COM-001-2 Telecommunications Requirement 1: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall operationally test, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. Proposed Measure: Each Reliability

Coordinator, Transmission Operator, and Balancing Authority shall provide evidence that it operationally tested, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. Attributes of the requirement Binary Quarterly operational tests of alternate telecommunications Timing X Omission Communication Quality X Other SDT Proposed Lower VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last quarter. CEDRP Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in one of the previous four quarters. SDT Proposed Moderate VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 2 quarters. CEDRP Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in two of the previous four quarters. SDT Proposed High VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 3 quarters. CEDRP Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in three of the previous four quarters. SDT Proposed Severe VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 4 quarters. CEDRP Proposed Severe VSL: The Responsible Entity failed to operationally test alternative telecommunications every quarter on more than three separate occasions (i.e. more than any three different quarters). FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? Yes 3. Is it truly a “binary” requirement? Yes 4. If yes, is the VSL assignment consistent with other binary requirement assignments? Yes 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard – COM-001-2 Telecommunications Requirement 2: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities of the failure of its normal telecommunications facilities, and shall verify that alternate means of telecommunications are functional. Proposed Measure: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide evidence that it notified impacted entities of failure of their normal telecommunications facilities, and verified the alternate means of telecommunications were functional. Attributes of the requirement Binary Timing Notify impacted entities and verify functionality of alternate telecommunications Omission Communication X Quality Other - Test X Discussion - This requirement needs to be re-written to be more clearly define who the entities are that are “impacted.” The key attributes appear to be notification of ALL (communication) impacted entities (possible omission if some, but not all are not notified). The requirement does not give any guidance on the “verification” side – this is a problem, one entity can interpret that to mean “we looked and it was working”, another may be to verify with all impacted entities that alternate communication is working. We suggest this requirement needs a little more clarification. The CEDRP does not feel it can write a valid VSL for this requirement as currently worded. SDT Proposed Lower VSL: The Reliability Coordinator, Transmission Operator or Balancing Authority notified all impacted entities of the failure of their normal telecommunications facilities, but failed to

verify the alternate means of telecommunications are functional. CEDRP Proposed Lower VSL: See Discussion SDT Proposed Moderate VSL: The Reliability Coordinator, Transmission Operator or Balancing Authority notified some, but not all, impacted entities of the failure of their normal telecommunications facilities, and failed to verify the alternate means of telecommunications are functional. CEDRP Proposed Moderate VSL: See Discussion SDT Proposed High VSL: N/A CEDRP Proposed High VSL: See Discussion SDT Proposed Severe VSL: The Reliability Coordinator, Transmission Operator or Balancing Authority failed to notify any impacted entities of the failure of their normal telecommunications facilities, and failed verify the alternate means of telecommunications are functional. CEDRP Proposed Severe VSL: See Discussion FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a “binary” requirement? No 4. If yes, is the VSL assignment consistent with other binary requirement assignments? N/A 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard – COM-001-2 Telecommunications Requirement 3: Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. Proposed Measure: The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. Attributes of the requirement Binary Use English for real-time communications unless agreed to otherwise. NOTE: OK with this as is because the requirement and VSLs have been re-written, will be removed from this standard shortly, and included in the new COM-003-1 standard. Timing Omission Communication X Quality Other SDT Proposed Lower VSL: N/A CEDRP Proposed Lower VSL: No change SDT Proposed Moderate VSL: N/A CEDRP Proposed Moderate VSL: No change SDT Proposed High VSL: N/A CEDRP Proposed High VSL: No change SDT Proposed Severe VSL: The responsible entity failed to provide evidence of concurrence to use a language other than English for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. CEDRP Proposed Severe VSL: The Responsible Entity failed to provide evidence of the concurrence to use a language other than English for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? Yes 3. Is it truly a “binary” requirement? Yes 4. If yes, is the VSL assignment consistent with other binary requirement assignments? It’s a little inflated as being Severe 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? It’s OK for

the interim 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard – COM-001-2 Telecommunications Requirement 4: Each Distribution Provider and Generation Operator shall have telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. Proposed Measure: Each Distribution Provider and Generation Operator has telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. Attributes of the requirement Binary “has” telecomm with TOP and BA Timing Omission Communication X Quality Other Discussion – Telecommunication Facilities is ambiguous and is not included in the NERC glossary of terms – the CEDRP recommend deleting the word “facilities” from the requirement and measure and leaving it just as “telecommunications” with its TOP and BA . SDT Proposed Lower VSL: N/A CEDRP Proposed Lower VSL: No change SDT Proposed Moderate VSL: N/A CEDRP Proposed Moderate VSL: No change SDT Proposed High VSL: N/A CEDRP Proposed High VSL: The Responsible Entity failed to establish telecommunications with either their Balancing Authority OR Transmission Operator for the exchange of Interconnection and operating information. SDT Proposed Severe VSL: The Distribution Provider or Generation Operator failed to have telecommunications facilities with its Transmission Operator and Balancing Authority CEDRP Proposed Severe VSL: The Responsible Entity failed to establish telecommunications with their Balancing Authority AND Transmission Operator for the exchange of Interconnection and operating information. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? Mostly 3. Is it truly a “binary” requirement? Mostly 4. If yes, is the VSL assignment consistent with other binary requirement assignments? Yes 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes, considering the wording of the requirement as written. More specifically, the word “have” as used in the requirement is a bit vague. A better choice could have been, “established and maintains.” 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard: COM-002-3 Communications and Coordination Requirement 1: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall issue directives in a clear, concise, and definitive manner; shall ensure the recipient of the directive repeats the information back correctly; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. Proposed Measure: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have evidence such as voice recordings or transcripts of voice recordings to show that it issued directives in a clear, concise, and definitive manner; ensured the recipient of the directive repeated the information back correctly; and acknowledged the response as correct or repeated the original statement to resolve any misunderstandings. Attributes of the requirement: Binary Timing Omission Communication X Quality X Other SDT Proposed Lower VSL: None CEDRP Proposed Lower VSL: No Comment SDT Proposed Moderate VSL: The responsible entity provided a clear directive in a clear, concise and definitive manner and required the recipient to repeat the directive, but did not acknowledge the recipient was correct in the repeated directive. CEDRP Proposed Moderate VSL: No comment SDT Proposed High VSL: The responsible entity provided a clear directive in a clear, concise and definitive manner, but did not require the recipient to repeat the directive. CEDRP

Proposed High VSL: No comment SDT Proposed Severe VSL: The responsible entity failed to provide a clear directive in a clear, concise and definitive manner when required. CEDRP Proposed Severe VSL: No comment FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a "binary" requirement? No 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes and No (Severe is for multiple occasions of not issuing directives per the requirement).

Individual

Timothy C. (TC) Thomas

Progress Energy Carolinas

No

R1- The proposed requirement R1 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set. R2 - The proposed requirement R2 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set. R4 - The proposed requirement R4 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set.

No

M1 - The proposed measure M1 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set. M2 - The proposed measure M2 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set. M4 - The proposed measure M4 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA

EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set.

Group

FirstEnergy

Sam Ciccone

FirstEnergy Corp.

No

Purpose - The purpose does not include the GOP and DP entities. It may be better if the purpose was written more generally as "To ensure adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information necessary to maintain BES reliability". R1 - This requirement makes no distinction between data and voice communications facilities and assumes a designated primary and backup facility configuration such that the backup communications systems are not used regularly. This may be an accurate assumption for data communications; however voice communications may be different. Today many organizations use voice communications systems that allow the system to choose the communication path each time a call is placed. This design ensures that all communications paths are tested regularly in day-to-day use. However, the design of these systems makes it difficult, if not impossible, to substantiate that a functional test of the circuitry has been performed. This requirement should be broken into two requirements. The first should cover data circuitry and the second should cover voice circuitry. This will allow the drafting team to address the inherent differences in these two methods of communications. Lastly, the requirements need to be much more specific concerning the criticality of the facilities to be tested to improve the measurability of the standard. The drafting team dropped the phrase "for the exchange of Interconnection and operating data" from the standard requirement. This deletion appears to open the application of this standard to virtually every communication path



used by an RC, BA, TOP whether or not it is used for communicating real-time operating information or not. We do not believe this was the intention of the drafting team and suggest this phrase be reinserted or another one added that limits applicability to only those communication paths that support the real-time reliability of the bulk electric system. R2 - It is not clear who the "impacted entities" would be in this requirement. The SDT should consider specifying these entities. R3 - The last sentence of this requirement should be deleted. It is not a requirement, it does not add clarity, and the first sentence is very specific as to the communications covered by the requirement. R4 - This requirement makes no distinction between data and voice communications facilities and assumes a designated primary and backup facility configuration such that the backup communications systems are not used regularly. This may be an accurate assumption for data communications; however voice communications may be different. Today many organizations use voice communications systems that allow the system to choose the communication path each time a call is placed. This design ensures that all communications paths are tested regularly in day-to-day use. However, the design of these systems makes it difficult, if not impossible, to substantiate that a functional test of the circuitry has been performed. This requirement should be broken into two requirements. The first should cover data circuitry and the second should cover voice circuitry. This will allow the drafting team to address the inherent differences in these two methods of communication.

No

The measures should be modified per our suggested modifications in question 1.

No

The VSL should be modified per our suggested modifications in question 1. R1 VSL - The statement in the VSL that the responsible entity did not "operationally test" is too broad. It should be more specific with the language used in the requirement.

No

Purpose - The GOP is still shown in the purpose statement although it was removed from the applicability. Also, it may be better if the purpose was written more generally as "To ensure adequate communications capabilities for addressing real-time emergency conditions and ensure communications by operating personnel are effective to maintain BES reliability".  
Applicability - In the SDT's document "Scope of Work Assigned to the Reliability Coordination Standard Drafting Team", the team decided to not include the FERC directive to include the DP in the applicability with the following reasoning "The proposed revisions do not include the DP entity because they are not applicable." We would like clarification on this. R1 - It does not appear that the implementation plan addresses the FERC direction to consider comments from Santa Clara, FirstEnergy, and Six Cities per 693 par. 539 regarding staffing requirements. Santa Clara asks that these requirements apply "only to operating staff available on site at all times or includes repair personnel who are available only on an on-call basis". FirstEnergy asks that the "term [staffed] should not require a physical presence at all facilities at all times because some units, such as peaking units, are not staffed 24 hours a day". FirstEnergy also suggest "because nuclear units are already subject to communications requirements in their operating procedures, their compliance with NRC operating procedures should be deemed in compliance with the NERC Reliability Standards". Six Cities "states that, to avoid unnecessary staffing burdens, particularly for smaller entities, the Commission should direct NERC to clarify COM-002-2 by providing that identification of an emergency contact

person on call to respond to real-time emergency conditions will constitute adequate compliance". R1 - Just as an FYI, with regard to the proposed replacement requirement statement in the implementation plan: "TOP-005-1, R1 and R3 require adequate telecommunications for BAs and TOPs to provide each other with operating data as well as providing data to the RC", per recently stakeholder approved ballots, R1 of TOP-005-1 has been retired and now covered in new standard IRO-010-1. R1.1 - The existing requirement includes "through predetermined communication paths of any condition that could threaten the reliability of its area or when firm load shedding is anticipated". The proposed replacement requirements do not address the need for "predetermined communication paths".

No

The measures should be modified if our comments in question 4 result in changes to the proposed requirements.

No

The VSL should be modified if our comments in question 4 result in changes to the proposed requirements.

No

R3 - should be a sub requirement of R2. These two requirements are sequential in nature and should be measured at the same time. The VRFs and Time Horizons are the same for both requirements lending to their combination into a requirement with a sub requirement. In the VSL for R2, an entity is being penalized with a high severity level for not completely following an RC directive even though it violated safety, equipment, statutory, or regulatory requirements. Measuring R2 and R3 at the same time allows for the process to complete prior to the measurement taking place. R3 - The "or" between "Distribution Provider" and "Purchasing-Selling Entity" should be replaced with an "and". R4 - Should be revised by adding the phrase "of the expected or actual threat" to the end of the requirement to add clarity. Existing R7 requirement - This requirement is proposed for retirement because it is redundant with IRO-014-1 R1. However, it is not clear how the existing requirement to "have clear, comprehensive coordination agreements with adjacent RCs to ensure that SOL or IROL violation mitigation requiring actions in adjacent RC areas are coordinated" is covered in IRO-014-1 R1. IRO-014-1 R1 requires agreements for coordination of actions between RCs to support Interconnection reliability, but it does not specifically require "clear" and "comprehensive" agreements to mitigate SOL or IROL violations. IRO-014-1 only vaguely covers the existing requirement R7 of IRO-001-1.

No

M2 - The word "intentional" should be added between "without" and "delay".

No

R2 VSL - The Severe VSL should include after the word directive: "that would not violate safety, equipment, statutory or regulatory requirements".

No

R2 - As written, this requirement does not clearly define the scope of the authority of the Reliability Coordinator over analysis tools. Is it the intent of the drafting team to give the RC authority over analysis tools owned and operated by the RC. Is it the intent of the drafting team to give the RC authority over the analysis tools owned and operated by the BA, TOP, GOP, etc.? Are the tools intended to be the real-time (EMS) or the off-line engineering planning

analysis tools or any analysis tool used in real-time. Does this include the analysis tools used by field personnel? This requirement should be revised to specify exactly the analysis tools under the authority of the Reliability Coordinator.

No

The measures should be modified per our suggested modifications in question 10.

No

The VSL should be modified per our suggested modifications in question 10.

Yes

No

R1 - Should be revised as follows to improve readability and clarity: R1.3 - Add "Exchanging" before "Planned" R1.4 - Add "Control of voltage" at the beginning of the requirement and delete "for voltage control" at the end of the requirement. Add a new R1.7 as follows: "A process for resolution of the disagreement covered by R6 of this standard."

No

The measures should be modified per our suggested modifications in question 14.

No

The VSL should be modified per our suggested modifications in question 14.

Yes

Yes

Group

Bonneville Power Administration

Denise Koehn

Transmission Reliability Program

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Individual
Greg Rowland
Duke Energy
No
Purpose - The purpose statement does not read very well. It either needs another sentence or changes to the current sentence. The purpose of the standard is to assure proper communications, not to suggest entities need proper communications as currently written. Suggest changing to, "To assure each Reliability Coordinator, Transmission Operator and Balancing Authority develops and maintains.... Requirement R1 - What is the definition of "alternative telecommunications facilities"? Is there another requirement somewhere to have alternative telecommunications facilities – or is this a new requirement being introduced by this standard? What is the relationship, if any, between "alternative telecommunications facilities" and EOP-008-1? What is the requirement for maintaining and testing "alternative telecommunications facilities"; what does “operationally test” mean? Just because an alternative facility works when it is tested does not mean it will work during an actual failure of the primary system. Furthermore, what do we do if the “test” fails- are we still compliant? The word “ensure” needs to be changed to “assure”. Requirement R2 - What does "impacted entity"

mean? Requirement R3 - Why can't others use alternate language – this limits alternate language to just TOPs and BAs internal operations. TOs, GOPs, and others may want to use alternate language internally. Need to define language to be used with and between other relationships – BA to PSE, as an example. Is this a reliability issue or a certification issue? Simply state that: “Entities may use alternative language for internal operations”. This will allow any entity to use alternative language for internal operations. The inclusion of TSPs, LSEs, and PSEs in IRO-001-2 indicates the need to include these functions in the COM-001-2 applicability and requirements concerning the use of English as the approved language. Requirement R4 - Remove R4 and add DP and GO, as well as all of the other entities listed in IRO-001-2, to R1 thru R3.

No

General comments - Not using consistent language regarding “provide evidence” and “shall have and provide upon request evidence”. Also need to add corresponding requirement number after each measure. Measure M1 - Just because an alternate facility works when it is tested does not mean it will work during an actual failure of the primary system. - what do we do if the “test” fails- are we complaint? Clarify that the requirement and measure is to “test” not "to test successfully". We may test and find that something does not work as expected.

No

VSL for Requirement R1 - The VSL for R1 seems to imply that an operational test needs to have been performed in the last 90 days – this is read in conjunction with the data retention requirements. Need to clarify in the requirement how “quarter basis” is defined - is it the calendar quarter, or a rolling 90 days? In addition, the VSLs for Requirement R1 appear to violate NERC guidelines, since the Moderate, High and Severe VSLs are based upon cumulative violations of the Lower VSL.

No

Requirement R1 - As defined by Merriam Webster, the use of the word “ensure” implies virtual guarantee <the government has ensured the safety of the refugees>; while the use of the alternative word “assure” implies the removal of doubt and suspense from a person's mind. We suggest that “assure” is more appropriate than “ensure” in this context in the standards. The use of words like “clear, concise, and definitive manner” is subject to interpretation. This same language is used in the VSLs. Depending on the interpretation of this phrase, an entity could be found to be in a “Severe” violation level. The issuer of the directive should not be subject to non-compliance if the recipient of the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back. The inclusion of TSPs, LSEs, and PSEs in IRO-001-2 indicates the need to include these functions in the COM-002-3 requirement concerning repeat-backs. What is a “directive”? The regional compliance processes are having difficulty in auditing this existing standard due to lack of clarity of what constitutes a directive. "Directive" should be defined as being associated with real-time operational emergency conditions, and not ordinary day-to-day communications. Otherwise a VRF of High is not warranted.

No

The use of words like “clear, concise, and definitive manner” is subject to interpretation. The issuer of the directive should not be subject to non-compliance if the recipient of the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back.

No

The use of words like “clear, concise, and definitive manner” is subject to interpretation. The issuer of the directive should not be subject to non-compliance if the recipient of the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back.

No

Requirement R1 - What happens if the RC failed to recognize that such an event was happening as opposed to failed to take action. Is this intended to cover both scenarios? The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision development of this definition needs to go thru Due Process. The inclusion of TSPs, LSEs, and PSEs here indicates the need to include these functions in the COM-001-2 requirements concerning the use of English as the approved language. In addition, this also indicates the need for all of these listed entities to be included in COM-002-3 requirements concerning repeat-backs. The RC, TOP, and BA should not be placed in a possible non-complaint state because the counter party refuses a repeat-back AND these requirements are not applicable to the counter party. Requirement R2 - The language in the Moderate VSL of R2 recognizes another potential reason for delay in execution of a directive. Requirement 2 of the Standards needs to be modified to also recognize this potential. Requirements R2 and R3 - Clarify that entities are obligated to take action and confirm directives only from their Reliability Coordinators, not from any Reliability Coordinator. Requirements R2, R3, R4, R5 - Inconsistent use of “timing” words in the standards – “without intentional delay” and “immediately”. Suggest deleting these words due to the difficulty of determining compliance. Requirement R4 - The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process. Requirement R5 - The VRF should be “Lower” instead of “High” since the notification is that the threat has been mitigated. Also, the term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process.

No

Measures M2, M4 and M5 use the terms “without delay” and “without intentional delay”. Suggest deleting these words due to the difficulty of determining compliance. The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process.

No

The language in R1 of the VSL is not consistent with the requirements and measures in the standard. The VSL needs to recognize that the RC may EITHER act or give direction to others to act. The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process. The language in R2 of the VSL places an entity in Moderate or High violation level even if failure is “allowed” in the standard; i.e. failure to act is due to violation of safety, regulatory, statutory requirements. The language in R2 of the VSL recognizes another potential reason for delay in execution of a directive. Requirement R2 of the Standard needs to be modified to also recognize this potential.

No

Requirement R1 - This requirement is in the wrong standard – this is a Facilities standard. This requirement belongs in another standard. Question: Is there a requirement in another standard that compels the TOPS, BAs, etc to provide the requested data? Requirement R2 - Need to clarify whose analysis tools (I assume it is the RCs analysis tools, not the analysis tools of another entity) and planned maintenance to what – is it tools, facilities, transmission, generation, etc. Depending on the answer above, this requirement is in the wrong standard – this is a Facilities standard. This requirement belongs in another standard. Question: Where is the Requirement for the RC to have analysis tools? It appears that the Requirement the RC has analysis tools have been removed in the revisions to the standard.

No

See response to Question #12 above. If the requirements are moved to another standard, the measures aren't needed here.

No

R1 VSL - As a general comment, this VSL is unclear and would be difficult to audit. This VSL uses subjective terms like “material impact” and “minimal impact”. These terms are not used in the associated requirement or measure and should be removed from the VSL. This VSL uses terms like “majority, but not all”; “some, but less than a majority” which provides an opportunity for a subjective review by Compliance as to what a complete listing of data requirements should be. This term is not used in the Requirements or Measures and should be removed from the VSL. This VSL introduces a concept, data the RC needs for “ ... administrative purposes, such as data reporting ...”. This concept is not included in the Requirements or Measures portions of the Standard and should be removed from the VSL. This VSL should be written to simply assess whether the RC has made determination of what its data needs are and whether those needs have been communicated to the entities in the footprint. R2 VSL - This VSL clarifies the questions posed above regarding what the RC needs approval rights over. R2 needs to be modified to include this clarity. This VSL needs to clarify that the RC approval rights are for the RC's tools, not tools of other entities. The Severe level of this VSL needs to be re-written along the lines of: The RC does not have approval rights for planned maintenance or outages to its analysis tools.

Yes

No

R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC? We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows: R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken. We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly. R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous". We suggest rewriting R5 to

read: In the event that an operating issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists.
No
See comment #14 above. Also, Measure M5 is inconsistent with Requirement R5. It should mirror the requirement. Also, need to add the requirement number at the end of each Measure.
No
See comments #14 and #15 above - VSLs need to be revised to correspond to the revised Requirements and Measures.
Yes
No
See comment #14 above regarding re-write needed for Requirement R6 of IRO-014-2.
Individual
Thad Ness
AEP
No
A precise definition of telecommunications facilities needs to be established in this standard. R2 needs to be clarified regarding impacted utilities. FERC Order 693 suggests that this standard should apply Distribution Providers (DP) along with Generation Operators (GOP). AEP acknowledges that there needs to be some level of coordination and communication between DP's and other function model entities; however, the requirements, as applied to the DP, for telecommunications with the TOP and BA might not address the current communication paths adequately. Today, the DP usually does not communicate with the RTO (performing the BA and/or TOP function), but the DP could either communicate directly or through a joint action agency to the IOU that may serve as the TO (or maybe the TOP). As this draft is written the DP's would be required to have telecommunication facilities with the RTO in this scenario. There will likely be many exceptions to the rule that the requirements and measures create when applied to the DP. We ask that the drafting team consider the applicability, some of the current channels of communications, and options for addressing the FERC comments without creating telecommunication paths that do not make practical sense.
No
M2 needs to be clarified regarding impacted functions.
Yes
Yes
Yes
Yes
Yes



Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Individual
Chris de Graffenried
Consolidated Edison Co. of NY, Inc.
Yes and No
Wording in question: R.2/M.2 Each ... Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without intentional delay to comply with the Reliability Coordinator's directives. R.3/M.3 Each ... Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it confirmed its ability to comply with the Reliability Coordinator's directives. [1] Question: Is this wording absolutely necessary? And then, is it sufficient, if needed? Comment: First, we would question whether there is a specific need to include this

wording. Is the IRO-001 Reliability Standard sufficient without it? [2] Question: Is this wording unambiguous? Comment: The wording seems somewhat vague and ambiguous. Analysis: The wording appears to establish performance standards ("without intentional delay", "shall immediately confirm") and evidentiary requirements ("evidence that it acted" or "evidence that it confirmed"), but without using pre-existing defined terms, establishing new defined terms, or defining these terms as used in context. [3] Intentional vs. Unintentional, Valid Intentional vs. Inappropriate Intentional? How does one differentiate between intentional and unintentional delay? When is and how much delay is valid or inappropriate? Isn't some intentional delay necessary to ensure that the other parts of the requirement being are met, e.g., "... unless such actions would violate safety, equipment, or regulatory or statutory requirements"? Mightn't some acceptable amount of valid intentional delay be necessary to insure that any such RC directive and entity action would not in fact violate these safety, equipment, or regulatory or statutory requirements? [4] What is the timeliness standard? How are the terms "without delay" and "immediately conform" defined? What standard commercial measures would apply, e.g., "reasonable efforts" vs. "best efforts?" Are these terms measured in units of time (seconds or minutes) or in units of performance quality? Does a poorly considered "immediate" reply meet the standard, while a well considered reply, which is intentionally delayed, yet still appropriate, fail to meet this standard? Is that the best outcome? [5] What is this Evidentiary Standard? Is the sought-after "evidence" sufficiently well defined, e.g., phone logs, computer e-mail, control center computer logs, hand-written operator journals, etc.? What form of evidence is necessary and sufficient to demonstrate that the entity met this evidentiary standard? How is failure to meet this uncertain standard measured, judged and penalized?

Yes and No

[Comments repeated for Measures] Wording in question: R.2/M.2 Each ... Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without intentional delay to comply with the Reliability Coordinator's directives. R.3/M.3 Each ... Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it confirmed its ability to comply with the Reliability Coordinator's directives. [1] Question: Is this wording absolutely necessary? And then, is it sufficient, if needed? Comment: First, we would question whether there is a specific need to include this wording. Is the IRO-001 Reliability Standard sufficient without it? [2] Question: Is this wording unambiguous? Comment: The wording seems somewhat vague and ambiguous. Analysis: The wording appears to establish performance standards ("without intentional delay", "shall immediately confirm") and evidentiary requirements ("evidence that it acted" or "evidence that it confirmed"), but without using pre-existing defined terms, establishing new defined terms, or defining these terms as used in context. [3] Intentional vs. Unintentional, Valid Intentional vs. Inappropriate Intentional? How does one differentiate between intentional and unintentional delay? When is and how much delay is valid or inappropriate? Isn't some intentional delay necessary to ensure that the other parts of the requirement being are met, e.g., "... unless such actions would violate safety, equipment, or regulatory or statutory requirements"? Mightn't some acceptable amount of valid intentional delay be necessary to insure that any such RC directive and entity action would not in fact violate these safety, equipment, or regulatory or statutory requirements? [4] What is the timeliness standard? How are the terms "without delay" and "immediately conform" defined? What standard commercial measures would apply, e.g., "reasonable efforts" vs. "best efforts?" Are these terms measured in units of time (seconds or minutes) or in units of performance

quality? Does a poorly considered “immediate” reply meet the standard, while a well considered reply, which is intentionally delayed, yet still appropriate, fail to meet this standard? Is that the best outcome? [5] What is this Evidentiary Standard? Is the sought-after “evidence” sufficiently well defined, e.g., phone logs, computer e-mail, control center computer logs, hand-written operator journals, etc.? What form of evidence is necessary and sufficient to demonstrate that the entity met this evidentiary standard? How is failure to meet this uncertain standard measured, judged and penalized?

Yes and No

Agreement uncertain, subject to further clarification of Requirements and Measures performance standards and definitions (see our comments on Requirements and Measures). Without clearer definitions, e.g., for "immediate," or any allowance for appropriate intentional delay, it is not entirely clear that the VSL's comport with the ultimate meaning, intent and needed wording to be incorporated into the Requirements and Measures. Why would failure to fully comply, when precluded by conditions specifically allowed in the standard, necessarily be a problem, so long as the RC received timely notice, however defined?

Individual

Kevin Koloini

Buckeye Power, Inc.

Yes and No

What constitutes "telecommunications facilities"?

Yes and No

abstain

Yes and No

abstain

Yes and No

abstain

Yes and No

abstain

Yes and No

abstain

Yes and No

abstain
Yes and No
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Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
Individual
Jason Shaver
American Transmission Company
Yes and No
If some language is clarified, we support the revisions. R2 states that "Each TO shall notify impacted entities of the failure of its normal telecommunications facilities...". If a phone line goes down and an alternate phone line is used, it is an excessive requirement to notify the impacted entities when there is no impact upon communication or the BES. The wording should be clear that notification is only required if an alternate means of communication is necessary. A defined timeframe for notification should be added to the requirement. It is possible that the loss of telecommunication facilities can occur without the loss of a control center. So, the redundancy with EOP-008 to R4 should be clarified.
No
M2 should be changed to reflect the comments noted in Question 1 for R2.
Yes
Based upon revisions to Question 1.

Yes
Yes and No
As long as the measurement of compliance does not include proving the negative, that no directives were issued.
No
R1-High VSL-If the directive was followed and there was no threat to the BES, then a lack of repetition of the directive does not constitute a "high" VSL. Suggest that this be a low or moderate VSL.
No
R2 refers to "intentional delay". The determination of intent should be left to the VSL portion of the standard, not the requirement portion.
Yes
If some language is changed, we support the revisions. R2 has language in it that should be added to M4 to be consistent. In M2, we propose adding language "unless such actions would violate safety, statutory or regulatory requirements."
No
VSL's for R2 and R3 are not appropriate. In order to assess a situation we may not be able to immediately inform the RC of our ability to comply with the directive. The high VSL for R2 currently states that if we do not follow the directive because of safety, statutory or regulatory requirements, it is a high VSL. An entity should not be penalized for not breaking the law.
Abstain.
Abstain.
Abstain.
No
The accountability and monitoring addressed in this Standard is still required. The drafting team's intent was that the ability to monitor is part of the certification process. However, certification is to Standards, and if there is not a Standard which addresses this issue, then an entity cannot certify to it.
Abstain
Abstain
Abstain
Abstain
Abstain
Group
ISO/RTO Council Standards Review Subcommittee
Charles Yeung
SPP
Yes and No

We suggest that a definition of telecommunications be written by the drafting team because it is not clear what all telecommunications is intended to be included. Does this requirement apply to data, voice, rtus, networks, etc? For requirement R2, e suggest that you strike the final clause: "and shall verify that alternate means of telecommunications are functional." It is obviated by the requirement to notify impacted parties. The responsible entity is already implicitly required to verify its alternate means of communication is functional since it is required to notify its impacted parties of the failure of its normal telecommunications. It can't notify its impacted parties if the alternate communications means are not functional. The VRF for new requirement 1 should be lower. It does not fit the definition of a medium VRF. A medium VRF requires that a violation of the requirement directly affect the state or capability or the ability to effectively monitor and control. Failure to test does not result in directly affecting the state or capability or the ability to effectively monitor and control. At a minimum, a failure of the alternative communication systems and primary communication systems must occur first. The failure to perform a single test in a given quarter does not mean that primary and alternative communication systems will fail. Thus, testing is really an administrative issue and should thus be a lower VRF. In the Data Retention section, Distribution Provider and Generation Operators should be added. Currently, there are no data retention requirements listed for them. Suggest modifying the language regarding data retention for compliance violations to: "... is found in violation of a requirement, it shall keep information related to the violation until it the Compliance Enforcement Authority finds it compliant."

Yes and No

M3: The evidence to show that concurrence is in place to allow communication using a language other than English is missing. The Measure as written merely asks for evidence that communication in a different language has occurred.

No

The VSLs as defined for Requirement 1 appear to violate Guideline 4 that the Commission established in their "Order on Violation Severity Levels Proposed by the Electric Reliability Organization". Guideline 4 requires that a VSL should be based on a single violation. The VSLs as defined accumulate the number of consecutive quarters. This would imply that a single violation could last more than a year and that the compliance auditor could not determine sanctions until the entity becomes compliant or year has passed. A single violation appears to be the failure to test in a single quarter. This requirement is binary in nature in that it is either met or it isn't. We suggest that only a lower VSL should be defined as: "The RC, TOP, or BA failed to test the backup telecommunication facilities for a single calendar quarter." The Lower VSL for R2 is not possible. The act of notifying all impacted entities of the failure of their primary telecommunication system requires the use of the alternative telecommunications systems which is a form of verifying that the alternative telecommunications facilities are functional. The drafting team should consider applying the numeric performance category of the VSL Development Guideline Criteria for R2. (i) R1: Suggest to revise the conditions for all levels to read "...failed to operationally test the alternative communication facilities within the last..... (ii) R2: The second part under Severe is not needed since failing to notify any impacted entities would imply no communication to the affected entities anyway. If verification of the functionality of the alternate means of telecommunications is also critical even without communicating to the affected entities, then the second condition should be an "OR". (iii) R3: Failure to having concurrence to use a language other than English for

communications between and among operating personnel responsible for real-time operations by itself does not constitute a violation of any requirements; it is the absence of such a concurrence AND having used a language other than English that would constitute a violation. Suggest to revise this condition.

Yes

Yes

Yes

Yes and No

New requirement R2 should omit act without intentional delay. Use of intentional implies willful disregard for compliance for the requirement. Intention should not be addressed as part of the compliance with the requirement but rather through the enforcement process once the compliance auditor has identified a violation. The word immediately should be removed from the new R3. This attempts to time frame the response of the responsible entity and remove the judgment from the compliance auditor. We agree with the concept of doing this but in reality it only confuses the issue and the compliance auditor will likely apply his judgment regarding what immediate is anyway. Additionally, the requirement attempts to separate the act of confirming that the responsible entity can take the action from notifying the RC that the entity can't take the action. This is not logical. What RC is going to request a responsible entity to take action that would violate safety, equipment, statutory, or regulatory requirements? The RC should already be aware of those requirements and likely won't direct actions that violate them. Thus, the likely scenario is that the responsible entity will attempt to take action and discover that equipment is not functioning properly and thus notify the RC. We suggest striking the "shall immediately confirm the ability to comply with the directive or" from the requirement. This part of the requirement is not needed because the responsible entity is already obligated to follow the RCs directive (see order 693.) Thus, the assumption is that the order will be followed unless it can't be followed because it will violate safety, equipment, statutory, or regulatory requirements. Requirements R4 and R5 are unnecessary. New R1 requires the RC to direct actions to be taken by the TOP, BA, GOP, TSP, LSE, DP and PSE to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. The RC can't direct these actions without notifying all impacted TOPs and BAs. They would also have to notify them when actions are no longer necessary. The VRF for R5 should not be High. Failure to notify others when potential threats to system reliability have been mitigated does not constitute a high risk to the interconnected system. We suggest it be reduced to a Medium (i.e., that it affects control of the BES).

No

The R1 High and Severe VSL appear to differ only by the inclusion of directing actions in Severe. From a practical perspective, what is the difference between directing actions and acting? We don't believe there is any. The actions are the result of the RC authority whether the RC takes the actions themselves or directs someone else to. We suggest a better alternative for the VSL levels would be for the High level to reflect that the RC did not act or direct actions to

prevent an Adverse Reliability Impact and Severe would be that the RC did not act or direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact. The moderate VSL for R2 is not practical and too subjective. What constitutes a delay? What if the responsible entity takes five minutes to determine how to carry out the action or if their equipment currently is capable of carrying out the action? Is this a delay? We suggest striking this Moderate VSL. The High VSL does not agree with the requirement. It considers the inability to fully follow an RC directive due to a violation of the safety, equipment, statutory, or regulatory requirements a violation. This is in direct conflict with the requirement. We suggest that the High VSL should be struck. We suggest the Severe VSL should be that the responsible entity failed to follow the RC directive and it would not have violated the safety, equipment, statutory or regulatory requirements. Currently, the Severe category does not allow that the responsible entity may not be able to carry out the directive due to the violation of safety, equipment, statutory, or regulatory requirements. In question 7, we request that the drafting team strike part of requirement 3. The striking of that portion of requirement 3 obviates the lower VSL. In paragraph 27 of the ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION, the Commission expresses "that, as a general rule, gradated Violation Severity Levels, wherever possible, would be preferable to binary Violation Severity Levels". Given that it is possible to define gradated VSLs for R4 and R5, we suggest that the drafting team should consider applying the numeric performance category of the Violation Severity Levels Development Guidelines Criteria based on the number of impacted TOPs and BAs that were notified.

No

New Requirement R2 is no longer needed as a result of paragraph 112 in Order 693-A. Since the RC's "authority to issue directives arises out of the Commission's approval of Reliability Standards" the RC already has veto authority or will have once R1 IRO-001-2 is approved. This requirement obligates the RC to take actions or direct actions to prevent Adverse Reliability Impacts. Veto outages of equipment and analysis tools would fall into this category even if the RC couldn't say for certain that an Adverse Reliability Impact was going to occur but rather they are concerned one could occur due to heavy loads for example.

No

Measure 1 should not focus on a letter as evidence. A more appropriate measure would be a data specification document and actual verification that data has been received. The letter or equivalent is only needed if data has not been supplied. Demonstration of the actual receipt the data would be easy.

No

For R1, the lower VSL contradicts itself. It states that RC demonstrated that it determined its data requirements and requested that data and then follows with that it didn't request that data. The second option in the Lower VSL category is not practical and a compliance auditor would not be in a position to determine this. In fact, if the administrative data is not requested, other administrative requirements for reporting would be violated. Additionally, it does not make sense that an RC would determine its data needs and then omit data for administrative reporting. Further, is it the compliance auditor's job to judge if the data the RC requests is sufficient or is it his job to see that the RC has met the requirement to define the data? The remaining VSLs imply that the RC may define only partial data requirements. This does not seem likely. Why would the RC do this? This VSL appears to add to the requirement by



making it appear that the compliance auditor is to judge the completeness of the data requirement. This violates Guideline 3 of the FERC ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION. Practically, it would not be enforceable anyway. It would require the RC to admit that they did not include administrative data in the their data requirements. It is doubtful this would happen because the RC likely believes they prepared a complete data requirement document. We suggest that the VSLs should be: Severe: The RC did not determine it data requirements or the RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be deomstrated for greater than 75 to 100% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. High: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be deomstrated for greater than 50 and less than or equal to 75% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Medium: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be deomstrated for greater than 25% and less than or equal to 50% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Lower: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be deomstrated for greater than 0% and less than or equal to 25% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. R2 VSLs are not needed er paragraph 112 of Order 693-A. The Severe VSL contradicts the requirement.

No

Please strike "as a minimum" in R1. By definition, the requirement defines the minimum. Please strike R1.6. RCs already have the authority to act per paragraph 112 of Order 693-A. Since R2 requires the RCs to agree, is the "mutually agreed to" clause in R1.1 necessary? Please strike requirements R4 and R4.1. It is duplicative to R1.1. Conference calls are a form of communication and should be address per R1.1. R5 is confusing. If a reliability issue isn't confirmed, doesn't this mean there is no reliability issue? Isn't this the point of confirming? Additionally, we suggest using validate instead of confirm. As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance. Use of the term collectively may resolve this dilemma.

No

Measure 1 appears to add to the requirement. Requirement 1 does not mention anything about System Operators yet the measurement does. The measurement should just be to verify that the RC has have Operating Processes, Procedures, and Plans. The sub-measurements are not measurements at all. There should be the single measurement to verify the Operating Processes, Procedures, and Plans have been developed and address the sub-requirements. This really points out the problem with making the criteria that must be considered in the Operating Processes, Procedures, and Plans sub-requirements in the first place. They aren't requirements of any sort. They represent criteria. The drafting team should consider making them a bulleted list without the Rs, then the drafting team won't feel compelled to write sub-measures that don't measure anything.

No

For R2, the High and Severe VSLs contradict the requirement. We believe all of the "nots" should be removed. We don't agree with the VSLs in R4 since we believe R4 should be struck. The Lower VSL for R6 should not even be a violation unless the impact was negative. If the RC implemented a different mitigation plan and resolved the issue, then the RC was likely correct to disagree.

Yes

Yes

We do agree with moving the requirement. However, the drafting team needs to revisit the wording of the requirement. The new wording is much more confusing. Until we reviewed IRO-016-2, it was not clear at all that R6 in IRO-014 was attempting to mimic R1 and its sub-requirements in IRO-016-2.

**Individual or group. (29 Responses)**  
**Name (17 Responses)**  
**Organization (17 Responses)**  
**Group Name (12 Responses)**  
**Lead Contact (12 Responses)**  
**Contact Organization (12 Responses)**  
**Question 1 (25 Responses)**  
**Question 1 Comments (29 Responses)**  
**Question 2 (25 Responses)**  
**Question 2 Comments (29 Responses)**  
**Question 3 (21 Responses)**  
**Question 3 Comments (29 Responses)**  
**Question 4 (22 Responses)**  
**Question 4 Comments (29 Responses)**  
**Question 5 (21 Responses)**  
**Question 5 Comments (29 Responses)**  
**Question 6 (20 Responses)**  
**Question 6 Comments (29 Responses)**  
**Question 7 (23 Responses)**  
**Question 7 Comments (29 Responses)**  
**Question 8 (21 Responses)**  
**Question 8 Comments (29 Responses)**  
**Question 9 (21 Responses)**  
**Question 9 Comments (29 Responses)**  
**Question 10 (20 Responses)**  
**Question 10 Comments (29 Responses)**  
**Question 11 (19 Responses)**  
**Question 11 Comments (29 Responses)**  
**Question 12 (19 Responses)**  
**Question 12 Comments (29 Responses)**  
**Question 13 (21 Responses)**  
**Question 13 Comments (29 Responses)**  
**Question 14 (20 Responses)**  
**Question 14 Comments (29 Responses)**  
**Question 15 (19 Responses)**  
**Question 15 Comments (29 Responses)**  
**Question 16 (19 Responses)**  
**Question 16 Comments (29 Responses)**  
**Question 17 (20 Responses)**  
**Question 17 Comments (29 Responses)**  
**Question 18 (20 Responses)**  
**Question 18 Comments (29 Responses)**  
**Question 19 (29 Responses)**

-
Individual
Kris Manchur
Manitoba Hydro
Yes
Yes
Yes



Yes
Group
NPCC
Guy Zito
NPCC
No
There is inconsistency between R3 and M3. In R3, there is a provision for agreement between entities (RC, TOP, BA, GOP, DP) to use a language other than English in their communications. In M3, that option is not presented. M3 should reflect what is written in R3.
No
There is inconsistency between R3 and M3. In R3, there is a provision for agreement between entities (RC, TOP, BA, GOP, DP) to use a language other than English in their communications. In M3, that option is not presented. M3 should reflect what is written in R3.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Individual
Jeffrey V Hackman
Ameren
Yes

Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes and No
While we agree that most of the requirements are redundancies that properly belong elsewhere, we are concerned that Requirement 4 and Requirement 8 are not properly represented elsewhere and should not be retired until they re-surface in another standard explicitly. We believe it is still very important for an RC to monitor their respective BAs reserves and CPS performance. Likewise in R8, while the frequency monitoring is a BA function, we think that it is important enough to also be included as an RC function explicitly.
Yes
Yes
Yes
Yes
Yes
Yes
Individual
Dan Rochester
Independent Electricity System Operator - Ontario
Yes
No
M3: The evidence to show that concurrence is in place to allow communication using a language other than English is missing. The Measure as written merely asks for evidence that communication in a different language has occurred.
No
(i) R1: Suggest to revise the conditions for all levels to read "...failed to operationally test the alternative communication facilities within the last..... (ii) R2: The second part under Severe is not needed since failing to notify any impacted entities would imply no communication to the affected entities anyway. If verification of the functionality of the alternate means of telecommunications is also critical even without communicating to the affected entities, then the second condition should be an "OR". (iii) R3: Failure to having concurrence to use a language other than English for communications between and among operating personnel responsible for real-time

operations by itself does not constitute a violation of any requirements; it is the absence of such a concurrence AND having used a language other than English that would constitute a violation. Suggest to revise this condition.

Yes

Yes

Yes

No

(i) R2: the phrase "act without intentional delay" is not necessary since the urgency of taking any actions as directed by the RC's are generally understood to be conveyed in the RC's directives. (ii) R3: Given R2 requires the responsible entities to comply with the RC directives, the part that says "immediately confirm the ability to comply with the directive or" is not needed. R3 should simply require the responsible entities to notify the RC upon recognition of the inability to perform the directive. (iii) The VRF for R5 should not be High. Failure to notify others when potential threats to system reliability have been mitigated does not constitute a high risk to the interconnected system. We suggest it be reduced to a Medium (i.e., that it affects control of the BES).

No

Wording in some of the Measures needs to be revised to reflect changes to R2 and/or R3, if our proposed changes are accepted. Also, we suggest the Requirement numbers be referenced in the Measures.

No

(i) R1: There should not be any distinction made between an RC acting and an RC directing others to act. Failure to mitigate adverse reliability impacts a severe violation of the requirement. We therefore suggest to revise the High and Severe levels as: High if the RC did not act or direct actions to prevent an Adverse Reliability Impact; Severe if the RC did not act or direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact. (ii) R2: The High VSL seems contradictory to the requirement, which already has provision of not fully complying with the RC directives due to safety, equipment, or regulatory or statutory requirements. (iii) R3: We have proposed some wording change to R3, which if adopted, would precipitate a need to revise the VSLs for R3 accordingly. (iv) R4 and R5: The VSLs for these two requirements could be graded by assessing the number and/or timing of notifying the affected entities.

No

(i) R1: There is a duplicating requirement in TOP-005 R1.1. Suggest to eliminate one of the two. (ii) We do not agree with eliminating all of R5 to R8. There is a fundamental need for RCs to monitor its area, and even some portion of its adjacent areas to be aware of situations that require preventive and mitigating actions. While arguments can be made that requiring RCs to prevent and mitigate adverse reliability impacts would imply monitoring, the latter is a fundamental duty of any RCs to ensure system reliability. If monitoring is not explicitly stated as a requirement, then the same argument may be extended to training and operational facilities. We do not agree with the drafting team's conclusion that it is not practical to measure real-time monitoring. Measuring can be illustrated, for example, by a compliance audit to review system logs and assess the extent to which an RC follows and assesses system conditions.

No

(i) M1: We suggest to change the word "letter" to "documented request" (ii) If our recommendations to retain some of R5 to R9, some measures will need to be provided.

No

(i) R1: The wording for Low VSL is contradictory (e.g. it determined and requested in the first part but did not request in the second part). Suggest to revise it. (ii) R1: We suggest to grade the VSLs according to the extent to which the percentage of data specification and/or the number of entities not requested. (iii) R2: The RC either has the right or it doesn't, and hence it's a binary requirement. The VSL should be developed accordingly. Further, the wording for the Severe VSL does not correspond to the requirement and measure. The condition should simply be that the Reliability Coordinator failed to demonstrate that it had the authority to veto planned outages to analysis tools, including final approvals for planned maintenance.

No

(i) R1: We do not agree with removing this requirement for the same reason given for the proposal to remove R5 to R8 from IRO-002 (see comments on 10 (ii), above). (ii) R8: We do not agree with completely removing this requirement, especially that part that requires an RC to monitor system frequency. While DCS and CPS are largely a BA's responsibility, the RC is the last line of defence for abnormal system performance and needs to monitor its BAs' performance including their ability to address large frequency deviations, and direct or take corrective actions as needed including requesting emergency assistance on the BAs' behalf and directing load shedding. (iii) R9: The second part of this requirement needs to be retained. IRO-004 covers operational planning, not current day operations. Coordinating pending generator and transmission facility outages is an essential and necessary task by the RC to ensure reliability. (iv) R11: The RC needs to monitor ACE, detect and identify the cause of any abnormal

ACE, and direct its BAs to take necessary actions to return ACE to within a normal range. (v) R13: We do not agree with removing the latter part of R13. The FAC standards cover the methodology used in calculating SOLs and IROLs. Regardless of how these limits are calculated, in practice there always exists the possibility that different entities come up with SOLs/IROLs, especially of the inter-ties, that could be different. Operating to the lowest SOLs/IROLs when more than one set exists is a necessary requirement for reliable operation.
No
We suggest to replace the word "impacted" with "other" since there is a preconception that the concerned RC makes an assessment of which other RCs are impacted by the coordinated actions, which may not be the perspective of the other RCs who may in fact be impacted by any coordinated actions among other RCs.
No
Measure 1 actually contains a number of subrequirements that should be stipulated in R1, not M1. If indeed these are required, they should be stipulated in the Requirement section, not the Measures Section.
No
(i) R2: the High and Severe VSLs contradict with the requirement. We believe all of the "nots" should be removed. (ii) R6: The Low VSL should be a High since not agreeing to a plan but implementing one that has not been agreed to is a high violation of the requirement. (iii) The VSLs for R1 may need to be revised if our comments on M1 are adopted.
Yes
Yes
Group
Reliability Coordinator Comment Working Group
Linda Perez
WECC
Yes
No
on Measure 3 need to remove the word "all" in reference to voice logs. Measure needs to include evidence of concurrence for using a language other than English
Yes
Yes
Yes
Yes
Yes
No
measures do not align with VSL's (see question 9)
No
R1 talks about "shall act or direct actions to be taken". High VSL - failure to act. Severe VSL - failure to act and direct. Does "act" mean any action taken short of issuing a directive? Change Severe VSL to failure to act or direct and eliminate the High VSL all together. R2 delay in issuing a directive due to equipment problems should be included in the moderate VSL and the body of the requirement and in the measure. The High VSL should be removed because not following the directive for equipment failure is allowed per R2. R5 - Severe VSL should be changed to moderate VSL since the problem has been mitigated and the system is stable and it does not adversely impact reliability. M3 talks about the ability of reliability entities to meet a directive. What constitutes evidence that confirms you are able to immediately comply with the directive? If the entity agrees to the directive and then is unable to comply due to events outside of their control, such as a CT not starting, do they meet the measure? If the entity, based on the circumstances at the time of the directive, agrees to comply in good faith are they compliant? The Lower VSL should be made N/A because it is not practical for an entity to immediately confirm they are able to meet the directive in all cases.
No



for R1, this should be 2 separate requirements and measures. R1 should have a methodology for determining what data is needed and then a R2 should be a requirement to request this data from the reliability entities.

Yes

add measures for R1 & R2 see question 10

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Individual

Fred Young

Northern California Power Agency

No

R3 should include in the last sentence that the Generator Operator and Distribution Provider may use alternate language for internal operations.

No

M3 should include Generator Operator and Distribution Provider in the applicability.

Yes

Yes and No

Remove Generator Operator from the Purpose Statement. The re-written standard no longer applies to GOP.

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes
Yes
Yes
Individual
Denise Roeder
ElectriCities of North Carolina, Inc.
No
We are a joint action agency registered on behalf of our member municipalities, who are all TDUs, neither own nor operate any Bulk Electric System facilities, and perform no real-time operations or operations planning for the BES. There are currently other standards that already apply to us that require us to have processes and means to communicate with our RC, BA, TOP, etc. The proposed modifications to this standard would now make our members subject to this standard as well, based on the DP registration designation. Given that, we believe there needs to be additional clarification of specifically what type of "telecommunications facilities" are required to be considered compliant with this standard. Maybe in the past when this standard applied to TOPs, BAs, and RCs, it was intuitive what type of telecommunications facilities they needed to communicate with each other. However, when you bring in small DPs, it doesn't seem so clear. Obviously we already communicate with our TOP and BA, and have done so for years. As written, the standard is ambiguous in terms of what more, if anything, we would have to put in place to satisfy this standard.
No
See comments on Question 1
No
Depends of what is meant by "telecommunications facilities"
Individual
Karl Bryan
US Army Corps of Engineers, Northwestern Division
No
R3 needs to have the last sentence revised to allow the Generator Operator and Distribution Provider to use an alternate language for internal operations.
No
M3 needs to include the GO and DP in its requirement for interutility communications in English.




Standard – IRO-001 R1 Requirement (including sub-requirements) The Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. [Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations] Proposed Measure Each Reliability Coordinator shall have evidence that it acted, or issued directives, to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordinator Area Attributes of the requirement Binary Timing X Omission X Communication X Quality Other Discussion – 1. As currently worded it can be interpreted that any time an event occurs the RC would be in violation of the standard simply because they had failed “to prevent” an event. 2. This requirement does not have a “timing” element included, although it implies timing based on the “duration of the event”. Including that “duration of the event” is problematic – it appears to imply that human intervention may provide a more timely response than relay operation, we would suggest more clarification about what the “duration” element of the requirement is intended to address (e.g. generation re-dispatch?). 3. There also appears to be a “quality” element included based on the mitigation of magnitude of the event. As a result we believe that timeliness, effectiveness and communication should be the basis of the VSLs. 4. The VSLs as differentiate between directing actions and acting. Practically, there is no difference. The RC is still giving the directive. It is just a matter of who is carrying it out. This is not a valid basis for differentiating between VSLs. We suggest the VSLs be defined based on actual system impact (i.e. Was the RC acting or directing actions to prevent or to mitigate?) and to either modify the requirement to remove timing aspects or to add the timing aspects to the VSLs. SDT Proposed Lower VSL N/A CEDRP Proposed VSL No Comment SDT Proposed Moderate VSL N/A CEDRP Proposed VSL No Comment SDT Proposed High VSL The Reliability Coordinator failed to act to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts. CEDRP Proposed VSL The Reliability Coordinator failed to act to prevent the magnitude or duration of Adverse Reliability Impacts. SDT Proposed Severe VSL The Reliability Coordinator failed to act and direct actions to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts CEDRP Proposed VSL The Reliability Coordinator failed to act and direct actions to mitigate the magnitude or duration of Adverse Reliability Impacts FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a “binary” requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Additional Compliance Elements Compliance Enforcement Authority NERC shall be responsible for compliance monitoring of the Regional Entity. Regional Entities shall be responsible for compliance monitoring of the Reliability Coordinators, Transmission Operators, Generator Operators, Distribution Providers, and Load Serving Entities. Compliance Monitoring Period and Reset Time Frame N/A Compliance Monitoring and Enforcement Processes: Compliance Audits Self-Certifications Spot Checking Compliance Violation Investigations Self-Reporting Complaints Data Retention Each applicable entity shall retain data and evidence for a rolling 12 months unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation. The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent compliance records. Additional Compliance Information None CAE Resource Pool Comments The Enforcement Authority Statement, “NERC shall be responsible for compliance monitoring of the Regional Entity.” Is not clear, if it is intended to encompass Regional Entities that perform RC functions is should be clearly stated, if not it should not be included in the Enforcement Authority section.

Standard – IRO-001 R2 Requirement (including sub-requirements) Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers, and Purchasing-Selling Entities shall act without intentional delay to comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations] Proposed Measure Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without delay to comply with the Reliability Coordinator’s directives. Attributes of the requirement Binary Timing X Omission X Communication X Quality X Other The team would suggest “intentional delay” be eliminated from the requirement – e.g. “shall act to...”). To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful

disregard of the requirement. The measure and VSLs do not consider the exceptions for not following the RC objective. The drafting team should consider combining requirements R2 and R3. Thus, one VSL would become failure to notify the RC of the inability to comply. The drafting team could consider applying the numerical category of VSLs for some directives such as an order to redispach. Obviously, it would not work well if the directive was to reconfigure the system. SDT Proposed Lower VSL N/A CEDRP Proposed VSL No Comment SDT Proposed Moderate VSL The responsible entity followed the Reliability Coordinators directive with a delay not caused by equipment problems. CEDRP Proposed VSL The team does not agree that this is a valid VSL. SDT Proposed High VSL The responsible entity followed the majority of the Reliability Coordinators directive but did not fully follow the directive because it would violate safety, equipment, statutory or regulatory requirements. CEDRP Proposed VSL The team does not agree that this is a valid VSL. The word majority implies some ability to numerically measure the response to the directive. Thus, the drafting team should consider applying the numerical category of the VSL guidelines. SDT Proposed Severe VSL The responsible entity did not follow the Reliability Coordinators directive. CEDRP Proposed VSL The responsible entity did not follow the Reliability Coordinators directive, the directive would not have violated safety, equipment, regulatory, or statutory requirements, and responsible entity did not communicate the inability to follow the directive to the Reliability Coordinator. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a "binary" requirement? N/A 4. If yes, is the VSL assignment consistent with other binary requirement assignments? N/A 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? No Standard - IRO-001 R3 Requirement (including sub-requirements) The Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider or Purchasing-Selling Entity shall immediately confirm the ability to comply with the directive or inform the Reliability Coordinator upon recognition of the inability to perform the directive. [Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations] Proposed Measure Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it confirmed its ability to comply with the Reliability Coordinator's directives, or if for safety, equipment, regulatory or statutory requirements it could not comply, informed the Reliability Coordinator upon recognition of the inability to comply. Attributes of the requirement Binary Timing Omission Communication X Quality Other Discussion – The requirement appears to be based on communication and can be problematic by including the requirement to immediately confirm the ability to comply, a directive can be issued to one entity or several entities at one time (e.g. conference call, all call, electronic notification) that may create several issues when attempting to process all confirmations, the requirement language presents a risk of being found out of compliance for following a directive but not providing an "immediate" confirmation to the RC. The CEDRP believes it to be a reasonable expectation that all entities will comply with reliability directives and notification should be made only on exception. The SDT should consider combining this requirement with R2. SDT Proposed Lower VSL The responsible entity failed to immediately confirm the ability to comply with the directive issued by the Reliability Coordinator. CEDRP Proposed VSL See above discussion note SDT Proposed Moderate VSL N/A CEDRP Proposed VSL No comment SDT Proposed High VSL N/A CEDRP Proposed VSL No comment SDT Proposed Severe VSL The responsible entity failed to inform the Reliability Coordinator upon recognition of the inability to perform the directive. CEDRP Proposed VSL No comment FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a "binary" requirement? N/A 4. If yes, is the VSL assignment consistent with other binary requirement assignments? N/A 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? As currently worded the CEDRP believe that the requirement should be changed to eliminate that "immediate confirmation" portion of the requirement 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? No Standard - IRO-001 R4 Requirement (including sub-requirements) Each Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have evidence that it notified, without intentional delay, all impacted Transmission Operators and balancing Authorities in its Reliability Coordinator Area when it identified a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area. Attributes of the requirement Binary Timing X Omission Communication X Quality Other Discussion – To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful disregard of the requirement. This requirement appears to fit the numerical category of the VSL guidelines best. SDT Proposed Lower VSL N/A CEDRP Proposed VSL The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify 25% or less of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. SDT Proposed Moderate VSL N/A CEDRP Proposed VSL The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 25% but less than or equal to 50% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. SDT Proposed High VSL

N/A CEDRP Proposed VSL The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 50% but less than or equal to 75% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. SDT Proposed Severe VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. CEDRP Proposed Severe VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 75% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a "binary" requirement? N/A 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard - IRO-001 R5 Requirement (including sub-requirements) Each Reliability Coordinator who identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have evidence that it notified, without intentional delay, all impacted Transmission Operators and balancing Authorities in its Reliability Coordinator Area when the real or potential threat with Adverse Reliability Impacts within its Reliability Coordinator Area has been mitigated. Attributes of the requirement Binary Timing X Omission Communication X Quality Other Discussion – To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful disregard of the requirement. Measure 5 is written implying that there is an Adverse Reliability Impact. The drafting team should consider wording the measurement to consider that there may not be an Adverse Reliability Impact requiring a directive. The Commission in paragraph 27 of the VSL order has stated that multiple VSLs are preferable where possible. Suggest applying the numerical category of the VSL Guidelines based on the number of entities notified.. SDT Proposed Lower VSL: N/A CEDRP Proposed Lower VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify 25% or less of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. SDT Proposed Moderate VSL: N/A CEDRP Proposed Moderate VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 25% but less than or equal to 50% of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. SDT Proposed High VSL: N/A CEDRP Proposed High VSL: The Reliability Coordinator Area failed to notify more than 50% but less than or equal to 75% of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. SDT Proposed Severe VSL: The Reliability Coordinator failed to notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated. CEDRP Proposed Severe VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 75% of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a "binary" requirement? N/A 4. If yes, is the VSL assignment consistent with other binary requirement assignments? N/A 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard – IRO-002-2 R1 Requirement (including sub-requirements) Each Reliability Coordinator shall determine the data requirements to support its reliability coordination tasks and shall request such data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a letter to Transmission Operators, Balancing Authorities, Transmission Owners, Generator Owners, Generator Operators, and Load-Serving Entities, or adjacent Reliability Coordinators, or other equivalent evidence that will be used to confirm that the Reliability Coordinator has requested the data required to support its reliability coordination tasks. Attributes of the requirement Binary Timing Omission X Communication X Quality Other Discussion – The VSLs attempt to measure the quality of the data requirements. They require the compliance auditor to judge if another RC has material impact and what data is administrative and what data is substantial. Given the typical length of a compliance audit, it is doubtful that the compliance auditor can make these types of judgments about the quality of the data and the material impact of another RC. The drafting team should consider applying numerical category of VSLs based on the number of entities the data request is made from. It is

interesting that the measure also does not require any documentation of a data specification. SDT Proposed Lower VSL: The Reliability Coordinator demonstrated that it 1) determined its data requirements and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with a material impact on the Bulk Electric System in its Reliability Coordination Area but did not request the data from Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with minimal impact on the Bulk Electric System in its Reliability Coordination Area or 2) determined its data requirements necessary to perform its reliability functions with the exceptions of data that may be needed for administrative purposes such as data reporting. CEDRP Proposed Lower VSL: The Reliability Coordinator failed to request data to support its reliability coordination tasks from 25% or less of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. SDT Proposed Moderate VSL: The Reliability Coordinator demonstrated that it determined the majority but not all of its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators. CEDRP Proposed Moderate VSL: The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 25% but less than or equal to 50% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. SDT Proposed High VSL: The Reliability Coordinator demonstrated that it determined 1) some but less than the majority of its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators Or 2) all of its data requirements necessary to support its reliability coordination functions but failed to demonstrate that it requested data from two of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators. CEDRP Proposed High VSL: The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 50% but less than or equal to 75% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. SDT Proposed Severe VSL: The Reliability Coordinator failed to demonstrate that it 1) determined its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators Or 2) requested the data from three or more of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators. CEDRP Proposed Severe VSL: The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 75% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators, Or, The Reliability Coordinator failed to determine data requirements to support its reliability coordination tasks. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a "binary" requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-002-2 R2 Requirement (including sub-requirements) Each Reliability Coordinator shall have the authority to veto planned outages to analysis tools, including final approvals for planned maintenance. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has the authority to veto planned outages to analysis tools, including final approvals for planned maintenance as specified in Requirement 2. Attributes of the requirement Binary Timing Omission Communication Quality Other X Is this requirement needed? R1 IRO-001-2 requires the RC to mitigate Adverse Reliability Impacts. R2 IRO-001-2 requires responsible entities to comply with the RC directives. Wouldn't the RC thus have the right to cancel all types of outages (i.e. analysis tools, transmission equipment, etc). FERC has stated in paragraph 112 of Order 693-A that an RC does not derive their authority from agreements but rather from FERC's approval of the standards. Barring the team's decision to remove this requirement, the Severe VSL is confusing. We have suggested different wording. SDT Proposed Lower VSL Reliability Coordinator has approval rights for planned outages of analysis tools but does not have approval rights for maintenance on analysis tools. CEDRP Proposed VSL No Comment SDT Proposed Moderate VSL N/A CEDRP Proposed VSL No Comment SDT Proposed High VSL N/A CEDRP Proposed VSL No Comment SDT Proposed Severe VSL Reliability Coordinator approval is not required for planned maintenance or planned outages. CEDRP Proposed VSL Reliability Coordinator does not approve planned maintenance or planned outages. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a "binary" requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated

requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-014-2 R1 Requirement (including sub-requirements) R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: [Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning] R1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. R1.2. Energy and capacity shortages. R1.3. Planned or unplanned outage information. R1.4. Voltage control, including the coordination of reactive resources for voltage control. R1.5. Coordination of information exchange to support reliability assessments. R1.6. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. Proposed Measure M1. The Reliability Coordinator's System Operators shall have available for Real-time use, the latest approved version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators. M1.1 These Operating Procedures, Processes, or Plans shall address: M1.2 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. M1.3 Energy and capacity shortages. M1.4 Planned or unplanned outage information. M1.5 Voltage control, including the coordination of reactive resources for voltage control. M1.6 Coordination of information exchange to support reliability assessments. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. Attributes of the requirement Binary Timing Omission x Communication x Quality Other Discussion – The CEDRP has no recommendations regarding this requirement. SDT Proposed Lower VSL: The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one or two of the subrequirements. CEDRP Proposed Lower VSL: No Comment SDT Proposed Moderate VSL: Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three or four of the subrequirements. CEDRP Proposed High VSL: No Comment SDT Proposed High VSL: The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address five of the subrequirements. CEDRP Proposed High VSL: No Comment SDT Proposed Severe VSL: The Reliability Coordinator failed to have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. CEDRP Proposed Severe VSL: No Comment FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a "binary" requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-014-2 R2 Requirement (including sub-requirements) R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: [Violation Risk Factor: Lower] [Time Horizon: Real-time Operations and Operations Planning] R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s). R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s). Proposed Measure M2. The Reliability Coordinator shall have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were: M2.1 Agreed to by all the Reliability Coordinators required to take the indicated action(s). M2.2 Distributed to all Reliability Coordinators that are required to take the indicated action(s). Attributes of the requirement Binary Timing Omission X Communication X Quality Other Discussion – The High and Severe VSLs appear to use "not" incorrectly. SDT Proposed Lower VSL N/A CEDRP Proposed VSL No Comment SDT Proposed Moderate VSL: The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take action. CEDRP Proposed Moderate VSL: The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take action. SDT Proposed High VSL: The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were not agreed to by all Reliability Coordinators that are required to take action CEDRP Proposed High VSL: The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action SDT Proposed Severe VSL: The Reliability Coordinator failed to have evidence that



the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were not agreed to by all Reliability Coordinators that are required to take action and were not distributed to all Reliability Coordinators that are required to take action

**CEDRP Proposed Severe VSL:** The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action and were distributed to all Reliability Coordinators that are required to take action

**FERC Guidance for VSLs**

1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned?
2. Is the VSL assignment a binary requirement?
3. Is it truly a “binary” requirement?
4. If yes, is the VSL assignment consistent with other binary requirement assignments?
5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised?
6. Does the VSL redefine or undermine the stated requirement?
7. Is the VSL based on a single violation of the requirement (not multiple violations)?

**Standard – IRO-014-2 R3 XXX-XXX Requirement (including sub-requirements) R3.** The Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]

**Proposed Measure M3.** The Reliability Coordinator shall have evidence it made notifications and exchanged reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. Attributes of the requirement Binary Timing Omission X Communication X Quality Other Discussion: The VSLs appear to be appropriate. Since the only difference is the use of the “and” and “or”, we suggest emphasizing those words in bold. We read this more than once before we noticed the difference.

**SDT Proposed Lower VSL N/A CEDRP Proposed VSL N/A SDT Proposed Moderate VSL N/A CEDRP Proposed VSL N/A SDT Proposed High VSL:** The Reliability Coordinator failed to make notifications or exchange reliability-related information with impacted Reliability Coordinators. **CEDRP Proposed High VSL:** The Reliability Coordinator failed to make notifications or exchange reliability-related information with impacted Reliability Coordinators. **SDT Proposed Severe VSL:** The Reliability Coordinator failed to make notifications and exchange reliability-related information with impacted Reliability Coordinators. **CEDRP Proposed Severe VSL:** The Reliability Coordinator failed to make notifications and exchange reliability-related information with impacted Reliability Coordinators. **FERC Guidance for VSLs**

1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned?
2. Is the VSL assignment a binary requirement?
3. Is it truly a “binary” requirement?
4. If yes, is the VSL assignment consistent with other binary requirement assignments?
5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised?
6. Does the VSL redefine or undermine the stated requirement?
7. Is the VSL based on a single violation of the requirement (not multiple violations)?

**Standard – IRO-014-2 R4 XXX-XXX Requirement (including sub-requirements) R4.** The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with impacted Reliability Coordinators. [Violation Risk Factor: Lower][Time Horizon: Real-time Operations] The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly.

**Proposed Measure M4.** The Reliability Coordinator shall have evidence it participated in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators. Attributes of the requirement Binary Timing X Omission X Communication X Quality Other Discussion – This requirement is purely administrative and probably does not rise to a level of a reliability standard requirement. It is in essence redundant, with R1.1 IRO-014-2? It appears R1.1 addresses the same information that would be expected to be discussed in a weekly conference call. Should the drafting team disagree and retain this requirement, please consider applying multiple VSLs based on how often the RC participates in conference calls, how many they missed, or how many impacted RCs they participated in conference calls with.

**SDT Proposed Lower VSL:** The Reliability Coordinator failed to participate in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators. **CEDRP Proposed Lower VSL:** The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators bi-weekly, Or the Reliability Coordinator failed to participate in one weekly conference call, Or the Reliability Coordinator agreed to participate in conference calls with 25% or less of the impacted Reliability Coordinators. **SDT Proposed Moderate VSL:** N/A **CEDRP Proposed Moderate VSL:** The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators every third week, Or the Reliability Coordinator failed to participate in two weekly conference calls, Or the Reliability Coordinator agreed to participate in conference calls with more than 25% but less than or equal to 50% of the impacted Reliability Coordinators. **SDT Proposed High VSL:** N/A **CEDRP Proposed High VSL:** The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators fourth week, Or the Reliability Coordinator failed to participate in three weekly conference calls, Or the Reliability Coordinator agreed to participate in conference calls with more than 50% but less than or equal to 75% of the impacted Reliability Coordinators. **SDT Proposed Severe VSL:** N/A **CEDRP Proposed Severe VSL:** The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators at least every fifth week, Or the Reliability Coordinator failed to participate in four weekly conference calls, Or the Reliability Coordinator failed to agree to participate in any conference calls, Or the Reliability Coordinator agreed to participate in conference calls with more than 75% but less than 100% of the

impacted Reliability Coordinators. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a "binary" requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-014-2 R5 XXX-XXX Requirement (including sub-requirements) R5. When an expected or actual reliability issue is detected, the Reliability Coordinator shall confirm the existence of the issue with the impacted Reliability Coordinators. In the event that the issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] Proposed Measure The Reliability Coordinator shall have evidence that, in cases when an expected or actual reliability issue was detected, it has confirmed the existence of the issue with the impacted Reliability Coordinators. Attributes of the requirement Binary Timing Omission X Communication X Quality Other Discussion – This requirement is confusing in the way it is worded. We think it is trying to say that the RC should operate as though the reliability issue (should this be Adverse Reliability Impact) is detected until the issue is confirmed not to exist. The way it is worded might imply that if one doesn't confirm it to exist, operate as though it does. This leaves open the interpretation that a confirmation that it doesn't exist must still be operated to as though it does exist. The drafting team should consider splitting operating to prevent from operating to mitigate an existing event in the VSLs. SDT Proposed Lower VSL The Reliability Coordinator that detected an expected or actual reliability issue contacted the other Reliability Coordinator(s) to confirm that there was a problem but could not confirm that the problem existed and failed to operate as though the problem existed. CEDRP Proposed VSL N/A SDT Proposed Moderate VSL N/A CEDRP Proposed VSL N/A SDT Proposed High VSL N/A CEDRP Proposed VSL The Reliability Coordinator that detected an expected reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem. SDT Proposed Severe VSL The Reliability Coordinator that detected an expected or actual reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem. CEDRP Proposed VSL The Reliability Coordinator that detected an actual reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a "binary" requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-014-2 R6 XXX-XXX Requirement (including sub-requirements) When an expected or actual reliability issue exists and the impacted Reliability Coordinators cannot agree on a mitigation plan, all impacted Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] Proposed Measure The affected Reliability Coordinators shall have evidence that, in cases when an expected or actual reliability issue existed and the impacted Reliability Coordinators could not agree on a mitigation plan, they implemented the mitigation plan developed by the Reliability Coordinator who has the reliability issue. Attributes of the requirement Binary Timing Omission X Communication X Quality Other Discussion: We are concerned the validity of this requirement, it may force an RC to implement a solution that they don't agree with and ultimately result in an Adverse Reliability Impact. The RC may not agree with the solution because it may not be reliable for their footprint. They need to have the ability to veto mitigation plans that cause Adverse Reliability Impacts in their footprint without incurring a compliance violation. SDT Proposed Lower VSL The Reliability Coordinator did not agree on a mitigation plan and implemented a plan other than the one developed by the Reliability Coordinator who had the reliability issue. CEDRP Proposed VSL N/A SDT Proposed Moderate VSL N/A CEDRP Proposed VSL N/A SDT Proposed High VSL N/A CEDRP Proposed VSL N/A SDT Proposed Severe VSL The Reliability Coordinator did not agree on a mitigation plan and did not implement a mitigation plan. CEDRP Proposed VSL What if the RC is correct in disagreeing and the mitigation plan would have caused an Adverse Reliability Impact on their system? FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a "binary" requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)?

Group
MRO NERC Standards Review Subcommittee
Terry Bilke
MidwestISO
No
The new R2 requirement is too verbose. We suggest that you strike the final clause: "and shall verify that alternate means of telecommunications are functional." It is obviated by the requirement to notify impacted parties. The responsible entity is already implicitly required to verify its alternate means of communication is functional since it is required to notify its impacted parties of the failure of its normal telecommunications. It can't notify its impacted

parties if the alternate communications means are not functional. This clause is similar to the old requirement one that the drafting team appropriately struck. We tend to agree that striking R1 makes sense due to the drafting team's reasoning. However, we are not clear why the new R4 is necessary then. If the drafting team does not believe R1 is necessary shouldn't they respond to the FERC directive with the same reason why R4 is not really necessary? The VRF for new requirement 1 should be lower. It does not fit the definition of a medium VRF. A medium VRF requires that a violation of the requirement directly affect the state or capability or the ability to effectively monitor and control. Failure to test does not result in directly affecting the state or capability or the ability to effectively monitor and control. At a minimum, a failure of the alternative communication systems and primary communication systems must occur first. The failure to perform a single test in a given quarter does not mean that primary and alternative communication systems will fail. Thus, testing is really an administrative issue and should thus be a lower VRF. In the Data Retention section, Distribution Provider and Generation Operators should be added. Currently, there are no data retention requirements listed for them. Suggest modifying the language regarding data retention for compliance violations to: "... is found in violation of a requirement, it shall keep information related to the violation until it the Compliance Enforcement Authority finds it compliant."

No

M4 does not appear to be worded as a measurement. If R4 is kept, we suggest the following modification: "The Distribution Provider and Generation Operator shall demonstrate the existence of its telecommunication systems identified in R4."

No

The VSLs as defined for Requirement 1 appear to violate Guideline 4 that the Commission established in their "Order on Violation Severity Levels Proposed by the Electric Reliability Organization". Guideline 4 requires that a VSL should be based on a single violation. The VSLs as defined accumulate the number of consecutive quarters. This would imply that a single violation could last more than a year and that the compliance auditor could not determine sanctions until the entity becomes compliant or year has passed. A single violation appears to be the failure to test in a single quarter. This requirement is binary in nature in that it is either met or isn't. We suggest that only a lower VSL should be defined as: "The RC, TOP, or BA failed to test the backup telecommunication facilities for a single calendar quarter." The Lower VSL for R2 is not possible. The act of notifying all impacted entities of the failure of their primary telecommunication system requires the use of the alternative telecommunications systems which is a form of verifying that the alternative telecommunications facilities are functional. The drafting team should consider applying the numeric performance category of the VSL Development Guideline Criteria for R2.

Yes

Yes

Yes

No

New requirement R2 should omit act without intentional delay. The desired outcome is for the responsible entity to comply with the RC directive. Adding act without intentional delay only confuses the situation and adds questions. What is an intentional delay? The word act implies that the requirement is met simply if the responsible entity attempted to meet the directive but was unable to do so. That is already considered in with the clause that begins "unless such actions would violate ...". Thus, the word act is not necessary. The word immediately should be removed from the new R3. This attempts to time frame the response of the responsible entity and remove the judgment from the compliance auditor. We agree with the concept of doing this but in reality it only confuses the issue and the compliance auditor will likely apply his judgment regarding what immediate is anyway. Additionally, the requirement attempts to separate the act of confirming that the responsible entity can take the action from notifying the RC that the entity can't take the action. This is not logical. What RC is going to request a responsible entity to take action that would violate safety, equipment, statutory, or regulatory requirements? The RC should already be aware of those requirements and likely won't direct actions that violate them. Thus, the likely scenario is that the responsible entity will attempt to take action and discover that equipment is not functional properly and thus notify the RC. We suggest striking the "shall immediately confirm the ability to comply with the directive or" from the requirement. This part of the requirement is not needed because the responsible entity is already obligated to follow the RCs directive (see order 693.) Thus, the assumption is that the order will be followed unless it can't be followed because it will violated safety, equipment, statutory, or regulatory requirements. Requirements R4 and R5 are unnecessary. New R1 requires the RC to direct actions to be taken by the TOP, BA, GOP, TSP, LSE, DP and PSE to prevent or mitigate the magnitude or duration of events that result in Adverst Reliability Impacts. The RC can't direct these actions without notifying all impacted TOPs and BAs. They would also have to notify them when actions are no longer necessary.

No

Some compliance auditors have been taking the need for evidence to the extreme. We have encountered actual situations where if a measure states evidence shall be provided for requirements that are event based. the

compliance auditor expected evidence even if no event occurred. For example, some RCs rarely issue directives. As M1 is written, some compliance auditors would require the RC to provide evidence that no reliability directives were issued. This is not possible. We suggest modifying the measurement to: Each Reliability Coordinator shall have evidence that it acted, or issued directives, to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordinator Area if needed. If there were no directives issues (assuming there are no complaints or evidence to the contrary of the need to issue a directive), no evidence is necessary."

No

The R1 High and Severe VSL appear to differ only by the inclusion of directing actions in Severe. From a practical perspective, what is the difference between directing actions and acting? We don't believe there is any. The actions are the result of the RC authority whether the RC takes the actions themselves or directs someone else to. We suggest a better alternative for the VSL levels would be for the High level to reflect that the RC did not act or direct actions to prevent an Adverse Reliability Impact and Severe would be that the RC did not act or direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact. The moderate VSL for R2 is not practical and too subjective. What constitutes a delay? What if the responsible entity takes five minutes to determine how to carry out the action or if their equipment currently is capable of carrying out the action? Is this a delay? We suggest striking this Moderate VSL. The High VSL does not agree with the requirement. It considers the inability to fully follow an RC directive due to a violation of the safety, equipment, statutory, or regulatory requirements a violation. This is in direct conflict with the requirement. We suggest that the High VSL should be struck. We suggest the Severe VSL should be that the responsible entity failed to follow the RC directive and it would not have violated the safety, equipment, statutory or regulatory requirements. Currently, the Severe category does not allow that the responsible entity may not be able to carry out the directive due to the violation of safety, equipment, statutory, or regulatory requirements. In question 7, we request that the drafting team strike part of requirement 3. The striking of that portion of requirement 3 obviates the lower VSL. In paragraph 27 of the ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION, the Commission expresses "that, as a general rule, graduated Violation Severity Levels, wherever possible, would be preferable to binary Violation Severity Levels". Given that it is possible to define graduated VSLs for R4 and R5, we suggest that the drafting team should consider applying the numeric performance category of the Violation Severity Levels Development Guidelines Criteria based on the number of impacted TOPs and BAs that were notified.

No

New Requirement R1 is duplicate to the requirement TOP-005-1 R1.1. If the drafting team can't delete TOP-005-1 R1.1, they should notify other appropriate drafting teams of the need to remove the requirement. We do not agree with eliminating requirements R5, R6, R7, and R8 in their entirety. The requirements as they are written are problematic. However, we do believe that there is a need for a basic requirement to monitor the system. The requirements should be that the RC should compare actual system flows to SOLs and IROLs. While some will argue SOLs are not the responsibility of the RC, failure to monitor SOLs could cause the RC to miss unknown IROLs since an SOL can become an IROL. Several SOL violations in a given area also can be indicative of a broader system problem the RC should be addressing. We also do not agree with the drafting team's conclusion that it is not practical to measure real-time monitoring. It is very easy to measure. As an example, a compliance auditor could select a day and an SOL or IROL and ask for the system flows from that day or hour etc. This is generally easy for any RC to produce with today's data archiving software. We believe that there should be a requirement that the RC have a state estimator and real-time contingency analysis as well (RTCA). The drafting team needs to be careful in the construction of these requirements to make them practical and measurable. For instance, making the requirement to have a state estimator and RTCA is measurable in that the compliance auditor can verify their existence but this is not stringent enough because they may only run once a week. At the same time, if we create a requirement that SE and RTCA must run every 5 minutes, we could inadvertently create a requirement that any missing 5 minute run of RTCA and SE could be construed as a violation. There also needs to be a requirement that there is a real-time assessment of voltage as well. New Requirement R2 is no longer needed as a result of paragraph 112 in Order 693-A. Since the RC's "authority to issue directives arises out of the Commission's approval of Reliability Standards" the RC already has veto authority or will have once R1 IRO-001-2 is approved. This requirement obligates the RC to take actions or direct actions to prevent Adverse Reliability Impacts. Veto outages of equipment and analysis tools would fall into this category even if the RC couldn't say for certain that an Adverse Reliability Impact was going to occur but rather they are concerned one could occur due to heavy loads for example.

No

Measure 1 should not focus on a letter as evidence. A more appropriate measure would be a data specification document and actual verification that data has been received. The letter or equivalent is only needed if data has not been supplied. Demonstration of the actual receipt the data would be easy. Requirement 2 is not needed and thus Measure 2 is not needed per paragraph 112 of Order 693-A. Additional measures are needed to address the proposed requirements in question 10.

No

For R1, the lower VSL contradicts itself. It states that RC demonstrated that it determined its data requirements and requested that data and then follows with that it didn't request that data. The second option in the Lower VSL category is not practical and a compliance auditor would not be in a position to determine this. In fact, if the

administrative data is not requested, other administrative requirements for reporting would be violated. Additionally, it does not make sense that an RC would determine its data needs and then omit data for administrative reporting. Further, is it the compliance auditor's job to judge if the data the RC requests is sufficient or is it his job to see that the RC has met the requirement to define the data? The remaining VSLs imply that the RC may define only partial data requirements. This does not seem likely. Why would the RC do this? This VSL appears to add to the requirement by making it appear that the compliance auditor is to judge the completeness of the data requirement. This violates Guideline 3 of the FERC ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION. Practically, it would not be enforceable anyway. It would require the RC to admit that they did not include administrative data in their data requirements. It is doubtful this would happen because the RC likely believes they prepared a complete data requirement document. We suggest that the VSLs should be: Severe: The RC did not determine its data requirements or the RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 75 to 100% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. High: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 50 and less than or equal to 75% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Medium: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 25% and less than or equal to 50% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Lower: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 0% and less than or equal to 25% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. R2 VSLs are not needed per paragraph 112 of Order 693-A. The Severe VSL contradicts the requirement.

No

R1 includes many requirements for monitoring the system that are important, measurable and should be retained. Monitoring is too critical to operating the system to completely eliminate these requirements. R4, R8 and R11 are problematic as currently written. However, there have been actual instances of a large BA intentionally operating short hundreds of MWs of energy. I believe this occurred during the summer of 1999. Thus, the RC should be monitoring the BAs ACE and directing the BA to correct it if it becomes too large. It is not necessary or even useful for the RC to monitor the BA CPS performance.

No

Please strike "as a minimum" in R1. By definition, the requirement defines the minimum. Please strike R1.6. RCs already have the authority to act per paragraph 112 of Order 693-A. Since R2 requires the RCs to agree, is the "mutually agreed to" clause in R1.1 necessary? Please strike requirements R4 and R4.1. It is duplicative to R1.1. Conference calls are a form of communication and should be addressed per R1.1. R5 is confusing. If a reliability issue isn't confirmed, doesn't this mean there is no reliability issue? Isn't this the point of confirming? Additionally, we suggest using validate instead of confirm. R6 appears to be a rewrite of requirements R1, R2 and their sub-requirements in IRO-016. We agree that those requirements do need to be written more succinctly or removed altogether. However, R6 does not accomplish the goal and only confuses that matter further. The reason the RCs may not be able to agree on a mitigation plan is that RC with the reliability issue may be requesting mitigations that the other RCs believe may cause them reliability issues. This requirement appears to suggest that the solution to a disagreement on the mitigation plan is cut and dried. Generally, the reason the disagreement arises is due to one RC not fully understanding the impact of their actions on another RC. The bottom line is that the RCs may have disagreements and there is no way to require a solution in these types of situations. Please revise R6 to require using the mitigation plan developed by the Reliability Coordinator who has the reliability issue provided that the mitigation plan does not cause a reliability issue in the other region. As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance.

No

Measure 1 appears to add to the requirement. Requirement 1 does not mention anything about System Operators yet the measurement does. The measurement should just be to verify that the RC has have Operating Processes, Procedures, and Plans. The sub-measurements are not measurements at all. There should be the single measurement to verify the Operating Processes, Procedures, and Plans have been developed and address the sub-requirements. This really points out the problem with making the criteria that must be considered in the Operating Processes, Procedures, and Plans sub-requirements in the first place. They aren't requirements of any sort. They represent criteria. The drafting team should consider making them a bulleted list without the Rs, then the drafting team won't feel compelled to write sub-measures that don't measure anything. We do not agree with M6 because we don't agree with R6.

No

For R2, the High and Severe VSLs contradict the requirement. We believe all of the "nots" should be removed. We don't agree with the VSLs in R4 since we believe R4 should be struck. The Lower VSL for R6 should not even be a violation unless the impact was negative. If the RC implemented a different mitigation plan and resolved the issue, then the RC was likely correct to disagree.

Yes
Yes
We do agree with moving the requirement. However, the drafting team needs to revisit the wording of the requirement. The new wording is much more confusing. Until we reviewed IRO-016-2, it was not clear at all that R6 in IRO-014 was attempting to mimic R1 and its sub-requirements in IRO-016-2.
Group
Southern Company Transmission
Jim Busbin
Southern Company Services, Inc.
No
1.1 - In R1, we suggest that "operationally test by way of operator action" should be defined to remove any confusion regarding what the term requires. The word "ensure" needs to be changed to "assure" to more accurately convey the intent of the requirement. We also suggest changing the word "facilities" to "capabilities". 1.2 - R2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. The VSL should be consistent with the language of the requirement. A very short, insignificant telecom outage with no notification could result in a severe violation as the requirement is presently written and VSL's applied. 1.3 - R1, R2 and R3 should be expanded to include the list of entities the RC needs to talk with as included in the Applicability section of IRO-001-2 (RC, TO, BA, GO, DP, TSP, LSE, PSE). These entities should also be included in the purpose statement and R4 and M4 can then be eliminated. 1.4 - In R3, we suggest that the last sentence of R3 should be changed to "entities may use an alternative language for internal operations" rather than allowing only TOs and BAs to have this option.
No
2.1 - A general comment regards the production of evidence - such language should be standardized as "have and provide upon request" and the authorized requestors identified. This comment should apply to all standards. 2.2 - M2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. 2.3 - The Drafting Team should coordinate the data retention time frame with the requirement measures for R1. DPs and GOs should also be included in the measures requirements.
Yes
3.1 - The expanded list of entities recommended in comment 1.3 and 1.4 need to be included the VSLs 3.2 - The Severe VSL for R2 should be corrected. Add the word 'to' as follows: "...and failed to verify the ..."
No
4.1 - We agree with the recommendation to retire COM-002-3 when COM-003-1 is approved; however we suggest the following changes should be made for the interim applicability of COM-002-3: 4.2 - The Purpose statement should be revised to re-align with the revisions in the Standard. 4.3 - The applicability of COM-002-3 should be consistent with the applicability of IRO-001-2. 4.4 - The words "clear, concise, and definitive manner" in R1 are ambiguous and impossible to measure. We suggest they be replaced with "the RC shall direct". 4.5 - An additional requirement, R2, should be added that requires the Operator to repeat the information back correctly (i.e., separate this requirement from R1). 4.6 - Grammatical changes are suggested. The revised requirement reads as follows: "To ensure Balancing Authorities, Transmission Operators, and Generator Operators have adequate communications; to ensure that these communication capabilities are staffed and available for addressing a real-time emergency condition; and to ensure effective communications by operating personnel." 4.7 - At the Data Retention section, the reference to 'Requirement 3, Measure 3' should be consistent with the modified standard. The revised standard only has one requirement. 4.8 - The use of calendar days in the Data Retention section is inconsistent with related standards where 'months' are used.
No
5.1 - The measures need to be revised to match the new requirements.
No
6.1 - The severity levels need to be revised to match the new requirements.
No
7.1 - Applicability 4.2 - Transmission Operator should be plural. 7.2 - The revised definition of "Adverse Reliability Impacts" (R1) should be included at the top of Standard IRO-001-2, per Glossary of Terms Used in Standards: All defined terms used in reliability standards shall be defined in the glossary. Definitions may be approved as part of a standard action or as a separate action. All definitions must be approved in accordance with the standards process. 7.3 - In R2 insert the word "its" before Reliability Coordinator. 7.4 - In R3, replace "immediately" with "without intentional delay", replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator.

No
8.1 - In M2 and M3, Add Distribution Provider. 8.2 - In M2 add "intentional" between "without" and "delay". 8.3 - In M3 replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator's and Reliability Coordinator. 8.4 - In M5, change "has" to "had".
No
9.1 - R1 is a binary requirement and should have only a severe VSL. The RC either acts or he doesn't - If he fails to act, he fails to direct and mitigate the problem by default. 9.2 - R2 VSLs need to be rewritten to recognize that some directives may not be followed because of safety, regulatory or statutory requirements. 9.3 - Remove the Lower severity level in R3 to conform to changes in R3 and M3.
No
10.1 - We propose that R1 and R2 should be moved to the RC Certification Procedure and this standard retired. If this standard is not retired then we recommend Comments 10.2 and 10.3. 10.2 - At Requirement R2, the RC is given 'veto' authority. Is a standard an appropriate place to give this type of authority? 10.3 - The revised Purpose basically provides that the RC will have access to information and control of analysis tools. What is the correlation of information/control to veto authority/approval of planned maintenance?
No
11.1 - Moving R1 and R2 to the RC Certification Procedure, will eliminate measurement requirements.
No
12.1 - Moving R1 and R2 to the RC Certification Procedure, will eliminate VSL requirements.
Yes
13.1 - We agree with retiring this standard.
No
14.1 - R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC? 14.2 - We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows: R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken. 14.3 - We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly. 14.4 - R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous" or a similar term. 14.5 - We suggest rewriting R5 to read: In the event that a reliability issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists. 14.6 - At Requirement R1, the use of the phrase "as a minimum" seems to add some flexibility for development of procedures, processes and plans. A negative consequence is that it introduces more ambiguity. The recommendation is to strike the phrase. 14.7 - At Requirement R1.6, consider the following: "Authority to act to prevent and mitigate instances 'that have the potential to cause' Adverse Reliability Impacts to other Reliability Coordinator Areas."
No
15.1 - In M1, delete "for Real-time use". 15.2 - Modify the measures to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
No
16.1 - In R2, severe should be "... and no action was taken by the RC". 16.2 - In R5, severe should also include "... or that the RC failed to operate as though the problem existed." 16.3 - Modify the VSLs to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
Yes
17.1 - We agree with the recommendation to retire IRO-015-2.
Yes
18.1 - We agree with the recommendation to retire IRO-016-2.
19.1 - We suggest the effective date for the retirement of R5 (NERC Net Security Policy) in the COM-001-2 Standard should be effective immediately upon regulatory approval. As written, the Policy is unenforceable, contains no measures and is not germane to BES Reliability.
Individual
Kathleen Goodman
ISO New England Inc.
No
ISO New England does not support the removal of Requirement 1. Also, we believe Requirement 3 is written such that it may pose an unnecessary requirement on the Hydro Quebec area given the terminology "inter-entity" and support further clarification.

No
See answer to #1.
No
ISO New England believes it is inefficient to have a (temporary) Standard with only one Requirement and recommend including this Requirement in COM-001, with COM-001 renamed to "Communications."
No
See response to Q#4
Yes and No
We beleive the word "threat" shoudl be replaced with "events" in Requirements 4 and 5.
Yes and No
Suggest changing with word "request" to "document" in Requirement 1.
Yes
Yes and No
As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance. Use of the term collectively may resolve this dilemma.
Yes
Yes
Individual
Edward Davis
Entergy Services, Inc
Yes
The drafting team should consider expanding the second sentence of R3 to apply to internal communications of any affected entity not just BAs and TOPs.
Yes
Yes
Yes
Yes
Yes
No
PER-003 R1 does not specifically addresss delegated functions; therefore, this requirement is not redundant with IRO-001 R6 without changes to PER-003 to specifically deal with employees performing delegated functions.
Yes
No



The VSL for R2 does not seem consistent with the language in the requirement. It is not clear why the entity should be subject to a high VSL if the entity did not comply with an RC directive due to safety or regulatory prohibition, and made the RC aware of same.

No

IRO-002-1 R9, the deleted language of the second sentence is not adequately covered by the language in EOP-008-0 R1, unless those outages are tied to the loss of a control center. EOP-008-0 is in the process of being revised and this language could be included in the revision, but it isn't adequately addressed by the version 0 standard.

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Overall, we think the coordinated set of standards being developed by the RTOSDT and IROLSDT are good for reliability, crisp, and tightens up the reliability concepts.

Individual

Danny Dees

MEAG Power

No

Directives that are mandatory under R2 of IRO-001-2 should have boundaries consistent with the proper role of an RC. For example, if an RC directs an LSE with a 15% planning reserve margin to execute purchase power agreements until its reserve margin is at least 20% and the LSE refuses, then the LSE may have violated this standard. Other examples of improper RC directives are directives to increase coal inventories, buy firm fuel transportation rights, reconductor transmission lines, purchase spare equipment, etc. Granted entities may be able to conjure up a regulatory or statutory basis for refusing many improper RC directives but in some instances there may be no permissible grounds to refuse. The appropriate solution is to modify the standard to ensure that improper directives are never mandatory in the first place. Specifically, NERC is urged to state that RC directives are mandatory only if they pertain to specific categories such as: switching orders to reconfigure the BES, orders to postpone scheduled outages of BES equipment, orders to change generator output, orders to curtail transactions or orders to curtail load.

No

The M2 measure should not mandate compliance with RC directives that are improper as defined in my response to question 7.

My other concerns are addressed in the comments of the SERC OC Standards Review Group.
Individual
Mike Gentry
Salt River Project
Yes
No
M3 should include providing evidence of concurrence to use a language other than English. This will better align the measure with the VSL language.
Yes
Yes
Yes
Yes
Yes
Yes
No
R1 states the RC must act OR direct. The R1 VSL's attempt to distinguish between act and direct. The requirement allows for either action. I suggest that the High VSL be removed and replaced by an N/A. The Severe VSL should be amended so that the words "act and direct" are replaced by the words "act OR direct" as is consistent with the requirement and the measure. R2:The moderate VSL introduces the phrase "equipment problems" for the first time in the Standard. "Equipment Problems" needs to be included in the Requirement, R2, and defined in the Measure for R2. R5: The Severe VSL needs to be moved to the Moderate category. This condition does not constitute an Adverse Reliability Impact that severely threatens the BES.
Yes
No
R1: The Requirement and VSL's mention that the RC will determine it's data needs. Yet the Measure for R1 does not mention this, it only mentions the RC requesting the data from it's member emities. This Measure needs to include a measure for how the RC determines it's data needs.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
I appreciate the new comment form in Word version. his allows me to comment on each requirement specifically addressing the requirement, measure or the VSL's

Group
SERC OC Standards Review Group
Jim Griffith
Southern Co.
Yes and No
1.1 - In R1, we suggest that "operationally test" should be defined to remove any confusion regarding what the term requires. The word "ensure" needs to be changed to "assure" to more accurately convey the intent of the requirement. We also suggest changing the word "facilities" to "capabilities". 1.2 - R2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. 1.3 - R1, R2 and R3 should be expanded to include the list of entities the RC needs to talk with as included in the Applicability section of IRO-001-2 (RC, TO, BA, GO, DP, TSP, LSE, PSE). These entities should also be included in the purpose statement and R4 and M4 can then be eliminated. 1.4 - In R3, we suggest that the last sentence of R3 should be changed to "entities may use an alternative language for internal operations" rather than allowing only TOs and BAs to have this option.
Yes and No
2.1 - A general comment regards the production of evidence - such language should be standardized as "have and provide upon request" and the authorized requestors identified. This comment should apply to all standards. 2.2 - M2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. 2.3 - The Drafting Team should coordinate the data retention time frame with the requirement measures for R1. DPs and GOs should also be included in the measures requirements
Yes and No
3.1 - The expanded list of entities recommended in comment 1.3 and 1.4 need to be included the VSLs
Yes and No
4.1 - We agree with the recommendation to retire COM-002-3 when COM-003-1 is approved; however we suggest the following changes should be made for the interim applicability of COM-002-3: 4.2 - The Purpose statement should be revised to re-align with the revisions in the Standard. 4.3 - The applicability of COM-002-3 should be consistent with the applicability of IRO-001-2. 4.4 - The words "clear, concise, and definitive manner" in R1 are ambiguous and impossible to measure. We suggest they be replaced with "the RC shall direct". 4.5 - An additional requirement, R2, should be added that requires the Operator to repeat the information back correctly (i.e., separate this requirement from R1).
No
5.1 - The measures need to be revised to match the new requirements.
No
6.1 - The severity levels need to be revised to match the new requirements
Yes and No
7.1 - Applicability 4.2 - Transmission Operator should be plural. 7.2 - The revised definition of "Adverse Reliability Impacts" (R1) should be included at the top of Standard IRO-001-2, per Glossary of Terms Used in Standards: All defined terms used in reliability standards shall be defined in the glossary. Definitions may be approved as part of a standard action or as a separate action. All definitions must be approved in accordance with the standards process. 7.3 - In R2 insert the word "its" before Reliability Coordinator 7.4 - In R3, replace "immediately" with "without intentional delay", replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator.
Yes and No
8.1 - In M2 and M3, Add Distribution Provider. 8.2 - In M2 add "intentional" between "without" and "delay". 8.3 - In M3 replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator's and Reliability Coordinator. 8.4 - In M5, change "has" to "had".
Yes and No
9.1 - R1 is a binary requirement and should have only a severe VSL. The RC either acts or he doesn't - If he fails to act, he fails to direct and mitigate the problem by default. 9.2 - R2 VSLs need to be rewritten to recognize that some directives may not be followed because of safety, regulatory or statutory requirements. 9.3 - Remove the Lower severity level in R3 to conform to changes in R3 and M3.
Yes and No
10.1 - We propose that R1 and R2 should be moved to the RC Certification Procedure and this standard retired.
Yes and No
11.1 - Moving R1 and R2 to the RC Certification Procedure, will eliminate measurement requirements.
Yes and No
12.1 - Moving R1 and R2 to the RC Certification Procedure, will eliminate VSL requirements.
Yes

13.1 - We agree with retiring this standard
Yes and No
14.1 - R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC? 14.2 - We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows: R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken. 14.3 - We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly. 14.4 - R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous". 14.5 - We suggest rewriting R5 to read: In the event that an operating issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists.
Yes and No
15.1 - In M1, delete "System Operator" and "for real-time use". 15.2 - Modify the measures to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
Yes and No
16.1 - In R2, severe should be "no action was taken by the RC". 16.2 - In R5, severe should also include that the RC failed to operate as though the problem existed. 16.3 - Modify the VSLs to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
Yes
17.1 - We agree with the recommendation to retire IRO-015-2
Yes
18.1 - We agree with the recommendation to retire IRO-016-2
19.1 - We suggest the effective date for the retirement of R5 (NERC Net Security Policy) in the COM-001-2 Standard should be effective immediately upon regulatory approval. As written, the Policy is unenforceable, contains no measures and is not germane to BES Reliability
Individual
Jay Seitz
US Bureau of Reclamation
No
Purpose Distribution Providers and Generator Operators were added to the applicability; the Purpose should be revised to reflect that.
Yes
Yes
No
Purpose Since Generator Operators were deleted from the applicability; the Purpose should be revised to reflect that and include Reliability Coordinators. The language is somewhat redundant, recommend it be simplified to "To ensure Balancing Authorities, Reliability Coordinators, and Transmission Operators communicate in an effective manner."
Yes
Yes
No
R4. and R5. Both of these Requirements use the phrase "without intentional delay" to describe the urgency of the notification to impacted entities. In both requirements we recommend the language be changed from "notify, without intentional delay" to "immediately notify".
No
M4. and M5. In both Measures, recommend "without intentional delay" be changed as described above for R4. and R5.
Yes
No

R2. This requirement provides authority to the Reliability Coordinator to veto planned outages and approve planned maintenance to "analysis tools". It is not clear in this standard what these "analysis tools" are. Per FERC Order 693, NERC was to identify a minimum set of analysis tools and the task was assigned to the Real-Time Tools Best Practices Task Force. Until the tools are identified, it is premature to insert a placeholder in a mandatory standard; this also applies to the violation severity levels table.

No

M2 again "analysis tools" have not been identified.

No

Until the tools are identified, it is premature to insert a placeholder in a mandatory standard; this also applies to the violation severity levels table.

Yes

Yes

Yes

Yes

Yes

Yes

Group

PJM Interconnection

Patrick Brown

PJM Interconnection

Yes

We agree with the revisions, but recommend adding applicability to Distribution Providers and Generator Operators for data retention requirements.

Yes

M4 should be revised to reflect that each Distribution Provider and Generation Operator has evidence demonstrating the functionality of telecommunications facilities with the TOP and BA for the exchange of interconnection and operating information.

No

Recommend the following VSLs for R1: Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on at least one occasion. Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on two separate occasions. Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on three separate occasions. Proposed Severe VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on more than three separate occasions. Recommend the following VSLs for R2: Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on at least one occasion. Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on two separate occasions. Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on three separate occasions. Proposed Severe VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on more than three separate occasions. Recommend the following VSLs for R4: Proposed High VSL: The Responsible Entity failed to establish telecommunications with either their Balancing Authority or Transmission Operator for the exchange of Interconnection and operating information. Proposed Severe VSL: The Responsible Entity failed to establish telecommunications with their Balancing Authority and Transmission Operator for the exchange of Interconnection and operating information.

Yes

We note that this requirement really is "3-part communication" and will be moved to the new communications standard, COM-003-1.




Standard – COM-001-2 Telecommunications Requirement 1: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall operationally test, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. Proposed Measure: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall provide evidence that it operationally tested, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. Attributes of the requirement Binary Quarterly operational tests of alternate telecommunications Timing X Omission Communication Quality X Other SDT Proposed Lower VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last quarter. CEDRP Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in one of the previous four quarters. SDT Proposed Moderate VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 2 quarters. CEDRP Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in two of the previous four quarters. SDT Proposed High VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 3 quarters. CEDRP Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in three of the previous four quarters. SDT Proposed Severe VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 4 quarters. CEDRP Proposed Severe VSL: The Responsible Entity failed to operationally test alternative telecommunications every quarter on more than three separate occasions (i.e. more than any three different quarters). FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? Yes 3. Is it truly a “binary” requirement? Yes 4. If yes, is the VSL assignment consistent with other binary requirement assignments? Yes 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard – COM-001-2 Telecommunications Requirement 2: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities of the failure of its normal telecommunications facilities, and shall verify that alternate means of telecommunications are functional. Proposed Measure: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide evidence that it notified impacted entities of failure of their normal telecommunications facilities, and verified the alternate means of telecommunications were functional. Attributes of the requirement Binary Timing Notify impacted entities and verify functionality of alternate telecommunications Omission Communication X Quality Other - Test X Discussion - This requirement needs to be re-written to be more clearly define who the entities are that are “impacted.” The key attributes appear to be notification of ALL (communication) impacted entities (possible omission if some, but not all are not notified). The requirement does not give any guidance on the “verification” side – this is a problem, one entity can interpret that to mean “we looked and it was working”, another may be to verify with all impacted entities that alternate communication is working. We suggest this requirement needs a little more clarification. The CEDRP does not feel it can write a valid VSL for this requirement as currently worded. SDT Proposed Lower VSL: The Reliability Coordinator, Transmission Operator or Balancing Authority notified all impacted entities of the failure of their normal telecommunications facilities, but failed to verify the alternate means of telecommunications are functional. CEDRP Proposed Lower VSL: See Discussion SDT Proposed Moderate VSL: The Reliability Coordinator, Transmission Operator or Balancing Authority notified some, but not all, impacted entities of the failure of their normal telecommunications facilities, and failed to verify the alternate means of telecommunications are functional. CEDRP Proposed Moderate VSL: See Discussion SDT Proposed High VSL: N/A CEDRP Proposed High VSL: See Discussion SDT Proposed Severe VSL: The Reliability Coordinator, Transmission Operator or Balancing Authority failed to notify any impacted entities of the failure of their normal telecommunications facilities, and failed verify the alternate means of telecommunications are functional. CEDRP Proposed Severe VSL: See Discussion FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a “binary” requirement? No 4. If yes, is the VSL assignment consistent with other binary requirement assignments? N/A 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard – COM-001-2 Telecommunications Requirement 3: Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. Proposed Measure: The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and

provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. Attributes of the requirement Binary Use English for real-time communications unless agreed to otherwise. NOTE: OK with this as is because the requirement and VSLs have been re-written, will be removed from this standard shortly, and included in the new COM-003-1 standard. Timing Omission Communication X Quality Other SDT Proposed Lower VSL: N/A CEDRP Proposed Lower VSL: No change SDT Proposed Moderate VSL: N/A CEDRP Proposed Moderate VSL: No change SDT Proposed High VSL: N/A CEDRP Proposed High VSL: No change SDT Proposed Severe VSL: The responsible entity failed to provide evidence of concurrence to use a language other than English for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. CEDRP Proposed Severe VSL: The Responsible Entity failed to provide evidence of the concurrence to use a language other than English for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? Yes 3. Is it truly a "binary" requirement? Yes 4. If yes, is the VSL assignment consistent with other binary requirement assignments? It's a little inflated as being Severe 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? It's OK for the interim 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard – COM-001-2 Telecommunications Requirement 4: Each Distribution Provider and Generation Operator shall have telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. Proposed Measure: Each Distribution Provider and Generation Operator has telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. Attributes of the requirement Binary "has" telecomm with TOP and BA Timing Omission Communication X Quality Other Discussion – Telecommunication Facilities is ambiguous and is not included in the NERC glossary of terms – the CEDRP recommend deleting the word "facilities" from the requirement and measure and leaving it just as "telecommunications" with its TOP and BA . SDT Proposed Lower VSL: N/A CEDRP Proposed Lower VSL: No change SDT Proposed Moderate VSL: N/A CEDRP Proposed Moderate VSL: No change SDT Proposed High VSL: N/A CEDRP Proposed High VSL: The Responsible Entity failed to establish telecommunications with either their Balancing Authority OR Transmission Operator for the exchange of Interconnection and operating information. SDT Proposed Severe VSL: The Distribution Provider or Generation Operator failed to have telecommunications facilities with its Transmission Operator and Balancing Authority CEDRP Proposed Severe VSL: The Responsible Entity failed to establish telecommunications with their Balancing Authority AND Transmission Operator for the exchange of Interconnection and operating information. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? Mostly 3. Is it truly a "binary" requirement? Mostly 4. If yes, is the VSL assignment consistent with other binary requirement assignments? Yes 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes, considering the wording of the requirement as written. More specifically, the word "have" as used in the requirement is a bit vague. A better choice could have been, "established and maintains." 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard: COM-002-3 Communications and Coordination Requirement 1: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall issue directives in a clear, concise, and definitive manner; shall ensure the recipient of the directive repeats the information back correctly; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. Proposed Measure: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have evidence such as voice recordings or transcripts of voice recordings to show that it issued directives in a clear, concise, and definitive manner; ensured the recipient of the directive repeated the information back correctly; and acknowledged the response as correct or repeated the original statement to resolve any misunderstandings. Attributes of the requirement: Binary Timing Omission Communication X Quality X Other SDT Proposed Lower VSL: None CEDRP Proposed Lower VSL: No Comment SDT Proposed Moderate VSL: The responsible entity provided a clear directive in a clear, concise and definitive manner and required the recipient to repeat the directive, but did not acknowledge the recipient was correct in the repeated directive. CEDRP Proposed Moderate VSL: No comment SDT Proposed High VSL: The responsible entity provided a clear directive in a clear, concise and definitive manner, but did not require the recipient to repeat the directive. CEDRP Proposed High VSL: No comment SDT Proposed Severe VSL: The responsible entity failed to provide a clear directive in a clear, concise and definitive manner when required. CEDRP Proposed Severe VSL: No comment FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a "binary" requirement? No 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes and No (Severe is for multiple occasions of not issuing directives per the requirement).





placed. This design ensures that all communications paths are tested regularly in day-to-day use. However, the design of these systems makes it difficult, if not impossible, to substantiate that a functional test of the circuitry has been performed. This requirement should be broken into two requirements. The first should cover data circuitry and the second should cover voice circuitry. This will allow the drafting team to address the inherent differences in these two methods of communications. Lastly, the requirements need to be much more specific concerning the criticality of the facilities to be tested to improve the measurability of the standard. The drafting team dropped the phrase "for the exchange of Interconnection and operating data" from the standard requirement. This deletion appears to open the application of this standard to virtually every communication path used by an RC, BA, TOP whether or not it is used for communicating real-time operating information or not. We do not believe this was the intention of the drafting team and suggest this phrase be reinserted or another one added that limits applicability to only those communication paths that support the real-time reliability of the bulk electric system. R2 - It is not clear who the "impacted entities" would be in this requirement. The SDT should consider specifying these entities. R3 - The last sentence of this requirement should be deleted. It is not a requirement, it does not add clarity, and the first sentence is very specific as to the communications covered by the requirement. R4 - This requirement makes no distinction between data and voice communications facilities and assumes a designated primary and backup facility configuration such that the backup communications systems are not used regularly. This may be an accurate assumption for data communications; however voice communications may be different. Today many organizations use voice communications systems that allow the system to choose the communication path each time a call is placed. This design ensures that all communications paths are tested regularly in day-to-day use. However, the design of these systems makes it difficult, if not impossible, to substantiate that a functional test of the circuitry has been performed. This requirement should be broken into two requirements. The first should cover data circuitry and the second should cover voice circuitry. This will allow the drafting team to address the inherent differences in these two methods of communication.

No

The measures should be modified per our suggested modifications in question 1.

No

The VSL should be modified per our suggested modifications in question 1. R1 VSL - The statement in the VSL that the responsible entity did not "operationally test" is too broad. It should be more specific with the language used in the requirement.

No

Purpose - The GOP is still shown in the purpose statement although it was removed from the applicability. Also, it may be better if the purpose was written more generally as "To ensure adequate communications capabilities for addressing real-time emergency conditions and ensure communications by operating personnel are effective to maintain BES reliability". Applicability - In the SDT's document "Scope of Work Assigned to the Reliability Coordination Standard Drafting Team", the team decided to not include the FERC directive to include the DP in the applicability with the following reasoning "The proposed revisions do not include the DP entity because they are not applicable." We would like clarification on this. R1 - It does not appear that the implementation plan addresses the FERC direction to consider comments from Santa Clara, FirstEnergy, and Six Cities per 693 par. 539 regarding staffing requirements. Santa Clara asks that these requirements apply "only to operating staff available on site at all times or includes repair personnel who are available only on an on-call basis". FirstEnergy asks that the "term [staffed] should not require a physical presence at all facilities at all times because some units, such as peaking units, are not staffed 24 hours a day". FirstEnergy also suggest "because nuclear units are already subject to communications requirements in their operating procedures, their compliance with NRC operating procedures should be deemed in compliance with the NERC Reliability Standards". Six Cities "states that, to avoid unnecessary staffing burdens, particularly for smaller entities, the Commission should direct NERC to clarify COM-002-2 by providing that identification of an emergency contact person on call to respond to real-time emergency conditions will constitute adequate compliance". R1 - Just as an FYI, with regard to the proposed replacement requirement statement in the implementation plan: "TOP-005-1, R1 and R3 require adequate telecommunications for BAs and TOPs to provide each other with operating data as well as providing data to the RC", per recently stakeholder approved ballots, R1 of TOP-005-1 has been retired and now covered in new standard IRO-010-1. R1.1 - The existing requirement includes "through predetermined communication paths of any condition that could threaten the reliability of its area or when firm load shedding is anticipated". The proposed replacement requirements do not address the need for "predetermined communication paths".

No

The measures should be modified if our comments in question 4 result in changes to the proposed requirements.

No

The VSL should be modified if our comments in question 4 result in changes to the proposed requirements.

No

R3 - should be a sub requirement of R2. These two requirements are sequential in nature and should be measured at the same time. The VRFs and Time Horizons are the same for both requirements lending to their combination into a requirement with a sub requirement. In the VSL for R2, an entity is being penalized with a high severity level for not completely following an RC directive even though it violated safety, equipment, statutory, or regulatory

requirements. Measuring R2 and R3 at the same time allows for the process to complete prior to the measurement taking place. R3 - The "or" between "Distribution Provider" and "Purchasing-Selling Entity" should be replaced with an "and". R4 - Should be revised by adding the phrase "of the expected or actual threat" to the end of the requirement to add clarity. Existing R7 requirement - This requirement is proposed for retirement because it is redundant with IRO-014-1 R1. However, it is not clear how the existing requirement to "have clear, comprehensive coordination agreements with adjacent RCs to ensure that SOL or IROL violation mitigation requiring actions in adjacent RC areas are coordinated" is covered in IRO-014-1 R1. IRO-014-1 R1 requires agreements for coordination of actions between RCs to support Interconnection reliability, but it does not specifically require "clear" and "comprehensive" agreements to mitigate SOL or IROL violations. IRO-014-1 only vaguely covers the existing requirement R7 of IRO-001-1.

No

M2 - The word "intentional" should be added between "without" and "delay".

No

R2 VSL - The Severe VSL should include after the word directive: "that would not violate safety, equipment, statutory or regulatory requirements".

No

R2 - As written, this requirement does not clearly define the scope of the authority of the Reliability Coordinator over analysis tools. Is it the intent of the drafting team to give the RC authority over analysis tools owned and operated by the RC. Is it the intent of the drafting team to give the RC authority over the analysis tools owned and operated by the BA, TOP, GOP, etc.? Are the tools intended to be the real-time (EMS) or the off-line engineering planning analysis tools or any analysis tool used in real-time. Does this include the analysis tools used by field personnel? This requirement should be revised to specify exactly the analysis tools under the authority of the Reliability Coordinator.

No

The measures should be modified per our suggested modifications in question 10.

No

The VSL should be modified per our suggested modifications in question 10.

Yes

No

R1 - Should be revised as follows to improve readability and clarity: R1.3 - Add "Exchanging" before "Planned" R1.4 - Add "Control of voltage" at the beginning of the requirement and delete "for voltage control" at the end of the requirement. Add a new R1.7 as follows: "A process for resolution of the disagreement covered by R6 of this standard."

No

The measures should be modified per our suggested modifications in question 14.

No

The VSL should be modified per our suggested modifications in question 14.

Yes

Yes

Group

Bonneville Power Administration

Denise Koehn

Transmission Reliability Program

Yes

Yes

Yes

Yes

Yes

Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Individual
Greg Rowland
Duke Energy
No
<p>Purpose - The purpose statement does not read very well. It either needs another sentence or changes to the current sentence. The purpose of the standard is to assure proper communications, not to suggest entities need proper communications as currently written. Suggest changing to, "To assure each Reliability Coordinator, Transmission Operator and Balancing Authority develops and maintains.... Requirement R1 - What is the definition of "alternative telecommunications facilities"? Is there another requirement somewhere to have alternative telecommunications facilities – or is this a new requirement being introduced by this standard? What is the relationship, if any, between "alternative telecommunications facilities" and EOP-008-1? What is the requirement for maintaining and testing "alternative telecommunications facilities"; what does "operationally test" mean? Just because an alternative facility works when it is tested does not mean it will work during an actual failure of the primary system. Furthermore, what do we do if the "test" fails- are we still compliant? The word "ensure" needs to be changed to "assure". Requirement R2 - What does "impacted entity" mean? Requirement R3 - Why can't others use alternate language – this limits alternate language to just TOPs and BAs internal operations. TOs, GOPs, and others may want to use alternate language internally. Need to define language to be used with and between other relationships – BA to PSE, as an example. Is this a reliability issue or a certification issue? Simply state that: "Entities may use alternative language for internal operations". This will allow any entity to use alternative language for internal operations. The inclusion of TSPs, LSEs, and PSEs in IRO-001-2 indicates the need to include these functions in the COM-001-2 applicability and requirements concerning the use of English as the approved language. Requirement R4 - Remove R4 and add DP and GO, as well as all of the other entities listed in IRO-001-2, to R1 thru R3.</p>
No
<p>General comments - Not using consistent language regarding "provide evidence" and "shall have and provide upon request evidence". Also need to add corresponding requirement number after each measure. Measure M1 - Just because an alternate facility works when it is tested does not mean it will work during an actual failure of the primary system. - what do we do if the "test" fails- are we complaint? Clarify that the requirement and measure is to "test" not "to test successfully". We may test and find that something does not work as expected.</p>

No
VSL for Requirement R1 - The VSL for R1 seems to imply that an operational test needs to have been performed in the last 90 days – this is read in conjunction with the data retention requirements. Need to clarify in the requirement how “quarter basis” is defined - is it the calendar quarter, or a rolling 90 days? In addition, the VSLs for Requirement R1 appear to violate NERC guidelines, since the Moderate, High and Severe VSLs are based upon cumulative violations of the Lower VSL.
No
Requirement R1 - As defined by Merriam Webster, the use of the word “ensure” implies virtual guarantee <the government has ensured the safety of the refugees>; while the use of the alternative word “assure” implies the removal of doubt and suspense from a person's mind. We suggest that “assure” is more appropriate than “ensure” in this context in the standards. The use of words like “clear, concise, and definitive manner” is subject to interpretation. This same language is used in the VSLs. Depending on the interpretation of this phrase, an entity could be found to be in a “Severe” violation level. The issuer of the directive should not be subject to non-compliance if the recipient of the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back. The inclusion of TSPs, LSEs, and PSEs in IRO-001-2 indicates the need to include these functions in the COM-002-3 requirement concerning repeat-backs. What is a “directive”? The regional compliance processes are having difficulty in auditing this existing standard due to lack of clarity of what constitutes a directive. "Directive" should be defined as being associated with real-time operational emergency conditions, and not ordinary day-to-day communications. Otherwise a VRF of High is not warranted.
No
The use of words like “clear, concise, and definitive manner” is subject to interpretation. The issuer of the directive should not be subject to non-compliance if the recipient of the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back.
No
The use of words like “clear, concise, and definitive manner” is subject to interpretation. The issuer of the directive should not be subject to non-compliance if the recipient of the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back.
No
Requirement R1 - What happens if the RC failed to recognize that such an event was happening as opposed to failed to take action. Is this intended to cover both scenarios? The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision development of this definition needs to go thru Due Process. The inclusion of TSPs, LSEs, and PSEs here indicates the need to include these functions in the COM-001-2 requirements concerning the use of English as the approved language. In addition, this also indicates the need for all of these listed entities to be included in COM-002-3 requirements concerning repeat-backs. The RC, TOP, and BA should not be placed in a possible non-complaint state because the counter party refuses a repeat-back AND these requirements are not applicable to the counter party. Requirement R2 - The language in the Moderate VSL of R2 recognizes another potential reason for delay in execution of a directive. Requirement 2 of the Standards needs to be modified to also recognize this potential. Requirements R2 and R3 - Clarify that entities are obligated to take action and confirm directives only from their Reliability Coordinators, not from any Reliability Coordinator. Requirements R2, R3, R4, R5 - Inconsistent use of “timing” words in the standards – “without intentional delay” and “immediately”. Suggest deleting these words due to the difficulty of determining compliance. Requirement R4 - The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process. Requirement R5 - The VRF should be “Lower” instead of “High” since the notification is that the threat has been mitigated. Also, the term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process.
No
Measures M2, M4 and M5 use the terms "without delay" and "without intentional delay". Suggest deleting these words due to the difficulty of determining compliance. The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process.
No
The language in R1 of the VSL is not consistent with the requirements and measures in the standard. The VSL needs to recognize that the RC may EITHER act or give direction to others to act. The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process. The language in R2 of the VSL places an entity in Moderate or High violation level even if failure is “allowed” in the standard; i.e. failure to act is due to violation of safety, regulatory, statutory requirements. The language in R2 of the VSL recognizes another potential reason for delay in execution of a directive. Requirement R2 of the Standard needs to be modified to also recognize this potential.
No

Requirement R1 - This requirement is in the wrong standard – this is a Facilities standard. This requirement belongs in another standard. Question: Is there a requirement in another standard that compels the TOPS, BAs, etc to provide the requested data? Requirement R2 - Need to clarify whose analysis tools (I assume it is the RCs analysis tools, not the analysis tools of another entity) and planned maintenance to what – is it tools, facilities, transmission, generation, etc. Depending on the answer above, this requirement is in the wrong standard – this is a Facilities standard. This requirement belongs in another standard. Question: Where is the Requirement for the RC to have analysis tools? It appears that the Requirement the RC has analysis tools have been removed in the revisions to the standard.

No

See response to Question #12 above. If the requirements are moved to another standard, the measures aren't needed here.

No

R1 VSL - As a general comment, this VSL is unclear and would be difficult to audit. This VSL uses subjective terms like "material impact" and "minimal impact". These terms are not used in the associated requirement or measure and should be removed from the VSL. This VSL uses terms like "majority, but not all"; "some, but less than a majority" which provides an opportunity for a subjective review by Compliance as to what a complete listing of data requirements should be. This term is not used in the Requirements or Measures and should be removed from the VSL. This VSL introduces a concept, data the RC needs for " ... administrative purposes, such as data reporting ...". This concept is not included in the Requirements or Measures portions of the Standard and should be removed from the VSL. This VSL should be written to simply assess whether the RC has made determination of what its data needs are and whether those needs have been communicated to the entities in the footprint. R2 VSL - This VSL clarifies the questions posed above regarding what the RC needs approval rights over. R2 needs to be modified to include this clarity. This VSL needs to clarify that the RC approval rights are for the RC's tools, not tools of other entities. The Severe level of this VSL needs to be re-written along the lines of: The RC does not have approval rights for planned maintenance or outages to its analysis tools.

Yes

No

R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC? We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows: R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken. We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly. R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous". We suggest rewriting R5 to read: In the event that an operating issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists.

No

See comment #14 above. Also, Measure M5 is inconsistent with Requirement R5. It should mirror the requirement. Also, need to add the requirement number at the end of each Measure.

No

See comments #14 and #15 above - VSLs need to be revised to correspond to the revised Requirements and Measures.

Yes

No

See comment #14 above regarding re-write needed for Requirement R6 of IRO-014-2.

Individual

Thad Ness

AEP

No

A precise definition of telecommunications facilities needs to be established in this standard. R2 needs to be clarified regarding impacted utilities. FERC Order 693 suggests that this standard should apply Distribution Providers (DP) along with Generation Operators (GOP). AEP acknowledges that there needs to be some level of coordination and communication between DP's and other function model entities; however, the requirements, as applied to the DP, for telecommunications with the TOP and BA might not address the current communication

paths adequately. Today, the DP usually does not communicate with the RTO (performing the BA and/or TOP function), but the DP could either communicate directly or through a joint action agency to the IOU that may serve as the TO (or maybe the TOP). As this draft is written the DP's would be required to have telecommunication facilities with the RTO in this scenario. There will likely be many exceptions to the rule that the requirements and measures create when applied to the DP. We ask that the drafting team consider the applicability, some of the current channels of communications, and options for addressing the FERC comments without creating telecommunication paths that do not make practical sense.

No

M2 needs to be clarified regarding impacted functions.

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Individual

Chris de Graffenried

Consolidated Edison Co. of NY, Inc.

Yes and No

Wording in question: R.2/M.2 Each ... Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without intentional delay to comply with the Reliability Coordinator's directives. R.3/M.3 Each ... Load-





Individual
Kevin Koloini
Buckeye Power, Inc.
Yes and No
What constitutes "telecommunications facilities"?
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Yes and No
abstain
Individual
Jason Shaver
American Transmission Company
Yes and No
If some language is clarified, we support the revisions. R2 states that "Each TO shall notify impacted entities of the failure of its normal telecommunications facilities...". If a phone line goes down and an alternate phone line is used, it is an excessive requirement to notify the impacted entities when there is no impact upon communication or the BES. The wording should be clear that notification is only required if an alternate means of communication is necessary. A defined timeframe for notification should be added to the requirement. It is possible that the loss of telecommunication facilities can occur without the loss of a control center. So, the redundancy with EOP-008 to R4 should be clarified.
No

M2 should be changed to reflect the comments noted in Question 1 for R2.
Yes
Based upon revisions to Question 1.
Yes
Yes and No
As long as the measurement of compliance does not include proving the negative, that no directives were issued.
No
R1-High VSL-If the directive was followed and there was no threat to the BES, then a lack of repetition of the directive does not constitute a "high" VSL. Suggest that this be a low or moderate VSL.
No
R2 refers to "intentional delay". The determination of intent should be left to the VSL portion of the standard, not the requirement portion.
Yes
If some language is changed, we support the revisions. R2 has language in it that should be added to M4 to be consistent. In M2, we propose adding language "unless such actions would violate safety, statutory or regulatory requirements."
No
VSL's for R2 and R3 are not appropriate. In order to assess a situation we may not be able to immediately inform the RC of our ability to comply with the directive. The high VSL for R2 currently states that if we do not follow the directive because of safety, statutory or regulatory requirements, it is a high VSL. An entity should not be penalized for not breaking the law.
Abstain.
Abstain.
Abstain.
No
The accountability and monitoring addressed in this Standard is still required. The drafting team's intent was that the ability to monitor is part of the certification process. However, certification is to Standards, and if there is not a Standard which addresses this issue, then an entity cannot certify to it.
Abstain
Abstain
Abstain
Abstain
Abstain
Group
ISO/RTO Council Standards Review Subcommittee
Charles Yeung
SPP
Yes and No
We suggest that a definition of telecommunications be written by the drafting team because it is not clear what all telecommunications is intended to be included. Does this requirement apply to data, voice, rtus, networks, etc? For requirement R2, e suggest that you strike the final clause: "and shall verify that alternate means of telecommunications are functional." It is obviated by the requirement to notify impacted parties. The responsible entity is already implicitly required to verify its alternate means of communication is functional since it is required to notify its impacted parties of the failure of its normal telecommunications. It can't notify its impacted parties if the alternate communications means are not functional. The VRF for new requirement 1 should be lower. It does not fit the definition of a medium VRF. A medium VRF requires that a violation of the requirement directly affect the state or capability or the ability to effectively monitor and control. Failure to test does not result in directly affecting the state or capability or the ability to effectively monitor and control. At a minimum, a failure of the alternative communication systems and primary communication systems must occur first. The failure to perform a single test in a given quarter does not mean that primary and alternative communication systems will fail. Thus, testing is really an administrative issue and should thus be a lower VRF. In the Data Retention section, Distribution Provider and Generation Operators should be added. Currently, there are no data retention requirements listed for them. Suggest modifying the language regarding data retention for compliance violations to: "... is found in violation of a requirement, it shall keep information related to the violation until it the Compliance Enforcement Authority finds it compliant."
Yes and No

M3: The evidence to show that concurrence is in place to allow communication using a language other than English is missing. The Measure as written merely asks for evidence that communication in a different language has occurred.

No

The VSLs as defined for Requirement 1 appear to violate Guideline 4 that the Commission established in their "Order on Violation Severity Levels Proposed by the Electric Reliability Organization". Guideline 4 requires that a VSL should be based on a single violation. The VSLs as defined accumulate the number of consecutive quarters. This would imply that a single violation could last more than a year and that the compliance auditor could not determine sanctions until the entity becomes compliant or year has passed. A single violation appears to be the failure to test in a single quarter. This requirement is binary in nature in that it is either met or it isn't. We suggest that only a lower VSL should be defined as: "The RC, TOP, or BA failed to test the backup telecommunication facilities for a single calendar quarter." The Lower VSL for R2 is not possible. The act of notifying all impacted entities of the failure of their primary telecommunication system requires the use of the alternative telecommunications systems which is a form of verifying that the alternative telecommunications facilities are functional. The drafting team should consider applying the numeric performance category of the VSL Development Guideline Criteria for R2. (i) R1: Suggest to revise the conditions for all levels to read "...failed to operationally test the alternative communication facilities within the last..... (ii) R2: The second part under Severe is not needed since failing to notify any impacted entities would imply no communication to the affected entities anyway. If verification of the functionality of the alternate means of telecommunications is also critical even without communicating to the affected entities, then the second condition should be an "OR". (iii) R3: Failure to having concurrence to use a language other than English for communications between and among operating personnel responsible for real-time operations by itself does not constitute a violation of any requirements; it is the absence of such a concurrence AND having used a language other than English that would constitute a violation. Suggest to revise this condition.

Yes

Yes

Yes

Yes and No

New requirement R2 should omit act without intentional delay. Use of intentional implies willful disregard for compliance for the requirement. Intention should not be addressed as part of the compliance with the requirement but rather through the enforcement process once the compliance auditor has identified a violation. The word immediately should be removed from the new R3. This attempts to time frame the response of the responsible entity and remove the judgment from the compliance auditor. We agree with the concept of doing this but in reality it only confuses the issue and the compliance auditor will likely apply his judgment regarding what immediate is anyway. Additionally, the requirement attempts to separate the act of confirming that the responsible entity can take the action from notifying the RC that the entity can't take the action. This is not logical. What RC is going to request a responsible entity to take action that would violate safety, equipment, statutory, or regulatory requirements? The RC should already be aware of those requirements and likely won't direct actions that violate them. Thus, the likely scenario is that the responsible entity will attempt to take action and discover that equipment is not functioning properly and thus notify the RC. We suggest striking the "shall immediately confirm the ability to comply with the directive or" from the requirement. This part of the requirement is not needed because the responsible entity is already obligated to follow the RCs directive (see order 693.) Thus, the assumption is that the order will be followed unless it can't be followed because it will violate safety, equipment, statutory, or regulatory requirements. Requirements R4 and R5 are unnecessary. New R1 requires the RC to direct actions to be taken by the TOP, BA, GOP, TSP, LSE, DP and PSE to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. The RC can't direct these actions without notifying all impacted TOPs and BAs. They would also have to notify them when actions are no longer necessary. The VRF for R5 should not be High. Failure to notify others when potential threats to system reliability have been mitigated does not constitute a high risk to the interconnected system. We suggest it be reduced to a Medium (i.e., that it affects control of the BES).

No

The R1 High and Severe VSL appear to differ only by the inclusion of directing actions in Severe. From a practical perspective, what is the difference between directing actions and acting? We don't believe there is any. The actions are the result of the RC authority whether the RC takes the actions themselves or directs someone else to. We suggest a better alternative for the VSL levels would be for the High level to reflect that the RC did not act or direct actions to prevent an Adverse Reliability Impact and Severe would be that the RC did not act or direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact. The moderate VSL for R2 is not practical and too subjective. What constitutes a delay? What if the responsible entity takes five minutes to determine how to carry out the action or if their equipment currently is capable of carrying out the action? Is this a

delay? We suggest striking this Moderate VSL. The High VSL does not agree with the requirement. It considers the inability to fully follow an RC directive due to a violation of the safety, equipment, statutory, or regulatory requirements a violation. This is in direct conflict with the requirement. We suggest that the High VSL should be struck. We suggest the Severe VSL should be that the responsible entity failed to follow the RC directive and it would not have violated the safety, equipment, statutory or regulatory requirements. Currently, the Severe category does not allow that the responsible entity may not be able to carry out the directive due to the violation of safety, equipment, statutory, or regulatory requirements. In question 7, we request that the drafting team strike part of requirement 3. The striking of that portion of requirement 3 obviates the lower VSL. In paragraph 27 of the ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION, the Commission expresses "that, as a general rule, gradated Violation Severity Levels, wherever possible, would be preferable to binary Violation Severity Levels". Given that it is possible to define gradated VSLs for R4 and R5, we suggest that the drafting team should consider applying the numeric performance category of the Violation Severity Levels Development Guidelines Criteria based on the number of impacted TOPs and BAs that were notified.

No

New Requirement R2 is no longer needed as a result of paragraph 112 in Order 693-A. Since the RC's "authority to issue directives arises out of the Commission's approval of Reliability Standards" the RC already has veto authority or will have once R1 IRO-001-2 is approved. This requirement obligates the RC to take actions or direct actions to prevent Adverse Reliability Impacts. Veto outages of equipment and analysis tools would fall into this category even if the RC couldn't say for certain that an Adverse Reliability Impact was going to occur but rather they are concerned one could occur due to heavy loads for example.

No

Measure 1 should not focus on a letter as evidence. A more appropriate measure would be a data specification document and actual verification that data has been received. The letter or equivalent is only needed if data has not been supplied. Demonstration of the actual receipt the data would be easy.

No

For R1, the lower VSL contradicts itself. It states that RC demonstrated that it determined its data requirements and requested that data and then follows with that it didn't request that data. The second option in the Lower VSL category is not practical and a compliance auditor would not be in a position to determine this. In fact, if the administrative data is not requested, other administrative requirements for reporting would be violated. Additionally, it does not make sense that an RC would determine its data needs and then omit data for administrative reporting. Further, is it the compliance auditor's job to judge if the data the RC requests is sufficient or is it his job to see that the RC has met the requirement to define the data? The remaining VSLs imply that the RC may define only partial data requirements. This does not seem likely. Why would the RC do this? This VSL appears to add to the requirement by making it appear that the compliance auditor is to judge the completeness of the data requirement. This violates Guideline 3 of the FERC ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION. Practically, it would not be enforceable anyway. It would require the RC to admit that they did not include administrative data in their data requirements. It is doubtful this would happen because the RC likely believes they prepared a complete data requirement document. We suggest that the VSLs should be: Severe: The RC did not determine its data requirements or the RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 75 to 100% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. High: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 50 and less than or equal to 75% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Medium: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 25% and less than or equal to 50% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Lower: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 0% and less than or equal to 25% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. R2 VSLs are not needed per paragraph 112 of Order 693-A. The Severe VSL contradicts the requirement.

No

No

Please strike "as a minimum" in R1. By definition, the requirement defines the minimum. Please strike R1.6. RCs already have the authority to act per paragraph 112 of Order 693-A. Since R2 requires the RCs to agree, is the "mutually agreed to" clause in R1.1 necessary? Please strike requirements R4 and R4.1. It is duplicative to R1.1. Conference calls are a form of communication and should be addressed per R1.1. R5 is confusing. If a reliability issue isn't confirmed, doesn't this mean there is no reliability issue? Isn't this the point of confirming? Additionally, we suggest using validate instead of confirm. As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance. Use of the term collectively may resolve this dilemma.

No

Measure 1 appears to add to the requirement. Requirement 1 does not mention anything about System Operators yet the measurement does. The measurement should just be to verify that the RC has have Operating Processes, Procedures, and Plans. The sub-measurements are not measurements at all. There should be the single measurement to verify the Operating Processes, Procedures, and Plans have been developed and address the sub-requirements. This really points out the problem with making the criteria that must be considered in the Operating Processes, Procedures, and Plans sub-requirements in the first place. They aren't requirements of any sort. They represent criteria. The drafting team should consider making them a bulleted list without the Rs, then the drafting team won't feel compelled to write sub-measures that don't measure anything.

No

For R2, the High and Severe VSLs contradict the requirement. We believe all of the "nots" should be removed. We don't agree with the VSLs in R4 since we believe R4 should be struck. The Lower VSL for R6 should not even be a violation unless the impact was negative. If the RC implemented a different mitigation plan and resolved the issue, then the RC was likely correct to disagree.

Yes

Yes

We do agree with moving the requirement. However, the drafting team needs to revisit the wording of the requirement. The new wording is much more confusing. Until we reviewed IRO-016-2, it was not clear at all that R6 in IRO-014 was attempting to mimic R1 and its sub-requirements in IRO-016-2.

## Consideration of Comments on Set of Reliability Coordination Standards (Project 2006-06)

The Reliability Coordination Standards Drafting Team (RC SDT) thanks all commenters who submitted comments on the set of Reliability Coordination Standards. These standards were posted for a 45-day public comment period from August 5, 2008 through September 16, 2008. Stakeholders were asked to provide feedback on the standards through a special electronic standard comment form. There were 29 sets of comments, including comments from more than 70 different people from approximately 50 companies representing 8 of the 10 Industry Segments as shown in the table on the following pages.

[http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)

The following standards remain within the scope of this project:

- COM-001-2 — Communications
- COM-002-3 — Communication and Coordination
- IRO-001-2 — Reliability Coordination — Responsibilities and Authorities
- IRO-002-2 — Reliability Coordination — Facilities
- IRO-005-1 — Reliability Coordination — Current Day Operations
- IRO-014-2 — Coordination among Reliability Coordinators
- IRO-015-1 — Notifications and Information Exchange between Reliability Coordinators
- IRO-016-1 — Coordination of Real-time Activities between Reliability Coordinators

The RC SDT has revised some of the requirements, measures, violation risk factors and violation severity levels for COM-001, COM-002, and IRO-001, and IRO-014 based on the comments received. A summary of the drafting team's consideration of comments follows:

### Requirements, Measures and VSLs in COM-001-2

**Requirements:** The RC SDT received several comments regarding the intent of the term "telecommunications facilities". For COM-001-2, the RC SDT envisions telecommunications to be voice or message communication between operating personnel. The standard has been renamed "Communications" and the term "telecommunications facilities" was replaced with "interpersonal communications capabilities" throughout the standard to better reflect the intent of the RC SDT.

We also received comments regarding the applicability of the standard that suggested adding the other entities listed in IRO-001 (Transmission Service Provider, Load-serving Entity and Purchasing-Selling Entity). The RC SDT contends that, in order to receive and carry out directives, an entity must be able to communicate with the Reliability Coordinator ...either directly or through other entities (e.g. – a Distribution Provider may receive a directive from the Transmission Operator who received it from the Reliability Coordinator). We have not expanded the applicability as suggested as we feel that this expands the standard beyond the reliability intent. The RC SDT contends that the addition of the Transmission Service Provider, Load-Serving Entity and Purchasing Selling Entity to COM-001 adds no reliability benefit as the interactions with these entities are commercial in nature. It is not necessary nor is it practical, for reliability purposes, for every entity to have normal and back-up interpersonal communications capabilities with every other entity. The SDT did, however add the Transmission Service Provider, Load-serving Entity and Purchasing-Selling Entity to the list of entities in R3 that must use English Language for inter-entity communications.

| Other commenters had concerns with regard to R2 and the intent with regard to length of outages. The requirement was revised as:

**R2.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its their normal interpersonal communications capabilities-telecommunications facilities, and verify the alternate means of telecommunications are functional.

The informational (last) sentence of R3 was removed per stakeholder suggestions:

**R3.** Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. ~~Transmission Operators and Balancing Authorities may use an alternate language for internal operations.~~

**Measures:** Commenters suggested general as well as specific revisions to the measures. One general comment suggested making the language consistent among the measures regarding evidence. M1-M3 were revised to include the phrase “shall have and provide upon request evidence that ...”.

Several commenters suggested revisions to M3. The RC SDT revised M3 based on the comments received suggesting that the applicability be expanded and added the Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-selling Entity, and Load-serving Entity to the measure. Several entities commented that M3 did not match R3 which included an explanatory sentence that allowed an entity to use a language other than English for its internal communications. The informational second sentence was removed from Requirement R3, thus eliminating the “disconnect” between the requirement and the measure. All measures were revised as necessary to reflect revisions to requirements.

**VSLs:** The RC SDT made revisions to the VSL’s based on the comments received and also to reflect revisions to the associated requirements. The SDT received comments that the VSLs for R1 and R2 were based on multiple violations rather than a single violation and revised the VSLs to reflect a single violation, which is one of FERC’s guidelines for VSLs.

### **Requirements, Measures and VSLs in COM-002-3**

The work of the IROL SDT resulted in the retirement of R1 from the standard. The RC SDT received comments recommending expanding the applicability of the standard and separating Requirement R1 into two distinct requirements. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. The requirements were revised to:

**R1.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a directive associated with real-time operational emergency conditions shall require the recipient of the directive to repeat the intent of the directive back; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. *[Violation Risk Factor: High][Time Horizon: Real-Time]*

**R2.** Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a directive issued per Requirement R1 shall repeat the intent of the directive back to the issuer of the directive. *[Violation Risk Factor: High][Time Horizon: Real-Time]*

The purpose statement was also revised to reflect the revisions to the standard: “To ensure communications by operating personnel are effective.”

The RC SDT received comments recommending expanding the applicability of the standard and separating Requirement R1 into two distinct requirements. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission

Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. The measures were revised to:

- M1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a directive associated with real-time operational emergency conditions shall have evidence such as voice recordings or transcripts of voice recordings to show that it required the recipient of the directive to repeat the intent of the directive back; and acknowledged the response as correct or repeated the original statement to resolve any misunderstandings.
- M2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a directive issued per Requirement R1 shall have evidence such as voice recordings or transcripts of voice recordings to show that it repeated the intent of the directive back to the issuer of the directive.

VSLs: The RC SDT received comments recommending revisions to the VSLs based on revisions to the requirements and measures. The RC SDT did this and created new VSLs for new Requirement R2.

#### **Requirements, Measures and VSLs in IRO-001-2**

The RC SDT has received a notable number of comments suggesting edits to the proposed requirements and measures for the draft standard, particularly regarding the phrase “without intentional delay.” The comments do not oppose the objective of the phrase, but often point out the issues of measuring intent and measuring delay time.

To maintain the intent while improving the measurability of the requirement, the SDT proposes to modify the standard as follows: delete the phrase ‘without intentional delay’ and leave the obligation of response and timing an unstated requirement of R1 “The RC shall act or direct actions...”

An RC that requires a given action in a given time will be expected to inform the impacted entities of those actions and time requirements. This would obviate the need for providing a measure for “intent”, but still maintain the reliability intent of the original requirement.

The VSLs were revised to reflect revisions to the requirements as well as the comments of stakeholders. Several comments suggested that there was no fundamental difference between the RC “acting” or “directing actions”. The RC SDT agreed and removed the High VSL for R1 and revised the Severe VSL accordingly. Other commenters suggested removing the High VSL from R2 as the VSL contradicted the requirement. The RC SDT agreed and removed the VSL.

#### **Requirements, Measures and VSLs in IRO-002-2**

Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired IRO-002-2 Requirement R1. The team also received concern about eliminating the requirement to monitor frequency. While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure “Monitoring” can provide. It is the SDT’s contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in entity certification requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability. The team declined to delete R2 (Reliability Coordinator veto over analysis tool outages) as it was a specific recommendation from the 2003 Blackout report. This requirement was revised and moved into IRO-001-2 as R6.

#### **Retirement of IRO-005-1**

Several commenters had concerns around removing the requirement to monitor frequency (IRO-005-1 R8). The intent of this monitoring activity was incorporated into IRO-002-2, R1. Other commenters had concerns with the removal of other monitoring requirements in the standard. While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity



associated with any attempt to measure “Monitoring.” It is the SDT’s contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in entity certification process requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability.

**Requirements, Measures and VSLs in IRO-014-2**

Several commenters expressed concerns with the term “impacted” and suggested replacing this with “other”. The RC SDT believes “impacted” directly relates to the purpose statement. The original wording of “one or more other” is vague and difficult to measure. Using the word “other” presents a similar situation. The RC SDT chose to use the word “impacted” to tighten the requirement and remove ambiguity. The RC SDT does not intend for non-contiguous Reliability Coordinators to have “Reliability Coordinator Agreements”, but to have Procedures, Processes, or Plans with impacted Reliability Coordinators. Other commenters suggested striking the term “as a minimum” in R1 and the RC SDT agrees and has modified R1 accordingly.

Some commenters did not agree with the wording of the two new requirements in IRO-014 that were formerly in IRO-016. The SDT modified and subdivided the requirements into four requirements (R5 – R8) shown below:

- R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]
- R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]
- R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]
- R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

Several commenters suggested that the High and Severe VSLs for R2 contradicted the requirement. The RC SDT agreed and removed the “nots” from the VSLs. Several commenters had suggested revisions for the VSLs for R6, which was imported from IRO-016. VSLs were changed to support the revised requirements.

**IRO-015-2**

Stakeholders agree with the proposal to move the requirements into IRO-014-2 and retire IRO-015 as a separate standard.

**IRO-016-1**

Stakeholders agree with the concept of moving the requirements of IRO-016-1 into IRO-014-2. Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements are listed above in IRO-014-2 summary.

**Implementation Plan - Proposed Effective Dates**

The RC SDT received comments that COM-001-2, R5 should have an effective date immediately upon regulatory approval. The RC SDT agrees and will request an effective date that is the first possible effective date – the first day of the first calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at [gerry.adamski@nerc.net](mailto:gerry.adamski@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

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<sup>1</sup> The appeals process is in the Reliability Standards Development Procedures: <http://www.nerc.com/standards/newstandardsprocess.html>.

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**Comments for Set of Reliability Coordination Standards (Project 2006-06)**

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 – Regional Reliability Organizations, Regional Entities

Committer		Organization		Industry Segment										
				1	2	3	4	5	6	7	8	9	10	
1.	Kris Manchur	Manitoba Hydro		x		x		x	x					
2.	Guy Zito	NPCC												x
<b>Additional Member</b>		<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>										
1.	Roger Champagne	Hydro One TransEnergie	NPCC	2										
2.	Lee Pedowicz	NPCC	NPCC	10										
3.	Gerry Dunbar	NPCC	NPCC	10										
3.	Jeffrey V Hackman	Ameren		x		x		x	x					
4.	Dan Rochester	Independent Electricity System Operator - Ontario			x									
5.	Linda Perez (WECC)	Reliability Coordinator Comment Working Group												x
6.	Fred Young	Northern California Power Agency					x							
7.	Denise Roeder	ElectriCities of North Carolina, Inc.				x	x		x					
8.	Karl Bryan	US Army Corps of Engineers, Northwestern Division						x						
9.	Annette Bannon	PPL Supply Group						x	x					
<b>Additional Member</b>		<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>										

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Commenter		Organization			Industry Segment										
					1	2	3	4	5	6	7	8	9	10	
1.	Mark Heimbach	PPL EnergyPlus	RFC	6											
2.			MRO	6											
3.			NPCC	6											
4.			SERC	6											
5.			SPP	6											
6.	John Cummings	PPL EnergyPlus	WECC	6											
7.	Jon Williamson	PPL EnergyPlus	WECC	6											
8.	Tom Lehman	PPL Montana	WECC	5, 6											
9.	Joe Kisela	PPL Generation	RFC	5											
10.			NPCC	5											
11.	David Gladey	PPL Susquehanna	RFC	5											
10.	John Blazekovich (Commonwealth Edison)	#1 Standards Interface Subcommittee/Compliance Elements Drafting													
11.	Terry Bilke (MRO)	MRO NERC SDTandards Review Subcommittee				x									
<b>Additional Member</b>		<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>											
1.	Neal Balu	WPS	MRO	3, 4, 5, 6											
2.	Carol Gerou	MP	MRO	1, 3, 5, 6											
3.	Jim Haigh	WAPA	MRO	1, 6											
4.	Charles Lawrence	ATC	MRO	1											
5.	Ken Goldsmith	ALTW	MRO	4											
6.	Tom Mielnik	MEC	MRO	1, 3, 5, 6											
7.	Pam Sordet	XCEL	MRO	1, 3, 5, 6											
8.	Dave Rudolph	BEPC	MRO	1, 3, 5, 6											
9.	Eric Rudolph	LES	MRO	1, 3, 5, 6											
10.	Joseph Knight	GRE	MRO	1, 3, 5, 6											
11.	Joe DePoorter	MGE	MRO	3, 4, 5, 6											
12.	Maire Knox	MISO	MRO	2											
13.	Michael Brytowski	MRO	MRO	10											

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Commenter		Organization			Industry Segment															
					1	2	3	4	5	6	7	8	9	10						
14.	Larry Brusseau	MRO	MRO	10																
12.	Jim Busbin	Southern Company Transmission			x															
Additional Member	Additional Organization	Region		Segment Selection																
1.	Raymond Vice	Southern Company Services, Inc.		SERC	1															
2.	Mike Hardy	Southern Company Services, Inc.		SERC	1															
3.	Chris Wilson	Southern Company Services, Inc.		SERC	1															
4.	Terry Coggins	Southern Company Services, Inc.		SERC	1															
5.	Dean Ulch	Southern Company Services, Inc.		SERC	1															
6.	J. T. Wood	Southern Company Services, Inc.		SERC	1															
7.	Roman Carter	Southern Company Services, Inc.		SERC	1															
8.	Marc Butts	Southern Company Services, Inc.		SERC	1															
13.	Kathleen Goodman	ISO New England Inc.				x														
14.	Edward Davis	Entergy Services, Inc			x															
15.	Danny Dees	MEAG Power			x		x		x											
16.	Mike Gentry	Salt River Project			x		x		x	x										
17.	Jim Griffith (Southern Company)	SERC OC Standards Review Group			x		x		x											
Additional Member	Additional Organization	Region		Segment Selection																
1.	Alan Jones	Alcoa		SERC	1, 3, 5															
2.	Al McMeekin	SCE&G		SERC	1, 3, 5															
3.	Brett Koelsch	Progress Energy		SERC	1, 3, 5															
4.	Raymond Vice	Southern Co.		SERC	1, 3, 5															
5.	Danny Dees	MEAG		SERC	1, 3, 5															
6.	Raleigh Nobles	Ga System Operations Corp		SERC	1, 3, 5															
7.	Greg Stone	Duke Energy		SERC	1, 3, 5															
8.	Tim Hattaway	PowerSouth		SERC	1, 3, 4, 5															
9.	Jack Kerr	Dominion VP		SERC	1, 3, 5															
10.	Richard McCall	NCEMC		SERC	3, 4															
11.	Jim Case	Entergy		SERC	1, 3, 5															
12.	Joel Wise	TVA		SERC	1, 3, 5, 9															

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Commenter		Organization		Industry Segment											
				1	2	3	4	5	6	7	8	9	10		
13.	John Rembold	SIPC	SERC	1, 3, 5											
14.	Lawrence Rodriquez	Entegra Power	SERC	3, 4, 5, 6											
15.	Mike Bryson	PJM	SERC	2											
18.	Jay Seitz	US Bureau of Reclamation						x							
19.	Patrick Brown	PJM Interconnection			x										
<b>Additional Member</b>		<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>											
1.	William Harm	PJM Interconnection	RFC	2											
2.	Leanne Harrison	PJM Interconnection	RFC	2											
20.	John Blazekovich (Commonwealth Edison)	#2 Standards Interface Subcommittee/Compliance Elements Development Resource Pool													
21.	Timothy C. (TC) Thomas	Progress Energy Carolinas			x		x		x	x					
22.	Sam Ciccone	FirstEnergy			x		x	x	x	x					
<b>Additional Member</b>		<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>											
1.	Dave Folk	FE	RFC	1, 3, 4, 5, 6											
2.	Doug Hohlbaugh	FE	RFC	1, 3, 4, 5, 6											
3.	Steve Lux	FE	RFC	1, 3, 4, 5, 6											
23.	Denise Koehn	Bonneville Power Administration			x		x		x	x					
<b>Additional Member</b>		<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>											
1.	Rich Ellison	Transmission Dispatch		WECC											
2.	Jeffrey Cook	Transmission Communications & Grid Modeling		WECC	1										
3.	Robin Chung	Generation Support		WECC	3, 5, 6										
24.	Greg Rowland	Duke Energy			x		x		x	x					
25.	Thad Ness	AEP			x		x		x	x					
26.	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.			x		x			x					
27.	Kevin Koloini	Buckeye Power, Inc.					x	x	x						
28.	Jason Shaver	American Transmission Company			x										
29.	Charles Yeung (SPP)	ISO/RTO Council Standards Review Subcommittee													x

1. Do you agree with the revisions to the Requirements in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

**Summary Consideration:** The RC SDT received several comments regarding the intent of the term “telecommunications facilities”. For COM-001-2, the RC SDT envisions telecommunications to be voice or message communication between operating personnel. The standard has been renamed “Communications” and the term “telecommunications facilities” was replaced with “interpersonal communications capabilities” throughout the standard to better reflect the intent of the RC SDT. Based on stakeholder comments, R1 was changed as follows:

R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall operationally test, on a quarterly basis ~~at a minimum,~~ alternative [interpersonal telecommunications facilities capabilities used for communicating real-time operating information.](#) ~~to ensure the availability of their use when normal telecommunications facilities fail. If the test is unsuccessful, the entity shall develop a mitigation plan to restore its interpersonal communications capabilities.~~

We also received comments regarding the applicability of the standard that suggested adding other entities listed in IRO-001. The RC SDT contends that, in order to receive and carry out directives, an entity must be able to communicate with the RC...either directly or through other entities (e.g. – a Distribution Provider may receive the directive from the Transmission Operator who received it from the Reliability Coordinator). We have not expanded the applicability of R1 to include the TSP, LSE and PSE as suggested as we feel that this expands the standard beyond the reliability intent. It is not necessary nor is it practical, for reliability purposes, for every entity to have normal and back-up interpersonal communications capabilities with every other entity. The TSP, LSE and PSE were, however, added to R3 to add these entities to the list of entities that must use the English language when exchanging inter-entity information.

Other commenters had concerns with regard to R2 and the intent with regard to length of outages. The requirement was revised as follows:

R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities [within 60 minutes of the detection](#) of ~~the a~~ failure [\(30 minutes or longer\)](#) of its normal [interpersonal tele](#)communications [facilities capabilities.](#) ~~, and shall verify that alternate means of telecommunications are functional.~~

The TSP, LSE and PSE were added to the list of responsible entities and the informational (last) sentence of R3 was removed per stakeholder suggestions:

R3. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, ~~Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity,~~ and Distribution Provider shall use English as the



language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. ~~Transmission Operators and Balancing Authorities may use an alternate language for internal operations.~~

Organization	Question 1:	Question 1 Comments:
AEP	No	<p>A precise definition of telecommunications facilities needs to be established in this standard.</p> <p>R2 needs to be clarified regarding impacted utilities. FERC Order 693 suggests that this standard should apply Distribution Providers (DP) along with Generation Operators (GOP). AEP acknowledges that there needs to be some level of coordination and communication between DPs and other function model entities; however, the requirements, as applied to the DP, for telecommunications with the TOP and BA might not address the current communication paths adequately. Today, the DP usually does not communicate with the RTO (performing the BA and/or TOP function), but the DP could either communicate directly or through a joint action agency to the IOU that may serve as the TO (or maybe the TOP). As this draft is written the DPs would be required to have telecommunication facilities with the RTO in this scenario. There will likely be many exceptions to the rule that the requirements and measures create when applied to the DP. We ask that the drafting team consider the applicability, some of the current channels of communications, and options for addressing the FERC comments without creating telecommunication paths that do not make practical sense.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>COM-001-2 has been renamed “Communications”. The RC SDT envisions COM-001-2 as referring to voice or text communications only. We have revised the term “telecommunications facilities” to “interpersonal communications capabilities” to better reflect the intent.</p> <p>In R2, the phrase, “impacted entities” refers to any entity with whom the TC, TOP or BA has lost interpersonal communications capabilities. The requirements were written to address the differences in any entity’s facility needs allowing for adequate flexibility to incorporate cost effective solutions as well as accommodate future technologies (FERC Order 693 directives).</p>		
ElectriCities of North Carolina, Inc.	No	<p>We are a joint action agency registered on behalf of our member municipalities, who are all TDUs, neither own nor operate any Bulk Electric System facilities, and perform no real-time operations or operations planning for the BES. There are currently other standards that already apply to us that require us to have processes and means to communicate with our RC, BA, TOP, etc. The proposed modifications to this standard would now make our members subject to this standard as well, based</p>

Organization	Question 1:	Question 1 Comments:
		<p>on the DP registration designation. Given that, we believe there needs to be additional clarification of specifically what type of "telecommunications facilities" are required to be considered compliant with this standard. Maybe in the past when this standard applied to TOPs, BAs, and RCs, it was intuitive what type of telecommunications facilities they needed to communicate with each other. However, when you bring in small DPs, it doesn't seem so clear. Obviously we already communicate with our TOP and BA, and have done so for years. As written, the standard is ambiguous in terms of what more, if anything, we would have to put in place to satisfy this standard.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. COM-001-2 has been renamed "Communications". The RC SDT envisions COM-001-2 as referring to voice or text communications only. We have revised the term "telecommunications facilities" to "interpersonal communications capabilities" to better reflect the intent. The purpose statement is revised as:</p> <p>To ensure that operating entities have adequate interpersonal communication capabilities.</p> <p>The requirement R4 was written to meet a FERC directive with respect to COM-001. The requirement states:</p> <p>Each Distribution Provider and Generation Operator shall demonstrate the existence of its interpersonal communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information.</p> <p>Compliance with NERC requirements can be achieved through agreements with other entities to meet the intent of the requirement. The RC SDT can not address compliance issues, as this is the scope of NERC Compliance.</p>		
US Army Corps of Engineers, Northwestern Division	No	R3 needs to have the last sentence revised to allow the Generator Operator and Distribution Provider to use an alternate language for internal operations.
<p><b>Response:</b> The RC SDT thanks you for your comment. The requirement and measure were revised to delete the last sentence as it was not a requirement, but only information.</p>		
US Bureau of Reclamation	No	Purpose Distribution Providers and Generator Operators were added to the applicability; the Purpose should be revised to reflect that.
<p><b>Response:</b> The RC SDT thanks you for your comment. The Purpose Statement was revised to:</p> <p>To ensure that operating entities have adequate interpersonal communication capabilities.</p>		

Organization	Question 1:	Question 1 Comments:
CU of Springfield	No	<p>City Utilities of Springfield, Missouri (CU) supports the effort of the drafting team to add Distribution Providers and Generator Operators to the "Applicability" section, the change in language regarding testing of alternate telecommunication facilities and the future effort to move COM-001-2 R3 to the new COM-003-1 standard.</p> <p>However, it is still necessary to define all parties that are responsible for having "adequate and reliable telecommunication facilities" and to require them to have both primary and backup telecommunication facilities. Since this standard is designed to address telecommunication facilities, any redundancy that exists should be removed from other standards instead. The proposal from the drafting team to remove all of the language from COM-001-1 R1 will create a gap in responsibility, since none of the standards mentioned in the Implementation Plan specifically require a RC, BA or TOP to have these facilities. It is the opinion of CU that you have defined the parties that need to communicate "Interconnection and operating information" in IRO-001-2, where a BA, TOP, GOP, TSP, LSE, DP and PSE receive and comply with directives from the RC. Therefore to maintain consistency are not all of these entities expected to have "adequate and reliable" telecommunication facilities?</p> <p>CU suggests that COM-001-2 R4 be moved to R1 and standard language changed to say:</p> <p>Purpose: Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity needs adequate and reliable telecommunications facilities internally and with others in the Reliability Coordinator's area, for the exchange of Interconnection and operating information necessary to maintain reliability.</p> <p>R1. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall have primary and backup telecommunications facilities for the exchange of Interconnection and operating information.</p> <p>R2. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall operationally test, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail.</p> <p>R3. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling</p>

Organization	Question 1:	Question 1 Comments:
		<p>Entity shall notify impacted entities of the failure of its normal telecommunications facilities, and shall verify that alternate means of telecommunications are functional.</p> <p>R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.</p> <p>The end result will be a standard that requires all applicable entities to:</p> <ul style="list-style-type: none"> <li>A. Have primary and backup telecommunication facilities.</li> <li>B. Test the telecommunication facilities.</li> <li>C. Utilize the telecommunication facilities.</li> </ul>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>Applicability: You are correct with regards to IRO-001 and the entities involved in carrying out directives. The RC SDT contends that, in order to receive and carry out directives, an entity must be able to communicate with the RC...either directly or through other entities (e.g. – a Distribution Provider may receive the directive from the Transmission Operator who received it from the Reliability Coordinator). The RC SDT has changed the name of this standard to “Communications and revised the Purpose Statement to:</p> <p>To ensure that operating entities have adequate interpersonal communication capabilities.</p> <p>We have replaced the term “Telecommunications Facilities” with “interpersonal communications capabilities” to better reflect the intent of the standard. We have not expanded the applicability of R1 or R2 as you suggest as we feel that this expands the standard beyond the reliability intent. It is not necessary nor is it practical, for reliability purposes, for every entity to have normal and back-up interpersonal communications capabilities with every other entity. The SDT did, however, expand the applicability for the requirement to use English language to include the TSP, LSE and PSE in support of your suggestion.</p>		
Northern California Power Agency	No	R3 should include in the last sentence that the Generator Operator and Distribution Provider may use alternate language for internal operations.
<p><b>Response:</b> The RC SDT thanks you for your comment. The requirement and measure were revised to delete the last sentence since it was informational only and not a requirement.</p>		

Organization	Question 1:	Question 1 Comments:
<p>MRO NERC SDT Standards Review Subcommittee</p>	<p>No</p>	<p>The new R2 requirement is too verbose. We suggest that you strike the final clause: "and shall verify that alternate means of telecommunications are functional." It is obviated by the requirement to notify impacted parties. The responsible entity is already implicitly required to verify its alternate means of communication is functional since it is required to notify its impacted parties of the failure of its normal telecommunications. It can't notify its impacted parties if the alternate communications means are not functional. This clause is similar to the old requirement one that the drafting team appropriately struck.</p> <p>We tend to agree that striking R1 makes sense due to the drafting team's reasoning. However, we are not clear why the new R4 is necessary then. If the drafting team does not believe R1 is necessary shouldn't they respond to the FERC directive with the same reason why R4 is not really necessary?</p> <p>The VRF for new requirement 1 should be lower. It does not fit the definition of a medium VRF. A medium VRF requires that a violation of the requirement directly affect the state or capability or the ability to effectively monitor and control. Failure to test does not result in directly affecting the state or capability or the ability to effectively monitor and control. At a minimum, a failure of the alternative communication systems and primary communication systems must occur first. The failure to perform a single test in a given quarter does not mean that primary and alternative communication systems will fail. Thus, testing is really an administrative issue and should thus be a lower VRF.</p> <p>In the Data Retention section, Distribution Provider and Generation Operators should be added. Currently, there are no data retention requirements listed for them. Suggest modifying the language regarding data retention for compliance violations to: "... is found in violation of a requirement, it shall keep information related to the violation until it the Compliance Enforcement Authority finds it compliant."</p>
<p><b>Response:</b> The RC SDT thanks you for your comments.</p> <p>R2: The RC SDT deleted the final clause as you suggest.</p> <p>R4: This was added because of the FERC directive:</p> <p>Include generator operators and distribution provider as applicable entities and include requirements for their telecommunications.</p> <p>VRF: We concur and have modified the VRF.</p>		

Organization	Question 1:	Question 1 Comments:
<p>Data Retention: We have revised the Data Retention to section to comport with your comment.</p>		
<p>Southern Company Transmission</p>	<p>No</p>	<p>1.1 - In R1, we suggest that "operationally test by way of operator action" should be defined to remove any confusion regarding what the term requires. The word "ensure" needs to be changed to "assure" to more accurately convey the intent of the requirement. We also suggest changing the word "facilities" to "capabilities".</p> <p>1.2 - R2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. The VSL should be consistent with the language of the requirement. A very short, insignificant telecom outage with no notification could result in a severe violation as the requirement is presently written and VSL's applied.</p> <p>1.3 - R1, R2 and R3 should be expanded to include the list of entities the RC needs to talk with as included in the Applicability section of IRO-001-2 (RC, TO, BA, GO, DP, TSP, LSE, PSE). These entities should also be included in the purpose statement and R4 and M4 can then be eliminated.</p> <p>1.4 - In R3, we suggest that the last sentence of R3 should be changed to "entities may use an alternative language for internal operations" rather than allowing only TOs and BAs to have this option.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>1.1: The RC SDT removed the word "operationally" from the requirement. The requirement was revised to remove the "assurance" part as it does not add to the requirement. We have changed to term "telecommunications facilities" to "interpersonal communication capabilities" to better reflect the intent of the standard.</p> <p>1.2: We have revised the requirement to place time bounds on outages that require notification. The new R2 is:                      Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p> <p>1.3: The RC SDT contends that the addition of the TSP, LSE and PSE to R1 and R2 of COM-001 expands the scope beyond the reliability intent, but has added the TSP, LSE and PSE to the list of entities that must use the English language in R3.</p> <p>1.4: We have removed the informational (last) sentence as it is not a requirement. Others can use an alternate language, but the entities must agree to do so. This is in the first sentence of the requirement which states "Unless agreed to otherwise..." R3 was revised so that the last</p>		

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 1:	Question 1 Comments:
sentence, which was explanatory and did not include any required performance, was deleted.		
Progress Energy Carolinas	No	<p>R1 - The proposed requirement R1 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set.</p> <p>R2 - The proposed requirement R2 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set.</p> <p>R4 - The proposed requirement R4 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. COM-001-2 has been renamed "Communications". The RC SDT envisions COM-001-2 as referring to voice or message communications only. We have revised the term "telecommunications facilities" to "interpersonal communications capabilities" throughout the standard to better reflect the intent.</p>		
NPCC	No	<p>There is inconsistency between R3 and M3. In R3, there is a provision for agreement between entities (RC, TOP, BA, GOP, DP) to use a language other than English in their communications. In M3, that option is not presented. M3 should reflect what is written in R3.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. The provision that you mention was removed from the requirement since it is not a requirement, but an informational statement. The English language Requirement begins with the phrase "Unless agreed to otherwise...". This allows for the use of other languages where agreed to.</p>		
ISO New England Inc.	No	<p>ISO New England does not support the removal of Requirement 1.</p> <p>Also, we believe Requirement 3 is written such that it may pose an unnecessary requirement on the</p>

Organization	Question 1:	Question 1 Comments:
		Hydro Quebec area given the terminology "inter-entity" and support further clarification.
<p><b>Response:</b> The RC SDT thanks you for your comment. The majority of commenters agreed with the removal of R1. The last sentence of the requirement 3 was deleted as it was an informational statement only. The English language Requirement begins with the phrase "Unless agreed to otherwise..." This allows for the use of other languages where agreed to.</p>		
FirstEnergy	No	<p>Purpose - The purpose does not include the GOP and DP entities. It may be better if the purpose was written more generally as "To ensure adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information necessary to maintain BES reliability".</p> <p>R1 - This requirement makes no distinction between data and voice communications facilities and assumes a designated primary and backup facility configuration such that the backup communications systems are not used regularly. This may be an accurate assumption for data communications; however voice communications may be different. Today many organizations use voice communications systems that allow the system to choose the communication path each time a call is placed. This design ensures that all communications paths are tested regularly in day-to-day use. However, the design of these systems makes it difficult, if not impossible, to substantiate that a functional test of the circuitry has been performed. This requirement should be broken into two requirements. The first should cover data circuitry and the second should cover voice circuitry. This will allow the drafting team to address the inherent differences in these two methods of communications. Lastly, the requirements need to be much more specific concerning the criticality of the facilities to be tested to improve the measurability of the standard. The drafting team dropped the phrase "for the exchange of Interconnection and operating data" from the standard requirement. This deletion appears to open the application of this standard to virtually every communication path used by an RC, BA, TOP whether or not it is used for communicating real-time operating information or not. We do not believe this was the intention of the drafting team and suggest this phrase be reinserted or another one added that limits applicability to only those communication paths that support the real-time reliability of the bulk electric system.</p> <p>R2 - It is not clear who the "impacted entities" would be in this requirement. The SDT should consider specifying these entities.</p> <p>R3 - The last sentence of this requirement should be deleted. It is not a requirement, it does not add clarity, and the first sentence is very specific as to the communications covered by the requirement.</p> <p>R4 - This requirement makes no distinction between data and voice communications facilities and</p>



Organization	Question 1:	Question 1 Comments:
		<p>assumes a designated primary and backup facility configuration such that the backup communications systems are not used regularly. This may be an accurate assumption for data communications; however voice communications may be different. Today many organizations use voice communications systems that allow the system to choose the communication path each time a call is placed. This design ensures that all communications paths are tested regularly in day-to-day use. However, the design of these systems makes it difficult, if not impossible, to substantiate that a functional test of the circuitry has been performed. This requirement should be broken into two requirements. The first should cover data circuitry and the second should cover voice circuitry. This will allow the drafting team to address the inherent differences in these two methods of communication.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p><b>Purpose:</b> To better reflect the intent of the standard, we have modified the Purpose Statement to: To ensure that operating entities have adequate interpersonal communication capabilities.</p> <p><b>R1:</b> The standard has been revised to remove the term “telecommunications facilities” and replace it with “interpersonal communications capabilities”. This reflects the intent of the standard, which is to have voice and message communication capabilities. R1 has been revised as: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test, on a quarterly basis, alternative interpersonal communications capabilities used for communicating real-time operating information. If the test is unsuccessful, the entity shall develop a mitigation plan to restore its interpersonal communications capabilities. <i>[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]</i></p> <p><b>R2:</b> The term “impacted entities” indicates those entities with which you have lost interpersonal communications capabilities. R2 has been revised to: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p> <p><b>R3:</b> We concur and have deleted the sentence.</p> <p><b>R4:</b> COM-001-2 only covers voice and message communications and R4 has no provision for primary / alternate capabilities.</p>		
Duke Energy	No	<p>Purpose - The purpose statement does not read very well. It either needs another sentence or changes to the current sentence. The purpose of the standard is to assure proper communications, not to suggest entities need proper communications as currently written. Suggest changing to, “To</p>

Organization	Question 1:	Question 1 Comments:
		<p>assure each Reliability Coordinator, Transmission Operator and Balancing Authority develops and maintains”.</p> <p>Requirement R1 - What is the definition of "alternative telecommunications facilities"? Is there another requirement somewhere to have alternative telecommunications facilities — or is this a new requirement being introduced by this standard? What is the relationship, if any, between "alternative telecommunications facilities" and EOP-008-1? What is the requirement for maintaining and testing "alternative telecommunications facilities"; what does “operationally test” mean Just because an alternative facility works when it is tested does not mean it will work during an actual failure of the primary system. Furthermore, what do we do if the “test” fails — are we still compliant? The word “ensure” needs to be changed to “assure”.</p> <p>Requirement R2 - What does "impacted entity" mean?</p> <p>Requirement R3 - Why can't others use alternate language — this limits alternate language to just TOPs and BAs internal operations. TOs, GOPs, and others may want to use alternate language internally. Need to define language to be used with and between other relationships — BA to PSE, as an example. Is this a reliability issue or a certification issue? Simply state that: “Entities may use alternative language for internal operations”. This will allow any entity to use alternative language for internal operations. The inclusion of TSPs, LSEs, and PSEs in IRO-001-2 indicates the need to include these functions in the COM-001-2 applicability and requirements concerning the use of English as the approved language.</p> <p>Requirement R4 - Remove R4 and add DP and GO, as well as all of the other entities listed in IRO-001-2, to R1 thru R3.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p><b>Purpose:</b> To better reflect the intent of the standard, we have modified the Purpose Statement to:</p> <p>To ensure that operating entities have adequate interpersonal communication capabilities.</p> <p><b>R1:</b> “Alternative telecommunications facilities” was used in place of “redundant”. Many entities have multiple “primary facilities” which could be construed as redundant. The use of “alternative” is intended to indicate at least one primary and one other facility.</p> <p><b>R2:</b> The term “impacted entities” indicates those entities with which you have lost communications capabilities. Based on other’s comments, R2 has been revised to:</p> <p>Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of</p>		

Organization	Question 1:	Question 1 Comments:
		<p>a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p> <p>R3: The second sentence was removed as it was a statement and not a requirement. Others can use an alternate language, but the entities must agree to do so. This is in the first sentence of the requirement which states "Unless agreed to otherwise..."</p> <p>R4: The DP and GOP were added to this standard per a FERC directive (paragraph 509 of Order 693). Putting these entities in R1-R3 would add requirements not envisioned by the directive and provide no additional reliability benefit. The RC SDT contends that the addition of the TSP, LSE and PSE (from IRO-001) to COM-001 R1 and R2 expands the scope beyond the reliability intent, but has added the TSP, LSE and PSE to the list of entities that must use the English language in R3.</p>
<p>ISO/RTO Council Standards Review Subcommittee</p>	<p>Yes and No</p>	<p>We suggest that a definition of telecommunications be written by the drafting team because it is not clear what all telecommunications is intended to be included. Does this requirement apply to data, voice, rtus, networks, etc?</p> <p>For requirement R2, we suggest that you strike the final clause: "and shall verify that alternate means of telecommunications are functional." It is obviated by the requirement to notify impacted parties. The responsible entity is already implicitly required to verify its alternate means of communication is functional since it is required to notify its impacted parties of the failure of its normal telecommunications. It can't notify its impacted parties if the alternate communications means are not functional.</p> <p>The VRF for new requirement 1 should be lower. It does not fit the definition of a medium VRF. A medium VRF requires that a violation of the requirement directly affect the state or capability or the ability to effectively monitor and control. Failure to test does not result in directly affecting the state or capability or the ability to effectively monitor and control. At a minimum, a failure of the alternative communication systems and primary communication systems must occur first. The failure to perform a single test in a given quarter does not mean that primary and alternative communication systems will fail. Thus, testing is really an administrative issue and should thus be a lower VRF.</p> <p>In the Data Retention section, Distribution Provider and Generation Operators should be added. Currently, there are no data retention requirements listed for them. Suggest modifying the language regarding data retention for compliance violations to: "...is found in violation of a requirement, it shall keep information related to the violation until it the Compliance Enforcement Authority finds it compliant."</p>

Organization	Question 1:	Question 1 Comments:
<p><b>Response:</b> The RC SDT thanks you for your comment. The intent of this standard is reflected in the revised purpose statement:                      To ensure that operating entities have adequate interpersonal communication capabilities.                      COM-001-2 only deals with voice or message communications. We have renamed the standard to “Communications” and replaced the term “telecommunications facilities’ with “interpersonal communications capabilities” throughout the standard.                      R2: We have revised R2 as you suggest. R2 has been revised to:                      Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i>                      VRF: We concur and have modified the VRF.                      Data Retention: We have revised the Data Retention as you suggested.</p>		
<p>SERC OC Standards Review Group</p>	<p>Yes and No</p>	<p>1.1 - In R1, we suggest that "operationally test" should be defined to remove any confusion regarding what the term requires. The word "ensure" needs to be changed to "assure" to more accurately convey the intent of the requirement. We also suggest changing the word "facilities" to "capabilities".                      1.2 - R2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation.                      1.3 - R1, R2 and R3 should be expanded to include the list of entities the RC needs to talk with as included in the Applicability section of IRO-001-2 (RC, TO, BA, GO, DP, TSP, LSE, PSE). These entities should also be included in the purpose statement and R4 and M4 can then be eliminated.                      1.4 - In R3, we suggest that the last sentence of R3 should be changed to "entities may use an alternative language for internal operations" rather than allowing only TOs and BAs to have this option.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.                      1.1: The RC SDT removed the word “operationally” from the requirement. The requirement was revised remove the “assurance” part as it does not add to the requirement. We have changed to term “facilities” to “capabilities” as you suggest.</p>		

Organization	Question 1:	Question 1 Comments:
		<p>1.2: We have revised the requirement to place time bounds on outages that require notification. The new R2 is:                      Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p> <p>1.3: The RC SDT contends that the addition of the TSP, LSE and PSE to COM-001 expands the scope beyond the reliability intent, but has added the TSP, LSE and PSE to the list of entities that must use the English language in R3.</p> <p>1.4: We have removed the informational (last) sentence as it is not a requirement. Others can use an alternate language, but the entities must agree to do so. This is in the first sentence of the requirement which states "Unless agreed to otherwise..."</p>
Buckeye Power, Inc.	Yes and No	What constitutes "telecommunications facilities"?
		<p><b>Response:</b> The RC SDT thanks you for your comment. COM-001-2 deals with voice or message communications only and has been renamed "Communications. We have replaced the phrase "telecommunications facilities" with "interpersonal communications capabilities" throughout the standard to better reflect the intent. The purpose statement has been revised to                      To ensure that operating entities have adequate interpersonal communication capabilities.</p>
American Transmission Company	Yes and No	<p>If some language is clarified, we support the revisions. R2 states that "Each TO shall notify impacted entities of the failure of its normal telecommunications facilities". If a phone line goes down and an alternate phone line is used, it is an excessive requirement to notify the impacted entities when there is no impact upon communication or the BES. The wording should be clear that notification is only required if an alternate means of communication is necessary. A defined timeframe for notification should be added to the requirement. It is possible that the loss of telecommunication faculties can occur without the loss of a control center. So, the redundancy with EOP-008 to R4 should be clarified.</p>
		<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>The RC SDT believes that entities should contact others when their normal communication capability is lost. For example, the normal phone line could be cut and someone trying to contact that entity may only get a busy signal and have no idea that alternate communications is necessary.</p> <p>We have revised the requirement to place time bounds on outages that require notification as you suggest. The new R2 is:                      Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of</p>

Organization	Question 1:	Question 1 Comments:
<p>a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p> <p>Based on these revisions, we do not believe further clarification with regards to EOP-008 is necessary.</p>		
PJM Interconnection	Yes	We agree with the revisions, but recommend adding applicability to Distribution Providers and Generator Operators for data retention requirements.
<p><b>Response:</b> The RC SDT thanks you for your comment. The data retention requirements have been revised as you suggested.</p>		
Entergy Services, Inc	Yes	The drafting team should consider expanding the second sentence of R3 to apply to internal communications of any affected entity not just BAs and TOPs.
<p><b>Response:</b> The RC SDT thanks you for your comment. We concur with your sentiment and the second sentence has been removed as it was not a requirement, but an informational statement. Use of an alternate language by any entity is allowed under the requirement which begins with the phrase: "Unless agreed to otherwise..." The requirement has been revised to:</p> <p>R3. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>		
Salt River Project	Yes	
Manitoba Hydro	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	
Reliability Coordinator	Yes	

**Comments for Set of Reliability Coordination Standards (Project 2006-06)**

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<b>Organization</b>	<b>Question 1:</b>	<b>Question 1 Comments:</b>
Comment Working Group		
PPL Supply Group	Yes	
Bonneville Power Administration	Yes	

2. Do you agree with the revisions to the Measures in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

**Summary Consideration:** Commenters suggested general as well as specific revisions to the measures. One general comment suggested making the language consistent among the measures regarding evidence. M1-M3 were revised to include the phrase “shall have and provide upon request evidence that ...”.

The revisions to M1 are shown below:

M1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request, evidence that could include, but is not limited to dated test records, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, it operationally tested, on a quarterly basis-at a minimum, alternative interpersonal telecommunications facilities-capabilities used for communicating real-time operating information. to ensure the availability of their use when normal telecommunications facilities fail. If the test was unsuccessful, the entity shall have and provide upon request evidence that it developed a mitigation plan to restore the interpersonal communications capabilities.

Several commenters suggested revisions to M3. The RC SDT revised M3 based on the comments received suggesting that the applicability be expanded to include Generator Operators, Transmission Service Providers, Load-Serving Entities, Purchasing-Selling Entities, and Distribution Providers. Several entities commented that M3 did not match R3 which included an explanatory sentence that allowed an entity to use a language other than English for its internal communications. The informational second sentence was removed from Requirement R3, thus eliminating the “disconnect” between the requirement and the measure.

The revisions to M3 are shown below:

M3. ~~The Each~~ Reliability Coordinator, Transmission Operator or Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. If a language other than English is used, each party shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language.



M4 was revised based on stakeholder comments as follows:

M4. Each Distribution Provider and Generation Operator shall demonstrate the existence of ~~has-its tele~~interpersonal communications ~~facilities~~capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information.

All measures were revised as necessary to reflect revisions to requirements.

Organization	Question 2:	Question 2 Comments:
NPCC	No	There is inconsistency between R3 and M3. In R3, there is a provision for agreement between entities (RC, TOP, BA, GOP, DP) to use a language other than English in their communications. In M3, that option is not presented. M3 should reflect what is written in R3.
<p>Response: The RC SDT thanks you for your comment. The informational second sentence was removed from the requirement so there is no longer a disconnect between the requirement and the measure.</p>		
CU of Springfield	No	<p>CU suggests that COM-001-2 M4 be moved to M1 and language in the measures changed to:</p> <p>M1. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall have evidence of primary and backup telecommunication facilities.</p> <p>M2.Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall provide evidence that it operationally tested, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail.</p> <p>M3. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall provide evidence that it notified impacted entities of failure of their normal telecommunications facilities, and verified the alternate means of telecommunications were functional.</p> <p>M4. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall have and provide upon request evidence that could include, but is not limited to operator</p>

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 2:	Question 2 Comments:
		logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES.
<p>Response: The RC SDT thanks you for your comment. We have revised the requirements for COM-001 based on the comments received from all stakeholders. We also revised the measures to reflect the new verbiage of the requirements.</p> <p>We have replaced the term “Telecommunications Facilities” with “interpersonal communications capabilities” to better reflect the intent of the standard.</p> <p>The RC SDT contends that the addition of the TSP, LSE and PSE to COM-001 to R1 and R2 expands the scope beyond the reliability intent, but has added the TSP, LSE and PSE to the list of entities that must use the English language in R3. It is not necessary nor is it practical, for reliability purposes, for every entity to have normal and back-up interpersonal communications capabilities with every other entity.</p>		
Independent Electricity System Operator - Ontario	No	M3: The evidence to show that concurrence is in place to allow communication using a language other than English is missing. The Measure as written merely asks for evidence that communication in a different language has occurred.
<p>Response: The RC SDT thanks you for your comment. The informational second sentence was removed from the requirement so there is no longer a requirement for evidence regarding this.</p>		
Reliability Coordinator Comment Working Group	No	On Measure 3 need to remove the word "all" in reference to voice logs. Measure needs to include evidence of concurrence for using a language other than English
<p>Response: The RC SDT thanks you for your comment. The informational second sentence was removed from the requirement so there is no longer a requirement for evidence regarding this.</p>		
Northern California Power Agency	No	M3 should include Generator Operator and Distribution Provider in the applicability.
<p>Response: The RC SDT thanks you for your comment. The measure has been revised to include the Generator Operator and Distribution Provider.</p>		

**Comments for Set of Reliability Coordination Standards (Project 2006-06)**

Organization	Question 2:	Question 2 Comments:
ElectriCities of North Carolina, Inc.	No	See comments on Question 1
<p><b>Response:</b> Please see response to question 1.</p>		
US Army Corps of Engineers, Northwestern Division	No	M3 needs to include the GO and DP in its requirement for inter-utility communications in English.
<p><b>Response:</b> The RC SDT thanks you for your comment. The measure has been revised to include the Generator Operator and Distribution Provider.</p>		
MRO NERC SDTandards Review Subcommittee	No	M4 does not appear to be worded as a measurement. If R4 is kept, we suggest the following modification: "The Distribution Provider and Generation Operator shall demonstrate the existence of its telecommunication systems identified in R4."
<p><b>Response:</b> The RC SDT thanks you for your comment. We have revised M4 per your suggestion.</p>		
Southern Company Transmission	No	<p>2.1 - A general comment regards the production of evidence - such language should be standardized as "have and provide upon request" and the authorized requestors identified. This comment should apply to all standards.</p> <p>2.2 - M2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation.</p> <p>2.3 - The Drafting Team should coordinate the data retention time frame with the requirement measures for R1. DPs and GOs should also be included in the measures requirements.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>2.1 - The measures for this standard have all been revised per your comment.</p> <p>2.2 – The requirement for this measure has been modified to reflect time frames for notification as well as a length of time applicable to the outage. The measure has been revised accordingly.</p>		

Organization	Question 2:	Question 2 Comments:
<p>2.3 - The Data Retention section for this standard has been revised to comport with NERC Compliance guidelines. DP and GOP have been added to the measure.</p>		
ISO New England Inc.	No	See answer to #1.
<p><b>Response:</b> Please see response to question 1.</p>		
Salt River Project	No	M3 should include providing evidence of concurrence to use a language other than English. This will better align the measure with the VSL language.
<p><b>Response:</b> The RC SDT thanks you for your comment. We have revised the measure by adding the following sentence:                      If a language other than English is used, both parties shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language.</p>		
SERC OC Standards Review Group	Yes and No	<p>2.1 - A general comment regards the production of evidence - such language should be standardized as "have and provide upon request" and the authorized requestors identified. This comment should apply to all standards.</p> <p>2.2 - M2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation.</p> <p>2.3 - The Drafting Team should coordinate the data retention time frame with the requirement measures for R1. DPs and GOs should also be included in the measures requirements</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>2.1 - The measures for this standard have all been revised per your comment.</p> <p>2.2 – The requirement for this measure has been modified to reflect time frames for notification as well as a length of time applicable to the outage. The measure has been revised accordingly.</p> <p>2.3 - The Data Retention section for this standard has been revised to comport with NERC Compliance guidelines. DP and GOP have been added to the measure.</p>		

Organization	Question 2:	Question 2 Comments:
Progress Energy Carolinas	No	<p>M1 - The proposed measure M1 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set.</p> <p>M2 - The proposed measure M2 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set.</p> <p>M4 - The proposed measure M4 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. COM-001-2 has been renamed "Communications". The RC SDT envisions COM-001-2 as referring to voice or text communications only. We have revised the term "telecommunications facilities" to "interpersonal communications capabilities" to better reflect the intent.</p>		
FirstEnergy	No	The measures should be modified per our suggested modifications in question 1.
<p><b>Response:</b> The RC SDT thanks you for your comment. The measures were revised based on the revisions to requirements that resulted from stakeholder comments.</p>		
Duke Energy	No	<p>General comments - Not using consistent language regarding "provide evidence" and "shall have and provide upon request evidence". Also need to add corresponding requirement number after each measure.</p> <p>Measure M1 - Just because an alternate facility works when it is tested does not mean it will work during an actual failure of the primary system. - what do we do if the "test" fails — are we complaint? Clarify that the requirement and measure is to "test" not "to test successfully". We may test and find that something does not work as expected.</p>

Organization	Question 2:	Question 2 Comments:
<p><b>Response:</b> The RC SDT thanks you for your comment. We have modified the “evidence” language for consistency. Each measure corresponds to the measure with the same number. There is a one-to-one relationship between requirements and measures – however the SDT did add the requirement numbers to ensure this is clear to all stakeholders.</p> <p>M1: We have added the following sentence to R1 and M1.</p> <p>R1: If the test is unsuccessful, the entity shall develop a mitigation plan to restore its interpersonal communications capabilities.</p> <p>M1: If the test was unsuccessful, the entity shall have and provide upon request evidence that it developed a mitigation plan to restore the interpersonal communications capabilities.</p>		
AEP	No	M2 needs to be clarified regarding impacted functions.
<p><b>Response:</b> The RC SDT thanks you for your comment. The requirement, as written, has sufficient clarity regarding the impacted entities.</p>		
American Transmission Company	No	M2 should be changed to reflect the comments noted in Question 1 for R2.
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT believes that entities should contact others when their normal communication capability is lost. For example, the normal phone line could be cut and someone trying to contact that entity may only get a busy signal and have no idea that alternate communications is necessary. We have revised the requirement to place time bounds on outages that require notification. The new R2 is:</p> <p>Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p> <p>The measure reflects the new requirement.</p>		
ISO/RTO Council Standards Review Subcommittee	Yes and No	M3: The evidence to show that concurrence is in place to allow communication using a language other than English is missing. The Measure as written merely asks for evidence that communication in a different language has occurred.
<p><b>Response:</b> The RC SDT thanks you for your comment. The measure has been revised as:</p> <p>M1: The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and provide upon request evidence that could include,</p>		

Organization	Question 2:	Question 2 Comments:
<p>but is not limited to dated test records, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. If a language other than English is used, both parties shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language.</p>		
PJM Interconnection	Yes	M4 should be revised to reflect that each Distribution Provider and Generation Operator has evidence demonstrating the functionality of telecommunications facilities with the TOP and BA for the exchange of interconnection and operating information.
<p><b>Response:</b> The RC SDT thanks you for your comment. The measure was modified as:                      Each Distribution Provider and Generation Operator shall demonstrate the existence of its interpersonal communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information.</p>		
Buckeye Power, Inc.	Yes and No	Abstain
US Bureau of Reclamation	Yes	
Bonneville Power Administration	Yes	
Manitoba Hydro	Yes	
Ameren	Yes	
PPL Supply Group	Yes	
Entergy Services, Inc	Yes	

**3. Do you agree with the Violation Severity Levels proposed in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

**Summary Consideration:** The RC SDT made revisions to the VSLs based on the comments received and also to reflect revisions to the associated requirements. We received comments that the VSLs for R1 and R2 were based on multiple violations, which do not support FERC's Guideline 4 for VSLs - Guideline 4 requires that a VSL should be based on a single violation. We agreed and revised the VSLs to reflect a single violation.

Organization	Question 3:	Question 3 Comments:
Independent Electricity System Operator - Ontario	No	<p>R1: Suggest to revise the conditions for all levels to read "failed to operationally test the alternative communication facilities within the last???"</p> <p>R2: The second part under Severe is not needed since failing to notify any impacted entities would imply no communication to the affected entities anyway. If verification of the functionality of the alternate means of telecommunications is also critical even without communicating to the affect entities, then the second condition should be an "OR".</p> <p>R3: Failure to having concurrence to use a language other than English for communications between and among operating personnel responsible for real-time operations by itself does not constitute a violate of any requirements; it is the absence of such a concurrence AND having used a language other than English that would constitute a violation. Suggest to revise this condition.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>We have revised the VSLs per your suggestions and comments from other stakeholders, and revisions made to the wording of the associated requirement.</p> <p>We have revised the VSLs per your suggestions and the revisions made to the associated requirement</p> <p>We have revised the VSLs per your suggestions.</p>		
CU of Springfield	No	Revise to reflect proposed changes above
<p><b>Response:</b> The RC SDT thanks you for your comment. The Requirement, Measures and VSLs have been revised per your and other</p>		



Organization	Question 3:	Question 3 Comments:
<a href="#">stakeholders' comments.</a>		
ElectriCities of North Carolina, Inc.	No	Depends of what is meant by "telecommunications facilities"
<p><b>Response:</b> The RC SDT thanks you for your comment. We have clarified the requirements and measures to use the term "interpersonal communications capabilities" rather than "telecommunications facilities".</p>		
MRO NERC SDTandards Review Subcommittee	No	<p>The VSLs as defined for Requirement 1 appear to violate Guideline 4 that the Commission established in their "Order on Violation Severity Levels Proposed by the Electric Reliability Organization". Guideline 4 requires that a VSL should be based on a single violation. The VSLs as defined accumulate the number of consecutive quarters. This would imply that a single violation could last more than a year and that the compliance auditor could not determine sanctions until the entity becomes compliant or year has passed. A single violation appears to be the failure to test in a single quarter. This requirement is binary in nature in that it is either met or it isn't. We suggest that only a lower VSL should be defined as: "The RC, TOP, or BA failed to test the backup telecommunication facilities for a single calendar quarter."</p> <p>The Lower VSL for R2 is not possible. The act of notifying all impacted entities of the failure of their primary telecommunication system requires the use of the alternative telecommunications systems which is a form of verifying that the alternative telecommunications facilities are functional. The drafting team should consider applying the numeric performance category of the VSL Development Guideline Criteria for R2.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>R1: We have revised the VSLs per the guideline and the revised requirement.</p> <p>R2: We have revised the requirement to have time constraints for the length of an outage as well as a timeframe for notification. The VSL has been revised to reflect the revised requirement.</p>		
PJM Interconnection	No	<p>Recommend the following VSLs for R1:</p> <p>Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on at least one occasion.</p>

Organization	Question 3:	Question 3 Comments:
		<p>Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on two separate occasions.</p> <p>Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on three separate occasions.</p> <p>Proposed Severe VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on more than three separate occasions.</p> <p>Recommend the following VSLs for R2:</p> <p>Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on at least one occasion.</p> <p>Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on two separate occasions.</p> <p>Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on three separate occasions.</p> <p>Proposed Severe VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on more than three separate occasions.</p> <p>Recommend the following VSLs for R4:</p> <p>Proposed High VSL: The Responsible Entity failed to establish telecommunications with either their Balancing Authority or Transmission Operator for the exchange of Interconnection and operating information.</p> <p>Proposed Severe VSL: The Responsible Entity failed to establish telecommunications with their Balancing Authority and Transmission Operator for the exchange of Interconnection and operating information.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p>		

Organization	Question 3:	Question 3 Comments:
<p>R1: The proposed VSLs reflect multiple violations of the requirement. Each VSL must be written for a single violation (failure to test quarterly).                      R2: The proposed VSLs reflect multiple violations of the requirement and are a duplication of the VSLs proposed for R1, not for R2.                      R4: We have revised the VSLs per your suggestion.</p>		
FirstEnergy	No	<p>The VSL should be modified per our suggested modifications in question 1.R1 VSL - The statement in the VSL that the responsible entity did not "operationally test" is too broad. It should be more specific with the language used in the requirement.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. The requirement, measure and VSLs have been revised per stakeholder comments and the phrase, "operationally test" is no longer used in the standard.</p>		
Duke Energy	No	<p>VSL for Requirement R1 - The VSL for R1 seems to imply that an operational test needs to have been performed in the last 90 days — this is read in conjunction with the data retention requirements. Need to clarify in the requirement how ?quarter basis? is defined - is it the calendar quarter, or a rolling 90 days? In addition, the VSLs for Requirement R1 appear to violate NERC guidelines, since the Moderate, High and Severe VSLs are based upon cumulative violations of the Lower VSL.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. The data retention was changed from three months to three years. The VSLs were revised to reflect the guidelines as you suggested. There are now 2 VSLs.</p>		
ISO/RTO Council Standards Review Subcommittee	No	<p>The VSLs as defined for Requirement 1 appear to violate Guideline 4 that the Commission established in their "Order on Violation Severity Levels Proposed by the Electric Reliability Organization". Guideline 4 requires that a VSL should be based on a single violation. The VSLs as defined accumulate the number of consecutive quarters. This would imply that a single violation could last more than a year and that the compliance auditor could not determine sanctions until the entity becomes compliant or year has passed. A single violation appears to be the failure to test in a single quarter. This requirement is binary in nature in that it is either met or it isn't. We suggest that only a lower VSL should be defined as: "The RC, TOP, or BA failed to test the backup telecommunication facilities for a single calendar quarter."</p> <p>The Lower VSL for R2 is not possible. The act of notifying all impacted entities of the failure of their primary telecommunication system requires the use of the alternative telecommunications systems which is a form of verifying that the alternative telecommunications facilities are functional. The</p>

Organization	Question 3:	Question 3 Comments:
		<p>drafting team should consider applying the numeric performance category of the VSL Development Guideline Criteria for R2.</p> <p>(i) R1: Suggest to revise the conditions for all levels to read "...failed to operationally test the alternative communication facilities within the last....."</p> <p>(ii) R2: The second part under Severe is not needed since failing to notify any impacted entities would imply no communication to the affected entities anyway. If verification of the functionality of the alternate means of telecommunications is also critical even without communicating to the affect entities, then the second condition should be an "OR".</p> <p>(iii) R3: Failure to having concurrence to use a language other than English for communications between and among operating personnel responsible for real-time operations by itself does not constitute a violate of any requirements; it is the absence of such a concurrence AND having used a language other than English that would constitute a violation. Suggest to revise this condition.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>R1: We have revised the requirement to have a provision to test as well as a provision to develop a mitigation plan when a test fails. The VSLs reflect the revised requirement.</p> <p>R2: (i) We have revised the requirement to have a provision to test as well as a provision to develop a mitigation plan when a test fails. The VSLs reflect the revised requirement.</p> <p style="padding-left: 40px;">The second part of the VSL was removed.</p> <p style="padding-left: 40px;">The VSL was revised to:</p> <p>The responsible entity failed to provide evidence of concurrence to use a language other than English for communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected Bulk Electric System when a language other than English was used.</p>		
SERC OC Standards Review Group	Yes and No	3.1 - The expanded list of entities recommended in comment 1.3 and 1.4 need to be included the VSLs

Organization	Question 3:	Question 3 Comments:
<p><b>Response:</b> The RC SDT thanks you for your comment. Please see response to comment 1.3 and 1.4.</p>		
Buckeye Power, Inc.	Yes and No	abstain
Southern Company Transmission	Yes	<p>3.1 - The expanded list of entities recommended in comment 1.3 and 1.4 need to be included the VSLs</p> <p>3.2 - The Severe VSL for R2 should be corrected. Add the word 'to' as follows: "...and failed to verify the..."</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>3.1 - Please see response to comment 1.3 and 1.4.</p> <p>3.2 - The VSLs were revised based on revisions to the requirement.</p>		
American Transmission Company	Yes	Based upon revisions to Question 1.
<p><b>Response:</b> The RC SDT thanks you for your comment. The VSLs were revised to reflect changes to the requirements.</p>		
Bonneville Power Administration	Yes	
AEP	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Reliability	Yes	

**Comments for Set of Reliability Coordination Standards (Project 2006-06)**

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Organization	Question 3:	Question 3 Comments:
Coordinator Comment Working Group		
Northern California Power Agency	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	

4. Do you agree with the revisions to the Requirements in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

**Summary Consideration:** The work of the IROL SDT resulted in the retirement of R1 from the standard. The RC SDT received comments recommending expanding the applicability of the standard and separating Requirement R2 (now R1) into two distinct requirements. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. The requirements were revised to:

R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall ~~issue directives in a clear, concise, and definitive manner; shall ensure~~require the recipient of the verbal directive to repeats the intent of the directive back ~~information back correctly~~; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings.

R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a directive issued per Requirement R1 shall repeat the intent of the directive back to the issuer of the directive

The purpose statement was also revised to reflect the revisions to the standard:

~~To ensure Balancing Authorities, Transmission Operators, and Generator Operators have adequate communications and that these communications capabilities are staffed and available for addressing a real time emergency condition.~~ To ensure emergency communications by between operating personnel are effective.

Organization	Question 4:	Question 4 Comments:
Southern Company Transmission	No	4.1 - We agree with the recommendation to retire COM-002-3 when COM-003-1 is approved; however we suggest the following changes should be made for the interim applicability of COM-002-3: 4.2 - The Purpose statement should be revised to re-align with the revisions in the Standard. 4.3 - The applicability of COM-002-3 should be consistent with the applicability of IRO-001-2. 4.4 - The words "clear, concise, and definitive manner" in R1 are ambiguous and impossible to

Organization	Question 4:	Question 4 Comments:
		<p>measure. We suggest they be replaced with "the RC shall direct".</p> <p>4.5 - An additional requirement, R2, should be added that requires the Operator to repeat the information back correctly (i.e., separate this requirement from R1).</p> <p>4.6 - Grammatical changes are suggested. The revised requirement reads as follows: " To ensure Balancing Authorities, Transmission Operators, and Generator Operators have adequate communications; to ensure that these communication capabilities are staffed and available for addressing a real-time emergency condition; and to ensure effective communications by operating personnel."</p> <p>4.7 - At the Data Retention section, the reference to 'Requirement 3, Measure 3' should be consistent with the modified standard. The revised standard only has one requirement.</p> <p>4.8 - The use of calendar days in the Data Retention section is inconsistent with related standards where 'months' are used.</p>
<p><b>Response:</b> The RC SDT thanks you for your comments.</p> <p>4.2 - We have revised the purpose statement to: To ensure emergency communications between operating personnel are effective.</p> <p>4.3 – We have changed the applicability of COM-002 to match that of IRO-001.</p> <p>4.4 and 4.5 - We have separated the requirement into two requirements to ensure that the requirements are measurable and distinct. We concur with your comments and have revised the requirements to:</p> <p>R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall require the recipient of the verbal directive to repeat the intent of the directive back; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p>R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1, shall repeat the intent of the directive back to the issuer of the directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p>4.6 - We have revised the purpose statement to: To ensure emergency communications between operating personnel are effective.</p>		



Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 4:	Question 4 Comments:
4.7 and 4.8 – We have updated the data retention section with the latest compliance template information.		
ISO New England Inc.	No	ISO New England believes it is inefficient to have a (temporary) Standard with only one Requirement and recommend including this Requirement in COM-001, with COM-001 renamed to "Communications."
<p><b>Response:</b> The RC SDT thanks you for your comments. Based on other stakeholder feedback, we have added applicable entities and another requirement for those entities. This standard will be retired upon adoption of COM-003-1.</p>		
US Bureau of Reclamation	No	Purpose: Since Generator Operators were deleted from the applicability; the Purpose should be revised to reflect that and include Reliability Coordinators. The language is somewhat redundant, recommend it be simplified to "To ensure Balancing Authorities, Reliability Coordinators, and Transmission Operators communicate in an effective manner."
<p><b>Response</b> The RC SDT thanks you for your comments. Several entities were added to the applicability and the purpose statement was revised to:</p> <p>To ensure emergency communications between operating personnel are effective.</p>		
FirstEnergy	No	<p>Purpose - The GOP is still shown in the purpose statement although it was removed from the applicability. Also, it may be better if the purpose was written more generally as "To ensure adequate communications capabilities for addressing real-time emergency conditions and ensure communications by operating personnel are effective to maintain BES reliability".</p> <p>Applicability - In the SDT's document "Scope of Work Assigned to the Reliability Coordination Standard Drafting Team", the team decided to not include the FERC directive to include the DP in the applicability with the following reasoning "The proposed revisions do not include the DP entity because they are not applicable." We would like clarification on this.</p> <p>R1 - It does not appear that the implementation plan addresses the FERC direction to consider comments from Santa Clara, FirstEnergy, and Six Cities per 693 par. 539 regarding staffing requirements. Santa Clara asks that these requirements apply "only to operating staff available on site at all times or includes repair personnel who are available only on an on-call basis". FirstEnergy asks that the "term [staffed] should not require a physical presence at all facilities at all times because some units, such as peaking units, are not staffed 24 hours a day". FirstEnergy also suggest "because nuclear units are already subject to communications requirements in their operating</p>

Organization	Question 4:	Question 4 Comments:
		<p>procedures, their compliance with NRC operating procedures should be deemed in compliance with the NERC Reliability Standards". Six Cities "states that, to avoid unnecessary staffing burdens, particularly for smaller entities, the Commission should direct NERC to clarify COM-002-2 by providing that identification of an emergency contact person on call to respond to real-time emergency conditions will constitute adequate compliance".</p> <p>R1 - Just as an FYI, with regard to the proposed replacement requirement statement in the implementation plan: "TOP-005-1, R1 and R3 require adequate telecommunications for BAs and TOPs to provide each other with operating data as well as providing data to the RC", per recently stakeholder approved ballots, R1 of TOP-005-1 has been retired and now covered in new standard IRO-010-1.R1.1 - The existing requirement includes "through predetermined communication paths of any condition that could threaten the reliability of its area or when firm load shedding is anticipated". The proposed replacement requirements do not address the need for "predetermined communication paths".</p>
<p><b>Response:</b> The RC SDT thanks you for your comments.</p> <p><b>Purpose:</b> Several entities were added to the applicability and the purpose statement was revised to: To ensure emergency communications between operating personnel are effective.</p> <p><b>Applicability:</b> The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity.</p> <p><b>R1:</b> The RC SDT considered these comments when developing the proposed COM-001-2 specification requirements. We have revised the requirement to indicate that directives being issued relate to real-time operating emergencies. We do not feel that this would place an undue burden on any entity with respect to staffing as the requirement makes no mention of staffing.</p> <p><b>R1 FYI:</b> Thank you for the FYI.</p>		
Duke Energy	No	<p>Requirement R1 - As defined by Merriam Webster, the use of the word "ensure" implies virtual guarantee &lt;the government has ensured the safety of the refugees&gt;; while the use of the alternative word "assure" implies the removal of doubt and suspense from a person's mind. We suggest that "assure" is more appropriate than "ensure" in this context in the standards. The use of words like "clear, concise, and definitive manner" is subject to interpretation. This same language is used in the VSLs. Depending on the interpretation of this phrase, an entity could be found to be in a "Severe" violation level. The issuer of the directive should not be subject to non-compliance if the recipient of</p>

Organization	Question 4:	Question 4 Comments:
		<p>the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back. The inclusion of TSPs, LSEs, and PSEs in IRO-001-2 indicates the need to include these functions in the COM-002-3 requirement concerning repeat-backs. What is a “directive”? The regional compliance processes are having difficulty in auditing this existing standard due to lack of clarity of what constitutes a directive. "Directive" should be defined as being associated with real-time operational emergency conditions, and not ordinary day-to-day communications. Otherwise a VRF of High is not warranted.</p>
<p><b>Response:</b> The RC SDT thanks you for your comments. We concur with your comments and have revised the requirements to:</p> <p>R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall require the recipient of the verbal directive to repeat the intent of the directive back; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p>R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1, shall repeat the intent of the directive back to the issuer of the directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p>		
Northern California Power Agency	Yes and No	Remove Generator Operator from the Purpose Statement. The re-written standard no longer applies to GOP
<p><b>Response:</b> The RC SDT thanks you for your comments. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity.</p> <p>We have revised the purpose statement to: “To ensure emergency communications between operating personnel are <b>effective</b>[ML1].”</p>		
SERC OC Standards Review Group	Yes and No	<p>4.1 - We agree with the recommendation to retire COM-002-3 when COM-003-1 is approved; however we suggest the following changes should be made for the interim applicability of COM-002-3:</p> <p>4.2 - The Purpose statement should be revised to re-align with the revisions in the Standard.</p> <p>4.3 - The applicability of COM-002-3 should be consistent with the applicability of IRO-001-2.</p> <p>4.4 - The words "clear, concise, and definitive manner" in R1 are ambiguous and impossible to</p>

Organization	Question 4:	Question 4 Comments:
		measure. We suggest they be replaced with "the RC shall direct". 4.5 - An additional requirement, R2, should be added that requires the Operator to repeat the information back correctly (i.e., separate this requirement from R1).
<p><b>Response:</b> The RC SDT thanks you for your comments.</p> <p>4.2 - We have revised the purpose statement to:                      To ensure emergency communications between operating personnel are effective.</p> <p>4.3 – We have changed the applicability of COM-002 to match that of IRO-001.</p> <p>4.4 and 4.5 - We have separated the requirement into two requirements to ensure that the requirements are measurable and distinct. We concur with your comments and have revised the requirements to:</p> <p>R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall require the recipient of the verbal directive to repeat the intent of the directive back; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p>R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1, shall repeat the intent of the directive back to the issuer of the directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p>		
Buckeye Power, Inc.	Yes and No	Abstain
PJM Interconnection	Yes	We note that this requirement really is "3-part communication" and will be moved to the new communications standard, COM-003-1.
<p><b>Response:</b> The RC SDT thanks you for your comments. As envisioned, the 3-part communication requirements in this standard are temporary – they will be retired when COM-003-1 becomes effective.</p>		
CU of Springfield	Yes	CU supports moving R1 to COM-003 and retiring COM-002.
<p><b>Response:</b> The RC SDT thanks you for your comment. As envisioned, the 3-part communication requirements in this standard are temporary – they will be retired when COM-003-1 becomes effective.</p>		

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 4:	Question 4 Comments:
PPL Supply Group	Yes	PPL agrees with the changes to COM-002-3. However, for clarity PPL suggests that Generator Operator should be removed from the purpose statement of this standard.
<p><b>Response:</b> The RC SDT thanks you for your comments. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity.</p> <p>We have revised the purpose statement to:</p> <p>To ensure emergency communications between operating personnel are effective.</p>		
Manitoba Hydro	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	
American Transmission Company	Yes	
ISO/RTO Council Standards Review Subcommittee	Yes	
NPCC	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	

Comments for Set of Reliability Coordination Standards (Project 2006-06)

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Organization	Question 4:	Question 4 Comments:
Reliability Coordinator Comment Working Group	Yes	
MRO NERC SDStandards Review Subcommittee	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	

5. Do you agree with the revisions to the Measures in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

**Summary Consideration:** The RC SDT received comments recommending expanding the applicability of the standard and separating Requirement R1 into two distinct requirements. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. The requirements and measures were revised to:

R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority [that issues a verbal directive associated with real-time operational emergency conditions](#) shall ~~issue directives in a clear, concise, and definitive manner; shall ensure~~ [require](#) the recipient of the [verbal](#) directive [to repeat](#) ~~s the information intent of the directive~~ back ~~correctly;~~ and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. *[Violation Risk Factor: High][Time Horizon: Real-Time]*

[R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1, shall repeat the intent of the directive back to the issuer of the directive. \[Violation Risk Factor: High\]\[Time Horizon: Real-Time\]](#)

M1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority [that issues a verbal directive associated with real-time operational emergency conditions](#) shall have evidence such as voice recordings or transcripts of voice recordings to show that it ~~required issued directives in a clear, concise, and definitive manner; ensured~~ the recipient of the [verbal](#) directive [to repeat](#) ~~ed the information intent of the directive~~ back ~~correctly;~~ and acknowledged the response as correct or repeated the original statement to resolve any misunderstandings.

[M2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1 shall have evidence such as voice recordings or transcripts of voice recordings to show that it repeated the intent of the directive back to the issuer of the directive.](#)

Organization	Question 5:	Question 5 Comments:
Southern Company	No	5.1 - The measures need to be revised to match the new requirements.

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 5:	Question 5 Comments:
Transmission		
<p><b>Response:</b> The RC SDT thanks you for your comment. The measures have been revised to reflect revisions to the requirements.</p>		
SERC OC Standards Review Group	No	5.1 - The measures need to be revised to match the new requirements.
<p><b>Response:</b> The RC SDT thanks you for your comment. The measures have been revised to reflect revisions to the requirements.</p>		
ISO New England Inc.	No	See response to Q#4
<p><b>Response:</b> The RC SDT thanks you for your comment. Please see response to Q4.</p>		
FirstEnergy	No	The measures should be modified if our comments in question 4 result in changes to the proposed requirements.
<p><b>Response:</b> The RC SDT thanks you for your comment. The measures have been revised to reflect revisions to the requirements.</p>		
Duke Energy	No	The use of words like “clear, concise, and definitive manner” is subject to interpretation. The issuer of the directive should not be subject to non-compliance if the recipient of the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back.
<p><b>Response:</b> The RC SDT thanks you for your comments. We concur with you comments – the phrase, “clear, concise, and definitive” was removed from the standard and the requirement was subdivided so that there is a separate requirement that obligates the recipients to repeat the intent of the directive. Measures and VSLs were revised to reflect the modifications to the requirements. The new measures are:</p> <p>Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall have evidence such as voice recordings or transcripts of voice recordings to show that it required the recipient of the verbal directive to repeat the intent of the directive back; and acknowledged the response as correct or repeated the original statement to resolve any misunderstandings.</p> <p>Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving</p>		



Organization	Question 5:	Question 5 Comments:
Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1 shall have evidence such as voice recordings or transcripts of voice recordings		
American Transmission Company	Yes and No	As long as the measurement of compliance does not include proving the negative, that no directives were issued.
<b>Response:</b> The RC SDT thanks you for your comment.		
Buckeye Power, Inc.	Yes and No	Abstain
CU of Springfield	Yes	CU supports moving M1 to COM-003 and retiring COM-002.
<b>Response:</b> The RC SDT thanks you for your comment.		
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	

Organization	Question 5:	Question 5 Comments:
MRO NERC SDStandards Review Subcommittee	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	
ISO/RTO Council Standards Review Subcommittee	Yes	

6. Do you agree with the Violation Severity Levels proposed in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

**Summary Consideration:** The RC SDT received comments recommending revisions to the VSLs based on revisions to the requirements and measures. The RC SDT did this and created new VSLs for new Requirement R2. The revised VSLs are:

Requirement	Lower	Moderate	High	Severe
R1	N/A	The responsible entity <del>provided a clear</del> issued a verbal directive <del>in a clear, concise and definitive manner</del> associated with real-time operating emergency conditions and required the recipient to repeat the <del>directive</del> intent of the directive, but did not acknowledge the recipient was correct in the repeated directive <u>OR failed to repeat the intent of the original statement to resolve any misunderstandings.</u>	The responsible entity <del>provided a clear</del> issued a verbal directive associated with real-time operating emergency conditions <del>in a clear, concise and definitive manner</del> , but did not require the recipient to repeat the intent of the directive.	<u>The responsible entity issued a verbal directive associated with real-time operating emergency conditions and required the recipient to repeat the intent of the directive, but did not acknowledge the recipient was correct in the repeated directive AND failed to repeat the intent of the original statement to resolve any misunderstandings..</u> <del>The responsible entity failed to provide a clear directive in a clear, concise and definitive manner when required.</del>
<u>R2</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The responsible entity that is the recipient of a verbal directive issued per Requirement R1 failed to repeat the intent of the directive back to the issuer of the directive.</u>

Organization	Question 6:	Question 6 Comments:
Southern Company Transmission	No	6.1 - The severity levels need to be revised to match the new requirements.
<p><b>Response:</b> The RC SDT thanks you for your comment. The VSLs were revised based on revisions to the requirements.</p>		
SERC OC Standards Review Group	No	6.1 - The severity levels need to be revised to match the new requirements
<p><b>Response:</b> The RC SDT thanks you for your comment. The VSLs were revised based on revisions to the requirements.</p>		
PJM Interconnection	No	<p>The word "clear" is redundantly used in the High and Severe columns.</p> <p>Recommend that "Moderate" should read: "The Responsible Entity provided a directive in a clear, concise and definitive manner, but did not require the recipient to repeat the directive back to the originator."</p> <p>Recommend that "High" should read: "The Responsible Entity failed to issue a directive in a clear, concise and definitive manner while ensuring the recipient of the directive repeated the information back correctly with acknowledgment by the originator that the response was correct."</p> <p>Recommend that "Severe" should read: "The Responsible Entity failed on more than one occasion to issue a directive in a clear, concise and definitive manner while ensuring the recipient of the directive repeated the information back correctly with acknowledgment by the originator that the response was correct."</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. We have removed the language "clear, concise and definitive manner" from the requirements, measures and VSLs. Based on the requirements, the VSLs were revised as shown above in the Summary Consideration section. We do not agree with your suggestion on the Severe VSL regarding the number of occasions. The requirement is a stand alone which requires the entity to perform it each time.</p>		
FirstEnergy	No	The VSL should be modified if our comments in question 4 result in changes to the proposed requirements.

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 6:	Question 6 Comments:
<p><b>Response:</b> The RC SDT thanks you for your comment. The VSLs were revised based on revisions to the requirements.</p>		
Duke Energy	No	<p>The use of words like “clear, concise, and definitive manner” is subject to interpretation. The issuer of the directive should not be subject to non-compliance if the recipient of the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. We concur with your comments. The words “clear, concise, and definitive manner” have been removed from the requirement, measure and VSLs. A separate requirement has been added per your suggestion.</p>		
American Transmission Company	No	<p>R1-High VSL-If the directive was followed and there was no threat to the BES, then a lack of repetition of the directive does not constitute a "high" VSL. Suggest that this be a low or moderate VSL.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. We have revised the requirements, measures and VSLs to reflect that these directives are those that are issued for real-time operating emergency conditions.</p>		
Buckeye Power, Inc.	Yes and No	abstain
Manitoba Hydro	Yes	
NPCC	Yes	
CU of Springfield	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	
Reliability Coordinator	Yes	

**Comments for Set of Reliability Coordination Standards (Project 2006-06)**

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Organization	Question 6:	Question 6 Comments:
Comment Working Group		
Northern California Power Agency	Yes	
MRO NERC SDStandards Review Subcommittee	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	
ISO/RTO Council Standards Review Subcommittee	Yes	

**7. Do you agree with the revisions to the Requirements in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

**Summary Consideration:** The RC SDT has received a notable number of comments suggesting edits to the proposed requirements and measures for the draft standard, particularly regarding the phrase “without intentional delay.” The comments do not oppose the objective of the phrase, but often point out the issues of measuring intent and measuring time delay.

To maintain the intent while improving the measurability of the requirement, the SDT proposes to modify the standard as follows: delete the phrase ‘without intentional delay’ and leave the obligation of response and timing an unstated requirement of R1 “The RC shall act or direct actions...”

R2 was modified as shown below – note that the phrase, “without intentional delay” was removed from all requirements, measures and VSLs:

R2. Each Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers, and Purchasing-Selling Entities shall ~~act without intentional delay to~~ comply with its Reliability Coordinator’s directives unless such actions would violate safety, equipment, or regulatory or statutory requirements.

An RC that requires a given action in a given time will be expected to inform the impacted entities of those actions and time requirements. This revision would obviate the need for providing a measure for “intent”, while still maintaining the reliability intent of the original requirement.

The SDT proposes to re-post the standard to obtain stakeholder feedback on the suggested revisions

Organization	Question 7:	Question 7 Comments:
Manitoba Hydro	No	<p>I do not agree with the way IRO-001-2 R1 is written. In the present form the requirement may infer that directing action is not an action. It may also infer that the RC is only required to do "act "or "direct actions" but not both. The way it is written also leads to problems with the VSLs. Perhaps R1 can be edited along the lines of:</p> <p>R1. The Reliability Coordinator shall act to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. When required, the actions initiated by the Reliability Coordinator will include, but is not limited to, directing the actions to be taken by Transmission</p>

Organization	Question 7:	Question 7 Comments:
		<p>Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area.</p> <p>I agree with the other Requirements in IRO-001-2 with the exception of the "High" Violation Risk Factor assigned to IRO-001-2 requirement R5. This should be a "Medium" VRF at the most. If the emergency has been mitigated, and the entities are not aware, they will still be operating to restrictions, which means the grid is operating well within limits. Not notifying the entities that the problem has been mitigated may have some financial implications but it should not place the grid at risk.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. The recommended language change is what the requirement means. The SDT did not modify the original language as they say the same thing.</p> <p>The RC SDT agrees and modified the VRF for R5 to medium.</p>		
Independent Electricity System Operator - Ontario	No	<p>R2: the phrase "act without intentional delay" is not necessary since the urgency of taking any actions as directed by the RC's are generally understood to be conveyed in the RC's directives.</p> <p>R3: Given R2 requires the responsible entities to comply with the RC directives, the part that says "immediately confirm the ability to comply with the directive or" is not needed. R3 should simply require the responsible entities to notify the RC upon recognition of the inability to perform the directive.</p> <p>The VRF for R5 should not be High. Failure to notify others when potential threats to system reliability have been mitigated does not constitute a high risk to the interconnected system. We suggest it be reduced to a Medium (i.e., that it affects control of the BES).</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>The RC SDT agrees to remove this phrase. The majority of commenters found this to be unnecessary.</p> <p>Agreed, the RC SDT modified R3 to remove "immediately confirm the ability to comply with the directive or"</p> <p>The RC SDT agrees and modified the VRF for R5 to medium.</p>		
MRO NERC SDTandards Review	No	New requirement R2 should omit act without intentional delay. The desired outcome is for the responsible entity to comply with the RC directive. Adding act without intentional delay only confuses



Organization	Question 7:	Question 7 Comments:
Subcommittee		<p>the situation and adds questions. What is an intentional delay? The word act implies that the requirement is met simply if the responsible entity attempted to meet the directive but was unable to do so. That is already considered in with the clause that begins "unless such actions would violate ...". Thus, the word act is not necessary.</p> <p>The word immediately should be removed from the new R3. This attempts to time frame the response of the responsible entity and remove the judgment from the compliance auditor. We agree with the concept of doing this but in reality it only confuses the issue and the compliance auditor will likely apply his judgment regarding what immediate is anyway. Additionally, the requirement attempts to separate the act of confirming that the responsible entity can take the action from notifying the RC that the entity can't take the action. This is not logical. What RC is going to request a responsible entity to take action that would violate safety, equipment, statutory, or regulatory requirements? The RC should already be aware of those requirements and likely won't direct actions that violate them. Thus, the likely scenario is that the responsible entity will attempt to take action and discover that equipment is not function properly and thus notify the RC. We suggest striking the "shall immediately confirm the ability to comply with the directive or" from the requirement. This part of the requirement is not needed because the responsible entity is already obligated to follow the RCs directive (see order 693.) Thus, the assumption is that the order will be followed unless it can't be followed because it will violated safety, equipment, statutory, or regulatory requirements.</p> <p>Requirements R4 and R5 are unnecessary. New R1 requires the RC to direct actions to be taken by the TOP, BA, GOP, TSP, LSE, DP and PSE to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. The RC can't direct these actions without notifying all impacted TOPs and BAs. They would also have to notify them when actions are no longer necessary.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT agrees to remove this phrase. The majority of commenters found this to be unnecessary.</p> <p>The RC SDT agrees. We have modified R3 to remove "immediately" and "confirm the ability to comply with the directive or".</p> <p>The RC SDT does not agree with regard to R4 and R5, as some impacted entities may not need to take action or be issued directives but would benefit from the situational awareness associated with knowing the status of operating issues.</p>		
Southern Company	No	7.1 - Applicability 4.2 - Transmission Operator should be plural.

Organization	Question 7:	Question 7 Comments:
Transmission		<p>7.2 - The revised definition of "Adverse Reliability Impacts" (R1) should be included at the top of Standard IRO-001-2, per Glossary of Terms Used in Standards: All defined terms used in reliability standards shall be defined in the glossary. Definitions may be approved as part of a standard action or as a separate action. All definitions must be approved in accordance with the standards process.</p> <p>7.3 - In R2 insert the word "its" before Reliability Coordinator.</p> <p>7.4 - In R3, replace "immediately" with "without intentional delay", replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>7.1 agreed, The RC SDT modified the applicability section.</p> <p>7.2 The revision to the definition will be placed in the correct location on the next posting and will be balloted along with the standard revisions.</p> <p>7.3 The RC SDT agrees and modified R2, the expectation is the entity's RC will issue the directives, not a different RC.</p> <p>7.4 R3 has been modified and changed "the" with "its" before RC. Note that based on comments from other stakeholders, the phrase, "immediately confirm the ability to comply" has been omitted from the revised requirement.</p>		
ISO New England Inc.	Yes and No	We believe the word "threat" should be replaced with "events" in Requirements 4 and 5.
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT chose the term "threat with Adverse Reliability Impacts" to convey the concept that action may be taken to prevent an event when an RC identified a potential threat. This will help better ensure reliability by mitigating threats rather than waiting for an event to occur.</p>		
Entergy Services, Inc	No	PER-003 R1 does not specifically address delegated functions; therefore, this requirement is not redundant with IRO-001 R6 without changes to PER-003 to specifically deal with employees performing delegated functions.
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>The RC SDT references the NERC ROP in the Implementation plan which address your delegation concern. -</p> <p>Per NERC ROP appendix 5, Organization Registration and Certification Manual v3.3 Sec IV and V:</p> <p>The applicant retains the responsibility for all delegated tasks. The applicant shall identify to the review team all tasks that have been delegated</p>		

Organization	Question 7:	Question 7 Comments:
<p>to another entity prior to the on-site visit. The review team shall conduct at least one on-site visit to the applicant's facilities. This may also apply to the facilities of entities responsible for delegated tasks. During the visit, the review team will:</p> <ul style="list-style-type: none"> <li>a. Review with the applicant the data collected through the questionnaires;</li> <li>b. Interview the operations and management personnel;</li> <li>c. Inspect the facilities and equipment;</li> <li>d. Request a demonstration of all tools identified in the certification standard;</li> <li>e. Review all necessary documents and data including all agreements, processes, and procedures identified in the certification standard;</li> <li>f. Review certification documents and projected system operator work schedules; and</li> <li>g. Review any additional documentation that is needed to support the completed questionnaire or inquiries arising during the site-visit.</li> </ul>		
MEAG Power	No	<p>Directives that are mandatory under R2 of IRO-001-2 should have boundaries consistent with the proper role of an RC. For example, if an RC directs an LSE with a 15% planning reserve margin to execute purchase power agreements until its reserve margin is at least 20% and the LSE refuses, then the LSE may have violated this standard. Other examples of improper RC directives are directives to increase coal inventories, buy firm fuel transportation rights, reconductor transmission lines, purchase spare equipment, etc. Granted entities may be able to conjure up a regulatory or statutory basis for refusing many improper RC directives but in some instances there may be no permissible grounds to refuse. The appropriate solution is to modify the standard to ensure that improper directives are never mandatory in the first place. Specifically, NERC is urged to state that RC directives are mandatory only if they pertain to specific categories such as: switching orders to reconfigure the BES, orders to postpone scheduled outages of BES equipment, orders to change generator output, orders to curtail transactions or orders to curtail load.</p>
<p>Response: The RC SDT thanks you for your comment. It is envisioned by the RC SDT that such RC directives consist of real-time and same-day operating actions that prevent or mitigate events that may or will cause Adverse Reliability impacts.</p>		
FirstEnergy	No	<p>R3 - should be a sub requirement of R2. These two requirements are sequential in nature and should be measured at the same time. The VRFs and Time Horizons are the same for both requirements lending to their combination into a requirement with a sub requirement. In the VSL for R2, an entity is being penalized with a high severity level for not completely following an RC directive even though it violated safety, equipment, statutory, or regulatory requirements. Measuring R2 and R3 at the same</p>

Organization	Question 7:	Question 7 Comments:
		<p>time allows for the process to complete prior to the measurement taking place.</p> <p>R3 - The "or" between "Distribution Provider" and "Purchasing-Selling Entity" should be replaced with an "and".</p> <p>R4 - Should be revised by adding the phrase "of the expected or actual threat" to the end of the requirement to add clarity.</p> <p>Existing R7 requirement - This requirement is proposed for retirement because it is redundant with IRO-014-1 R1. However, it is not clear how the existing requirement to "have clear, comprehensive coordination agreements with adjacent RCs to ensure that SOL or IROL violation mitigation requiring actions in adjacent RC areas are coordinated" is covered in IRO-014-1 R1. IRO-014-1 R1 requires agreements for coordination of actions between RCs to support Interconnection reliability, but it does not specifically require "clear" and "comprehensive" agreements to mitigate SOL or IROL violations. IRO-014-1 only vaguely covers the existing requirement R7 of IRO-001-1.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. The intent of the drafting team is to have distinct requirements that are measured independently. Having one as a subrequirement will not allow that to occur.</p> <p>The RC SDT revised the "or" to an "and".</p> <p>R4, The recommended language change is what the requirement means. The RC SDT did not modify the original language as they say the same thing.</p> <p>R7, The industry comments do not support being more specific in IRO-014-1 R1 in order to retire IRO-001-1 R7.</p>		
SERC OC Standards Review Group	Yes and No	<p>7.1 - Applicability 4.2 - Transmission Operator should be plural.</p> <p>7.2 - The revised definition of "Adverse Reliability Impacts" (R1) should be included at the top of Standard IRO-001-2, per Glossary of Terms Used in Standards: All defined terms used in reliability standards shall be defined in the glossary. Definitions may be approved as part of a standard action or as a separate action. All definitions must be approved in accordance with the standards process.</p> <p>7.3 - In R2 insert the word "its" before Reliability Coordinator</p> <p>7.4 - In R3, replace "immediately" with "without intentional delay", replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator.</p>

Organization	Question 7:	Question 7 Comments:
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>7.1 The RC SDT agrees and will modify the applicability section.</p> <p>7.2 The revision to the definition will be placed in the correct location on the next posting and will be balloted along with the standard revisions.</p> <p>7.3 Agreed, The RC SDT modified R2, the expectation is the entities RC will issue the directives, not a different RC.</p> <p>7.4 R3 has been modified and changed “the” with “its” before RC. Note that based on comments from other stakeholders, the phrase, “immediately confirm the ability to comply” has been omitted from the revised requirement.</p>		
US Bureau of Reclamation	No	R4. and R5. Both of these Requirements use the phrase “without intentional delay” to describe the urgency of the notification to impacted entities. In both requirements we recommend the language be changed from “notify, without intentional delay” to “immediately notify”.
<p><b>Response:</b> The RC SDT thanks you for your comment. We have removed the phrase from the requirements.</p>		
American Transmission Company	No	R2 refers to "intentional delay". The determination of intent should be left to the VSL portion of the standard, not the requirement portion.
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT has removed “without intentional delay” from the proposed requirement.</p>		
Consolidated Edison Co. of NY, Inc.	Yes and No	<p>Wording in question: R.2/M.2 Each Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without intentional delay to comply with the Reliability Coordinator's directives.R.3/M.3 Each — Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it confirmed its ability to comply with the Reliability Coordinator's directives.</p> <p>[1] Question: Is this wording absolutely necessary? And then, is it sufficient, if needed? Comment: First, we would question whether there is a specific need to include this wording. Is the IRO-001 Reliability Standard sufficient without it?</p> <p>[2] Question: Is this wording unambiguous? Comment: The wording seems somewhat vague and ambiguous. Analysis: The wording appears to establish performance standards ("without intentional delay", "shall immediately confirm") and evidentiary requirements ("evidence that it acted" or "evidence that it confirmed"), but without using pre-existing defined terms, establishing new defined</p>

Organization	Question 7:	Question 7 Comments:
		<p>terms, or defining these terms as used in context.</p> <p>[3] Intentional vs. Unintentional, Valid Intentional vs. Inappropriate Intentional? How does one differentiate between intentional and unintentional delay? When is and how much delay is valid or inappropriate? Isn't some intentional delay necessary to ensure that the other parts of the requirement being are met, e.g., — unless such actions would violate safety, equipment, or regulatory or statutory requirements?? Mightn't some acceptable amount of valid intentional delay be necessary to insure that any such RC directive and entity action would not in fact violate these safety, equipment, or regulatory or statutory requirements?</p> <p>[4] What is the timeliness standard?</p> <p>How are the terms “without delay” and “immediately conform” defined? What standard commercial measures would apply, e.g., “reasonably efforts” vs. “best efforts”? Are these terms measured in units of time (seconds or minutes) or in units of performance quality? Does a poorly considered “immediate” reply meet the standard, while a well considered reply, which is intentionally delayed, yet still appropriate, fail to meet this standard? Is that the best outcome?</p> <p>[5] What is this Evidentiary Standard? Is the sought-after “evidence” sufficiently well defined, e.g., phone logs, computer e-mail, control center computer logs, hand-written operator journals, etc.? What form of evidence is necessary and sufficient to demonstrate that the entity met this evidentiary standard? How is failure to meet this uncertain standard measured, judged and penalized?</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>The RC SDT has removed the phrases “immediately” and “without intentional delay” from the proposed requirements.</p>		
Duke Energy	No	<p>Requirement R1 - What happens if the RC failed to recognize that such an event was happening as opposed to failed to take action? Is this intended to cover both scenarios? The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision development of this definition needs to go thru Due Process. The inclusion of TSPs, LSEs, and PSEs here indicates the need to include these functions in the COM-001-2 requirements concerning the use of English as the approved language. In addition, this also indicates the need for all of these listed entities to be included in COM-002-3 requirements concerning repeat-backs. The RC, TOP, and BA should not be placed in a possible non-complaint state because the counter party refuses a repeat-back AND these requirements are not applicable to the counter party.</p>

Organization	Question 7:	Question 7 Comments:
		<p>Requirement R2 - The language in the Moderate VSL of R2 recognizes another potential reason for delay in execution of a directive. Requirement 2 of the Standards needs to be modified to also recognize this potential.</p> <p>Requirements R2 and R3 - Clarify that entities are obligated to take action and confirm directives only from their Reliability Coordinators, not from any Reliability Coordinator. Requirements R2, R3, R4, R5 - Inconsistent use of "timing" words in the standards — "without intentional delay" and "immediately". Suggest deleting these words due to the difficulty of determining compliance.</p> <p>Requirement R4 - The term "Adverse Reliability Impacts?" is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process.</p> <p>Requirement R5 - The VRF should be "Lower" instead of "High" since the notification is that the threat has been mitigated. Also, the term "Adverse Reliability Impacts" is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>R1 Both scenarios are envisioned by the requirement. The proposed revision to the definition will be balloted along with the standard revision. &amp; R4, &amp;R5. The TSPs, LSEs, and PSEs have been added to COM-001 and COM-002 as you suggest.</p> <p>R2, already included in R2 "unless such actions would violate safety, equipment, or regulatory or statutory requirements."</p> <p>R2, R3, The RC SDT modified R2, R3 to identify "its" RC. The phrases "immediately" and "without intentional delay" have been removed from the standard.</p> <p>R4 The revision to the definition will be placed in the correct location on the next posting and will be balloted along with the standard revisions.</p> <p>R5, The RC SDT modified the VRF for R5 to medium based on other industry comments.</p>		
Buckeye Power, Inc.	Yes and No	abstain
ISO/RTO Council Standards Review Subcommittee	Yes and No	New requirement R2 should omit act without intentional delay. Use of intentional implies willful disregard for compliance for the requirement. Intention should not be addressed as part of the compliance with the requirement but rather through the enforcement process once the compliance auditor has identified a violation.

Organization	Question 7:	Question 7 Comments:
		<p>The word immediately should be removed from the new R3. This attempts to time frame the response of the responsible entity and remove the judgment from the compliance auditor. We agree with the concept of doing this but in reality it only confuses the issue and the compliance auditor will likely apply his judgment regarding what immediate is anyway. Additionally, the requirement attempts to separate the act of confirming that the responsible entity can take the action from notifying the RC that the entity can't take the action. This is not logical. What RC is going to request a responsible entity to take action that would violate safety, equipment, statutory, or regulatory requirements? The RC should already be aware of those requirements and likely won't direct actions that violate them. Thus, the likely scenario is that the responsible entity will attempt to take action and discover that equipment is not functioning properly and thus notify the RC. We suggest striking the "shall immediately confirm the ability to comply with the directive or" from the requirement. This part of the requirement is not needed because the responsible entity is already obligated to follow the RCs directive (see order 693.) Thus, the assumption is that the order will be followed unless it can't be followed because it will violate safety, equipment, statutory, or regulatory requirements.</p> <p>Requirements R4 and R5 are unnecessary. New R1 requires the RC to direct actions to be taken by the TOP, BA, GOP, TSP, LSE, DP and PSE to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. The RC can't direct these actions without notifying all impacted TOPs and BAs. They would also have to notify them when actions are no longer necessary.</p> <p>The VRF for R5 should not be High. Failure to notify others when potential threats to system reliability have been mitigated does not constitute a high risk to the interconnected system. We suggest it be reduced to a Medium (i.e., that it affects control of the BES).</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT has removed the phrases "immediately" and "without intentional delay" from the proposed requirements. The RC SDT modified R3 based on industry comments and the phrase, "shall immediately confirm the ability to comply with the directive or" was removed from the requirement.</p> <p>The RC SDT does not agree with regard to R4 and R5, as some impacted entities may not need to take action or be issued directives but would benefit from the situational awareness associated with knowing the status of operating issues.</p> <p>The RC SDT modified the VRF for R5 to medium based on industry comments.</p>		
CU Springfield	Yes	CU supports the effort to consolidate redundant requirements in the standards.



Organization	Question 7:	Question 7 Comments:
<b>Response:</b> The RC SDT thanks you for your comment.		
PJM Interconnection	Yes	
Salt River Project	Yes	
NPCC	Yes	
Ameren	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	

**8. Do you agree with the revisions to the Measures in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

**Summary Consideration:**

The RC SDT has received a notable number of comments suggesting edits to the proposed requirements and measures for the draft standard, particularly regarding the phrase “without intentional delay.” The comments do not oppose the objective of the phrase, but often point out the issues of measuring intent and measuring time delay.

To maintain the intent while improving the measurability of the requirement, the SDT proposes to modify the standard as follows: delete the phrase ‘without intentional delay’ and leave the obligation of response and timing an unstated requirement of R1 “The RC shall act or direct actions...”

An RC that requires a given action in a given time will be expected to inform the impacted entities of those actions and time requirements. This revision would obviate the need for providing a measure for “intent”, while still maintaining the reliability intent of the original requirement.

The SDT proposes to re-post the standard to obtain stakeholder feedback on the suggested revisions.

Organization	Question 8:	Question 8 Comments:
CU of Springfield	No	M2 and M3 should include Distribution Provider as one of the entities to comply with directives from the Reliability Coordinator.
<p><b>Response:</b> The RC SDT thanks you for your comment. The SDT will correct the oversight.</p>		
Independent Electricity System Operator - Ontario	No	Wording in some of the Measures needs to be revised to reflect changes to R2 and/or R3, if our proposed changes are accepted. Also, we suggest the Requirement numbers be referenced in the Measures.
<p><b>Response:</b> The RC SDT thanks you for your comment. The SDT has revised the R2 and R3 and the associated measures per stakeholder comments. We have also added the associated requirement number to each measure.</p>		

Organization	Question 8:	Question 8 Comments:
Reliability Coordinator Comment Working Group	No	Measures do not align with VSLs (see question 9)
<p><b>Response:</b> The RC SDT thanks you for your comment. We will ensure that the VSLs and measures align.</p>		
MRO NERC SDT Standards Review Subcommittee	No	<p>Some compliance auditors have been taking the need for evidence to the extreme. We have encountered actual situations where if a measure states evidence shall be provided for requirements that are event based, the compliance auditor expected evidence even if no event occurred. For example, some RCs rarely issue directives. As M1 is written, some compliance auditors would require the RC to provide evidence that no reliability directives were issued. This is not possible. We suggest modifying the measurement to: Each Reliability Coordinator shall have evidence that it acted, or issued directives, to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordinator Area if needed. If there were no directives issues (assuming there are no complaints or evidence to the contrary of the need to issue a directive), no evidence is necessary."</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT agrees with the principle (i.e. should not have to prove a negative to an auditor). This issue should be addressed with NERC or Regional Compliance personnel. The RC SDT has the obligation to draft measures based on the requirements. The measure (M1) for R1 accomplishes that as written.</p>		
Southern Company Transmission	No	<p>8.1 - In M2 and M3, Add Distribution Provider.                      8.2 - In M2 add "intentional" between "without" and "delay".                      8.3 - In M3 replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator's and Reliability Coordinator.                      8.4 - In M5, change "has" to "had".</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. We have added DP to the measures M2 and M3. We have removed the phrases "immediately" and "without intentional delay" from the measures. The RC SDT has left the word "inability" in the measure to mirror the requirement. We have made the other revisions that you suggested.</p>		

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 8:	Question 8 Comments:
MEAG Power	No	The M2 measure should not mandate compliance with RC directives that are improper as defined in my response to question 7.
<p><b>Response:</b> The RC SDT thanks you for your comment. It is envisioned by the RC SDT that RC directives consist of real-time and same-day operating actions that prevent or mitigate events that may or will cause Adverse Reliability impacts.</p>		
SERC OC Standards Review Group	Yes and No	<p>8.1 - In M2 and M3, Add Distribution Provider.</p> <p>8.2 - In M2 add "intentional" between "without" and "delay".</p> <p>8.3 - In M3 replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator's and Reliability Coordinator.</p> <p>8.4 - In M5, change "has" to "had".</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. We have added DP to the measures M2 and M3. We have removed the phrases "immediately" and "without intentional delay" from the measures. The RC SDT has left the word "inability" in the measure to mirror the requirement. We have made the other revisions that you suggested.</p>		
US Bureau of Reclamation	No	M4. and M5. In both Measures, recommend "without intentional delay" be changed as described above for R4. and R5.
<p><b>Response:</b> The RC SDT thanks you for your comment. Based on stakeholder comments, we have removed "without intentional delay" from the requirement and measure.</p>		
Progress Energy Carolinas		
FirstEnergy	No	M2 - The word "intentional" should be added between "without" and "delay".
<p><b>Response:</b> The RC SDT thanks you for your comment. Based on stakeholder comments, we have removed the phrase "without intentional delay" from the requirement and measure.</p>		
Duke Energy	No	Measures M2, M4 and M5 use the terms "without delay" and "without intentional delay". Suggest deleting these words due to the difficulty of determining compliance. The term "Adverse Reliability

Organization	Question 8:	Question 8 Comments:
		Impacts” is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process.
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>We have removed the phrases “immediately” and “without intentional delay” from the measures.</p> <p>The proposed definition has been added to the standard and will be posted with the proposed revisions to the standard.</p>		
Consolidated Edison Co. of NY, Inc.	Yes and No	<p>[Comments repeated for Measures] Wording in question:R.2/M.2 Each Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without intentional delay to comply with the Reliability Coordinator's directives.R.3/M.3 Each Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it confirmed its ability to comply with the Reliability Coordinator's directives.</p> <p>[1] Question: Is this wording absolutely necessary? And then, is it sufficient, if needed? Comment: First, we would question whether there is a specific need to include this wording. Is the IRO-001 Reliability Standard sufficient without it?</p> <p>[2] Question: Is this wording unambiguous? Comment: The wording seems somewhat vague and ambiguous. Analysis: The wording appears to establish performance standards (“without intentional delay”, “shall immediately confirm”) and evidentiary requirements (“evidence that it acted” or “evidence that it confirmed”), but without using pre-existing defined terms, establishing new defined terms, or defining these terms as used in context.</p> <p>[3] Intentional vs. Unintentional, Valid Intentional vs. Inappropriate Intentional? How does one differentiate between intentional and unintentional delay? When is and how much delay is valid or inappropriate? Isn't some intentional delay necessary to ensure that the other parts of the requirement being are met, e.g., unless such actions would violate safety, equipment, or regulatory or statutory requirements?? Mightn't some acceptable amount of valid intentional delay be necessary to insure that any such RC directive and entity action would not in fact violate these safety, equipment, or regulatory or statutory requirements?</p> <p>[4] What is the timeliness standard? How are the terms “without delay” and “immediately conform” defined? What standard commercial measures would apply, e.g., “reasonable efforts” vs. “best efforts”? Are these terms measured in units of time (seconds or minutes) or in units of performance quality? Does a poorly considered “immediate” reply meet the standard, while a well considered reply, which is intentionally delayed, yet still appropriate, fail to meet this standard? Is that the best</p>

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 8:	Question 8 Comments:
		outcome? [5] What is this Evidentiary Standard? Is the sought-after “evidence” sufficiently well defined, e.g., phone logs, computer e-mail, control center computer logs, hand-written operator journals, etc.? What form of evidence is necessary and sufficient to demonstrate that the entity met this evidentiary standard? How is failure to meet this uncertain standard measured, judged and penalized?
<p><b>Response:</b> The RC SDT thanks you for your comment. We have removed the phrases “immediately” and “without intentional delay” from the measures.</p>		
Buckeye Power, Inc.	Yes and No	abstain
American Transmission Company	Yes	If some language is changed, we support the revisions. R2 has language in it that should be added to M4 to be consistent. In M2, we propose adding language "unless such actions would violate safety, statutory or regulatory requirements."
<p><b>Response:</b> The RC SDT thanks you for your comment. The suggested change has been made.</p>		
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Northern California Power Agency	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	

Organization	Question 8:	Question 8 Comments:
PJM Interconnection	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	

9. Do you agree with the Violation Severity Levels proposed in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

**Summary Consideration:** The VSLs were revised to reflect revisions to the requirements as well as the comments of stakeholders. Several comments suggested that there was no fundamental difference between the RC “acting” or “directing actions”. The RC SDT agreed and removed the High VSL for R1 and revised the Severe VSL accordingly. Other commenters suggested removing the High VSL from R2 as the VSL contradicted the requirement. The RC SDT agreed and removed the VSL. All of the revised VSLs are in the table below.

Requirement	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	N/A	The Reliability Coordinator failed to act or direct actions to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts
R2	N/A	N/A	N/A	<a href="#">The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements.</a> <del>The responsible entity did not follow the Reliability Coordinators directive per requirement 2.</del>
R3	N/A	N/A	N/A	The responsible entity failed to inform <del>the-its</del> Reliability Coordinator upon recognition of <del>the-its</del> inability to perform the directive.



Comments for Set of Reliability Coordination Standards (Project 2006-06)

R4	The Reliability Coordinator <del>who</del> identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area <u>and</u> failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator <del>who</del> identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area <u>and</u> failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator <del>who</del> identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area <u>and</u> failed to issue an alert to three or more, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator <del>who</del> identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area <u>and</u> failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.
R5	The Reliability Coordinator <u>issued an alert failed to notify entities of a transmission problem but failed</u> to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator <u>issued an alert to notify entities of a transmission problem but</u> failed to notify two, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator <u>issued an alert to notify entities of a transmission problem but</u> failed to notify three or more, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator <u>issued an alert to notify entities of a transmission problem but</u> failed to notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.
R6	N/A	N/A	N/A	The Reliability Coordinator failed to provide its <del>Operating operating Personnel</del> <u>personnel</u> with the authority to veto planned outages of its own analysis tools.

Organization	Question 9:	Question 9 Comments:
Manitoba Hydro	No	<p>IRO-001-2 R1 VSLs: You can not split "shall act" and "or direct actions" into separate VSLs. They are one and same. If the RC directs action then they have acted. If the RC failed to direct action or have failed to other wise act then they have failed to act appropriately. Perhaps the VSLs can be drafted along the lines of the following:</p> <p>IRO-001-2 R1 High VSL... The Reliability Coordinator's action was incomplete in that it failed to demonstrate a specific action to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts.</p> <p>IRO-001-2 R1 Severe VSL... The Reliability Coordinator failed to act to prevent or mitigate the magnitude or duration of</p>

Organization	Question 9:	Question 9 Comments:
		<p>Adverse Reliability Impacts.</p> <p>IRO-001-2 R2 VSLs:                      (1) Entities may be justified in an intentional delay in responding to an RC directive. A justified intentional delay may due be equipment problems, a generators ramp rate or system voltage adjustments prior to large system reconfiguration or large transmission loading changes.                      (2) An entity cannot be faulted for not following an RC directive because to it would violate safety, equipment, regulatory or statutory requirements.                      Perhaps the VSLs can be drafted along the lines of the following:                      Moderate VSL... should be deleted.                      High VSL... The responsible entity followed the Reliability Coordinators directive but with an unjustified delay.                      Severe VSL... no edits required.</p> <p>IRO-001-2 R5 VSLs:                      Perhaps the VSLs can be drafted along the lines of the following to reflect to what degree the RC missed the mark:                      Lower VSL...The Reliability Coordinator failed to notify &lt;25% of its impacted Transmission Operators and Balancing Authorities when the transmission system problem had been mitigated.                      Moderate VSL... The Reliability Coordinator failed to notify &gt;24% but &lt;50% of its impacted Transmission Operators and Balancing Authorities when the transmission system problem had been mitigated.                      High VSL...The Reliability Coordinator failed to notify &gt;49% but &lt;75% of its impacted Transmission Operators and Balancing Authorities when the transmission system problem had been mitigated.                      Severe VSL... The Reliability Coordinator failed to notify &gt;74% of its impacted Transmission Operators and Balancing Authorities when the transmission system problem had been mitigated.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>R1: The RC SDT agrees with you regarding “act” and direct actions. Based on your and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL.</p> <p>R2: 1. The SDT removed the “intentional delay” wording. 2. We concur with your statement. The RC SDT believes that the revised requirement is a binary and thus only requires one VSL. We have removed the High VSL and revised the severe VSL to:</p> <p>The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements.</p> <p>R5: The RC SDT developed a revised set of VSLs that are graded in a way that gives consideration to the number of impacted entities since some entities will have a very small number of entities to contact, and using percentages may not be effective.</p>		
Independent Electricity System	No	<p>R1: There should not be any distinction made between an RC acting and an RC directing others to act. Failure to mitigate adverse reliability impacts a severe violation of the requirement. We therefore suggest to revise the High and Severe levels as: High if the RC did not act or direct actions to prevent an Adverse Reliability Impact; Severe if the RC did not act or</p>

Organization	Question 9:	Question 9 Comments:
Operator - Ontario		<p>direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact.</p> <p>R2: The High VSL seems contradictory to the requirement, which already has provision of not fully complying with the RC directives due to safety, equipment, or regulatory or statutory requirements.</p> <p>R3: We have proposed some wording change to R3, which if adopted, would precipitate a need to revise the VSLs for R3 accordingly.</p> <p>(iv) R4 and R5: The VSLs for these two requirements could be graded by assessing the number and/or timing of notifying the affected entities.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>The RC SDT agrees with you regarding “act” and “direct actions”. Based on yours and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL.</p> <p>We agree and have removed the High VSL.</p> <p>R3. The requirement was revised and the Lower VSL removed.</p> <p>R4 and R5: We concur and have expanded the VSLs to include notification of a varying number of entities.</p>		
Reliability Coordinator Comment Working Group	No	<p>R1 talks about "shall act or direct actions to be taken".</p> <p>High VSL - failure to act.</p> <p>Severe VSL - failure to act and direct. Does "act" mean any action taken short of issuing a directive? Change Severe VSL to failure to act or direct and eliminate the High VSL all together.</p> <p>R2 delay in issuing a directive due to equipment problems should be included in the moderate VSL and the body of the requirement and in the measure. The High VSL should be removed because not following the directive for equipment failure is allowed per R2.</p> <p>R5 - Severe VSL should be changed to moderate VSL since the problem has been mitigated and the system is stable and it does not adversely impact reliability.</p> <p>M3 talks about the ability of reliability entities to meet a directive. What constitutes evidence that confirms you are able to immediately comply with the directive? If the entity agrees to the directive and then is unable to comply due to events outside of their control, such as a CT not starting, do they meet the measure? If the entity, based on the circumstances at the time of the directive, agrees to comply in good faith are they compliant? The Lower VSL should be made N/A because it is not practical for an entity to immediately confirm they are able to meet the directive in all cases.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p>		

**Comments for Set of Reliability Coordination Standards (Project 2006-06)**

Organization	Question 9:	Question 9 Comments:
<p>R1 - The RC SDT agrees with you regarding “act” and “direct actions” and has removed the High VSL and revised the Severe VSL.</p> <p>R2 - Based on your and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL.</p> <p>R5: The VSL relates to how badly an entity missed the requirement, not the threat to reliability (this is the VRF). The requirement is to notify “all”. The RC SDT has developed a revised set of graded VSLs for this requirement.</p> <p>M3. The requirement was revised to remove words such as “immediately” and intentional delay:</p> <p>R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform a directive.</p> <p>The measure was revised to reflect the new requirement which addresses your concerns. The Lower VSL was revised to N/A.</p>		
<p>MRO NERC SDT Standards Review Subcommittee</p>	<p>No</p>	<p>The R1 High and Severe VSL appear to differ only by the inclusion of directing actions in Severe. From a practical perspective, what is the difference between directing actions and acting? We don’t believe there is any. The actions are the result of the RC authority whether the RC takes the actions themselves or directs someone else to. We suggest a better alternative for the VSL levels would be for the High level to reflect that the RC did not act or direct actions to prevent an Adverse Reliability Impact and Severe would be that the RC did not act or direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact.</p> <p>The moderate VSL for R2 is not practical and too subjective. What constitutes a delay? What if the responsible entity takes five minutes to determine how to carry out the action or if their equipment currently is capable of carrying out the action? Is this a delay? We suggest striking this Moderate VSL. The High VSL does not agree with the requirement. It considers the inability to fully follow an RC directive due to a violation of the safety, equipment, statutory, or regulatory requirements a violation. This is in direct conflict with the requirement. We suggest that the High VSL should be struck. We suggest the Severe VSL should be that the responsible entity failed to follow the RC directive and it would not have violated the safety, equipment, statutory or regulatory requirements. Currently, the Severe category does not allow that the responsible entity may not be able to carry out the directive due to the violation of safety, equipment, statutory, or regulatory requirements.</p> <p>In question 7, we request that the drafting team strike part of requirement 3. The striking of that portion of requirement 3 obviates the lower VSL.</p> <p>In paragraph 27 of the ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION, the Commission expresses “that, as a general rule, gradated Violation Severity Levels, wherever possible, would be preferable to binary Violation Severity Levels”. Given that it is possible to define gradated VSLs for R4 and R5, we suggest that the drafting team should consider applying the numeric performance category of the Violation Severity Levels Development Guidelines Criteria based on the number of impacted TOPs and BAs that were notified.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p>		

**Comments for Set of Reliability Coordination Standards (Project 2006-06)**

Organization	Question 9:	Question 9 Comments:
<p>R1: The RC SDT agrees with you regarding “act” and “direct actions”. Based on your and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL to include failure to “act or direct actions”.</p> <p>R2. We have removed the “intentional delay” verbiage and subsequently removed the Moderate VSL. We agree with you regarding the High VSL and have removed it from the table. The Severe VSL was revised per your suggestion.</p> <p>R3. The requirement was revised and the Lower VSL removed.</p> <p>R4 and R5: We concur and have expanded the VSLs to include notification of a varying number of entities.</p>		
Southern Company Transmission	No	<p>9.1 - R1 is a binary requirement and should have only a severe VSL. The RC either acts or he doesn't - If he fails to act, he fails to direct and mitigate the problem by default.</p> <p>9.2 - R2 VSLs need to be rewritten to recognize that some directives may not be followed because of safety, regulatory or statutory requirements.</p> <p>9.3 - Remove the Lower severity level in R3 to conform to changes in R3 and M3.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>R1: The RC SDT agrees with you regarding “act” and “direct actions”. Based on your and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL. This is now treated as a binary requirement with just one VSL.</p> <p>R2. We agree and have removed the High VSL and revised the severe VSL to:</p> <p>The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements.</p> <p>R3. The requirement was revised and the Lower VSL removed.</p>		
Entergy Services, Inc	No	The VSL for R2 does not seem consistent with the language in the requirement. It is not clear why the entity should be subject to a high VSL if the entity did not comply with an RC directive due to safety or regulatory prohibition, and made the RC aware of same.
<p><b>Response:</b> The RC SDT thanks you for your comment. Please see Summary Consideration above. The High VSL for R2 was removed.</p>		
Salt River Project	No	<p>R1 states the RC must act OR direct. The R1 VSLs attempt to distinguish between act and direct. The requirement allows for either action. I suggest that the High VSL be removed and replaced by an N/A. The Severe VSL should be amended so that the words "act and direct" are replaced by the words "act OR direct" as is consistent with the requirement and the measure.</p> <p>R2: The moderate VSL introduces the phrase "equipment problems" for the first time in the Standard. "Equipment Problems" needs to be included in the Requirement, R2, and defined in the Measure for</p>

**Comments for Set of Reliability Coordination Standards (Project 2006-06)**

Organization	Question 9:	Question 9 Comments:
		R2.R5: The Severe VSL needs to be moved to the Moderate category. This condition does not constitute an Adverse Reliability Impact that severely threatens the BES.
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>R1: The RC SDT agrees with you regarding “act” and “direct actions”. Based on your and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL to use the phrase, “act or direct.”</p> <p>R2. The moderate VSL was removed.</p> <p>R5: The VSL relates to how badly an entity missed the requirement, not the threat to reliability (this is the VRF). The requirement is to notify “all”. The RC SDT believes it has developed appropriate VSLs for this requirement.</p>		
FirstEnergy	No	R2 VSL - The Severe VSL should include after the word directive: "that would not violate safety, equipment, statutory or regulatory requirements".
<p><b>Response:</b> The RC SDT thanks you for your comment. We agree with your premise, but the suggested wording of the VSL appears cumbersome. The VSL has been revised to:</p> <p>The responsible entity did not follow the Reliability Coordinator’s directive per Requirement R2.</p>		
Duke Energy	No	<p>The language in R1 of the VSL is not consistent with the requirements and measures in the standard. The VSL needs to recognize that the RC may EITHER act or give direction to others to act.</p> <p>The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process.</p> <p>The language in R2 of the VSL places an entity in Moderate or High violation level even if failure is “allowed” in the standard; i.e. failure to act is due to violation of safety, regulatory, statutory requirements.</p> <p>The language in R2 of the VSL recognizes another potential reason for delay in execution of a directive. Requirement R2 of the Standard needs to be modified to also recognize this potential.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>R1: The RC SDT agrees with you regarding “act” and “direct actions”. Based on your and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL to use the phrase, “act or direct.”</p> <p>The proposed revision to the term, “Adverse Reliability Impact” will be posted for stakeholder comment with the next version of the standard.</p> <p>R2. We agree and have removed the Moderate and High VSLs and revised the Severe VSL to :</p>		

**Comments for Set of Reliability Coordination Standards (Project 2006-06)**

Organization	Question 9:	Question 9 Comments:
<p>The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements.  <a href="#">The requirement already addresses equipment.</a></p>		
<p>American Transmission Company</p>	<p>No</p>	<p>VSLs for R2 and R3 are not appropriate. In order to assess a situation we may not be able to immediately inform the RC of our ability to comply with the directive. The high VSL for R2 currently states that if we do not follow the directive because of safety, statutory or regulatory requirements, it is a high VSL. An entity should not be penalized for not breaking the law.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.  R2: We agree and have removed the Moderate and high VSLs.  R3. The requirement was revised to remove the “immediately” verbiage and the VSLs were revised accordingly – the Lower VSL was removed.</p>		
<p>ISO/RTO Council Standards Review Subcommittee</p>	<p>No</p>	<p>The R1 High and Severe VSL appear to differ only by the inclusion of directing actions in Severe. From a practical perspective, what is the difference between directing actions and acting? We don't believe there is any. The actions are the result of the RC authority whether the RC takes the actions themselves or directs someone else to. We suggest a better alternative for the VSL levels would be for the High level to reflect that the RC did not act or direct actions to prevent an Adverse Reliability Impact and Severe would be that the RC did not act or direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact.</p> <p>The moderate VSL for R2 is not practical and too subjective. What constitutes a delay? What if the responsible entity takes five minutes to determine how to carry out the action or if their equipment currently is capable of carrying out the action? Is this a delay? We suggest striking this Moderate VSL. The High VSL does not agree with the requirement. It considers the inability to fully follow an RC directive due to a violation of the safety, equipment, statutory, or regulatory requirements a violation. This is in direct conflict with the requirement. We suggest that the High VSL should be struck. We suggest the Severe VSL should be that the responsible entity failed to follow the RC directive and it would not have violated the safety, equipment, statutory or regulatory requirements. Currently, the Severe category does not allow that the responsible entity may not be able to carry out the directive due to the violation of safety, equipment, statutory, or regulatory requirements.</p> <p>In question 7, we request that the drafting team strike part of requirement 3. The striking of that portion of requirement 3 obviates the lower VSL.</p> <p>In paragraph 27 of the ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION, the Commission expresses "that, as a general rule, gradated Violation Severity Levels, wherever possible, would be preferable to binary Violation Severity Levels". Given that it is possible to define gradated VSLs for R4 and R5, we suggest that the drafting team should consider applying the numeric performance category of the Violation Severity Levels Development Guidelines Criteria based on the number of impacted TOPs and BAs that were notified.</p>

**Comments for Set of Reliability Coordination Standards (Project 2006-06)**

Organization	Question 9:	Question 9 Comments:
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>R1: The RC SDT agrees with you regarding “act” and “direct actions”. Based on your and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL to use the phrase, “act or direct.”</p> <p>R2. We agree and have removed the Moderate and High VSLs and revised the Severe VSL to :</p> <p>The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements.</p> <p>R3. The requirement was revised and the Lower VSL removed.</p> <p>R4 and R5: We concur and have expanded the VSLs to include notification of a varying number of entities.</p>		
SERC OC Standards Review Group	Yes and No	<p>9.1 - R1 is a binary requirement and should have only a severe VSL. The RC either acts or he doesn't - If he fails to act, he fails to direct and mitigate the problem by default.</p> <p>9.2 - R2 VSLs need to be rewritten to recognize that some directives may not be followed because of safety, regulatory or statutory requirements.</p> <p>9.3 - Remove the Lower severity level in R3 to conform to changes in R3 and M3.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>R1: The RC SDT agrees with you regarding “act” and “direct actions”. Based on your and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL to use the phrase, “act or direct.”</p> <p>R2. We agree and have removed the High VSL and revised the Severe VSL to:</p> <p>The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements..</p> <p>R3. The requirement was revised and the Lower VSL removed.</p>		
Consolidated Edison Co. of NY, Inc.	Yes and No	<p>Agreement uncertain, subject to further clarification of Requirements and Measures performance standards and definitions (see our comments on Requirements and Measures). Without clearer definitions, e.g., for "immediate," or any allowance for appropriate intentional delay, it is not entirely clear that the VSLs comport with the ultimate meaning, intent and needed wording to be incorporated into the Requirements and Measures. Why would failure to fully comply, when precluded by conditions specifically allowed in the standard, necessarily be a problem, so long as the RC received timely notice, however defined?</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. The SDT removed the word, “immediate” and the phrase, “without intentional delay” from the standard.</p>		



**Comments for Set of Reliability Coordination Standards (Project 2006-06)**

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Organization	Question 9:	Question 9 Comments:
Buckeye Power, Inc.	Yes and No	abstain
Northern California Power Agency	Yes	
CU of Springfield	Yes	
NPCC	Yes	
Ameren	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	

**10. Do you agree with the revisions to the Requirements in IRO-002-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

**Summary Consideration:** The last proposed version of IRO-002-2 had two requirements – R1 required the Reliability Coordinator to request data from other entities; R2 required the Reliability Coordinator to provide its operating personnel with authority to veto planned outages of analysis tools.

Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees’ approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired IRO-002 Requirement R1 and eliminated the need for the proposed R2.

The team received comments expressing concern about eliminating the requirement to monitor frequency which had been in an earlier approved version of IRO-002. While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure “Monitoring” can provide. It is the SDT’s contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in Certification Requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability. The team retained the remaining requirement (Reliability Coordinator’s authority to veto analysis tool outages) as it was a specific recommendation from the 2003 Blackout report. This requirement was revised and moved into IRO-001-2, R6.

R6. Each Reliability Coordinator shall ~~have~~provide its operating personnel with the authority to veto planned outages to its own analysis tools, ~~including final approvals for planned maintenance.~~ *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

Organization	Question 10:	Question 10 Comments:
Independent Electricity System Operator - Ontario	No	two. R1: There is a duplicating requirement in TOP-005 R1.1. Suggest to eliminate one of the  We do not agree with eliminating all of R5 to R8. There is a fundamental need for RCs to

Organization	Question 10:	Question 10 Comments:
		<p>monitor its area, and even some portion of its adjacent areas to be aware of situations that require preventive and mitigating actions. While arguments can be made that requiring RCs to prevent and mitigate adverse reliability impacts would imply monitoring, the latter is a fundamental duty of any RCs to ensure system reliability. If monitoring is not explicitly stated as a requirement, then the same argument may be extended to training and operational facilities. We do not agree with the drafting team's conclusion that it is not practical to measure real-time monitoring. Measuring can be illustrated, for example, by a compliance audit to review system logs and assess the extent to which an RC follows and assesses system conditions.</p>
<p><b>Response:</b> R1: The RC SDT thanks you for your comment. Several NERC drafting teams are working on related standards. The RTO SDT just posted changes to TOP-005 that will retire that standard upon approval. Therefore, there will be no redundancy because TOP-005 R1.1 will be removed.</p> <p>Monitoring: While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure "Monitoring" can provide. It is the SDT's contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in Certification Requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability.</p>		
Reliability Coordinator Comment Working Group	No	<p>For R1, this should be 2 separate requirements and measures. R1 should have a methodology for determining what data is needed and then a R2 should be a requirement to request this data from the reliability entities.</p>
<p><b>Response:</b> The RC SDT appreciates your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1.</p>		
MRO NERC SDT Standards Review Subcommittee	No	<p>New Requirement R1 is duplicate to the requirement TOP-005-1 R1.1. If the drafting team can't delete TOP-005-1 R1.1, they should notify other appropriate drafting teams of the need to remove the requirement.</p> <p>We do not agree with eliminating requirements R5, R6, R7, and R8 in their entirety. The requirements as they are written are problematic. However, we do believe that there is a need for a basic</p>

Organization	Question 10:	Question 10 Comments:
		<p>requirement to monitor the system. The requirements should be that the RC should compare actual system flows to SOLs and IROLs. While some will argue SOLs are not the responsibility of the RC, failure to monitor SOLs could cause the RC to miss unknown IROLs since an SOL can become an IROL. Several SOL violations in a given area also can be indicative of a broader system problem the RC should be addressing. We also do not agree with the drafting team's conclusion that it is not practical to measure real-time monitoring. It is very easy to measure. As an example, a compliance auditor could select a day and an SOL or IROL and ask for the system flows from that day or hour etc. This is generally easy for any RC to produce with today's data archiving software. We believe that there should be a requirement that the RC have a state estimator and real-time contingency analysis as well (RTCA). The drafting team needs to be careful in the construction of these requirements to make them practical and measurable. For instance, making the requirement to have a state estimator and RTCA is measurable in that the compliance auditor can verify their existence but this is not stringent enough because they may only run once a week. At the same time, if we create a requirement that SE and RTCA must run every 5 minutes, we could inadvertently create a requirement that any missing 5 minute run of RTCA and SE could be construed as a violation. There also needs to be a requirement that there is a real-time assessment of voltage as well.</p> <p>New Requirement R2 is no longer needed as a result of paragraph 112 in Order 693-A. Since the RC's "authority to issue directives arises out of the Commission's approval of Reliability Standards" the RC already has veto authority or will have once R1 IRO-001-2 is approved. This requirement obligates the RC to take actions or direct actions to prevent Adverse Reliability Impacts. Veto outages of equipment and analysis tools would fall into this category even if the RC couldn't say for certain that an Adverse Reliability Impact was going to occur but rather they are concerned one could occur due to heavy loads for example.</p>
<p><b>Response:</b> The RC SDT appreciates your comments. The RTO SDT has recently posted the proposed retirement of TOP-005. This eliminates the redundancy with R1.</p> <p>The RC SDT appreciates your comments and recognizes that NERC standards historically have included requirements to ensure that each entity is acting responsibly in the portion of the Interconnect over which it has authority. The IRO-014, as proposed by this team, requires RCs to act in coordinated fashion to protect the Interconnection. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability.</p> <p>The RC must respond to these situations proactively in order to prevent separation or cascading events.</p> <p>The RC SDT agrees philosophically with your comment regarding the redundancy of Requirement R2, however, this issue was enumerated in</p>		

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 10:	Question 10 Comments:
<p>the report on the 2003 Blackout as a key improvement. The team believes that, while this is redundant as you stated, it is too soon to remove it from standards. At some point in the future after the industry assimilates the set of changes currently proposed, this requirement could be proposed for deletion.</p>		
<p>Southern Company Transmission</p>	<p>No</p>	<p>10.1 - We propose that R1 and R2 should be moved to the RC Certification Procedure and this standard retired. If this standard is not retired then we recommend Comments</p> <p>10.2 and 10.3.10.2 - At Requirement R2, the RC is given 'veto' authority. Is a standard an appropriate place to give this type of authority?</p> <p>10.3 - The revised Purpose basically provides that the RC will have access to information and control of analysis tools. What is the correlation of information/control to veto authority/approval of planned maintenance?</p>
<p><b>Response:</b> The RC SDT appreciates your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1.</p> <p>R2. This is a Blackout recommendation and therefore is appropriate within a standard. We revised the wording to indicate that the RC will provide its Operating Personnel the authority. This clarified the intent of the requirement. This requirement will also be moved into IRO-001-2, R6.</p> <p>10.3 This standard will be retired making the purpose statement moot.</p>		
<p>ISO New England Inc.</p>	<p>Yes and No</p>	<p>Suggest changing with word "request" to "document" in Requirement 1.</p>
<p><b>Response:</b> The RC SDT appreciates your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1.</p>		
<p>Entergy Services, Inc</p>	<p>No</p>	<p>IRO-002-1 R9, the deleted language of the second sentence is not adequately covered by the language in EOP-008-0 R1, unless those outages are tied to the loss of a control center. EOP-008-0 is in the process of being revised and this language could be included in the revision, but it isn't adequately addressed by the version 0 standard.</p>

Organization	Question 10:	Question 10 Comments:
<p><b>Response:</b> The RC SDT appreciates your comments. The RC SDT took this comment into consideration when making revisions to this requirement as well as to COM-001-2 regarding specifications. The data specification required in IRO-010 should address mitigation plans for analysis tool outages and proposed COM-001 specifications should include mitigation plans for communications outages.</p>		
<p>US Bureau of Reclamation</p>	<p>No</p>	<p>R2. This requirement provides authority to the Reliability Coordinator to veto planned outages and approve planned maintenance to “analysis tools”. It is not clear in this standard what these “analysis tools” are. Per FERC Order 693, NERC was to identify a minimum set of analysis tools and the task was assigned to the Real-Time Tools Best Practices Task Force. Until the tools are identified, it is premature to insert a placeholder in a mandatory standard; this also applies to the violation severity levels table.</p>
<p><b>Response:</b> The RC SDT appreciates your comments. The Reliability Coordinator has a set of tools in use to monitor and analyze its area as well as to provide a wide area view. These tools may include a SCADA system, state estimator and contingency analysis programs. It is the responsibility of the Reliability Coordinator to ensure that these tools are operational or that a plan or procedure is in place to mitigate their outages. The Real-time Tools Best Practices Task Force work has resulted in the inception of a new standard development project. It is scheduled to begin in 2009.</p>		
<p>FirstEnergy</p>	<p>No</p>	<p>R2 - As written, this requirement does not clearly define the scope of the authority of the Reliability Coordinator over analysis tools. Is it the intent of the drafting team to give the RC authority over analysis tools owned and operated by the RC. Is it the intent of the drafting team to give the RC authority over the analysis tools owned and operated by the BA, TOP, GOP, etc.? Are the tools intended to be the real-time (EMS) or the off-line engineering planning analysis tools or any analysis tool used in real-time. Does this include the analysis tools used by field personnel? This requirement should be revised to specify exactly the analysis tools under the authority of the Reliability Coordinator.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. The intent of the requirement is to have veto authority over its own tools. The requirement is revised to:</p> <p>R2. Each Reliability Coordinator shall provide its Operating Personnel with the authority to veto planned outages to its own analysis tools. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</p> <p>The intended tools are any tools that the Reliability Coordinator needs to perform its reliability functions.</p>		

Organization	Question 10:	Question 10 Comments:
Duke Energy	No	<p>Requirement R1 - This requirement is in the wrong standard — this is a Facilities standard. This requirement belongs in another standard. Question: Is there a requirement in another standard that compels the TOPS, BAs, etc to provide the requested data? Requirement R2 - Need to clarify whose analysis tools (I assume it is the RCs analysis tools, not the analysis tools of another entity) and planned maintenance to what — is it tools, facilities, transmission, generation, etc. Depending on the answer above, this requirement is in the wrong standard — this is a Facilities standard. This requirement belongs in another standard. Question: Where is the Requirement for the RC to have analysis tools? It appears that the Requirement the RC has analysis tools have been removed in the revisions to the standard.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and does compel entities to provide data to the Reliability Coordinator</p> <p>For R2, the intent of the requirement is to have veto authority over its own tools. The requirement is revised to:</p> <p>R2. Each Reliability Coordinator shall provide its Operating Personnel with the authority to veto planned outages to its own analysis tools. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</p> <p>The intended tools are any tools that the Reliability Coordinator needs to perform its reliability functions.</p>		
ISO/RTO Council Standards Review Subcommittee	No	<p>New Requirement R2 is no longer needed as a result of paragraph 112 in Order 693-A. Since the RC's "authority to issue directives arises out of the Commission's approval of Reliability Standards" the RC already has veto authority or will have once R1 IRO-001-2 is approved. This requirement obligates the RC to take actions or direct actions to prevent Adverse Reliability Impacts. Veto outages of equipment and analysis tools would fall into this category even if the RC couldn't say for certain that an Adverse Reliability Impact was going to occur but rather they are concerned one could occur due to heavy loads for example.</p>
<p><b>Response:</b> The RC SDT agrees philosophically with your comment regarding the redundancy of Requirement R2, however, this issue was enumerated in the report on the 2003 Blackout as a key improvement. The team believes that, while this is redundant as you stated, it is too soon to remove it from standards. At some point in the future after the industry assimilates the set of changes currently proposed, this requirement could be proposed for deletion.</p>		
SERC OC	Yes and No	10.1 - We propose that R1 and R2 should be moved to the RC Certification Procedure and this

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Organization	Question 10:	Question 10 Comments:
Standards Review Group		standard retired.
<p><b>Response:</b> The RC SDT appreciates your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1.</p> <p>For R2, the intent of the requirement is to have veto authority over its own tools. The requirement is revised and moved into IRO-001-2, R6: R2. Each Reliability Coordinator shall provide its Operating Personnel with the authority to veto planned outages to its own analysis tools. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</p> <p>This will retire IRO-002-1.</p>		
Buckeye Power, Inc.	Yes and No	Abstain
PJM Interconnection	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Northern California Power Agency	Yes	
Salt River Project	Yes	
Bonneville Power Administration	Yes	



Organization	Question 10:	Question 10 Comments:
AEP	Yes	
American Transmission Company		Abstain.

**11. Do you agree with the revisions to the Measures in IRO-002-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

**Summary Consideration:** Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1.

For R2, the intent of the requirement is to have veto authority over its own tools. The requirement and measure have been revised based on stakeholder comment and moved into IRO-001-2 as Requirement R6. The revisions made are shown below:

**R6.** Each Reliability Coordinator shall ~~have~~ provide its operating personnel with the authority to veto planned outages to its own analysis tools ~~including final approvals for planned maintenance~~. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]

**M6.** Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its operating personnel with the authority to veto planned outages ~~to of its own~~ analysis tools, ~~including final approvals for planned maintenance as specified in Requirement 2.~~

Organization	Question 11:	Question 11 Comments:
Independent Electricity System Operator - Ontario	No	M1: We suggest to change the word "letter" to "documented request"  If our recommendations to retain some of R5 to R9, some measures will need to be provided.
<p><b>Response:</b> The RC SDT thanks you for your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1.</p> <p>As stated in our response to your comments in Question 10, we do not intend to retain R5 through R9.</p>		
MRO NERC SDT Standards Review	No	Measure 1 should not focus on a letter as evidence. A more appropriate measure would be a data specification document and actual verification that data has been received. The letter or equivalent is only needed if data has not been supplied. Demonstration of the actual receipt the data would be

**Comments for Set of Reliability Coordination Standards (Project 2006-06)**

Organization	Question 11:	Question 11 Comments:
Subcommittee		easy. Requirement 2 is not needed and thus Measure 2 is not needed per paragraph 112 of Order 693-A. Additional measures are needed to address the proposed requirements in question 10.
<p><b>Response:</b> The RC SDT thanks you for your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1.</p> <p>The RC SDT did not agree to remove R2 in response to your comments in Question 10.</p>		
Southern Company Transmission	No	11.1 - Moving R1 and R2 to the RC Certification Procedure will eliminate measurement requirements.
<p><b>Response:</b> The RC SDT thanks you for your comments. See our response to your comments in Question 10.</p>		
Salt River Project	No	R1: The Requirement and VSLs mention that the RC will determine it's data needs. Yet the Measure for R1 does not mention this, it only mentions the RC requesting the data from it's member entities. This Measure needs to include a measure for how the RC determines it's data needs.
<p><b>Response:</b> The RC SDT appreciates your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1.</p>		
US Bureau of Reclamation	No	M2 again "analysis tools" have not been identified.
<p><b>Response:</b> The RC SDT appreciates your comments. See our response to your comments on Question 10.</p>		
FirstEnergy	No	The measures should be modified per our suggested modifications in question 10.
<p><b>Response:</b> The RC SDT thanks you for your comments. The requirements were not modified. See our response to your comments on Question 10.</p>		
Duke Energy	No	See response to Question #12 above. If the requirements are moved to another standard, the measures aren't needed here.

**Comments for Set of Reliability Coordination Standards (Project 2006-06)**

Organization	Question 11:	Question 11 Comments:
<p><b>Response:</b> The RC SDT thanks you for your comments. We believe that “#12” in this comment was a typo and that you intended it to read “Q10”. See our response to your comments on Question 10.</p>		
ISO/RTO Council Standards Review Subcommittee	No	Measure 1 should not focus on a letter as evidence. A more appropriate measure would be a data specification document and actual verification that data has been received. The letter or equivalent is only needed if data has not been supplied. Demonstration of the actual receipt the data would be easy.
<p><b>Response:</b> The RC SDT thanks you for your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1.</p>		
Buckeye Power, Inc.	Yes and No	abstain
SERC OC Standards Review Group	Yes and No	11.1 - Moving R1 and R2 to the RC Certification Procedure will eliminate measurement requirements.
<p><b>Response:</b> The RC SDT thanks you for your comments. See our response to your comments in Question 10.</p>		
Reliability Coordinator Comment Working Group	Yes	add measures for R1 & R2 see question 10
<p><b>Response:</b> The RC SDT appreciates your suggestion. See our response to Question 10.</p>		
Entergy Services, Inc	Yes	
PJM Interconnection	Yes	
AEP	Yes	

Organization	Question 11:	Question 11 Comments:
Bonneville Power Administration	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Northern California Power Agency	Yes	
American Transmission Company		Abstain.

**12. Do you agree with the Violation Severity Levels proposed in IRO-002-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

**Summary Consideration:** Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1. The RC SDT has revised R2 and M2 and moved them to IRO-001-2, as Requirement R6 and Measure M6. The VSLs have been revised to reflect the modifications made to the requirement and measure and in response to stakeholders who indicated this is a “binary” requirement.

<a href="#">R6</a>	<del>Reliability Coordinator has approval rights for planned outages of analysis tools but does not have approval rights for maintenance on analysis tools.</del>	N/A	N/A	Reliability Coordinator <a href="#">failed to provide its operating personnel with the authority to veto approval is not required for planned maintenance or</a> planned outages <a href="#">of its own analysis tools.</a>
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Organization	Question 12:	Question 12 Comments:
Independent Electricity System Operator - Ontario	No	<p>R1: The wording for Low VSL is contradictory (e.g. it determined and requested in the first part but did not request in the second part). Suggest to revise it.</p> <p>R1: We suggest to grade the VSLs according to the extent to which the percentage of data specification and/or the number of entities not requested.</p> <p>R2: The RC either has the right or it doesn't, and hence it's a binary requirement. The VSL should be developed accordingly. Further, the wording for the Severe VSL does not correspond to the requirement and measure. The condition should simply be that the Reliability Coordinator failed to demonstrate that it had the authority to veto planned outages to analysis tools, including final approvals for planned maintenance.</p>
<p><a href="#">Response:</a> The RC SDT thanks you for your comment. Please see Summary Consideration above. The first requirement was retired as part</p>		

Organization	Question 12:	Question 12 Comments:
of the IROL project. The lower VSL was removed as proposed for the second requirement.		
Southern Company Transmission	No	12.1 - Moving R1 and R2 to the RC Certification Procedure will eliminate VSL requirements.
<b>Response:</b> The RC SDT thanks you for your comment. Please see Summary Consideration above. R1 was retired – and R2 was moved into IRO-001 as Requirement R6. The VSLs for R6 are still needed.		
US Bureau of Reclamation	No	Until the tools are identified, it is premature to insert a placeholder in a mandatory standard; this also applies to the violation severity levels table.
<b>Response:</b> The RC SDT thanks you for your comment. Please see Summary Consideration above. As envisioned, the intent is to protect the analysis tools used by real time operating personnel – and not all companies have the same set of tools, so the SDT will not name specific tools in this standard. The intent is to give the real time operating personnel control over the availability of their tools so that the real time operating personnel will always know if their tools are “unavailable” due to maintenance. Names of specific tools are not needed to enforce the intent of this requirement.		
MRO NERC SDT Standards Review Subcommittee	No	For R1, the lower VSL contradicts itself. It states that RC demonstrated that it determined its data requirements and requested that data and then follows with that it didn't request that data. The second option in the Lower VSL category is not practical and a compliance auditor would not be in a position to determine this. In fact, if the administrative data is not requested, other administrative requirements for reporting would be violated. Additionally, it does not make sense that an RC would determine its data needs and then omit data for administrative reporting. Further, is it the compliance auditor's job to judge if the data the RC requests is sufficient or is it his job to see that the RC has met the requirement to define the data? The remaining VSLs imply that the RC may define only partial data requirements. This does not seem likely. Why would the RC do this? This VSL appears to add to the requirement by making it appear that the compliance auditor is to judge the completeness of the data requirement. This violates Guideline 3 of the FERC ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION. Practically, it would not be enforceable anyway. It would require the RC to admit that they did not include administrative data in their data requirements. It is doubtful this would happen because the RC likely believes they prepared a complete data requirement document.

Organization	Question 12:	Question 12 Comments:
		<p>We suggest that the VSLs should be:</p> <p>Severe: The RC did not determine it data requirements or the RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 75 to 100% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs.</p> <p>High: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 50 and less than or equal to 75% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs.</p> <p>Medium: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 25% and less than or equal to 50% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs.</p> <p>Lower: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 0% and less than or equal to 25% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs.</p> <p>R2 VSLs are not needed or paragraph 112 of Order 693-A. The Severe VSL contradicts the requirement.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. Please see Summary Consideration above. The first requirement was retired as part of the IROL project. For R2, based on your comments and the comments of others, the VSLs were modified – the lower was removed and the requirement was treated as binary with just a Severe VSL rephrased to more closely match the language in the revised requirement.</p>		
FirstEnergy	No	The VSL should be modified per our suggested modifications in question 10.
<p><b>Response:</b> The RC SDT thanks you for your comment. Please see Summary Consideration above.</p>		
Duke Energy	No	<p>R1 VSL - As a general comment, this VSL is unclear and would be difficult to audit. This VSL uses subjective terms like “material impact” and “minimal impact”. These terms are not used in the associated requirement or measure and should be removed from the VSL. This VSL uses terms like “majority, but not all”; “some, but less than a majority” which provides an opportunity for</p>



Organization	Question 12:	Question 12 Comments:
		<p>a subjective review by Compliance as to what a complete listing of data requirements should be. This term is not used in the Requirements or Measures and should be removed from the VSL. This VSL introduces a concept, data the RC needs for ?? administrative purposes, such as data reporting ??. This concept is not included in the Requirements or Measures portions of the Standard and should be removed from the VSL. This VSL should be written to simply assess whether the RC has made determination of what its data needs are and whether those needs have been communicated to the entities in the footprint.</p> <p>R2 VSL - This VSL clarifies the questions posed above regarding what the RC needs approval rights over. R2 needs to be modified to include this clarity. This VSL needs to clarify that the RC approval rights are for the RC's tools, not tools of other entities. The Severe level of this VSL needs to be re-written along the lines of: The RC does not have approval rights for planned maintenance or outages to its analysis tools.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. Please see Summary Consideration above. The first requirement was retired as part of the IROL project. For R2, based on your comments and the comments of others, the requirement, measure and VSLs were all modified – the lower was removed and the requirement was treated as binary with just a Severe VSL rephrased to more closely match the language in the revised requirement.</p>		
ISO/RTO Council Standards Review Subcommittee	No	<p>For R1, the lower VSL contradicts itself. It states that RC demonstrated that it determined its data requirements and requested that data and then follows with that it didn't request that data. The second option in the Lower VSL category is not practical and a compliance auditor would not be in a position to determine this. In fact, if the administrative data is not requested, other administrative requirements for reporting would be violated. Additionally, it does not make sense that an RC would determine its data needs and then omit data for administrative reporting. Further, is it the compliance auditor's job to judge if the data the RC requests is sufficient or is it his job to see that the RC has met the requirement to define the data? The remaining VSLs imply that the RC may define only partial data requirements. This does not seem likely. Why would the RC do this? This VSL appears to add to the requirement by making it appear that the compliance auditor is to judge the completeness of the data requirement. This violates Guideline 3 of the FERC ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION. Practically, it would not be enforceable anyway. It would require the RC to admit that they did not include administrative data in their data requirements. It is doubtful this would happen because the RC likely believes they prepared a complete data requirement document.</p>

Organization	Question 12:	Question 12 Comments:
		<p>We suggest that the VSLs should be:</p> <p>Severe: The RC did not determine it data requirements or the RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 75 to 100% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs.</p> <p>High: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 50 and less than or equal to 75% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs.</p> <p>Medium: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 25% and less than or equal to 50% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs.</p> <p>Lower: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 0% and less than or equal to 25% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs.</p> <p>R2 VSLs are not needed er paragraph 112 of Order 693-A. The Severe VSL contradicts the requirement.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. Please see Summary Consideration above. The first requirement was retired as part of the IROL project. For R2, based on your comments and the comments of others, the requirement, measure and VSLs were all modified – the lower was removed and the requirement was treated as binary with just a Severe VSL rephrased to more closely match the language in the revised requirement.</p>		
SERC OC Standards Review Group	Yes and No	12.1 - Moving R1 and R2 to the RC Certification Procedure will eliminate VSL requirements.
<p><b>Response:</b> The RC SDT thanks you for your comment. Please see Summary Consideration above. R1 was retired – and R2 was moved into IRO-001 as Requirement R6. The VSLs for R6 are still needed.</p>		

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 12:	Question 12 Comments:
Buckeye Power, Inc.	Yes and No	abstain
Manitoba Hydro	Yes	
NPCC	Yes	
CU of Springfield	Yes	
Ameren	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
AEP	Yes	
PJM Interconnection	Yes	
Bonneville Power Administration	Yes	
American Transmission Company		Abstain.

**13. Do you agree with the revisions to IRO-005-1 as shown in the posted Standard and Implementation Plan? The RC SDT is recommending retiring or moving all of the requirements and retiring this standard. If not, please explain in the comment area.**

**Summary Consideration:** Several commenters had concerns around removing the requirement to monitor frequency. Other commenters had concerns with the removal of other monitoring requirements in the standard. While the Standard Drafting Team (SDT) recognizes the concerns raised, the SDT is even more concerned with the subjectivity that any attempt to measure “Monitoring” can provide. It is the SDT’s contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in organization certification process requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in assessing and responding to situations or events that could have an adverse impact on reliability.

Organization	Question 13:	Question 13 Comments:
Independent Electricity System Operator - Ontario	No	<p>R1: We not agree with removing this requirement for the same reason given for the proposal to remove R5 to R8 from IRO-002 (see comments on 10 (ii), above).</p> <p>R8: We do not agree with completely removing this requirement, especially that part that requires an RC to monitor system frequency. While DCS and CPS are largely a BA's responsibility, the RC is the last line of defense for abnormal system performance and needs to monitor its BAs' performance including their ability to address large frequency deviations, and direct or take corrective actions as needed including requesting emergency assistance on the BAs' behalf and directing load shedding.</p> <p>R9: The second part of this requirement needs to be retained. IRO-004 covers operational planning, not current day operations. Coordinating pending generator and transmission facility outages is an essential and necessary task by the RC to ensure reliability.</p> <p>R11: The RC needs to monitor ACE, detect and identify the cause of any abnormal ACE, and direct its BAs to take necessary actions to return ACE to within a normal range.</p> <p>R13: We do not agree with removing the latter part of R13. The FAC standards cover the methodology used in calculating SOLs and IROLs. Regardless of how these limits are calculated, in practice there always exists the possibility that different entities come up with SOLs/IROLs, especially of the inter-ties, that could be different. Operating to the lowest SOLs/IROLs when more than one set</p>

Organization	Question 13:	Question 13 Comments:
		exists is a necessary requirement for reliable operation.
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>I While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure “Monitoring” can provide. It is the SDT contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in organization certification process Requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability.</p> <p>li With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in assessing and responding to situations or events that could have an adverse impact on reliability.</p> <p>lii The RC SDT proposes retiring this requirement as it is redundant with TOP-003 and IRO-004 (all requirements) for next day requirements. The RC has the authority to coordinate pending outages in real-time through IRO-001-2, R1 (proposed).</p> <p>Iv The SDT feels that there are better avenues to ensure BAs operate within established and acceptable thresholds as described in the BAL-001 and BAL-002 standards. Current standards projects are addressing revisions to the BAL set of standards.</p> <p>V The SDT believes this requirement is redundant with FAC-014. FAC-014 states the requirement for developing and sharing SOL and IROL between the RC, PA, TP and TOP in both the planning and operating time frames.</p>		
American Transmission Company	No	The accountability and monitoring addressed in this Standard is still required. The drafting team's intent was that the ability to monitor is part of the certification process. However, certification is to Standards, and if there is not a Standard which addresses this issue, then an entity cannot certify to it.
<p><b>Response:</b> The RC SDT thanks you for your comment. While the Standard Drafting Team (SDT) recognizes the concerns raised, the SDT is even more concerned with the subjectivity that any attempt to measure “Monitoring” can provide. It is the SDT's contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in organization certification process Requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability.</p>		
MRO NERC SDT standards	No	R1 includes many requirements for monitoring the system that are important, measurable and should be retained. Monitoring is too critical to operating the system to completely eliminate these

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 13:	Question 13 Comments:
Review Subcommittee		<p>requirements.</p> <p>R4, R8 and R11 are problematic as currently written. However, there have been actual instances of a large BA intentionally operating short hundreds of MWs of energy. I believe this occurred during the summer of 1999. Thus, the RC should be monitoring the BAs ACE and directing the BA to correct it if it becomes too large. It is not necessary or even useful for the RC to monitor the BA CPS performance.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. The SDT feels that there are better avenues to ensure BAs operate within established and acceptable thresholds as described in the BAL-001 and BAL-002 standards. If a BA chooses to operate off schedule then the BAL standards need to be revisited and tightened up. This is being done in the current projects addressing the BAL standards. Monitoring capability can be objectively measured and is essential to real-time operations – however real-time monitoring is a supporting activity and is only one of several processes used to support operation within defined parameters. Monitoring capability should be assessed during the entity registration certification process and should not be a requirement. Note that certification is aimed at verifying that an entity has the “capability” of operating reliably. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in assessing and responding to situations or events that could have an adverse impact on reliability.</p>		
Ameren	Yes and No	<p>While we agree that most of the requirements are redundancies that properly belong elsewhere, we are concerned that Requirement 4 and Requirement 8 are not properly represented elsewhere and should not be retired until they re-surface in another standard explicitly. We believe it is still very important for an RC to monitor their respective BAs reserves and CPS performance. Likewise in R8, while the frequency monitoring is a BA function, we think that it is important enough to also be included as an RC function explicitly.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. The SAR for this project included eliminating redundancies within the standards. In the Implementation Plan for this standard, we show the redundancy between this requirement, R4, and EOP-002-2. (please see pages 6-8 of the Implementation Plan). While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure “Monitoring” can provide. It is the SDT’s contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in organization certification process Requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability.</p>		
Buckeye Power,	Yes and No	Abstain

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 13:	Question 13 Comments:
Inc.		
CU Springfield	Yes	CU supports the retirement of this standard.
<b>Response:</b> The RC SDT thanks you for your comment.		
Southern Company Transmission	Yes	13.1 - We agree with retiring this standard.
<b>Response:</b> The RC SDT thanks you for your comment.		
SERC OC Standards Review Group	Yes	13.1 - We agree with retiring this standard
<b>Response:</b> The RC SDT thanks you for your comment.		
ISO New England Inc.	Yes	
Entergy Services, Inc	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
US Army Corps of	Yes	

Comments for Set of Reliability Coordination Standards (Project 2006-06)

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Organization	Question 13:	Question 13 Comments:
Engineers, Northwestern Division		
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
FirstEnergy	Yes	
Bonneville Power Administration	Yes	
Duke Energy	Yes	
AEP	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	



**14. Do you agree with the revisions to the Requirements in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

**Summary Consideration:** Several commenters expressed concerns with the term “impacted” and suggested replacing this with “other”. The RC SDT believes “impacted” directly relates to the purpose statement. The original wording of “one or more other” is vague and difficult to measure. Using the word “other” presents a similar situation. The RC SDT chose to use the word “impacted” to tighten the requirement and remove ambiguity. The RC SDT does not intend for non-contiguous reliability coordinators to have “RC agreements”, but to have Procedures, Processes, or Plans with impacted reliability coordinators. Other commenters suggested striking the term “as a minimum” in R1 and the RC SDT agrees and has modified R1 accordingly. Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. The requirement that was transferred from IRO-016 has been translated into 4 requirements in IRO-014:

R5. ~~When an expected or actual reliability issue is detected, the~~ Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. ~~confirm the existence of the issue with the impacted Reliability Coordinators.~~

R6. ~~In the event that the issue cannot be confirmed, e~~ Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators.

R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists.

~~R6~~R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when ~~When an expected or actual reliability issue exists and~~ the impacted Reliability Coordinators cannot agree on a mitigation plan, ~~all impacted Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue.~~

Organization	Question 14:	Question 14 Comments:
Independent Electricity System	No	We suggest to replace the word "impacted" with "other" since there is a preconception that the concerned RC makes an assessment of which other RCs are impacted by the coordinated actions,

Organization	Question 14:	Question 14 Comments:
Operator - Ontario		which may not be the perspective of the other RCs who may in fact be impacted by any coordinated actions among other RCs.
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT believes “impacted” directly relates to the purpose statement. The original wording of “one or more other” is vague and difficult to measure. Using the word “other” presents a similar situation. The RCSDT chose to use the word “impacted” to tighten the requirement and remove ambiguity. Additionally, R1.1 reconciles the preconception of the Reliability Coordinator making an assessment:</p> <p>R1.1 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.</p>		
MRO NERC SDT Standards Review Subcommittee	No	<p>Please strike "as a minimum" in R1. By definition, the requirement defines the minimum. Please strike R1.6. RCs already have the authority to act per paragraph 112 of Order 693-A.</p> <p>Since R2 requires the RCs to agree, is the "mutually agreed to" clause in R1.1 necessary?</p> <p>Please strike requirements R4 and R4.1. It is duplicative to R1.1. Conference calls are a form of communication and should be address per R1.1.</p> <p>R5 is confusing. If a reliability issue isn't confirmed, doesn't this mean there is no reliability issue? Isn't this the point of confirming? Additionally, we suggest using validate instead of confirm.</p> <p>R6 appears to be a rewrite of requirements R1, R2 and their sub-requirements in IRO-016. We agree that those requirements do need to be written more succinctly or removed altogether. However, R6 does not accomplish the goal and only confuses that matter further. The reason the RCs may not be able to agree on a mitigation plan is that RC with the reliability issue may be requesting mitigations that the other RCs believe may cause them reliability issues. This requirement appears to suggest that the solution to a disagreement on the mitigation plan is cut and dried. Generally, the reason the disagreement arises is due to one RC not fully understanding the impact of their actions on another RC. The bottom line is that the RCs may have disagreements and there is no way to require a solution in these types of situations. Please revise R6 to require using the mitigation plan developed by the Reliability Coordinator who has the reliability issue provided that the mitigation plan does not cause a reliability issue in the other region.</p> <p>As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The</p>

Organization	Question 14:	Question 14 Comments:
		<p>drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>R1: The RC SDT agrees with striking “as a minimum” and the requirement is modified accordingly. The RC SDT believes that the term “collectively” addresses the interpretation of R1 (your last comment).</p> <p>R1.6: The RC SDT disagrees with the MRO interpretation of 693-A and believes R1.6 reinforces the Commission’s determination in paragraph 112 of 693-A which clarifies the reliability coordinator’s authority stating “...authority to issue directives arises out of the Commission’s approval of Reliability Standards that mandate compliance with such directives.”</p> <p>R1.1: R1.1 provides the conditions under which the RC’s will communicate or notify each other. R2 deals with actions that are to be taken beyond notifications.</p> <p>R4 and R4.1: The RC SDT disagrees with the duplicity. R1.1 is a sub-requirement of R1 which requires the reliability coordinator “to have” procedures, processes, or plans, and R4 requires “participation.”</p> <p>R5 &amp; R6: Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements:</p> <p>R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p>		

Organization	Question 14:	Question 14 Comments:
Southern Company Transmission	No	<p>14.1 - R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC?</p> <p>14.2 - We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows: R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken.</p> <p>14.3 - We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly.</p> <p>14.4 - R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous" or a similar term.</p> <p>14.5 - We suggest rewriting R5 to read: In the event that a reliability issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists.</p> <p>14.6 - At Requirement R1, the use of the phrase "as a minimum" seems to add some flexibility for development of procedures, processes and plans. A negative consequence is that it introduces more ambiguity. The recommendation is to strike the phrase.</p> <p>14.7 - At Requirement R1.6, consider the following: "Authority to act to prevent and mitigate instances 'that have the potential to cause' Adverse Reliability Impacts to other Reliability Coordinator Areas."</p>
<p><b>Response:</b> The RC SDT thanks you for your comments.</p> <p>14.1: The RC SDT believes "impacted" directly relates to the purpose statement. The original wording of "one or more other" is vague and difficult to measure. Using the word "other" presents a similar situation. The RCSDT chose to use the word "impacted" to tighten the requirement and remove ambiguity. The RC SDT does not intend for non-contiguous reliability coordinators to have "RC agreements", but to have Procedures, Processes, or Plans with impacted reliability coordinators.</p> <p>14.2: The RC SDT respectfully disagrees with your comment. R6 requires implementation ("shall implement") and R1 is a "shall have" requirement; keeping these separate provides clarity of related measures. The Dispute Resolution process is more administrative in nature regarding compliance, certification, audit processes, or contracts.</p>		

Organization	Question 14:	Question 14 Comments:
		<p>14.3: The RC SDT deleted 4.1 modified R4 to: “The RC shall participate in agreed upon conference calls at least weekly and other communication forums with impacted Reliability Coordinators.”</p> <p>14.4: The RC SDT chose the word “impacted” after much discussion. Impacted has the implication that the RC is immediately impacted or the RC may be impacted by a future situation. We feel that the requirement for weekly calls addresses your concern.</p> <p>14.5: R5 &amp; R6: Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements:</p> <p>R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>14.6: The RC SDT agrees with striking “as a minimum” and the requirement is modified accordingly.</p> <p>14.7: The RC SDT believes that if a reliability coordinator acts to prevent or mitigate instances the “potential to cause” already exists.</p>
ISO New England Inc.	Yes and No	As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance. Use of the term collectively may resolve this dilemma.
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT agrees that the term “collectively” addresses your interpretation and it is already included in R1.</p>		

Organization	Question 14:	Question 14 Comments:
FirstEnergy	No	<p>R1 - Should be revised as follows to improve readability and clarity:</p> <p>R1.3 - Add "Exchanging" before "Planned"</p> <p>R1.4 - Add "Control of voltage" at the beginning of the requirement and delete "for voltage control" at the end of the requirement.</p> <p>Add a new R1.7 as follows: "A process for resolution of the disagreement covered by R6 of this standard."</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>R1.3: The RC SDT believes adding the term "Exchanging" before "Planned" is redundant with "... exchange of information" stated in R1.</p> <p>R1.4: The RC SDT modified R1.4 to read as "Control of voltage including the coordination of reactive resources."</p> <p>R1.7: R6: To address the process for resolution of disagreements, the RC SDT proposes the 4 requirements:</p> <p>R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p>		
Duke Energy	No	<p>R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC? We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows:</p>

Organization	Question 14:	Question 14 Comments:
		<p>R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken. We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly.</p> <p>R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous". We suggest rewriting R5 to read: In the event that an operating issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>R1 and R2: The RC SDT believes "impacted" directly relates to the purpose statement. The original wording of "one or more other" is vague and difficult to measure. Using the word "other" presents a similar situation. The RC SDT chose to use the word "impacted" to tighten the requirement and remove ambiguity. The RC SDT does not intend for non-contiguous reliability coordinators to have "RC agreements", but to have Procedures, Processes, or Plans with impacted reliability coordinators.</p> <p>To address your comments on the process for resolution of disagreements and R5, the RC SDT proposes the 4 requirements:</p> <p>R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R4: The RC SDT deleted 4.1 modified R4 to: "The RC shall participate in agreed upon conference calls, at least weekly, and other communication forums with impacted Reliability Coordinators." The RC SDT chose the word "impacted" after much discussion. Impacted has the implication that the RC is immediately impacted or the RC may be impacted by a future situation. We feel that the requirement for weekly</p>		

Organization	Question 14:	Question 14 Comments:
calls addresses your concern		
ISO/RTO Council Standards Review Subcommittee	No	<p>Please strike "as a minimum" in R1. By definition, the requirement defines the minimum. Please strike R1.6. RCs already have the authority to act per paragraph 112 of Order 693-A. Since R2 requires the RCs to agree, is the "mutually agreed to" clause in R1.1 necessary? Please strike requirements R4 and R4.1. It is duplicative to R1.1. Conference calls are a form of communication and should be address per R1.1.</p> <p>R5 is confusing. If a reliability issue isn't confirmed, doesn't this mean there is no reliability issue? Isn't this the point of confirming? Additionally, we suggest using validate instead of confirm. As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance. Use of the term collectively may resolve this dilemma.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>R1: The RC SDT agrees with striking "as a minimum" and the requirement is modified accordingly. The RC SDT believes that the term "collectively" addresses your interpretation of R1.</p> <p>R1.6: The RC SDT disagrees with your interpretation of 693-A, and believes R1.6 reinforces the Commission's determination in paragraph 112 of 693-A which clarifies the reliability coordinator's authority stating "...authority to issue directives arises out of the Commission's approval of Reliability Standards that mandate compliance with such directives."</p> <p>R1.1: The RC SDT believes "mutually agreed to" reinforces R2.</p> <p>R4 and R4.1: The RC SDT disagrees with the duplicity. R1.1 is a sub-requirement of R1 which requires the reliability coordinator "to have" procedures, processes, or plans, and R4 requires "participation."</p> <p>R5: The RC SDT proposes the 4 requirements for clarity:</p> <p>R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day</p>		



Organization	Question 14:	Question 14 Comments:
		<p>Operations and Real-time Operations]</p> <p>R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p>
<p>SERC OC Standards Review Group</p>	<p>Yes and No</p>	<p>14.1 - R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC?</p> <p>14.2 - We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows: R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken.</p> <p>14.3 - We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly.</p> <p>14.4 - R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous".</p> <p>14.5 - We suggest rewriting R5 to read: In the event that an operating issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists.</p>
		<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>14.1: The RC SDT believes "impacted" directly relates to the purpose statement. The original wording of "one or more other" is vague and difficult to measure. Using the word "other" presents a similar situation. The RCSDT chose to use the word "impacted" to tighten the requirement and remove ambiguity. The RC SDT does not intend for non-contiguous reliability coordinators to have "RC agreements", but to have Procedures, Processes, or Plans with impacted reliability coordinators.</p> <p>14.2: To address your comments on the process for resolution of disagreements and R5, the RC SDT proposes the 4 requirements:</p> <p>R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation</p>

Organization	Question 14:	Question 14 Comments:
<p>Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>14.3: The RC SDT deleted 4.1 modified R4 to: "The RC shall participate in agreed upon conference calls at least weekly and other communication forums with impacted Reliability Coordinators."</p> <p>14.4: The RC SDT chose the word "impacted" after much discussion. Impacted has the implication that the RC is immediately impacted or the RC may be impacted by a future situation. We feel that the requirement for weekly calls addresses your concern.</p> <p>14.5: R5 was modified as above.</p>		
Buckeye Power, Inc.	Yes and No	abstain
Entergy Services, Inc	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	

Organization	Question 14:	Question 14 Comments:
Bonneville Power Administration	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	
CU of Springfield	Yes	
Ameren	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
AEP	Yes	
American Transmission Company		Abstain

15. Do you agree with the revisions to the Measures in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

**Summary Consideration:** The RC SDT received comments to revise M1 to remove “System operators” as it added to the requirement and to remove “for real-time use”. The RC SDT agrees and has modified the measure as shown below:

M1. The Reliability Coordinator ~~’s System Operators~~ shall have available ~~for Real-time use,~~ the latest approved [documented](#) version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators. [This documentation may include, but is not limited to, dated, current in force documentation with the specified elements.](#)

~~M1.1 These Operating Procedures, Processes, or Plans shall address:~~

- ~~–M1.1.1— Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.~~
- ~~–M1.1.2— Energy and capacity shortages.~~
- ~~–M1.1.3— Planned or unplanned outage information.~~
- ~~–M1.1.4— Voltage control, including the coordination of reactive resources for voltage control.~~
- ~~–M1.1.5— Coordination of information exchange to support reliability assessments.~~
- ~~–M1.1.6— Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.~~

~~Most o~~ [Other The](#) measures were ~~also~~ revised to conform to changes in the requirements [and to provide samples of acceptable evidence.](#)

Organization	Question 15:	Question 15 Comments:
Independent Electricity System Operator -	No	Measure 1 actually contains a number of subrequirements that should be stipulated in R1, not M1. If indeed these are required, they should be stipulated in the Requirement section, not the Measures Section.

Organization	Question 15:	Question 15 Comments:
Ontario		
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT modified M1 deleting “System Operators” and the submeasures were removed and included only in the requirement.</p>		
ISO/RTO Council Standards Review Subcommittee	No	<p>Measure 1 appears to add to the requirement. Requirement 1 does not mention anything about System Operators yet the measurement does. The measurement should just be to verify that the RC has have Operating Processes, Procedures, and Plans. The sub-measurements are not measurements at all. There should be the single measurement to verify the Operating Processes, Procedures, and Plans have been developed and address the sub-requirements. This really points out the problem with making the criteria that must be considered in the Operating Processes, Procedures, and Plans sub-requirements in the first place. They aren't requirements of any sort. They represent criteria. The drafting team should consider making them a bulleted list without the Rs, then the drafting team won't feel compelled to write sub-measures that don't measure anything.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. . The RC SDT modified M1 deleting “System Operators” and the submeasures were removed and included only in the requirement. As the list includes topics for every RC is required to address, these are mandatory and should be numbered rather than bulleted.</p>		
MRO NERC SDTandards Review Subcommittee	No	<p>Measure 1 appears to add to the requirement. Requirement 1 does not mention anything about System Operators yet the measurement does. The measurement should just be to verify that the RC has have Operating Processes, Procedures, and Plans. The sub-measurements are not measurements at all. There should be the single measurement to verify the Operating Processes, Procedures, and Plans have been developed and address the sub-requirements. This really points out the problem with making the criteria that must be considered in the Operating Processes, Procedures, and Plans sub-requirements in the first place. They aren't requirements of any sort. They represent criteria. The drafting team should consider making them a bulleted list without the Rs, then the drafting team won't feel compelled to write sub-measures that don't measure anything. We do not agree with M6 because we don't agree with R6.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT modified M1 deleting “System Operators” and the submeasures were removed and included only in the requirement.</p>		
<p>R6: The RC SDT disagrees with your assertion that “RCs may have disagreements and there is no way to require a solution in these types of</p>		

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 15:	Question 15 Comments:
situations". RC's need to coordinate solutions and the revised wording of the requirements R5-R8 will require that.		
Southern Company Transmission	No	15.1 - In M1, delete "for Real-time use".15.2 - Modify the measures to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT modified M1 and deleted "for Real-time use." The measures were revised based on revisions to the requirements (see response to Q14).</p>		
FirstEnergy	No	The measures should be modified per our suggested modifications in question 14.
<p><b>Response:</b> The RC SDT thanks you for your comment. The measures were revised based on revisions to the requirements (see response to Q14).</p>		
Duke Energy	No	See comment #14 above. Also, Measure M5 is inconsistent with Requirement R5. It should mirror the requirement. Also, need to add the requirement number at the end of each Measure.
<p><b>Response:</b> The RC SDT thanks you for your comment. See response to question 14. M5 was modified to reflect the entirety of R5 and new R6/M6, R7/M7 and R8/M8 were written for clarity and completeness.-</p>		
SERC OC Standards Review Group	Yes and No	15.1 - In M1, delete "System Operator" and "for real-time use".15.2 - Modify the measures to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT modified M1 and deleted both, "System Operators" and "for Real-time use." The measures were revised based on revisions to the requirements (see response to Q14).</p>		
Buckeye Power, Inc.	Yes and No	Abstain
Manitoba Hydro	Yes	

Organization	Question 15:	Question 15 Comments:
NPCC	Yes	
Ameren	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
CU of Springfield	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
Bonneville Power Administration	Yes	

Organization	Question 15:	Question 15 Comments:
AEP	Yes	
American Transmission Company		Abstain



**16. Do you agree with the Violation Severity Levels proposed in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

**Summary Consideration:** Several commenters suggested that the High and Severe VSLs for R2 contradicted the requirement. The RC SDT agreed and removed the "nots" from the VSLs to correct this error.

The VSL for R4 was originally proposed as a binary requirement with only a Lower VSL – since that time, a determination was made that noncompliance with any binary requirement must be classified a Severe VSL – thus the VSL for R4 was changed from Lower to Severe.

Several commenters had suggested revisions for the VSLs for R6. This requirement was imported from IRO-016 and several commenters suggested expanding the set of requirements regarding the Implementation Plan. The RC SDT expanded the requirements to 4 separate requirements and developed VSLs for these requirements (R5-R8). This made some of the comments on the VSLs moot.

Organization	Question 16:	Question 16 Comments:
Independent Electricity System Operator - Ontario	No	<p>R2: the High and Severe VSLs contradict with the requirement. We believe all of the "nots" should be removed.</p> <p>R6: The Low VSL should be a High since not agreeing to a plan but implementing one that has not been agreed to is a high violation of the requirement.</p> <p>The VSLs for R1 may need to be revised if our comments on M1 are adopted.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>We have revised the VSL based on your comment.</p> <p>R6 – The requirements were revised and additional requirements were added for clarity. The VSLs were written based on the revised requirements.</p> <p>The VSL for R1 was unchanged as R1 remained unchanged.</p>		
MRO NERC SDTandards Review	No	For R2, the High and Severe VSLs contradict the requirement. We believe all of the "nots" should be removed. We don't agree with the VSLs in R4 since we believe R4 should be struck.

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 16:	Question 16 Comments:
Subcommittee		The Lower VSL for R6 should not even be a violation unless the impact was negative. If the RC implemented a different mitigation plan and resolved the issue, then the RC was likely correct to disagree.
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>We have revised the VSL for R2 per your suggestion.</p> <p>R4 – R4 remains in the standard</p> <p>R6 - The requirements were revised and additional requirements were added for clarity. The VSLs were written based on the revised requirements.</p>		
Southern Company Transmission	No	<p>16.1 - In R2, severe should be "... and no action was taken by the RC".</p> <p>16.2 - In R5, severe should also include "... or that the RC failed to operate as though the problem existed."</p> <p>16.3 - Modify the VSLs to be consistent with changes requested in R1, R2, R4, R4.1 and R5.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>16.1 The requirement is to have agreed to plans and to distribute the plans. Other requirements address the actions to be taken.</p> <p>16.2 The requirements were revised and additional requirements were added for clarity. The VSLs were written based on the revised requirements.</p> <p>16.3 The VSLs were revised based on stakeholder comments and revised requirements.</p>		
FirstEnergy	No	The VSL should be modified per our suggested modifications in question 14.
<p><b>Response:</b> The RC SDT thanks you for your comment. The VSLs were revised to reflect revisions to the requirements.</p>		
Duke Energy	No	See comments #14 and #15 above - VSLs need to be revised to correspond to the revised Requirements and Measures.
<p><b>Response:</b> The RC SDT thanks you for your comment. Please see responses to comment 14 and 15 above. VSLs were revised to reflect</p>		

Organization	Question 16:	Question 16 Comments:
revised requirements.		
ISO/RTO Council Standards Review Subcommittee	No	<p>For R2, the High and Severe VSLs contradict the requirement. We believe all of the "nots" should be removed.</p> <p>We don't agree with the VSLs in R4 since we believe R4 should be struck.</p> <p>The Lower VSL for R6 should not even be a violation unless the impact was negative. If the RC implemented a different mitigation plan and resolved the issue, then the RC was likely correct to disagree.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>The VSL for R2 was revised per your suggestion.</p> <p>R4 – R4 remains in the standard. The VSLs were revised to reflect that noncompliance with a binary requirement is Severe.</p> <p>R6 – The requirements were revised and additional requirements were added for clarity. The VSLs were written based on the revised requirements.</p>		
SERC OC Standards Review Group	Yes and No	<p>16.1 - In R2, severe should be "no action was taken by the RC".</p> <p>16.2 - In R5, severe should also include that the RC failed to operate as though the problem existed.</p> <p>16.3 - Modify the VSLs to be consistent with changes requested in R1, R2, R4, R4.1 and R5.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>16.1 - The requirement is to have agreed to plans and to distribute the plans. Other requirements address the actions to be taken.</p> <p>16.2 - The requirements were revised and additional requirements were added for clarity. The VSLs were written based on the revised requirements.</p> <p>16.3 - The VSLs were revised based on stakeholder comments and revised requirements.</p>		
Buckeye Power, Inc.	Yes and No	abstain

Comments for Set of Reliability Coordination Standards (Project 2006-06)

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Organization	Question 16:	Question 16 Comments:
US Bureau of Reclamation	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	
PJM Interconnection	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
CU of Springfield	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	

Organization	Question 16:	Question 16 Comments:
American Transmission Company		Abstain

17. Do you agree with the RC SDT recommendation to retire IRO-015-1 and move the requirements into IRO-014-2? If not, please explain in the comment area.

**Summary Consideration:** Stakeholders agree with the proposed revisions.

Organization	Question 17:	Question 17 Comments:
Buckeye Power, Inc.	Yes and No	abstain
SERC OC Standards Review Group	Yes	17.1 - We agree with the recommendation to retire IRO-015-2
<b>Response:</b> The RC SDT thanks you for your comment.		
Southern Company Transmission	Yes	17.1 - We agree with the recommendation to retire IRO-015-2.
<b>Response:</b> The RC SDT thanks you for your comment.		
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	

Organization	Question 17:	Question 17 Comments:
CU of Springfield	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
MRO NERC SDStandards Review Subcommittee	Yes	
ISO New England Inc.	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
FirstEnergy	Yes	
Bonneville Power	Yes	

Comments for Set of Reliability Coordination Standards (Project 2006-06)

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Organization	Question 17:	Question 17 Comments:
Administration		
Duke Energy	Yes	
AEP	Yes	
ISO/RTO Council Standards Review Subcommittee	Yes	
American Transmission Company		Abstain



**18. Do you agree with the revisions to IRO-016-1 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

**Summary Consideration:** Stakeholders agree with the concept of moving the requirements of IRO-016-1 into IRO-014-2. Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements formed to cover the intent of the requirement transferred from IRO-016:

R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

Organization	Question 18:	Question 18 Comments:
Duke Energy	No	See comment #14 above regarding re-write needed for Requirement R6 of IRO-014-2.
<b>Response:</b> The RC SDT thanks you for your comment. Please see response in #14 above.		
MRO NERC SDTandards Review Subcommittee	Yes	We do agree with moving the requirement. However, the drafting team needs to revisit the wording of the requirement. The new wording is much more confusing. Until we reviewed IRO-016-2, it was not clear at all that R6 in IRO-014 was attempting to mimic R1 and its sub-requirements in IRO-016-2.

Organization	Question 18:	Question 18 Comments:
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements:</p> <p>R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan,. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p>		
Southern Company Transmission	Yes	18.1 - We agree with the recommendation to retire IRO-016-2.
<p><b>Response:</b> The RC SDT thanks you for your comment.</p>		
Buckeye Power, Inc.	Yes and No	Abstain
SERC OC Standards Review Group	Yes	18.1 - We agree with the recommendation to retire IRO-016-2
<p><b>Response:</b> The RC SDT thanks you for your comment.</p>		
ISO/RTO Council Standards Review	Yes	We do agree with moving the requirement. However, the drafting team needs to revisit the wording of the requirement. The new wording is much more confusing. Until we reviewed IRO-016-2, it was not clear at all that R6 in IRO-014 was attempting to mimic R1 and its sub-requirements in IRO-016-

Organization	Question 18:	Question 18 Comments:
Subcommittee		2.
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements:</p> <p>R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan,. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p>		
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	
CU of Springfield	Yes	
Reliability Coordinator Comment Working	Yes	

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 18:	Question 18 Comments:
Group		
Northern California Power Agency	Yes	
ISO New England Inc.	Yes	
Entergy Services, Inc	Yes	
MEAG Power		
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
FirstEnergy	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	
American Transmission Company		Abstain

**19. If you have any other comments, not expressed in questions above, on this set of revisions, please provide your comments here.**

**Summary Consideration:** The RC SDT received comments that COM-001-2, R5 should be retired upon regulatory approval. The RC SDT will propose the earliest possible retirement date – the first day of the first calendar quarter following applicable regulatory approval, or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following BOT adoption.

Organization	Question 19:
Southern Company Transmission	19.1 - We suggest the effective date for the retirement of R5 (NERC Net Security Policy) in the COM-001-2 Standard should be effective immediately upon regulatory approval. As written, the Policy is unenforceable, contains no measures and is not germane to BES Reliability.
<b>Response:</b> The RC SDT thanks you for your comment. We concur and will request an effective date as you suggest.	
SERC OC Standards Review Group	19.1 - We suggest the effective date for the retirement of R5 (NERC Net Security Policy) in the COM-001-2 Standard should be effective immediately upon regulatory approval. As written, the Policy is unenforceable, contains no measures and is not germane to BES Reliability
<b>Response:</b> The RC SDT thanks you for your comment. We concur and will request an effective date as you suggest.	
Entergy Services, Inc	Overall, we think the coordinated set of standards being developed by the RTOSDT and IROLSDT are good for reliability, crisp, and tightens up the reliability concepts.
<b>Response:</b> The RC SDT thanks you for your comment.	
MEAG Power	My other concerns are addressed in the comments of the SERC OC Standards Review Group.
<b>Response:</b> The RC SDT thanks you for your comment.	
Salt River Project	I appreciate the new comment form in Word version. his allows me to comment on each requirement specifically addressing the requirement, measure or the VSL's

Organization	Question 19:
<p><b>Response:</b> The RC SDT thanks you for your comment.</p>	
<p>#2 Standards Interface Subcommittee/Compliance Elements Development Resource Pool</p>	<p>Standard – COM-001-2 Telecommunications:</p> <p>Requirement 1: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall operationally test, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail.</p> <p>Proposed Measure: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall provide evidence that it operationally tested, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail.</p> <p>SDT Proposed Lower VSL The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last quarter.</p> <p>CEDRP Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in one of the previous four quarters.</p> <p>SDT Proposed Moderate VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 2 quarters.</p> <p>CEDRP Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in two of the previous four quarters.</p> <p>SDT Proposed High VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 3 quarters.</p> <p>CEDRP Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in three of the previous four quarters.</p>

Organization	Question 19:
	<p>SDT Proposed Severe VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 4 quarters.</p> <p>CEDRP Proposed Severe VSL: The Responsible Entity failed to operationally test alternative telecommunications every quarter on more than three separate occasions (i.e. more than any three different quarters).</p> <p>=====</p> <p>Standard – COM-001-2 R2 Telecommunications Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities of the failure of its normal telecommunications facilities, and shall verify that alternate means of telecommunications are functional.</p> <p>Proposed Measure: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide evidence that it notified impacted entities of failure of their normal telecommunications facilities, and verified the alternate means of telecommunications were functional.</p> <p>Discussion - This requirement needs to be re-written to be more clearly define who the entities are that are “impacted.” The key attributes appear to be notification of ALL (communication) impacted entities (possible omission if some, but not all are not notified). The requirement does not give any guidance on the “verification” side – this is a problem, one entity can interpret that to mean “we looked and it was working”, another may be to verify with all impacted entities that alternate communication is working. We suggest this requirement needs a little more clarification.</p> <p><b>Response:</b> The RC SDT believes that entities should contact others when their normal communication capability is lost. For example, the normal phone line could be cut and someone trying to contact that entity may only get a busy signal and have no idea that alternate communications is necessary.</p> <p>We have revised the requirement to place time bounds on outages that require notification. The requirement was rewritten to:</p> <p>R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p> <p>The CEDRP does not feel it can write a valid VSL for this requirement as currently worded.</p> <p>SDT Proposed Lower VSL:</p>

Organization	Question 19:
	<p>The Reliability Coordinator, Transmission Operator or Balancing Authority notified all impacted entities of the failure of their normal telecommunications facilities, but failed to verify the alternate means of telecommunications are functional.                      CEDRP Proposed Lower VSL:                      See Discussion</p> <p>SDT Proposed Moderate VSL:                      The Reliability Coordinator, Transmission Operator or Balancing Authority notified some, but not all, impacted entities of the failure of their normal telecommunications facilities, and failed to verify the alternate means of telecommunications are functional.                      CEDRP Proposed Moderate VSL:                      See Discussion:</p> <p>SDT Proposed High VSL:                      N/A                      CEDRP Proposed High VSL:                      See Discussion                      SDT Proposed Severe VSL:                      The Reliability Coordinator, Transmission Operator or Balancing Authority failed to notify any impacted entities of the failure of their normal telecommunications facilities, and failed verify the alternate means of telecommunications are functional.                      CEDRP Proposed Severe VSL:                      See Discussion</p> <hr/> <p>Standard – COM-001-2 R3 Telecommunications                      Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.                      Proposed Measure: The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used</p>



Organization	Question 19:
	<p>to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES.</p> <p>NOTE: OK with this as is because the requirement and VSLs have been re-written, will be removed from this standard shortly, and included in the new COM-003-1 standard.</p> <p><b>Response:</b> Thank you for your comment.</p> <p>SDT Proposed Severe VSL: The Responsible Entity failed to provide evidence of concurrence to use a language other than English for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System.</p> <p>CEDRP Proposed Severe VSL: The Responsible Entity failed to provide evidence of the concurrence to use a language other than English for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System.</p> <p>=====</p> <p>Standard – COM-001-2 R4 Telecommunications Each Distribution Provider and Generation Operator shall have telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information.</p> <p>Proposed Measure: Each Distribution Provider and Generation Operator has telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information.</p> <p>“has” telecomm with TOP and BA Discussion – Telecommunication Facilities is ambiguous and is not included in the NERC glossary of terms – the CEDRP recommend deleting the word “facilities” from the requirement and measure and leaving it just as “telecommunications” with its TOP and BA .</p> <p><b>Response:</b> The term “telecommunications facilities” was replaced with “interpersonal communications</p>

Organization	Question 19:
	<p>capabilities” to clarify the intent of the requirement.</p> <p>SDT Proposed High VSL: N/A</p> <p>CEDRP Proposed High VSL: The Responsible Entity failed to establish telecommunications with either their Balancing Authority OR Transmission Operator for the exchange of Interconnection and operating information.</p> <p>SDT Proposed Severe VSL: The Distribution Provider or Generation Operator failed to have telecommunications facilities with its Transmission Operator and Balancing Authority</p> <p>CEDRP Proposed Severe VSL: The Responsible Entity failed to establish telecommunications with their Balancing Authority AND Transmission Operator for the exchange of Interconnection and operating information.</p> <p>5. Is the VSL language clear &amp; measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes, considering the wording of the requirement as written. More specifically, the word “have” as used in the requirement is a bit vague. A better choice could have been, “established and maintains.”</p> <p><b>Response:</b> Thank you for your comment.</p> <p>=====</p> <p>Standard: COM-002-3 Communications and Coordination</p>
	<p><b>Response:</b> The RC SDT thanks you for your comments. Please see responses embedded above.</p> <p>In the future, please do not submit comments in this format. It is extremely burdensome on the drafting team in trying to respond to the comments. Please answer each question individually. If you encounter difficulty, please contact NERC for assistance.</p>
Standards Interface Subcommittee/Compliance Elements Drafting	<p>Standard – IRO-001 R1</p> <p>The Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. [Violation Risk</p>

Organization	Question 19:
	<p>Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]  Proposed Measure  Each Reliability Coordinator shall have evidence that it acted, or issued directives, to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordinator Area Discussion –</p> <ol style="list-style-type: none"> <li>1. As currently worded it can be interpreted that any time an event occurs the RC would be in violation of the standard simply because they had failed “to prevent” an event.</li> <li>2. This requirement does not have a “timing” element included, although it implies timing based on the “duration of the event”. Including that “duration of the event” is problematic – it appears to imply that human intervention may provide a more timely response than relay operation, we would suggest more clarification about what the “duration” element of the requirement is intended to address (e.g. generation re-dispatch?).</li> <li>3. There also appears to be a “quality” element included based on the mitigation of magnitude of the event. As a result we believe that timeliness, effectiveness and communication should be the basis of the VSLs.</li> <li>4. The VSLs as differentiate between directing actions and acting. Practically, there is no difference. The RC is still giving the directive. It is just a matter of who is carrying it out. This is not a valid basis for differentiating between VSLs. We suggest the VSLs be defined based on actual system impact (i.e. Was the RC acting or directing actions to prevent or to mitigate?) and to either modify the requirement to remove timing aspects or to add the timing aspects to the VSLs.</li> </ol> <p><b>Response:</b></p> <ol style="list-style-type: none"> <li>1. The RC SDT does not agree that there would be a violation any time an event occurred. The RC should always be looking ahead. Even though events can occur that were not foreseeable or due to catastrophic failures of system equipment.</li> <li>2. The intent of the phrase of “duration of the event” is to emphasize that there are actions that can be taken to shorten the duration of an event. These include ordering redispatch and system reconfiguration (including load shedding) to mitigate an Adverse Reliability Impact, thus shortening the event and its impact on the interconnection.</li> <li>3. The VSL has been re-written to include only a Severe VSL.</li> <li>4. We agree and have revised the VSL to only have a Severe VSL.</li> </ol> <p>SDT Proposed High VSL IRO-001 R1</p>

Organization	Question 19:
	<p>The Reliability Coordinator failed to act to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts.                      CEDRP Proposed VSL                      The Reliability Coordinator failed to act to prevent the magnitude or duration of Adverse Reliability Impacts.</p> <p>SDT Proposed Severe VSL IRO-001 R1                      The Reliability Coordinator failed to act and direct actions to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts                      CEDRP Proposed VSL                      The Reliability Coordinator failed to act and direct actions to mitigate the magnitude or duration of Adverse Reliability Impacts</p> <p>CAE Resource Pool Comments                      The Enforcement Authority Statement, “NERC shall be responsible for compliance monitoring of the Regional Entity.” Is not clear, if it is intended to encompass Regional Entities that perform RC functions is should be clearly stated, if not it should not be included in the Enforcement Authority section.</p> <p>=====</p> <p>Standard – IRO-001 R2                      Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers, and Purchasing-Selling Entities shall act without intentional delay to comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]                      Proposed Measure                      Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without delay to comply with the Reliability Coordinator’s directives <b>unless such actions would violate safety, equipment, or regulatory or statutory requirements.</b>                      Discussion - The team would suggest “intentional delay” be eliminated from the requirement – e.g. “shall act to...”). To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful disregard of the requirement.</p>

Organization	Question 19:
	<p>The measure and VSLs do not consider the exceptions for not following the RC objective. The drafting team should consider combining requirements R2 and R3. Thus, one VSL would become failure to notify the RC of the inability to comply. The drafting team could consider applying the numerical category of VSLs for some directives such as an order to redispach. Obviously, it would not work well if the directive was to reconfigure the system.</p> <p><b>Response:</b></p> <p>The term “intentional delay” was eliminated from the standard as you suggested. The VSLs were revised to reflect the requirement.</p> <p>SDT Proposed Moderate <del>Moderate</del> High VSL  The responsible entity followed the Reliability Coordinators directive <b>unless such actions would violate safety, equipment, or regulatory or statutory requirements</b> with a delay. <del>not caused by equipment problems.</del></p> <p>CEDRP Proposed VSL IRO-001 R2  The team does not agree that this is a valid VSL.</p> <p>SDT Proposed High VSL  <del>The responsible entity followed the majority of the Reliability Coordinators directive but did not fully follow the directive because it would violate safety, equipment, statutory or regulatory requirements.</del></p> <p>CEDRP Proposed VSL IRO-001 R2  The team does not agree that this is a valid VSL. The word majority implies some ability to numerically measure the response to the directive. Thus, the drafting team should consider applying the numerical category of the VSL guidelines.</p> <p>SDT Proposed Severe VSL  <del>The responsible entity did not follow the Reliability Coordinators directive. The responsible entity did not follow the Reliability Coordinators directive, the directive would not have violated safety, equipment, regulatory, or statutory requirements, and responsible entity did not communicate the inability to follow the directive to the Reliability Coordinator.</del></p> <p>CEDRP Proposed VSL IRO-001 R2  The responsible entity did not follow the Reliability Coordinators directive, the directive would not have violated safety, equipment, regulatory, or statutory requirements, and responsible entity did not communicate the inability to follow the directive to the Reliability Coordinator.</p>

Organization	Question 19:
	<p>=====</p> <p>Standard - IRO-001 R3 The Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider or Purchasing-Selling Entity shall immediately confirm the ability to comply with the directive or inform the Reliability Coordinator upon recognition of the inability to perform the directive. [Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</p> <p>Proposed Measure</p> <p>Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it confirmed its ability to comply with the Reliability Coordinator's directives, or if for safety, equipment, regulatory or statutory requirements it could not comply, informed the Reliability Coordinator upon recognition of the inability to comply.</p> <p>Discussion – The requirement appears to be based on communication and can be problematic by including the requirement to immediately confirm the ability to comply, a directive can be issued to one entity or several entities at one time (e.g. conference call, all call, electronic notification) that may create several issues when attempting to process all confirmations, the requirement language presents a risk of being found out of compliance for following a directive but not providing an “immediate” confirmation to the RC. The CEDRP believes it to be a reasonable expectation that all entities will comply with reliability directives and notification should be made only on exception. The SDT should consider combining this requirement with R2.</p> <p><b>Response:</b></p> <p>The phrase “immediately confirm the ability to comply” was removed from the requirement. The new wording is:</p> <p>R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, or Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform the directive. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i></p> <p>SDT Proposed Lower VSL IRO-001 R3</p> <p>The responsible entity failed to immediately confirm the ability to comply with the directive issued by the Reliability Coordinator.</p>

Organization	Question 19:
	<p>CEDRP Proposed VSL See above discussion note</p> <p>=====</p> <p>Standard - IRO-001 R4</p> <p>Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</p> <p>Proposed Measure</p> <p>Each Reliability Coordinator shall have evidence that it notified, without intentional delay, all impacted Transmission Operators and balancing Authorities in its Reliability Coordinator Area when it identified a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area.</p> <p>Discussion – To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful disregard of the requirement. This requirement appears to fit the numerical category of the VSL guidelines best.</p> <p><b>Response:</b></p> <p>The term “intentional delay” was eliminated from the standard as you suggested. The VSLs were revised as you suggested.</p> <p>SDT Proposed Lower VSL IRO-001 R4 N/A CEDRP Proposed VSL</p> <p>The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify 25% or less of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area.</p> <p>SDT Proposed Moderate VSL IRO-001 R4 N/A CEDRP Proposed VSL</p>

Organization	Question 19:
	<p>The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 25% but less than or equal to 50% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area.</p> <p>SDT Proposed High VSL IRO-001 R4 N/A CEDRP Proposed VSL</p> <p>The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 50% but less than or equal to 75% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area.</p> <p>SDT Proposed Severe VSL: IRO-001 R4 The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</p> <p>CEDRP Proposed Severe VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 75% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area.</p> <p>=====</p> <p>Standard - IRO-001 R5</p> <p>Each Reliability Coordinator who identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</p> <p>Proposed Measure Each Reliability Coordinator shall have evidence that it notified, without intentional delay, all impacted Transmission Operators and balancing Authorities in its Reliability Coordinator Area when the real or potential threat with Adverse Reliability Impacts within its Reliability Coordinator Area has been mitigated.</p>



Organization	Question 19:
	<p>Discussion – To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful disregard of the requirement. Measure 5 is written implying that there is an Adverse Reliability Impact. The drafting team should consider wording the measurement to consider that there may not be an Adverse Reliability Impact requiring a directive. The Commission in paragraph 27 of the VSL order has stated that multiple VSLs are preferable where possible. Suggest applying the numerical category of the VSL Guidelines based on the number of entities notified.</p> <p><b>Response:</b></p> <p>The term “intentional delay” was eliminated from the standard as you suggested. The VSLs were revised per your suggestion.</p> <p>SDT Proposed Lower VSL: IRO-001 R5 N/A CEDRP Proposed Lower VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify 25% or less of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated.</p> <p>SDT Proposed Moderate VSL: IRO-001 R5 N/A CEDRP Proposed Moderate VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 25% but less than or equal to 50% of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated.</p> <p>SDT Proposed High VSL: IRO-001 R5 N/A CEDRP Proposed High VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 50% but less than or equal to 75% of the</p>

Organization	Question 19:
	<p>impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated.</p> <p>SDT Proposed Severe VSL: IRO-001 R5                      The Reliability Coordinator failed to notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.</p> <p>CEDRP Proposed Severe VSL:                      The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 75% of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated.</p> <p>=====</p> <p>Standard – IRO-002-2 R1                      Each Reliability Coordinator shall determine the data requirements to support its reliability coordination tasks and shall request such data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</p> <p>Proposed Measure                      Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a letter to Transmission Operators, Balancing Authorities, Transmission Owners, Generator Owners, Generator Operators, and Load-Serving Entities, or adjacent Reliability Coordinators, or other equivalent evidence that will be used to confirm that the Reliability Coordinator has requested the data required to support its reliability coordination tasks.</p> <p>Discussion – The VSLs attempt to measure the quality of the data requirements. They require the compliance auditor to judge if another RC has material impact and what data is administrative and what data is substantial. Given the typical length of a compliance audit, it is doubtful that the compliance auditor can make these types of judgments about the quality of the data and the material impact of another RC. The drafting team should consider applying numerical category of VSLs based on the number of entities the data request is made from. It is interesting that the measure also does not require</p>

Organization	Question 19:
	<p>any documentation of a data specification.</p> <p><b>Response:</b></p> <p>The requirement was retired by the work of the IROLSDT. It is no longer in the standard.</p> <p>SDT Proposed Lower VSL:                      The Reliability Coordinator demonstrated that it</p> <ol style="list-style-type: none"> <li>1) determined its data requirements and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with a material impact on the Bulk Electric System in its Reliability Coordination Area but did not request the data from Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with minimal impact on the Bulk Electric System in its Reliability Coordination Area or</li> <li>2) determined its data requirements necessary to perform its reliability functions with the exceptions of data that may be needed for administrative purposes such as data reporting.</li> </ol> <p>CEDRP Proposed Lower VSL: IRO-002-2 R1</p> <p>The Reliability Coordinator failed to request data to support its reliability coordination tasks from 25% or less of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators.</p> <p>SDT Proposed Moderate VSL:                      The Reliability Coordinator demonstrated that it determined the majority but not all of its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators.</p> <p>CEDRP Proposed Moderate VSL: IRO-002-2 R1</p> <p>The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 25% but less than or equal to 50% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators.</p> <p>SDT Proposed High VSL:                      The Reliability Coordinator demonstrated that it determined</p> <ol style="list-style-type: none"> <li>1) some but less than the majority of its data requirements necessary to support its reliability</li> </ol>

Organization	Question 19:
	<p>coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators</p> <p>Or</p> <p>2) all of its data requirements necessary to support its reliability coordination functions but failed to demonstrate that it requested data from two of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators.</p> <p>CEDRP Proposed High VSL: IRO-002-2 R1                      The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 50% but less than or equal to 75% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators.</p> <p>SDT Proposed Severe VSL:                      The Reliability Coordinator failed to demonstrate that it</p> <p>1) determined its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators</p> <p>Or</p> <p>2) requested the data from three or more of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators.</p> <p>CEDRP Proposed Severe VSL: IRO-002-2 R1                      The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 75% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators,</p>

Organization	Question 19:
	<p>Or,</p> <p>The Reliability Coordinator failed to determine data requirements to support its reliability coordination tasks.</p> <p>Standard – IRO-002-2 R2</p> <p>Each Reliability Coordinator shall have the authority to veto planned outages to analysis tools, including final approvals for planned maintenance. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</p> <p>Proposed Measure</p> <p>Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has the authority to veto planned outages to analysis tools, including final approvals for planned maintenance as specified in Requirement 2.</p> <p>Is this requirement needed? R1 IRO-001-2 requires the RC to mitigate Adverse Reliability Impacts. R2 IRO-001-2 requires responsible entities to comply with the RC directives. Wouldn't the RC thus have the right to cancel all types of outages (i.e. analysis tools, transmission equipment, etc). FERC has stated in paragraph 112 of Order 693-A that an RC does not derive their authority from agreements but rather from FERC's approval of the standards.</p> <p>Barring the team's decision to remove this requirement, the Severe VSL is confusing. We have suggested different wording.</p> <p><b>Response:</b></p> <p>While the RC SDT agrees that the other requirements should cover this subject, this is a direct response to the 2003 blackout and is included here. We have revised the Severe VSL to reflect the revised requirement.</p> <p>SDT Proposed Severe VSL IRO-002-2 R2  Reliability Coordinator approval is not required for planned maintenance or planned outages.  CEDRP Proposed VSL  Reliability Coordinator does not approve planned maintenance or planned outages.</p>

Organization	Question 19:
	<p>=====                      Standard – IRO-014-2 R1 No comments                      =====</p> <p>Standard – IRO-014-2 R2                      R2. Each Reliability Coordinator’s Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: [Violation Risk Factor: Lower] [Time Horizon: Real-time Operations and Operations Planning]                      R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s).                      R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).</p> <p>Proposed Measure                      M2. The Reliability Coordinator shall have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were:                      M2.1 Agreed to by all the Reliability Coordinators required to take the indicated action(s).                      M2.2 Distributed to all Reliability Coordinators that are required to take the indicated action(s).</p> <p>Discussion – The High and Severe VSLs appear to use “not” incorrectly.</p> <p><b>Response:</b>                      We agree and have revised the VSLs.</p> <p>SDT Proposed Moderate VSL: IRO-014-2 R2                      The Reliability Coordinator <del>failed to</del> <b>did not</b> have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take action.</p> <p>CEDRP Proposed Moderate VSL: IRO-014-2 R2                      The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take</p>

Organization	Question 19:
	<p>action.</p> <p>SDT Proposed High VSL:                      The Reliability Coordinator <del>failed to</del> <b>did not</b> have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were <del>not</del> agreed to by all Reliability Coordinators that are required to take action</p> <p>CEDRP Proposed High VSL:                      The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action</p> <p>SDT Proposed Severe VSL:                      The Reliability Coordinator <del>failed to</del> <b>did not</b> have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were <del>not</del> agreed to by all Reliability Coordinators that are required to take action and were <del>not</del> distributed to all Reliability Coordinators that are required to take action</p> <p>CEDRP Proposed Severe VSL:                      The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action and were distributed to all Reliability Coordinators that are required to take action</p> <p>=====</p> <p>Standard – IRO-014-2 R3 [Response: The SDT appreciates the comments. To better emphasize the distinction, the SDT decided to underline the “and” and the “or”.]                      Requirement (including sub-requirements)                      R3. The Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. [Violation Risk Factor: Medium][Time</p>

Organization	Question 19:
	<p>Horizon: Real-time Operations and Operations Planning]</p> <p>Proposed Measure  M3. The Reliability Coordinator shall have evidence it made notifications and exchanged reliability–related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information.</p> <p>Discussion: The VSLs appear to be appropriate. Since the only difference is the use of the “and” and “or”, we suggest emphasizing those words in bold. We read this more than once before we noticed the difference.</p> <p><b>Response:</b>  We revised the VSL to emphasize the “OR” and “AND” parts.</p> <p>SDT Proposed High VSL:  The Reliability Coordinator failed to make notifications <b>or</b> exchange reliability–related information with impacted Reliability Coordinators.  CEDRP Proposed High VSL: IRO-014-2 R3  The Reliability Coordinator failed to make notifications or exchange reliability–related information with impacted Reliability Coordinators.</p> <p>SDT Proposed Severe VSL:  The Reliability Coordinator failed to make notifications <b>and</b> exchange reliability–related information with impacted Reliability Coordinators.  CEDRP Proposed Severe VSL: IRO-014-2 R3  The Reliability Coordinator failed to make notifications and exchange reliability–related information with impacted Reliability Coordinators.</p> <p>=====</p> <p>Standard – IRO-014-2 R4  R4. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with impacted Reliability Coordinators. [Violation Risk Factor: Lower][Time</p>



Organization	Question 19:
	<p>Horizon: Real-time Operations]</p> <p>The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly.</p> <p>Proposed Measure</p> <p>M4. The Reliability Coordinator shall have evidence it participated in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators.</p> <p>Discussion – This requirement is purely administrative and probably does not rise to a level of a reliability standard requirement.</p> <p>It is in essence redundant, with R1.1 IRO-014-2? It appears R1.1 addresses the same information that would be expected to be discussed in a weekly conference call. Should the drafting team disagree and retain this requirement, please consider applying multiple VSLs based on how often the RC participates in conference calls, how many they missed, or how many impacted RCs they participated in conference calls with.</p> <p><b>Response:</b></p> <p>R1.1 is a sub-requirement of R1 which requires the reliability coordinator “to have” procedures, processes, or plans, and R4 requires “participation.” R4 requires participation on calls. If the RC fails to participate, that is a violation of the requirement, making it a binary requirement with only one VSL.</p> <p>SDT Proposed Lower VSL:                      The Reliability Coordinator failed to participate in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators.</p> <p>CEDRP Proposed Lower VSL: IRO-014-2 R4                      The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators bi-weekly,                      Or                      the Reliability Coordinator failed to participate in one weekly conference call,                      Or                      the Reliability Coordinator agreed to participate in conference calls with 25% or less of the impacted Reliability Coordinators.</p> <p>SDT Proposed Moderate VSL:                      N/A</p>

Organization	Question 19:
	<p>CEDRP Proposed Moderate VSL: IRO-014-2 R4                      The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators every third week,                      Or                      the Reliability Coordinator failed to participate in two weekly conference calls,                      Or                      the Reliability Coordinator agreed to participate in conference calls with more than 25% but less than or equal to 50% of the impacted Reliability Coordinators.</p> <p>SDT Proposed High VSL:                      N/A                      CEDRP Proposed High VSL: IRO-014-2 R4                      The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators fourth week,                      Or                      the Reliability Coordinator failed to participate in three weekly conference calls,                      Or                      the Reliability Coordinator agreed to participate in conference calls with more than 50% but less than or equal to 75% of the impacted Reliability Coordinators.</p> <p>SDT Proposed Severe VSL:                      N/A                      CEDRP Proposed Severe VSL: IRO-014-2 R4                      The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators at least every fifth week,                      Or                      the Reliability Coordinator failed to participate in four weekly conference calls,                      Or                      the Reliability Coordinator failed to agree to participate in any conference calls,                      Or                      the Reliability Coordinator agreed to participate in conference calls with more than 75% but less than 100% of the impacted Reliability Coordinators.</p> <p>=====</p>

Organization	Question 19:
	<p>Standard – IRO-014-2 R5</p> <p>R5. When an expected or actual reliability issue is detected, the Reliability Coordinator shall confirm the existence of the issue with the impacted Reliability Coordinators. <del>Until in the event that the issue cannot be</del> has been <b>proven to not exist</b>, <del>confirmed</del>, each Reliability Coordinator shall operate as though the problem exists. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>Proposed Measure</p> <p>The Reliability Coordinator shall have evidence that, in cases when an expected or actual reliability issue was detected, it has confirmed the existence of the issue with the impacted Reliability Coordinators.</p> <p>Discussion – This requirement is confusing in the way it is worded. We think it is trying to say that the RC should operate as though the reliability issue (should this be Adverse Reliability Impact) is detected until the issue is confirmed not to exist. The way it is worded might imply that if one doesn't confirm it to exist, operate as though it does. This leaves open the interpretation that a confirmation that it doesn't exist must still be operated to as though it does exist.</p> <p>The drafting team should consider splitting operating to prevent from operating to mitigate an existing event in the VSLs.</p> <p><b>Response:</b></p> <p>The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements:</p> <p>R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk</p>

Organization	Question 19:
	<p>Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan,. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>The RC SDT has revised / created VSLs based on the new requirements.</p> <p>SDT Proposed Lower VSL                      The Reliability Coordinator that detected an expected or actual reliability issue contacted the other Reliability Coordinator(s) to confirm that there was a problem but could not confirm that the problem existed and failed to operate as though the problem existed.                      CEDRP Proposed VSL IRO-014-2 R5                      N/A</p> <p>SDT Proposed High VSL                      N/A                      CEDRP Proposed VSL IRO-014-2 R5                      The Reliability Coordinator that detected an expected reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem.</p> <p>SDT Proposed Severe VSL                      The Reliability Coordinator that detected an expected or actual reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem.                      CEDRP Proposed VSL IRO-014-2 R5                      The Reliability Coordinator that detected an actual reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem.</p> <p>=====</p> <p>Standard – IRO-014-2 R6                      When an expected or actual reliability issue exists and the impacted Reliability Coordinators cannot agree on a mitigation plan, all impacted Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>Proposed Measure</p>

Organization	Question 19:
	<p>The affected Reliability Coordinators shall have evidence that, in cases when an expected or actual reliability issue existed and the impacted Reliability Coordinators could not agree on a mitigation plan, they implemented the mitigation plan developed by the Reliability Coordinator who has the reliability issue.</p> <p>Discussion: We are concerned the validity of this requirement, it may force an RC to implement a solution that they don't agree with and ultimately result in an Adverse Reliability Impact. The RC may not agree with the solution because it may not be reliable for their footprint. They need to have the ability to veto mitigation plans that cause Adverse Reliability Impacts in their footprint without incurring a compliance violation.</p> <p><b>Response:</b></p> <p>R6 was brought into this standard from IRO-016, R1 and R2. The RC SDT removed the wording relating to the "most conservative solution" because it can not be measured. We are proposing to use the mitigation plan of the RC who is experiencing the issue in cases where an agreed to mitigation plan can not be developed.</p> <p>SDT Proposed Lower VSL                      The Reliability Coordinator did not agree on a mitigation plan and implemented a plan other than the one developed by the Reliability Coordinator who had the reliability issue.                      CEDRP Proposed VSL IRO-014-2 R6                      N/A</p> <p>SDT Proposed Severe VSL                      The Reliability Coordinator did not agree on a mitigation plan and did not implement a mitigation plan.                      CEDRP Proposed VSL IRO-014-2 R6                      What if the RC is correct in disagreeing and the mitigation plan would have caused an Adverse Reliability Impact on their system?</p>
<p><b>Response:</b> The RC SDT thanks you for your comments. Please see responses embedded above.</p> <p>In the future, please do not submit comments in this format. It is extremely burdensome on the drafting team in trying to respond to the comments. Please answer each question individually. If you encounter difficulty, please contact NERC for assistance.</p>	

### Standard Development Roadmap

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

#### Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
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7. Draft Version 2 of standards and response to comments September 16, 2008 – May 26, 2009.

#### Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the first draft. The team is seeking comments on the revised standards.

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Anticipated Actions	Anticipated Date
1. Second Posting of draft standards,	July-August 2009
2. Respond to comments on second posting	August 2009
3. Post Standards for pre-ballot period.	September 2009
4. Standards posted for initial and recirculation ballots.	October 2009
5. Standards sent to BOT for approval.	December 2009
6. Standards filed with regulatory authorities.	January 2010

**Definitions of Terms Used in Standard**

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

**None**

## A. Introduction

1. **Title:** Communications
2. **Number:** COM-001-2
3. **Purpose:** To ensure that operating entities have adequate interpersonal communication capabilities.
4. **Applicability:**
  - 4.1. Transmission Operators.
  - 4.2. Balancing Authorities.
  - 4.3. Reliability Coordinators.
  - 4.4. Distribution Providers.
  - 4.5. Generator Operators.
  - 4.6. Transmission Service Providers.
  - 4.7. Load-Serving Entities.
  - 4.8. Purchasing-Selling Entities.
5. **Effective Date:** The first day of the first calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption.

## B. Requirements

- R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test, on a quarterly basis, alternative interpersonal communications capabilities used for communicating real-time operating information. If the test is unsuccessful, the entity shall develop a mitigation plan to restore its interpersonal communications capabilities. *[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]*
- R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]*
- R3. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*
- R4. Each Distribution Provider and Generation Operator shall have interpersonal communications capabilities with its Transmission Operator and Balancing Authority



for the exchange of Interconnection and operating information. *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*

**C. Measures**

- M1.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to dated test records, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, it tested, on a quarterly basis, alternative interpersonal communications capabilities used for communicating real-time operating information. If the test was unsuccessful, the entity shall have and provide upon request evidence that it developed a mitigation plan to restore the interpersonal communications capabilities. (R1.)
- M2.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, it notified impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of their normal communications capabilities. (R2.)
- M3.** Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. If a language other than English is used, each party shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language. (R3.)
- M4.** Each Distribution Provider and Generation Operator shall demonstrate the existence of its interpersonal communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.)

**D. Compliance**

- 1. Compliance Monitoring Process**
  - 1.1. Compliance Enforcement Authority**
    - Regional Entity
  - 1.2. Compliance Monitoring and Enforcement Processes**
    - Compliance Audits
    - Self-Certifications
    - Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

### **1.3. Data Retention**

The Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall keep the most recent three years of historical data (evidence) for Requirement R1, Measure M1.

Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall keep the most recent twelve months of historical data (evidence) for Requirement R2, Measure M2.

Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall keep evidence for Requirement R3, Measure M3 for the most recent 3 months. If a Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider or Generator Operator is found non-compliant with a requirement, it shall keep information related to the noncompliance until the Compliance Enforcement Authority finds it compliant.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

### **1.4. Additional Compliance Information**

None

2. Violation Severity Levels

Requirement	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The responsible entity tested alternative interpersonal communications capabilities but failed to develop a mitigation plan when the test failed.	N/A	N/A	The responsible entity failed to test the alternative interpersonal communications capabilities on a quarterly basis.
R2	N/A	The responsible entity notified at least one, but not all, impacted entities of the failure of its normal interpersonal communications capabilities within 60 minutes.	N/A	The responsible entity failed to notify any impacted entities of the failure of their normal interpersonal communications capabilities within 60 minutes.
R3	N/A	N/A	N/A	The responsible entity failed to provide evidence of concurrence to use a language other than English for communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected BES when a language other than English was used.
R4	N/A	N/A	The responsible entity failed to have interpersonal communications capabilities with its Transmission Operator <b>or</b> Balancing Authority.	The responsible entity failed to have interpersonal communications capabilities with its Transmission Operator <b>and</b> Balancing Authority.

**E. Regional Differences**

None identified.

**F. Associated Documents**

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
2	TBD	Revised per SAR for Project 2006-06, RCSDT	Revised

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**None**

## A. Introduction

1. **Title:** **C**Telecommunications
2. **Number:** COM-001-2
3. **Purpose:** To ensure that operating entities have adequate interpersonal communication capabilities.~~Each Reliability Coordinator, Transmission Operator and Balancing Authority needs adequate and reliable telecommunications facilities internally and with others for the exchange of Interconnection and operating information necessary to maintain reliability.~~
4. **Applicability:**
  - 4.1. Transmission Operators.
  - 4.2. Balancing Authorities.
  - 4.3. Reliability Coordinators.
  - 4.4. Distribution Providers.
  - 4.5. Generator Operators.
  - 4.6. Transmission Service Providers.
  - 4.7. Load-Serving Entities.
  - 4.8. Purchasing-Selling Entities.
5. **Effective Date:** **TBD**The first day of the first calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption.

## B. Requirements

- R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall ~~operationally~~ test, on a quarterly basis ~~at a minimum~~, alternative interpersonal telecommunications capabilities~~facilities used for communicating real-time operating information to ensure the availability of their use when normal telecommunications facilities fail.~~ If the test is unsuccessful, the entity willshall develop a mitigation plan to restore ~~the~~its interpersonal communications capabilities. *[Violation Risk Factor: Lower~~Medium~~][Time Horizon: Real-time Operations]*
- R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a~~of~~ failure (30 minutes or longer) of ~~the~~its normal interpersonal communications capabilities. ~~of their normal telecommunications facilities, and verify the alternate means of telecommunications are functional.~~*[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]*
- R3. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity and Distribution Provider shall use English

as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected ~~Bulk Electric System~~ BES. ~~Transmission Operators and Balancing Authorities may use an alternate language for internal operations.~~ [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]

- R4. Each Distribution Provider and Generation Operator shall have interpersonal telecommunications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. [Violation Risk Factor: High][Time Horizon: Real-time Operations ~~and Operations Planning~~]

### C. Measures

- M1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to dated test records, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, ~~it operationally~~ tested, on a quarterly basis ~~at a minimum~~, alternative interpersonal telecommunications capabilities used for communicating real-time operating information to ensure the availability of their use when normal telecommunications facilities fail. If the test was unsuccessful, the entity shall have and provide upon request evidence that it developed a mitigation plan to restore the interpersonal communications capabilities. (R1.)
- M2. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, ~~that~~ it notified impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of their normal ~~telecommunications capabilities~~ ~~facilities, and verified the alternate means of telecommunications were functional.~~ (R2.)
- M3. ~~The Each~~ Reliability Coordinator, Transmission Operator, ~~or~~ Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. If a language other than English is used, both parties shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language. (R3.)
- M4. Each Distribution Provider and Generation Operator shall demonstrate the existence of its interpersonal telecommunications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.)



## D. Compliance

### 1. Compliance Monitoring Process

#### 1.1. Compliance Enforcement Authority

Regional Entity

#### 1.2. Compliance Monitoring and Enforcement Processes

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

#### 1.3. Data Retention

The Reliability Coordinator, Transmission Operator, ~~and~~ Balancing Authority, Distribution Provider and Generator Operator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

~~For the Measures, e~~ Each Reliability Coordinator, Transmission Operator, ~~and~~ Balancing Authority, Distribution Provider, and Generator Operator shall ~~each~~ keep the most recent three ~~years~~ months of historical data (evidence) for Requirement R1, Measure M1.

Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall keep the most recent twelve months of historical data (evidence) for Requirement R2, Measure M2.

Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall keep evidence for Requirement R3, Measure M3 for the most recent 3 months.

If a Reliability Coordinator, Transmission Operator, ~~and~~ Balancing Authority, Distribution pProvider ~~and~~ Generator Operator is found non-compliant with a requirement, it shall keep information related to the noncompliance until the Compliance Enforcement Authority finds it ~~ound~~ compliant.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

#### 1.4. Additional Compliance Information

None

2. Violation Severity Levels

Requirement	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The responsible entity tested alternative interpersonal communications capabilities but failed to develop a mitigation plan when the test failed.	N/A	N/A	The responsible entity failed to test the alternative interpersonal communications capabilities on a quarterly basis.
R2	N/A	The responsible entity notified at least one, but not all, impacted entities of the failure of its normal interpersonal communications capabilities within 60 minutes.	N/A	The responsible entity failed to notify any impacted entities of the failure of their normal interpersonal communications capabilities within 60 minutes.

R3	N/A	N/A	N/A	<p>The responsible entity failed to provide evidence of concurrence to use a language other than English for <b>all</b> communications between and among operating personnel responsible for the real-time generation control <b>and-or</b> operation of the interconnected <b>Bulk Electric System</b> <u>BES when a language other than English was used.</u></p>
R4	N/A	N/A	<p><u>The responsible entity failed to have interpersonal communications capabilities with its Transmission Operator</u> <b>OR</b> <u>Balancing Authority.</u> <b>N/A</b></p>	<p>The <u>responsible entity</u> <b>Distribution Provider or Generation Operator</b> failed to have <u>interpersonal communications capabilities</u> <b>telecommunications facilities</b> with its Transmission Operator <b>and</b> Balancing Authority.</p>

**E. Regional Differences**

None identified.

**F. Associated Documents**

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
2	TBD	Revised per SAR for Project 2006-06, RCSDT	Revised

## **UNOFFICIAL Comment Form for Reliability Coordination — Project 2006-06**

**Please DO NOT use this form.** Please use the electronic comment form located at the link below to submit comments on the proposed revisions to the standards for Project 2006-06: Reliability Coordination. Comments must be submitted by **August 9, 2009**. If you have questions please contact Stephen Crutchfield at [stephen.crutchfield@nerc.net](mailto:stephen.crutchfield@nerc.net) or by telephone at 609-651-9455.

[http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)

### **Background Information:**

The Reliability Coordination Standards Drafting Team (RC SDT) was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable, 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System, and 3) revising the group of standards based on FERC Order 693.

During the course of the project, the NERC standards staff revised the Reliability Standards Development Plan and noted several areas of overlapping scope between certain projects. The original SAR for Project 2006-06 called for revisions to PER-004 — Reliability Coordination — Staffing and PRC-001 — System Protection Coordination. Based on scope overlap, it was determined that PER-004 and PRC-001 would best be served by moving the proposed work to Project 2006-01: System Personnel Training and Project 2007-06: System Protection, respectively.

The RC SDT proposed revisions to the set of standards under the project in August and September 2008. The RC SDT made revisions to the set of standards based on stakeholder feedback and the results of the IROL Standards Drafting Team work. Since the inception of this project, the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for three new Standards which included revisions to other IRO standards. With the approval of the IROL set of standards, certain requirements were retired from other IRO standards (see below summaries for specific examples under the RC SDT project).

### **Requirements, Measures and Violation Severity Levels in COM-001-2**

Requirements: The RC SDT received several comments regarding the intent of the term “telecommunications facilities”. For COM-001-2, the RC SDT envisions telecommunications to be voice or message communication between operating personnel. The standard has been renamed “Communications” and the term “telecommunications facilities” was replaced with “interpersonal communications capabilities” throughout the standards to better reflect the intent of the RC SDT.

We also received comments regarding the applicability of the standard that suggested adding other entities listed in IRO-001 (LSE, PSE, and TSP). The RC SDT contends that, in order to receive and carry out directives, an entity must be able to communicate with the RC...either directly or through other entities (e.g. – a DP may receive the directive from the TOP who received it from the RC). We have not expanded the applicability of Requirements R1 and R2 as suggested as we feel that this expands the standard beyond the reliability - it is not necessary nor is it practical, for reliability purposes, for every entity to have normal and back-up interpersonal communications capabilities with every other entity.

Other commenters had concerns with regard to R2 and the intent with regard to length of outages. The requirement was revised as:

R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. [*Violation Risk Factor: Medium*][*Time Horizon: Real-time Operations*]

R3 was expanded to include the Transmission Service Provider, Load-Serving Entity, and Purchasing-Selling Entity – to ensure that they use the English language for inter-entity communications. The informational (last) sentence of R3 was removed per stakeholder suggestions.

**Measures:** Commenters suggested general as well as specific revisions to the measures. One general comment suggested making the language consistent among the measures regarding evidence. M1-M3 were revised to include the phrase “shall have and provide upon request evidence that ...”.

Several commenters suggested revisions to M3. The RC SDT revised M3 based on the comments received suggesting that the applicability be expanded to include Generator Operators, Distribution Providers, Transmission Service Providers, Purchasing-selling Entities and Load-Serving Entities. Several entities commented that M3 did not match R3 which included an explanatory sentence that allowed an entity to use a language other than English for its internal communications. The informational second sentence was removed from Requirement R3, thus eliminating the “disconnect” between the requirement and the measure. All measures were revised as necessary to reflect revisions to requirements.

VSLs: The RC SDT made revisions to the VSLs based on the comments received and also to reflect revisions to the associated requirements. We received comments that the VSLs for R1 and R2 were based on multiple violations. We agreed and revised the VSLs to reflect a single violation.

### **Requirements, Measures and Violation Severity Levels in COM-002-3**

The work of the IROL SDT resulted in the retirement of R1 from the standard. The RC SDT received comments recommending expanding the applicability of the standard and separating Requirement R1 into two distinct requirements. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. The requirements were revised to:

R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a directive associated with real-time operational emergency conditions shall require the recipient of the directive to repeat the intent of the directive back; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. [*Violation Risk Factor: High*][*Time Horizon: Real-Time*]

R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a directive issued per Requirement R1 shall repeat the intent of the directive back to the issuer of the directive. [*Violation Risk Factor: High*][*Time Horizon: Real-Time*]

The purpose statement was also revised to reflect the revisions to the standard:

To ensure communications by operating personnel are effective.

The RC SDT received comments recommending expanding the applicability of the standard and separating Requirement R1 into two distinct requirements. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. The measures were revised to:

M1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a directive associated with real-time operational emergency conditions shall have evidence such as voice recordings or transcripts of voice recordings to show that it required the recipient of the directive to repeat the intent of the directive back; and acknowledged the response as correct or repeated the original statement to resolve any misunderstandings.

M2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a directive issued per Requirement R1 shall have evidence such as voice recordings or transcripts of voice recordings to show that it repeated the intent of the directive back to the issuer of the directive.

The RC SDT received comments recommending revisions to the VSLs based on revisions to the requirements and measures. The RC SDT did this and created new VSLs for new Requirement R2.

#### **Requirements, Measures and Violation Severity Levels in IRO-001-2**

The RC SDT has received a notable number of comments suggesting edits to the proposed requirements and measures for the draft standard, particularly regarding the phrase “without intentional delay.” The comments do not oppose the objective of the phrase, but often point out the issues of measuring intent and measuring delay time.

To maintain the intent while improving the measurability of the requirement, the SDT proposes to modify the standard as follows: delete the phrase ‘without intentional delay’ and leave the obligation of response and timing an unstated requirement of R1 “The RC shall act or direct actions...”

An RC that requires a given action in a given time will be expected to inform the impacted entities of those actions and time requirements. This would obviate the need for providing a measure for “intent”, but still maintain the reliability intent of the original requirement.

The VSLs were revised to reflect revisions to the requirements as well as the comments of stakeholders. Several comments suggested that there was no fundamental difference between the RC “acting” or “directing actions”. The RC SDT agreed and removed the High VSL for R1 and revised the Severe VSL accordingly. Other commenters suggested removing the High VSL from R2 as the VSL contradicted the requirement. The RC SDT agreed and removed the VSL.

#### **Requirements, Measures and Violation Severity Levels in IRO-002-2**

Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired IRO-002-2 Requirement R1. The team received comments expressing concern about eliminating the requirement in IRO-002 to monitor frequency. While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure “Monitoring” can provide. It is the SDT’s



contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in entity certification requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability. The team declined to delete R2 (Reliability Coordinator veto over analysis tool outages) as it was a specific recommendation from the 2003 Blackout report. This requirement was revised and moved into IRO-001-2 as R6.

Stakeholders indicated that R6 (previously IRO-002 R2) is a “binary” requirement and the Lower VSL was deleted and the Severe VSL was revised based on those comments.

#### **Retirement of IRO-005-1**

Several commenters had concerns around removing the requirement to monitor frequency (IRO-005-1 R8). The intent of this monitoring activity was incorporated into IRO-002-2, R1. Other commenters had concerns with the removal of other monitoring requirements in the standard. While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity associated with any attempt to measure “Monitoring.” It is the SDT’s contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in entity certification process requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability.

#### **Requirements, Measures and Violation Severity Levels in IRO-014-2**

Several commenters expressed concerns with the term “impacted” and suggested replacing this with “other”. The RC SDT believes “impacted” directly relates to the purpose statement. Additionally, replacing “one or more other” with “impacted” does tighten the requirement and removes ambiguity. The RC SDT does not intend for non-contiguous Reliability Coordinators to have “Reliability Coordinator Agreements”, but to have Procedures, Processes, or Plans with impacted reliability coordinators. Other commenters suggested striking the term “as a minimum” in R1 and the RC SDT agrees and has modified R1 accordingly. Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements:

R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator that has the identified Adverse Reliability Impact when the

impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

Several commenters suggested that the High and Severe VSLs for R2 contradicted the requirement. The RC SDT agreed and removed the “nots” from the VSLs. Several commenters had suggested revisions for the VSLs for R6. This requirement was imported from IRO-016 and several commenters suggested expanding the set of requirements regarding the mitigation plan. New VSLs were developed for these requirements.

**Retirement of IRO-015-2**

Stakeholders agreed with the proposed revisions and this is not being re-posted for comment.

**Requirements of IRO-016-1**

Stakeholders agreed with the concept of moving the requirements of IRO-016-1 into IRO-014-2. Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016 and the RC SDT revised these requirements in support of stakeholder comments. There are now 4 requirements, rather than 2, that address Reliability Coordinator actions when a Reliability Coordinator identifies an Adverse Reliability Impact. New measures and VSLs were developed to support these revised requirements.

**Proposed Effective Dates**

The RC SDT received comments that COM-001-2, R5 should have an effective date immediately upon regulatory approval. The RC SDT agrees and will request an effective date that is the first possible effective date – the first day of the first calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption.

The Reliability Coordination Drafting Team would like to receive industry comments on these changes. The RC SDT asks that you review the revised standards and answer the following questions by August 9, 2009.

1. **Do you agree with the revisions made to the Requirements in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

Yes

No

Comments:

2. **Do you agree with the revisions made to the Measures in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

Yes

No

Comments:

3. **Do you agree with the revisions made to the Violation Severity Levels in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

Yes

No

Comments:

4. **Do you agree with the revisions made to the Requirements in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area.**

Yes

No

Comments:

5. **Do you agree with the revisions made to the Measures in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area.**

Yes

No

Comments:

6. **Do you agree with the revisions made to the Violation Severity Levels in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area.**

Yes

No

Comments:

7. **Do you agree with the revisions to the definition of Adverse Reliability Impacts (IRO-001-2)? If not, please explain in the comment area.**

Yes

No

Comments:

**8. Do you agree with the revisions to the Requirements in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

Yes

No

Comments:

**9. Do you agree with the revisions to the Measures in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

Yes

No

Comments:

**10. Do you agree with the revisions to the Violation Severity Levels in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

Yes

No

Comments:

**11. Do you agree with the revisions to the Requirements in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.**

Yes

No

Comments:

**12. Do you agree with the revisions to the Measures in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.**

Yes

No

Comments:

**13. Do you agree with the revisions to the Violation Severity Levels in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.**

Yes

No

Comments:

**14. If you have any other comments, not expressed in questions above, for the RC SDT on any of the other changes made to this set of standards and their associated implementation plans, please provide them here.**

Comments:

### **Prerequisite Approvals**

- IRO-002-2
- IRO-005-3

### **Conforming Changes to Requirements in Already Approved Standards**

- None

### **Revision Summary**

- The RC SDT revised the standard and is proposing retiring three requirements (R1, R5 and R6). Changes were made to eliminate redundancies between standards (existing and proposed), to align with the ERO Rules of Procedure and to address issues in FERC Order 693.

### **Effective Dates**

To be determined.

**Implementation Plan for COM-001-2  
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**Revisions or Retirements to Already Approved Standards**

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></p>	<p>The RC SDT contends that COM-001-1, R1 and its subrequirements are low level facilitating requirements that are more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards. Examples include:</p> <p>IRO-001-1, R3 requires adequate telecommunication for the Reliability Coordinator to direct actions of multiple entities, including TOPs and BAs.</p> <p>TOP-005-1, R1 and R3 require adequate telecommunications for BAs and TOPs to provide each other with operating data as well as providing data to the RC.</p> <p>TOP-001-1, R3 requires adequate telecommunications facilities for the TOP, BA, and GOP to be able to receive directives from the RC.</p> <p>TOP-006-1, R1 requires adequate telecommunications for the GOP to inform the BA and TOP of resources. The BA and TOP will then inform the RC, other TOP and BAs of all transmission and generation available for use.</p> <p>The retirement of this requirement also facilitates one of the FERC Order 693 directives for COM-001-1 to “includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions”.</p>
<p><b>Notes:</b> Based on the above information, the RC SDT recommends retiring R1 and its subrequirements.</p>	

**Implementation Plan for COM-001-2  
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Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R2.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall <i>manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.</i> <i>[Violation Risk Factor: Medium]</i></p>	<p><b>COM-001-2:</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test, on a quarterly basis alternative interpersonal communications capabilities used for communicating real-time operating information. If the test is unsuccessful, the entity shall develop a mitigation plan to restore its interpersonal communications capabilities. <i>[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b> The RC SDT contends that the first sentence of COM-001-1, R2 is a low level facilitating requirements that is more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards as described in R1 above. We propose revising R2 as shown above to focus on the testing of capabilities that are not used on a routine basis.</p>	

**Implementation Plan for COM-001-2  
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Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R3.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>COM-001-2</b></p> <p><b>R2.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>



**Implementation Plan for COM-001-2  
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Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R4.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. <i>[Violation Risk Factor: Medium]</i></p>	<p><b>COM-001-2</b></p> <p><b>R3.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b> COM-001 Requirement R3 is being incorporated into COM-003-1 by the Operations Personnel Communications Protocols SDT (Project 2007-02). It will be retired from this standard upon approval of COM-003-1. The RC SDT expanded the list of applicable entities to include the TSP, LSE and PSE and to delete the explanatory sentence at the end of the requirement.</p>	

**Implementation Plan for COM-001-2  
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Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R5.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>EOP-008-0</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements:</p> <p><b>R1.1.</b> The contingency plan shall not rely on data or voice communication from the primary control facility to be viable.</p> <p><b>R1.2.</b> The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules.</p> <p><b>R1.3.</b> The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities.</p> <p><b>R1.4.</b> The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas.</p> <p><b>R1.5.</b> The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.</p> <p><b>R1.6.</b> The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans.</p> <p><b>R1.7.</b> The plan shall be reviewed and updated annually.</p> <p><b>R1.8.</b> Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.</p>
<p><b>Notes:</b> The RC SDT proposes retiring COM-001-1 R5 as it is redundant with EOP-008-0 Requirement R1.</p>	

**Implementation Plan for COM-001-2  
Communications**

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R6.</b> Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, "NERCNet Security Policy." <i>[Violation Risk Factor: Lower]</i></p>	<p><b>None - retire</b></p>
<p><b>Notes:</b> The RC SDT is recommending that R6 be retired. This is an ERO procedural issue and should not be in a reliability standard. It should be included in the ERO Rules of Procedure.</p>	

Already Approved Standard	Proposed Replacement Requirement(s)
	<p><b>COM-001-2</b></p> <p><b>R4.</b> Each Distribution Provider and Generation Operator shall have interpersonal communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Operations Planning]</i></p>
<p><b>Notes:</b> This is a new requirement based on the following FERC Order 693 directive:</p> <p>"expands the applicability to include generator operators and distribution providers and includes Requirements for their telecommunications facilities"</p>	

**Implementation Plan for COM-001-2  
Communications**

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**Functions that Must Comply with the Requirements in the Standards**

<b>Standard</b>	<b>Functions that Must Comply With the Requirements</b>							
	<b>Reliability Coordinator</b>	<b>Balancing Authority</b>	<b>Purchasing Selling Entity</b>	<b>Transmission Operator</b>	<b>Transmission Service Provider</b>	<b>Load Serving Entity</b>	<b>Generator Operator</b>	<b>Distribution Provider</b>
COM-001-2 Communications	X	X	X	X	X	X	X	X

## Prerequisite Approvals

- IRO-002-2
- IRO-005-3

## Conforming Changes to Requirements in Already Approved Standards

- None

## Revision Summary

- The RC SDT revised the standard and is proposing retiring three requirements (R1, R5 and R6). Changes were made to eliminate redundancies between standards (existing and proposed), to align with the ERO Rules of Procedure and to address issues in FERC Order 693.

## Effective Dates

To be determined.

**Revisions or Retirements to Already Approved Standards**

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></p>	<p>The RC SDT contends that COM-001-1, R1 and its subrequirements are low level facilitating requirements that are more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards. Examples include:</p> <p>IRO-001-1, R3 requires adequate telecommunication for the Reliability Coordinator to direct actions of multiple entities, including TOPs and BAs.</p> <p>TOP-005-1, R1 and R3 require adequate telecommunications for BAs and TOPs to provide each other with operating data as well as providing data to the RC.</p> <p>TOP-001-1, R3 requires adequate telecommunications facilities for the TOP, BA, and GOP to be able to receive directives from the RC.</p> <p>TOP-006-1, R1 requires adequate telecommunications for the GOP to inform the BA and TOP of resources. The BA and TOP will then inform the RC, other TOP and BAs of all transmission and generation available for use.</p> <p>The retirement of this requirement also facilitates one of the FERC Order 693 directives for COM-001-1 to “includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions”.</p>
<p><b>Notes:</b> Based on the above information, the RC SDT recommends retiring R1 and its subrequirements.</p>	

Implementation Plan for COM-001-2  
**Telecommunications**Communications

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R2.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall <u>manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.</u> [<i>Violation Risk Factor: Medium</i>]</p>	<p><b>COM-001-2:</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall <del>operationally</del> test, on a quarterly basis <del>at a minimum,</del> alternative <u>interpersonal telecommunications facilities capabilities used for communicating real-time operating information.</u> <u>If the test is unsuccessful, the entity shall develop a mitigation plan to restore its interpersonal communications capabilities.</u> <del>to ensure the availability of their use when normal telecommunications facilities fail.</del> <del>manage, alarm, test and/or actively monitor vital telecommunications facilities.</del> <del>Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.</del> [<i>Violation Risk Factor: <u>Medium</u> Lower</i>][<i>Time Horizon: Real-time Operations</i>]</p>
<p><b>Notes:</b> The RC SDT contends that the first sentence of COM-001-1, R2 is a low level facilitating requirements that is more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards as described in R1 above. We propose revising R2 as shown above-- <u>to focus on the testing of capabilities that are not used on a routine basis.</u></p>	

Implementation Plan for COM-001-2  
**Telecommunications**Communications

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R3.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>COM-001-2</b></p> <p><b>R2.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities <u>within 60 minutes of the detection of a ef-failure (30 minutes or longer)</u> of <del>their-its</del> normal <u>interpersonal communications capabilities</u>. <del>telecommunications facilities, and verify the alternate means of telecommunications are functional. provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas.</del> <i>[Violation Risk Factor: Medium Lower]</i><i>[Time Horizon: Real-time Operations]</i></p>



Implementation Plan for COM-001-2  
**Telecommunications**Communications

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R4.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. <i>[Violation Risk Factor: Medium]</i></p>	<p><b>COM-001-2</b></p> <p><b>R3.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, <del>and</del> Balancing Authority, Generator Operator, <u>Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity,</u> and Distribution Provider shall use English as the language for <u>all inter-entity Bulk Electric System (BES) reliability</u> communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected <del>Bulk Electric System</del><u>BES</u>. <del>Transmission Operators and Balancing Authorities may use an alternate language for internal operations.</del><i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b> COM-001 Requirement R3 is being incorporated into COM-003-1 by the Operations Personnel Communications Protocols SDT (Project 2007-02). It will be retired from this standard upon approval of COM-003-1. <u>The RC SDT expanded the list of applicable entities to include the TSP, LSE and PSE and to delete the explanatory sentence at the end of the requirement.</u></p>	

Implementation Plan for COM-001-2  
**Telecommunications** **Communications**

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R5.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>EOP-008-0</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements:</p> <p><b>R1.1.</b> The contingency plan shall not rely on data or voice communication from the primary control facility to be viable.</p> <p><b>R1.2.</b> The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules.</p> <p><b>R1.3.</b> The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities.</p> <p><b>R1.4.</b> The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas.</p> <p><b>R1.5.</b> The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.</p> <p><b>R1.6.</b> The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans.</p> <p><b>R1.7.</b> The plan shall be reviewed and updated annually.</p> <p><b>R1.8.</b> Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.</p>
<p><b>Notes:</b> The RC SDT proposes retiring COM-001-1 R5 as it is redundant with EOP-008-0 Requirement R1.</p>	

Implementation Plan for COM-001-2  
**Telecommunications**Communications

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R6.</b> Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, "NERCNet Security Policy." <i>[Violation Risk Factor: Lower]</i></p>	<p><b>None - retire</b></p>
<p><b>Notes:</b> The RC SDT is recommending that R6 be retired. This is an ERO procedural issue and should not be in a reliability standard. It should be included in the ERO Rules of Procedure.</p>	

Already Approved Standard	Proposed Replacement Requirement(s)
	<p><b>COM-001-2</b></p> <p><b>R4.</b> <u>Each Distribution Provider and Generation Operator shall have interpersonal telecommunications facilities capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. [Violation Risk Factor: High][Time Horizon: Real-time Operations and Operations Planning]</u></p>
<p>Notes: This is a new requirement based on the following FERC Order 693 directive:</p> <p>"expands the applicability to include generator operators and distribution providers and includes Requirements for their telecommunications facilities"</p>	

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	<u>Purchasing Selling Entity</u> <del>Interchange Authority</del>	Transmission Operator	Transmission <u>Service Provider</u> <del>Owner</del> or	<u>Load Serving Entity</u> <del>Generator Owner</del>	Generator Operator	Distribution Provider
COM-001-2 <del>Telecommuni</del> <u>Communi-</u> cations	X	X	<u>X</u>	X	<u>X</u>	<u>X</u>	X	X

## Standards Announcement

Comment Period Open

July 10–August 9, 2009

Now available at:

[http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)

### Project Name

Project 2006-06 — Reliability Coordination

### Due Date and Submittal Information

The comment period is open **until 8 p.m. EDT on August 9, 2009**. Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Lauren Koller at [Lauren.Koller@nerc.net](mailto:Lauren.Koller@nerc.net). An off-line, unofficial copy of the comment form is posted on the project page: [http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)

### Content for Comment Period

The Reliability Coordination Standards Drafting Team is seeking comments on its second drafts of the following proposed standards:

- COM-001-2 — Communications
- COM-002-3 — Communications and Coordination
- IRO-001-2 — Reliability Coordination – Responsibilities and Authorities
- IRO-014-2 — Coordination Among Reliability Coordinators

The drafting team revised the proposed standards based on stakeholder feedback and the results of the IROL Standards Drafting Team work.

### Other Materials Posted

- Revised implementation plans
- The drafting team's consideration of industry comments received during the first comment period

### Project Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable, 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System, and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team, and two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. Detailed information on these changes can be found in the comment form for this posting.

### **Applicability of Standards in Project**

Reliability Coordinator  
Balancing Authority  
Transmission Service Provider  
Transmission Operator  
Distribution Provider  
Generator Operator  
Purchasing Selling Entity  
Load Serving Entity

### **Standards Development Process**

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate

*For more information or assistance,  
please contact Shaun Streeter at [shaun.streeter@nerc.net](mailto:shaun.streeter@nerc.net) or at 609.452.8060.*



- Individual or group. (29 Responses)
- Name (19 Responses)
- Organization (19 Responses)
- Group Name (10 Responses)
- Lead Contact (10 Responses)
- Contact Organization (10 Responses)
- Question 1 (23 Responses)
- Question 1 Comments (29 Responses)
- Question 2 (27 Responses)
- Question 2 Comments (29 Responses)
- Question 3 (25 Responses)
- Question 3 Comments (29 Responses)
- Question 4 (28 Responses)
- Question 4 Comments (29 Responses)
- Question 5 (24 Responses)
- Question 5 Comments (29 Responses)
- Question 6 (23 Responses)
- Question 6 Comments (29 Responses)
- Question 7 (23 Responses)
- Question 7 Comments (29 Responses)
- Question 8 (22 Responses)
- Question 8 Comments (29 Responses)
- Question 9 (23 Responses)
- Question 9 Comments (29 Responses)
- Question 10 (21 Responses)
- Question 10 Comments (29 Responses)
- Question 11 (18 Responses)
- Question 11 Comments (29 Responses)
- Question 12 (18 Responses)
- Question 12 Comments (29 Responses)
- Question 13 (18 Responses)
- Question 13 Comments (29 Responses)
- Question 14 (0 Responses)
- Question 14 Comments (29 Responses)

Individual
Steve Alexanderson
Central Lincoln
Comments: The inclusion of load serving entities and distribution providers does not address any present reliability gap. R4 is extremely vague, and is not likely to be interpreted consistently. What form of evidence will be acceptable? Photos of telephones?
No
Comments: M4 is of little help regarding R4. How does an entity perform this demonstration, especially in the case of an off-site audit? If left to the regions, there will be no consistency.
No
The severity levels have little or no relationship to reliability. Failure to provide a evidence of an agreement per R3, for example, has no impact on reliability by itself; yet it carries the maximum VSL. In reality, the impact would only be severe if the use of an alternate language resulted in a miscommunication.
No
The inclusion of load serving entities and distribution providers does not address any present BES reliability gap.
No
M2 goes beyond R2 in requiring recordings. This will be cost prohibitive for small entities that have little impact on the BES. Telephone recording equipment will be needed on company phones. and some way to handle the recording of

directives and responses that occur after hours on home or cell phones must be handled. Drafters seem to have missed the fact that not all the applicable entities have 24/7 dispatch centers.

Empty table rows

Individual

Virginia Cook

JEA

R2 I would suggest that R2 be clarified so that it is understood that the 60 minutes starts at the beginning of the outage (or the end of the 30 minute period, if that was instead the intent) so that there can be no confusion about when the clock starts for notification periods. Otherwise, the wording of these standards is clearer than the current version. R4 I am concerned that with the word "capabilities" that the DP/GO's will be expected by the auditors to demonstrate that its "capability" was working every single second of every day since their last audit, especially since you have not included a data retention period(especially since this is rated a "high" VRF).

Yes

M1 - very nice, probably we will also be held responsible for completing the mitigation plans, so perhaps you should go ahead and add that so no one gets caught without sufficient evidence in that regard M2 - fine M3 - this measure would indicate that operators have the authority to agree among themselves to speak other languages, rather than a more formal agreement between entities, which is how I read the language of the requirement. If that is not what is meant, then I would suggest the examples include Memorandums of Agreement or Understanding, Contracts or other more formal mechanisms. M4 - fine

Yes

Empty table row

No

R1: just to avoid possible auditor misunderstandings the SDT might consider replacing the words "or repeat the original statement" to "reissue the directive" so that the RC does not get into trouble if the second statement is not verbatim of the first. This also helps clarify that another statement is required from the recipient along with a final acknowledgement from the RC that the intent is correct.

No

Not all entities have recorded lines. The standard does not directly require the to record their lines, but the measure implies it. It seems that a written log should be sufficient. Since both sides of the conversation gets audited, the auditors will have ample opportunity to check up on both sides.

Yes

Empty table rows

Individual

Daniel Duff

Liberty Electric Power LLC

Empty table row

Yes

Empty table row

Yes

Empty table row



No
The proposed standard does not require the RC, TO, or BA to declare an emergency to the GO when issuing a directive. There has been confusion at times in the past as to whether the entity is issuing a directive based on economics or due to an emergency. The standard should be amended to require the RC/TO/BA to state the directive is due to a declared emergency. The GO is required to repeat back the intent of an emergency directive, but is not required to repeat back the intent of economic directive. This can lead to a finding of a severe VSL non-compliance on the part of the GO due to a failure of the RC/TO/BA to clearly state the nature of the directive.
Yes
Yes
Yes
No
Similar objection to COM-002-3: There should be a requirement to the RC to declare the nature of the directive, emergency or economic.
Yes
No
The VSL's have a "Severe" VSL attached to a GO who fails to inform the RC when the Go becomes aware it is are unable to fully comply with a directive. However, the RC failing to inform two TO's - who potentially could have many GOs supplying power to their systems - of an emergency is only a "Moderate" VSL.
Yes
Yes
Yes
Group
Northwest LSE Group
Russell A. Noble
Cowlitz County PUD
No
The RC STD has done a commendable effort. However, it is questionable how expanding the applicability to include LSEs, DPs, & PSEs that are non-scheduling/tagging entities will increase reliability of the BES. In fact, we believe that increasing the applicability could do just the opposite. Many of these entities that are only registered as a LSE, DP, and/or PSE do not have a 24/7 desk/dispatch facility to receive RC/BA/TOP reliability directives, and are too small (10s of MW) to effectively assist during a reliability crisis. In addition, the Regional Entities (WECC in this case) are overwhelmed as it is, asking them to take on even more audit responsibilities is unrealistic, and not worth the effort. In addition, for the small Registered Entity, what would constitute compliance with R3 & R4 if no TOP/BA real-time directives were received? Everyone employed speaks English and there is at least one phone on the premises? Will the small DP and/or LSE be required to monitor its communication system 24/7 with competent personnel for an unlikely TOP/BA directive?
No
To demonstrate compliance the small Registered Entities will be in the position of proving a negative: i.e., there is no real-time BES operational communication from or to any other entity. Currently, for the smaller entities, communication with the Transmission Operator or Balancing Authority is strictly for operational safety and local reliability of service, not operational reliability for the BES as defined by NERC. It is not clear how the small entity will show compliance. If R4 requires the small load-only DP and/or LSE to have 24/7 monitoring of its phone, and contracted answering service is unable to contact anyone, will this be a violation?
No
With the vague verbiage of R4 coupled with the High and Severe VSL, it is important to clarify R4 with the small DP in mind, and possibly include Lower and Moderate VSLs for smaller load-only DP violations.
No
It would be advantageous to exempt certain smaller Registered Entities (LSE, DP, & PSE) that are non-scheduling/tagging entities. In addition to not having a scheduling/tagging desk, many of these entities do not have a 24/7 desk to receive RC/BA/TOP reliability directives/calls. and are too small (10s of MW) to even be substantially

significant in a reliability crisis. Instead of making this Standard applicable to all DPs, LSEs, and PSEs, we suggest that the RC, BAs, and TOPs to yearly publish those LSEs, DPs, and PSEs responsible for responding to emergency reliability directives. Also, it would be advisable for the RC, BA, and TOP giving a reliability directive to clearly preface the instruction with "The following is an emergency reliability directive" to differentiate from normal operations communications. Many smaller entities do not have the resources to install reliable voice recording equipment, but having access to such recordings would be beneficial towards compliance documentation; thus, it would be helpful to require the directive issuing RC, BA, or TOP to provide a digital copy of the voice recording, or transcript if available on request to the recipient of the directive. Short of a recording or transcript of the recording, it will be difficult to determine how a small entity without recorded line would show compliance other than writing down the directive as it is given and reading it back to the issuer. If the directive is lengthy, this will slow down the process and probably defeat the purpose and value of quick action. Further, there is no guarantee that the receiver will accurately retain a complicated directive if not immediately documented in some way to allow review. Last of all, what is meant by the word "intent?" Must the recipient understand and demonstrate the "why" the directive is given and the intended "outcome," or merely paraphrase the directive to demonstrate understanding? If the recipient repeats word for word the directive back to the issuer without any other indication that the directive is understood, is this a violation??

No

Only in making the Measures agree with the suggested changes to the requirements above.

No

Only in making the Measures agree with the suggested changes to the requirements above.

Yes

No

To reduce the compliance burden on smaller entities that would never receive a Reliability Coordinator directive and reduce needless Regional Entity auditing, it would be most helpful to require the RC to publish its list of entities responsible for receiving reliability directives. Also, any Registered Entity should be able to request copies of digital audio recordings or transcripts of the audio recordings if available from the RC.

No

Only in making the Measures agree with the suggested changes to the requirements above.

No

Only in making the Measures agree with the suggested changes to the requirements above.

Abstain

Abstain

Abstain

Group

WECC Reliability Coordinator

Mike Davis

WECC RC

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes
Yes
Yes
Group
PacifiCorp
Sandra Shaffer
PacifiCorp
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Group
Northeast Power Coordinating Council
Guy Zito
Northeast Power Coordinating Council
No
Interpersonal communication includes more than voice, such as instant messaging, text messaging and email. This Standard needs a definition of interpersonal communication. Having alternative interpersonal communications should be specified as a requirement. Work communication within Québec must be in French according to the law. It is understood and agreed that communication outside Québec with adjacent entities would be, and in fact is already, in English. Accordingly, R3 should be modify as the proposition below: R3. Unless dictated by law or otherwise agreed to, ...
No
See our comment for R3 in Q1. Accordingly, M3 should be modified as the proposition below: M3. ... that will be used to determine that personnel used English «or another language» as the language for all inter-entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. If a language other than English is used, both parties shall have and provide upon request, evidence that could include, but is not limited to operator logs.

voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement shall be provided to explain the use of the alternate language. (R3.) M3 allows a language other than English. Must the agreement for non-English be in place in advance of the call?
No
see M3 comment for question 2
No
Support the intent but not the existing language. Do not support Requirements that include some examples since the examples can be confused with the Requirement. Do not support one written Requirement that has two requirements. Recommend the following Requirements A new R1 - Each Entity shall have Operational Procedure requiring that communications directives be repeated back to the issuer R2 – leave as is A new R3 – If not repeated, then issuer shall request the receiving Entity to repeat the communication directive A new R4 – The issuer will acknowledge the correctness of the repetition of the communications directive
No
Addressed the new proposed Requirements above in Question 4.
No
Address the new proposed Requirements.
No
Remove the word “outages” that appears after “cascading” as per NERC Glossary and FERC Directive issued Dec. 27, 2007.
No
Add “an issued” to the wording as shown following: The Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and/or Purchasing-Selling Entity shall immediately confirm the ability to comply with the directive or inform the its Reliability Coordinator upon recognition of itshe inability to perform thean issued directive.
Yes
No
(i) R4: Since failing to issue an alert to 3 entities already attracts a “High” VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a “Severe” VSL. We suggest to change the High VSL to: “...failed to issue an alert to three, but not all, impacted...” and the Severe VSL to: “...failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a “Severe” violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a “High” violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a “Severe” violation. (ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
No
The intents of Requirements R7 and R8 are addressed in R6, and do not add anything. Suggest removing R7 and R8.
No
The intents of Measures M7 and M8 are addressed in M6, and do not add anything. Suggest removing M7 and M8.
No
(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe, if the VSLs are graded according to the number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more. (ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT’s response to our comments under Q11.
NPCC appreciates the work of the Drafting Team. No additional comments.
Individual
Brent Hebert
Calpine Corporation
Yes
Yes
Yes
Yes
Calpine supports three part communications when verbal directives are issued during real-time operational emergency conditions. Calpine believes all issued directives should be explicitly identified as such.



Group
Southern Company
Hugh Francis
Southern Company Services, Inc.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
No
IRO-001-1 Requirement 3 states that, "The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing- Selling Entities within its Reliability Coordinator Area to preserve the integrity and and reliability of the Bulk Electric System." This does not give one RC the authority to direct another RC. Requirement 7 and 8 would allow one RC to give a directive to another RC if they disagree. This would allow an RC with bad information to require another RC to carry out a mitigation plan that could degrade system reliability. For example, RC1 identifies a possible SOL violation in RC2's reliability area due to RC1's generation pattern. RC1 and RC2 can't agree that there is a problem. In order to mitigate the SOL a mitigation plan is developed by RC1 that requires RC2 to redispatch generation and reconfigure transmission in RC2's area so that the generation and transmission in RC1's area won't have to be redispatched or reconfigured. Suggested rewording of R7 and R8 R7. When Reliability Coordinators can not agree that a problem exists a mitigation plan will be developed by each Reliability Coordinator that will restore system reliability in their respective reliability areas. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed to relieve the identified Adverse Reliability Impact in their reliability area when the impacted Reliability Coordinators can not agree that a problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]
Yes
No
Reliability problems identified in other reliability areas are based on modeling information obtained from another reliability region. The fact that one RC will not agree that the model of an adjacent RC's reliability area may be more accurate than their model of the adjacent reliability area is no reason to impose a severe violation on the RC with the more accurate model of their own reliability region. Example: RC1 identifies a contingency overload of a transformer bank in an adjacent reliability area. The transformer bank was replaced the week before with a larger bank. When RC1 contacts RC2, RC2 explains that the bank overload is not valid because of the replacement. RC2 does not identify a problem due to the fact that the model RC2 is using has been updated with the new transformer bank. RC1 will not agree and requires RC2 to open a tie line with another reliability area to relieve the contingency overload. If RC2 does not follow the instructions of RC1, making the interconnection weaker to relieve a problem that does not exists, RC2 is out of compliance and a severe violation will be imposed.
Individual
Rao Somayajula

ReliabilityFirst Corporation
No
FERC 693 excludes distribution providers if they are not a user, owner or operator of BES. This should be reflected in R4 of the standard
No
No measures are posted for R4 of the revised standard
Yes
No
FERC 693 excludes distribution providers if they are not a user, owner or operator of BES. This should be reflected in R2 of the standard
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Individual
James H. Sorrels, Jr.
American Electric Power
Yes
AEP does generally agree with the revisions, but the use of the term "interpersonal communication capabilities" needs a NERC-approved definition. Otherwise, what is in scope? Are e-mail or text messages acceptable, and, if so, what type of guaranteed delivery is necessary?
Yes
Yes
Yes
AEP does generally agree with the revisions, but we have concerns with the much wider scope of three part communications that expand the required voice or transcript evidence. There is no rationale provided for changing the text in R1 and M1, and adding a the new R2 and M2. We would recommend that these items remain as stated in Version 2.
Yes
As described in the question 4 response, there is no rationale provided for changing the text in R1 and M1, and adding a the new R2 and M2. We would recommend that these items remain as stated in Version 2.
No
AEP is concerned that the severe VSL assigned to Requirement 2 is excessive and should be reconsidered.
Yes
Yes

Yes
Yes
Not applicable.
Not applicable.
Not applicable.
Group
SERC OC Standards Review Group
Jim Case
Entergy
No
The STD should clarify what types of communications are considered in the standard – is it voice or data communications or both?
Yes
Yes
No
The term “emergency” has a broad definition and other standards use “adverse conditions” or “adverse reliability impact”. There should be a consistency of terms when describing a system condition. The STD should include a definition of “directive” that includes more than “Emergency’ operational conditions. Should this requirement be modified to include the term “Reliability Directive” and the definition of this term added to the NERC Glossary?
Yes
Yes
If R1 changes as suggested in Question 4, the VSLs will need to be changed also.
No
What is the difference between “Adverse Reliability Impacts” and the definition of an IROL? Is this going to replace an IROL?
No
If R2 of IRO-001-1 is retired, what process is in place to ensure that reliability plans are kept up to date and are reviewed to approve footprint changes?
No
The measures should indicate how long records should be kept to verify compliance with the requirements.
Yes
No
Does the STD intend to give a Reliability Coordinator the authority to direct reliability outside their reliability area? This appears to be in conflict with IRO-001.
Yes
Yes
“The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers.”
Group
Bonneville Power Administration
Denise Koehn
BPA Transmission Reliability Program
Yes



No
Issue #1: Measure M3 The measure states that entities “shall have and provide” evidence that “personnel used English as the language for all” communications. This infers that all communications must be documented in some form or fashion and that any outage of the normal communication system must be met with alternative processes which will meet this measure, even if the alternative is the preparation of handwritten notes of each person’s conversations, noting that the communications occurred in English. Unfortunately, there have been times where our Dictaphone stopped recording phone calls, and nobody knew it for days! This measure sets us up for a violation! It’s just a matter of time.
Yes
Yes
Yes
No
Comments: Issue #1: Violation Severity Level The Moderate and Severe VSLs for Requirement R1 can lead to confusion. For instance, the Moderate VSL states that the responsible entity ‘did not acknowledge the recipient was correct in the repeated directive OR (emphasis theirs) failed to repeat the intent of the original statement to resolve any misunderstandings.’ What is it saying here? Is it dinging the responsible entity for making no response at all to the recipient after they repeated the intent of the message? Or is that what the Severe VSL is dinging for when it includes an AND rather than an OR in the statement? I can’t tell what the drafting team was intending with their statements, but one of the statements seem to infer that the responsible entity can actually be dinged for not doing both, acknowledging the recipient as being correct in their response and at the very same time repeating the intent of the original statement to resolve any misunderstandings because the recipient was incorrect in their response. This then argues that the recipient can be both correct and incorrect at the same time. I didn’t think that was possible...similar to binary code...either you get a one or a zero, but not both and never neither! I would argue that the drafting team should rewrite their VSLs to succinctly state that the responsible entity failed to respond after the recipient repeated the intent of the message. With that in mind, either the Moderate or the Severe VSL will be rewritten in an understandable way and the other VSL will disappear in the realms of impossible things.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Issue #2: Data Retention Why would the Distribution Provider and Generator Operator be required to store historical data (three years in the case of Requirement R1 and Measure M1; twelve months in the case of Requirement R2 and Measure M2) to show that these requirements and measures have been successfully implemented when these two entities (Distribution Provider and Generator Operator) aren’t even included either in Requirements R1 and R2 or in Measure M1 and M2? It would appear that they should only have to provide historical data for three months as required by the data retention time for Requirement 3 and Measure 3. Issue #1: Data Retention The first bullet in this section states that all entities are responsible for retaining documents associated with all Requirements and Measures associated with this standard. In reality, Requirements R1, R4, R5 and R6 and the corresponding Measures are the responsibility of the Reliability Coordinator. Requirements R2 and R3 and their corresponding Measures are implemented by the Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity and the Load Serving Entity. The Data Retention section should be rewritten to reflect this so that entities are not required to maintain documents that they aren’t suppose to even possess in some cases.
Individual
Brent ingebrightson
E.ON U.S.

No
E.ON U.S. suggests deleting "interpersonal" from the term "interpersonal communications capabilities". The need for and meaning of the term "interpersonal" isn't clear. Does it infer communications must be to/from a specific individual rather than to/from another reliability entity? Verbal vs electronic communications? All non-data communications? E.ON U.S. believes that the term "interpersonal" must be clarified if it is to remain in the standard. In the proposed R1 – how extensive must the quarterly testing be – establish contact or verify all functions? Does the term "alternative" include the "normal" communication medium or only the "backup" mediums? Does the alternative imply ALL possible communication alternatives? E.ON U.S. suggests replacing the term "alternative" with "planned backup" or similar. Quarterly testing needs to be limited to only established/planned backup communication methods not any potential "alternative" communication method.
No
E.ON U.S. believes that the M1 must be clarified to address whether the testing entity is responsible to develop and implement a mitigation plan when a test is unsuccessful due to an issue at the other end (i.e. non-testing entity).
No
E.ON U.S. suggests that R1 be modified to include the language that when an RC, BA and/or TOP issue a directive it must state: "This is a directive" and the entity receiving the directive must state: "I understand this is a directive". E.ON U.S. also requests that language be added to the requirement that states that this communication protocol is only for reliability related directives and not for other operational directives.
No
E.ON U.S. suggests that the VSL for R4 should be binary with the Severe VSL for failing to notify all entities as per R4. Partially meeting R4 is not consistent with the language in R4. E.ON U.S. also suggests that the VSL for R5 should be binary with the Severe VSL for failing to notify all entities as per R5. Partially meeting R5 is not consistent with the language in R5 but the reliability impact of partially meeting R5 is low.
COM-001-2 R1 and R2 and the associated M1 and M2 are only applicable to the RC, TOP and BA but the "Data Retention" for R1/R2 and M1/M2 require the DP and GOP to retain data for the Requirements and Measures. E.ON U.S. suggests that the requirement for data retention of the DP and GOP be eliminated from the standard.
Individual
Kasia Mihalchuk
Manitoba Hydro
No
do not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary as it would delay repairing the interpersonal communication capability. R2 assumed that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. We think this would be clearer if the requirement were revised to: "Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes." R3 is not necessary as it would be impossible to meet many other requirements if a common language such as English was not used. This requirement results in the waste of compliance resources managing and auditing documentation associated with it.
No
Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.
No
Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1. In addition, since R2 has a time component in the requirement four VSLs could be written based on the timeliness of the notification.
Yes
For the most part agree with the changes to the requirements and believe it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as directives. This makes it clear that only directives that are required for operating emergencies require three way communication. The SDT could further support

resolution to this directive issue by developing a definition for directive. In requirement 1, I would use another word than "require". Consider using "request". An RC, BA, and TOP can't force the recipient of the directive to repeat it back. They can ask or request it be repeated back though.

Yes

For the most part agree with the measures with the exception that a conforming change needs to be made to M1 if the suggestion regarding "require" in Q4 is accepted.

No

If the suggestion regarding "require" in Q4 is accepted, conforming changes to the VSL need to made. Additionally, believe the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct and the repeat was correct. In the Severe, we believe the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct but the repeat was incorrect. We agree that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive correctly, but the responsible entity did not acknowledge the recipient was correct. Severe VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.

Yes

No

R5 does not make sense as it doesn't create an adverse reliability impact should the RC fail to notify impacted entities.

No

Measure for R5 would need to be struck should R5 be struck as per question 8.

No

Believe two VSLs are possible for R1 based on whether the RC is acting or directing actions to prevent versus mitigate. Failure to mitigate should be Severe. Failure to prevent should be High because if the RC fails to act or direct action to prevent, the Adverse Reliability Impact may still not happen if system conditions change. For the Moderate VSL of R2, please remove the clause "but not all". It is not necessary.

No

Requirements R2 and R8 need additional work. R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, it inappropriately places the burden on the same RC to obtain the agreement of impacted RCs. No RC can be forced to agree. Rather R2 should remove the bullet to require agreement from the impacted RC and a new requirement should be written to require the impacted RC to acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given as the reason for not agreeing with the Operating Process, Procedure or Plan. This contributes to reliability by forcing the impacted RC to take action if the action is reasonable. Further, the drafting team needs to clarify that R2 also applies to the mitigation plan in R7. Because R7 requires the RC experiencing the Adverse Reliability Impact to develop the mitigation plan, the mitigation plan may not be agreed to by the impacted RC. The impacted RC may have a perfectly valid reliability, statutory, legal, or regulatory reason for not agreeing to the mitigation plan. R8 still obligates the RC to implement the mitigation plan developed in R7 though it may be contrary to reliability. R8 needs to allow the RC to refuse to implement the mitigation plan if the impacted RC has a reliability, statutory, legal or regulatory reason. Further the drafting team should consider if the impacted RC could refuse because the RC experiencing the Adverse Reliability Impact has not implemented comparable measures in their own area. R8 as written could allow an RC to simply pass cost on to the neighboring RC in the name of reliability. For example, the RC may not want to order a unit to be committed to avoid certain startup costs but they ask the neighboring RC to start up a unit in their footprint.

No

Conforming changes to the Measurements will be required for accepted changes from question 11.

No

Believe that four VSLs could be written for R4 based on the number of conference calls that are participated in. Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any.

Individual

Troy Willis

Georgia Transmission Corporation

No

Per the NERC Reliability Standards Development Procedure, under the definition of a Reliability Standard; "The obligations or requirements must be material to reliability and measurable." With regards to R3. - It goes without saying that inter-entity BES reliability communications must be in a common language between the entities for understanding operation instructions. From an audit/measurability standpoint, the evidence to the requirement would not converge to a finite amount of material. The amount of evidence required to demonstrate compliance of this requirement would be a huge administrative burden. It seems this concept (for use of the English language) could be captured under the "Entity Tasks and Interrelationships" section of the NERC Reliability Functional Model which defines the set of functions that must be performed to ensure the reliability of the bulk electric system. It also explains the relationship between and among the entities responsible for performing the tasks within each function. Additionally, this concept (for use of the English language) could further be explained under each applicable registration type (BA, GOP, TSP, LSE, PSE, and DP) in the NERC Reliability Functional Model. The Second option for R3 is to remove the Requirement from the continent wide Standards and have the effected entities/regions create a "Regional Standard" where entities involved in inter-entity BES reliability communications have a history of language barrier concerns. As a separate issue to R3, it also seems conflicting that a written requirement would provide the option of "Unless agreed to otherwise". This option described in the language of the requirement implies that it is not a requirement but an option which further supports the suggestions above.

No

See comments to Question 1 in regards to measurability.

No

Again, Requirement 3 seems to be an option.

Yes

Yes

Yes

Yes

Yes

Yes

Yes

N/A

N/A

N/A

Individual

Bob Thomas

Illinois Municipal Electric Agency

No

The IMEA supports comments submitted by the MISO Standards Collaboration Group indicating R3 is not necessary. Similarly, IMEA questions the necessity of R4. Therefore, we question the need to expand the applicability of COM-001 to DP, LSE, and PSE since R3 and R4 are the only two Requirements applicable to those functions.

No

Conforming changes are required to the Measures based on the suggested modifications to the requirements in Question 1.

No

Conforming changes are required to the VSLs based on the suggested modifications to the requirements in Question 1.

No

IMEA questions the necessity of expanding the applicability of COM-002 as proposed in R2, particularly to the DP, LSE, and PSE functions. IMEA recommends accomplishing the intent of COM-002-3 R2 by simply referring to COM-002-3 R1 in IRO-001-2 R2 which requires those entities to comply with the RC directive. Thus it would be understood that the functional entity had repeated the directive in order to comply with it; thereby avoiding the necessity of expanding applicability to another reliability standard.

Conforming changes are required to the Measures based on the suggested modifications to the requirements in

Question 4.
No
Conforming changes are required to the VSLs based on the suggested modifications to the requirements in Question 4.
Yes
No
IMEA supports the comments submitted by the MISO Standards Collaboration Group. In addition, while we agree with the proposed revisions to IRO-001-2 R2, IMEA recommends (as indicated in our comments to Question 4) that a reference be made to COM-002-3 R1 in IRO-001-2 R2. By including this reference, it is understood the applicable entities successfully repeated the directive in order to comply with the directive.
No
IMEA supports the comments submitted by the MISO Standards Collaboration Group.
No
IMEA supports the comments submitted by the MISO Standards Collaboration Group.
In order to minimize the number of reliability standards and the details covered in requirements - particularly those dealing with communications - it is recommended that an up-front provision/requirement be included as part of the compliance registration process that certain functional entities (e.g., DP, LSE, PSE, etc.) shall be responsible for providing the necessary information to transact services and for complying with the directives/requests of certain functional authorities (e.g., BA, PC, RC, etc.) in order to maintain/enhance reliability of the BES.
Individual
Chris Scanlon
Exelon
No
Agree with the revisions with the following exception/recommendation: COM-001: purpose is to address communication facilities / capabilities (technical/hardware). COM-002: purpose is to address effectiveness (protocols). COM-001: R.1-3 address telecommunication facility requirements. R4 requires English use. Recommend the drafting team move COM-001 R4 (use English) to COM-002 where effectiveness of communications (protocols) between entities is addressed.
No
See answer to #1
No
See answer # 1
Group
FirstEnergy
Sam Ciccone
FirstEnergy Corp.
Yes
We agree with many of the changes made to the standard including the change of title to reflect communications (voice and text messages). The parenthesis around 30 minutes or longer should be removed as parenthesis by definition mean a word, phrase, or sentence inserted in a passage to explain or modify the thought. This phrase is more than an explanation of the term failure. It sets forth a time requirement that is an integral part of R1. We suggest rewording the requirement as "Each RC, TOP, and BA shall notify impacted entities within 60 minutes of a failure of its normal

interpersonal communications capabilities that lasts 30 minutes or longer."
Yes
However, it is not clear whether to show compliance the voice recordings and associated transcripts are of the test done or of the conversations across those facilities.
Yes
Yes
1. We agree with the clarification in R1 that a directive per COM-002-3 is a "verbal directive associated with real-time operational emergency conditions". We understand this to be a "Reliability" directive used during times of emergency or in situations where reliability may be an issue. Also, with this clarification, it confirms that the term "directive", as used in this standard, does not include "Operational" directives issued by System Operators during normal system conditions to change the status of an element such as a circuit breaker. 2. The industry does not appear to have a clear, consistent definition of what constitutes a directive. We suggest the standard require the person issuing a directive to use the phrase "I am directing you to ...", "I am ordering you to ..." or something similar to invoke the three part communication requirement. 3. Since this standard deals with communications and coordination during emergency conditions, it may be helpful to change the title of the standard to "Communications and Coordination – Emergency Conditions". 4. The phrase "the intent of the directive" could be difficult to comply with and measure. The words "the intent of" should be removed from Requirements R1 and R2.
Yes
Yes
Yes
If the term "cascading" used in the definition is referring to the NERC-defined term, it should be capitalized.
No
Regarding the retirement of IRO-001-1 R7 – We are not convinced that this requirement is redundant with IRO-014-1 R1. The existing requirement requires the RC to "have clear, comprehensive coordination agreements with adjacent RCs to ensure that SOL or IROL violation mitigation requiring actions in adjacent RC areas are coordinated". IRO-014-1 R1 requires agreements for coordination of actions between RCs to support Interconnection reliability, but it does not specifically require "clear" and "comprehensive" agreements to mitigate SOL or IROL violations. For IRO-001-1 R7 to be properly retired, the "mitigation of SOL and IROL violations" should be explicitly stated in IRO-014-2 R1 as one of the items to be addressed in the RC's Operating Procedure, Process, or Plan.
Yes
Yes
No
See our comments from Questions 8. If IRO-001 R7 is retired and deemed covered by IRO-014 R1, then IRO-014 R1 should include the "mitigation of SOL and IROL violations" as one of the items to be addressed in the RC's Operating Procedure, Process, or Plan.
Yes
Yes
Individual
Roger Champagne
Hydro-Québec TransÉnergie (HQT)
No
Interpersonal communication includes more than voice, such as instant messaging, text messaging and email. This Standard needs a definition of interpersonal communication. Having alternative interpersonal communications should be specified as a requirement since there is actually no requirement to have that alternative way of communication in the first place. Work communication within Québec must be in French according to the law. It is understood and agreed that communication outside Québec with adjacent entities would be, and is in fact already, in English. Accordingly, R3 should be modify as the proposition below: R3. Unless determined by law or otherwise agreed to, ...
No
Comments: See our comment for R3 in Q1. Accordingly, M3 should be modify to read as the proposition below: M3. ... that will be used to determine that personnel used English «or another language determine otherwise» as the language

for all inter-entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. If a language other than English is used, upon request, evidence shall be provided to explain the use of the alternate language. (R3.) M3 allows a language other than English. Must the agreement for non-English be in place in advance of the call?

No

see M3 comment for question 2

No

Support the intent but not the existing language. Do not support Requirements that include some examples since the examples can be confused with the Requirement. Do not support one written Requirement that has two requirements. Recommend the following Requirements A new R1 - Each Entity shall have Operational Procedure requiring that communications directives be repeated back to the issuer R2 – leave as is A new R3 – If not repeated, then issuer shall request the receiving Entity to repeat the communication directive A new R4 – The issuer will acknowledge the correctness of the repetition of the communications directive

No

Address the new proposed Requirements above in Question 4.

No

address the new proposed Requirements.

No

Remove the word “outages” that appears after “cascading” as per NERC Glossary and FERC Directive issued Dec. 27, 2007.

No

Add “an issued” to the wording as shown following: Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform «an issued» directive.

Yes

No

(i) R4: Since failing to issue an alert to 3 entities already attracts a “High” VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a “Severe” VSL. We suggest to change the High VSL to: “...failed to issue an alert to three, but not all, impacted...” and the Severe VSL to: “...failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a “Severe” violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a “High” violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a “Severe” violation. (ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.

No

The intents of Requirements R7 and R8 are addressed in R6, and do not add anything. Suggest removing R7 and R8.

No

The intents of Measures M7 and M8 are addressed in M6, and do not add anything. Suggest removing M7 and M8.

No

(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe, if the VSLs are graded according to the number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more. (ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT’s response to our comments under Q11.

Individual

Scott Berry

Indiana Municipal Power Agency

No

The requirements do not consider a pre-recorded communication that might be sent out from the Transmission Operator to Generator Operators or any other entity. If this communication is a directive associated with a real-time operational emergency condition (depending on the judgement used by an entity or auditor), it does not make sense to repeat back a pre-recorded message on the phone. It might be good to clearly state in the standard that pre-recorded messages do not need to be repeated back.

Individual
Greg Rowland
Duke Energy
No
R1 requires an entity to “develop a mitigation plan” if a test of alternative communications capabilities is unsuccessful. We believe that this phrase should be changed to “take action”, reflecting that an entity’s response to an unsuccessful test may be to simply call or email a repair order. The phrase “develop a mitigation plan” implies that an entity must establish a backup to the alternative communications capabilities rather than just restore the alternative communications capabilities.
No
Replace the phrase “develop a mitigation plan” with the phrase “take action” per our comment on Requirement R1 above. Also, the DP and GOP should be deleted from the Data Retention section requirements for R1/M1 and R2/M2. Need to add a Data Retention requirement for R4/M4 for the DP and GOP.
No
Replace the phrase “develop a mitigation plan” with the phrase “take action to restore the capabilities” per our comment on Requirement R1 above.
No
We agree with adding the clarification that these requirements refer to “emergency” communications, but we think the word “Emergency” should be capitalized to further clarify that it is a defined term in the NERC Glossary. Also, the phrase “require the recipient of the verbal directive to repeat the intent of the directive back” should be changed to “have the recipient of the verbal directive repeat the intent of the directive back”. This avoids making the issuer of the directive make a statement requiring a repeat back unless the recipient actually fails to repeat back as normally expected.
No
Change “emergency” to “Emergency” per comment on R1 above. Also change the phrase “required the recipient of the verbal directive to repeat” to “had the recipient of the verbal directive repeat” per our comment on R1 above.
No
Change “emergency” to “Emergency” in the VSLs per our comment on R1 above. Also, we don’t see a tangible difference between the Moderate and Severe VSLs, and the High VSL should really be the Severe VSL. We suggest having just a High and a Severe VSL as follows: • High VSL: “The responsible entity issued a verbal directive associated with real-time operating Emergency conditions and had the recipient repeat back the intent of the directive, but did not either acknowledge the recipient was correct in the repeated directive or failed to repeat the intent of the original statement to resolve any misunderstandings.” • Severe VSL: “The responsible entity issued a verbal directive associated with real-time operating Emergency conditions, but did not have the recipient repeat back the intent of the directive.”
Yes
Yes
Yes
Yes
No
• R1 introduces the concept of “impacted Reliability Coordinators” which is unclear. Revise R1 as follows: R1. For conditions or activities that may impact other Reliability Coordinator Areas, each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for notification, exchange of information or coordination of actions with



those impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: • R2 Time Horizon should not include Long-term Planning. • R3 is unclear. Revise R3 as follows: R3. For conditions or activities that may impact other Reliability Coordinator Areas, each Reliability Coordinator shall make notifications and exchange reliability-related information with those impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans, or other available means to accomplish the notifications and exchange of reliability-related information. • R4 could be interpreted to require a weekly conference call even if there is no need for a call. Revise R4 as follows: R4. When there are conditions or activities that may impact other Reliability Coordinator areas, each Reliability coordinator shall participate in agreed upon conference calls, at least weekly, and other communication forums with those impacted Reliability Coordinators. • R5 – Insert the word “all” before impacted Reliability Coordinators for clarity. • R6, R7 and R8 are interrelated and unclear. Combine these three requirements into one clear requirement as follows: R6. When the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, the Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan and each impacted Reliability Coordinator shall implement the plan.

No

Need to revise the Measures to coincide with the recommended changes to the requirements in #11 above. Also under Data Retention, 12 months of evidence is needed for R3, R4 and M3, M4. However 3 years plus the current year is required for R5 through R8 and M5 through M8. We see no reason the data requirements to be different and believe 12 months is the proper amount of data retention.

No

Need to revise the VSLs to coincide with recommended changes to the requirements in #11 above.

Individual

Jianmei Chai

Consumers Energy Company

No

COM-002 R2 specifies the Generator Operator that receives a directive from the Transmission Operator, Reliability Coordinator or Balancing Authority must repeat the intent of the directive back to the Transmission Operator. COM-002 M2 specifies that evidence must be retained in the form of either voice recordings or transcripts by the generator operator. Since the Transmission Operator, Reliability Coordinator and Balancing Authority already have voice recording capability (centrally located), it is not necessary for the Generator to also install voice recording capability at each generating station. We suggest the wording of COM-002 be changed such that only the Transmission Operator, Reliability Coordinator and Balancing Authority be required to keep voice recordings or transcripts.

Group

IRC Standards Review Committee

Ben Li

IESO

No

(1) We do not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary and will only delay repairing the interpersonal communication capability as it would have to be completed first before fixing the system. If repairing the system would be a lengthy process, then a mitigation plan may be developed to document that the entity is in process to fix the system. There is no associated requirement to have an alternate interpersonal communication capability along with R1 to test it. Thus, if a responsible entity did not have an alternate interpersonal communication capability. R1. in essence. does not apply. We suggest adding a requirement to have an alternate

interpersonal communication capability to address this gap. Alternatively, the requirement to have an alternate interpersonal communication capability along with requirements to test and fix it could be stipulated in the Organization Certification Requirements. (2) In R2, we assume that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. We think this would be clearer if the requirement were revised to: "Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes." (3) R3 is not necessary. This requirement results in the waste of compliance resources managing and auditing documentation associated with it with no measurable improvement to reliability.

No

Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.

No

(1) Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1. (2) FERC expressed its desire in the June 2008 order on VSLs to have as many VSLs as possible. We suggest since R2 also has a time component in the requirement four VSLs could be written based on the timeliness of the notification as well as the number of impacted entities that were not notified. The VSLs should reflect both components.

Yes

(1) We largely agree with the changes to the requirements and believe it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as Reliability Directives. This makes it clear that only Reliability Directives that are required for operating emergencies require three way communication. We believe that the SDT could further support resolution to this Reliability Directive issue by developing a definition for Reliability Directive. We propose the following definition: Reliability Directive – A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority that requires action by the recipient to prevent or mitigate an Adverse Reliability Impact. Please note that AESO already has this term defined. The above suggested definition may be different from the AESO's definition. (2) In requirement 1, we do believe that another word than "require" should be used. Consider using "request". An RC, BA, and TOP can't force the recipient of the Reliability Directive to repeat it back. They can ask or request it be repeated back though.

Yes

We largely agree with the measures with the exception that a conforming change needs to be made to M1 if the suggestion regarding "require" in Q4 is accepted.

No

If the suggestion regarding "require" in Q4 is accepted, conforming changes to the VSL need to be made. Additionally, we believe the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the Reliability Directive was correct and the repeat was correct. In the Severe, we believe the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the Reliability Directive was correct but the repeat was incorrect. We agree that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal Reliability Directive associated with real-time operating emergency conditions and the recipient repeated the intent of the Reliability Directive correctly, but the responsible entity did not acknowledge the recipient was correct. Severe VSL: The responsible entity issued a verbal Reliability Directive associated with real-time operating emergency conditions and the recipient repeated the intent of the Reliability Directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.

Yes

The drafting team should consider that NERC is moving away from using the term "cascading outages". FERC has directed NERC to rescind this definition, and use the defined term "cascading" instead.

Yes

Yes

Yes

Yes

No

(1) R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, placing the burden on the same RC to obtain the agreement of impacted RCs may not be appropriate since the RC experiencing the Adverse Reliability Impact may not be able to force impacted RC to concur. We suggest the SDT to consider: a. Remove the bullet to require agreement from the impacted RC; b. Add a new requirement that the impacted RC shall acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given. (2) We realize that R7 implies that the RC experiencing the Adverse Reliability Impact has come up with an alternative plan when its initial plan was not agreed to, but the alternative may still be disagreed by the impacted RC. Simply implementing the alternative plan, as stipulated in R8, could expose the

impacted RC to operate in an unreliable or unsafe domain. We therefore request the SDT to assess if any requirements need to be introduced to resolve this difference with due regard to reliability concerns in both RC areas when agreement cannot be reached even on the alternative plan.

No

Conforming changes to the Measurements will be required if changes as suggested in Question 11 are introduced.

No

(1) In the Commission's June 2008 order on VSLs, they expressed their preference for having as many VSLs as possible. We believe that four VSLs could be written for R4 based on the number of conference calls that are participated in. We also believe this would be consistent with the Commission's guideline 4 because the requirement is written in the plural, that is conference calls, so all conference calls must be considered in aggregate. Thus, failure to participate in more than one conference call does not represent distinct violations but a single violation. (2) Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any. Note: CAISO abstains from these comments.

AESO abstains from commenting on VSLs. VSLs for Alberta will be developed by provincial authorities.

Individual

Michael R. Lombardi

Northeast Utilities

No

It is understood that the use of the term "interpersonal communications" and "interpersonal communications capabilities" were selected by the RC SDT to better reflect the intent of the Standard. However, NU reviewers are concerned over the new terminology and believe that it is unclear and not universally accepted to mean the same thing to all parties. NU's belief is that the original use of the terms "telecommunications" and "telecommunications facilities" are clearer and universally understood. NU recommends that the original terms be re-instated or the term "interpersonal communications" be replaced to reflect the intent of the Standard is to ensure "voice and text equipment" is adequate for communicating real-time operating information. R1 – the requirement has evolved to test alternative equipment, versus a requirement to have primary and alternative equipment. Standard should require entities to have the equipment such as in the -1 version. R2 is to notify impacted entities in the event of a loss of normal communications. With backup communications operating correctly do we assume there is no impact and therefore notification is not required? This is unclear from a compliance perspective and unnecessary if backup communications are available. Alternative communications often go several layers deep including cell phones, satellite phones, radio, etc.

Yes

Yes

Yes

No

NU agrees with expanding the applicability of the Standard beyond the Reliability Coordinators, Balancing Authorities and Transmission Operators to ensure that the recipient of a verbal directive repeats back the directive to the issuer (R2). Despite NU's agreement with R2, NU believes that M2 is duplicative to the intent of M1 and unnecessarily requires the installation of voice recording capabilities at the entities other than a RC, BA or TOP. It is our belief that the voice recordings of the RC, BA and TOP (M1) provide the evidentiary support required by all applicable entities.

Yes

No

Remove the word "outages" that appears after "cascading" as per NERC Glossary and FERC Directive issued Dec. 27, 2007.

No

The intent of R3 is not clear - i.e., "... shall inform its Reliability Coordinator upon recognition of its inability to perform a directive". Does this requirement pre-suppose a directive has been given? Suggest adding clarifying language that indicates that the requirement is applicable subsequent to a directive being received. It is our belief that the wording of Measure M3 supports the suggested changes to R3.

Yes

No

(i) R4: Since failing to issue an alert to 3 entities already attracts a "High" VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a "Severe" VSL. We suggest to change the High VSL to:

<p>"...failed to issue an alert to three, but not all, impacted..." and the Severe VSL to: "...failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a "Severe" violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a "High" violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a "Severe" violation. (ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.</p>
No
The intents of Requirements R7 and R8 are addressed in R6, and do not add anything. Suggest removing R7 and R8.
No
The intents of Measures M7 and M8 are addressed in M6, and do not add anything. Suggest removing M7 and M8.
No
(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe, if the VSLs are graded according to the number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more. (ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT's response to our comments under Q11.
Northeast Utilities appreciates the work of the Drafting Team. No additional comments.
Individual
Dan Rochester
Independent Electricity System Operator
No
We suggest the SDT review the applicability to Transmission Service Providers, Load-Serving Entities and Purchasing Entities from a real time operating perspective. We do not believe they are active participants in real time operation for which they require to have the same communication capability as the RCs, TOPs, BAs and DPs. Interpersonal communication includes more than voice, such as instant messaging, text messaging and email. This Standard needs a definition of interpersonal communication. Having alternative interpersonal communications should also be specified as a requirement. Work communication within Québec must be in French according to the law. It is understood and agreed that communication outside Québec with adjacent entities would be, and already is, in English. Accordingly, R3 should be modified as proposed below: R3. Unless dictated by law or otherwise agreed to, ... R4: We believe "Interconnection" should be replaced by "interconnection" since the former is not a defined term.
No
M3 and M4 may need to be revised depending on the response to our comments under Q1, above.
No
The VSLs for R3 may have to be changed based on the outcome of our comments in Q2 regarding the language of communication.
No
(i) We suggest the word "emergency" be capitalized since it is a defined term which generally covers the conditions under which directives are issued. (ii) We further suggest that to avoid confusion between operating instructions and directives, the term directive should be defined as suggested below: Directive or Reliability Directive – A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority that requires complying action by the recipient to prevent or mitigate an Adverse Reliability Impact. (iii) Since R1 contains two requirements, there may be some benefit in separating these since that would make the VSLs clearer, i.e. separate the requirements placed on the issuer of the directive to (a) request the recipient to repeat the intent of the directive and (b) to acknowledge the response of the recipient as correct.
No
Comments: Some changes may be necessary based on the SDT's response to our suggestion in Q4.
No
The sequence of communication required under R1 is intended to ensure that directives from the issuing entities are clearly understood. The earlier this sequence is broken, the greater the uncertainty that this goal is achieved and the greater should be the severity level. Thus, failure to request that the recipient entity repeat the intent of the directive – the earliest step in the sequence - should attract the "Severe" VSL. Also, failing to repeat the original directive when there is any misunderstanding, again, in our view, leaves the intent of the directive equally unclear and should also attract a "Severe" VSL. Failing to acknowledge the recipient was correct in the repeating the intent of the directive – the last step in the sequence – is already assigned a "Moderate" VSL and this should not be repeated in the "Severe" VSL. We therefore suggest that the two conditions under "High" and "Severe" in R1 be combined as one under "Severe" as follows: The responsible entity issued a verbal directive associated with real-time operating emergency conditions but did not require the recipient to repeat the intent of the directive; OR The responsible entity issued a verbal directive associated with real-time operating emergency conditions and required the recipient to repeat the intent of the directive, but failed to repeat the intent of the original statement to resolve any misunderstandings.
No

Comments: Remove the word "outages" that appears after "cascading" as per NERC Glossary and FERC Directive issued Dec. 27, 2007.
No
Comments: Change "...inability to perform a directive." to "...inability to perform an issued directive."
Yes
No
(i) R1: For clarity, we suggest changing "it" to "that". R4: Since failing to issue an alert to 3 entities already attracts a "High" VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a "Severe" VSL. We suggest to change the High VSL to: "...failed to issue an alert to three, but not all, impacted...." and the Severe VSL to: "...failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a "Severe" violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a "High" violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a "Severe" violation. (ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
No
(i) Definition of Adverse Reliability Impact is duplicated as it is already defined in IRO-001-2. (ii) We do not see the need for R7 and R8 since R6 already stipulates the necessary actions to be taken, it is not necessary for the Reliability Coordinator with the identified Adverse Reliability Impact to develop (re-develop?) a mitigation plan when the impacted Reliability Coordinators did not agree that the problem exists. What may be needed is the insertion of "shall develop a mitigation plan" before "notify impacted Reliability Coordinators" in R5. We suggest removing these requirements (R7 and R8).
No
Depending on the response of the SDT, changes to M5 to M8 may be required.
No
(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe if the VSLs are graded according to then number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more. (ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT's response to our comments under Q11.
In our comments on the previous posting, we expressed a disagreement with a proposed to remove IRO-005, in particular the latter part of R13, which stipulated that: In instances where there is a difference in derived limits, the Reliability Coordinator and its Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall always operate the Bulk Electric System to the most limiting parameter. Our rationale was that The FAC standards cover the methodology used in calculating SOLs and IROLs. Regardless of how these limits are calculated, in practice there always exists the possibility that different entities may come up with SOLs/IROLs, especially of the inter-ties, that could be different. Operating to the lowest SOLs/IROLs when more than one set exists is a necessary requirement for reliable operation. The SDT responded by suggesting that this requirement is redundant with FAC-014 which -014 states the requirement for developing and sharing SOL and IROL between the RC, PA, TP and TOP in both the planning and operating time frames. However, this response fails to address the situation where during operation, the situation of disagreeing SOLs or IROLs does arise. FAC-014 or any other standards do not currently have a requirement to ensure that all entities operate to the lower limit before the difference is resolved. This leaves room for unreliable operation. We suggest the SDT to consider restating this requirement somewhere. Note that this requirement is similar to R6 of IRO-014 that when in doubt, the more conservative approach should be taken. If it is necessary to have an R6 to deal with an uncertain identification/notification of an Adverse Reliability Impact, we don't see why it is not necessary to operate to a lower SOL or IROL when there is an unresolved difference.
Individual
Jason Shaver
American Transmission Company
No
We believe that the team needs to define the term "interpersonal communications capabilities". It's our understanding that the term refers to how entities will communicate (i.e. phone, cell phone, video conferencing, email or satellite phone) with each other, but that is not being clearly communicated by the requirement. A clear definition of the term "interpersonal communication capabilities" will likely provide needed clarity to the requirement. Requirement 1 seems to imply that an entity will be judge based on a single test of its alternative communication system within any given quarter, and if that test fails they must develop a mitigation plan. Our concern is that the requirement should allow for multiple testing and only if all or a reoccurring issue is found should you document and fix the issue. (Example: An entity performs weekly tests of its alternative communication system. One of the test's fails. All other tests, following the failed test, are successful. Would the entity have to develop a mitigation plan based on the one failure, or are the other successful tests sufficient to show compliance?) In R2, we assume that the 30 minutes or longer in parenthesis is

intended to describe the length of the outage. To clarify, we suggest that the language be changed to: "Each RC, TOP and BA shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communication systems lasting longer than 30 minutes."
No
See our comment to question 1
No
are supportive of the language regarding "directives" which clarifies that directives are those which involve operating emergencies. However, in R1, we believe that the word "requires" should be changed to "request". An entity can request that another entity repeat back a directive but we cannot "require" it.
No
See our comments to question 4
Yes
Yes
Yes
Group
Midwest ISO Standards Collaborators
Jason L. Marshall
Midwest ISO
No
We do not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary and will only delay repairing the interpersonal communication capability as it would have to be completed first before fixing the system. In R2, we assume that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. We think this would be clearer if the requirement were revised to: "Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes." R3 is not necessary as it would be impossible to meet many other requirements if a common language such as English was not used. This requirement results in the waste of compliance resources managing and auditing documentation associated with it.
No
Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.
No
Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1. In addition, we suggest since R2 has a time component in the requirement, four VSLs could be written based on the timeliness of the notification. This would be consistent with the FERC's expressed desire in the June 2008 order on VSLs in which they stated that as many VSLs should be developed as possible.
Yes
We largely agree with the changes to the requirements and believe it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as directives. This makes it clear that only directives that are required for operating emergencies require three way communication. We believe that the SDT could further support resolution to this directive issue by developing a definition for directive. We propose the following definition: Directive or Reliability Directive – A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority that requires action by the recipient to prevent or mitigate an Adverse Reliability Impact. In requirement 1, we do believe that another word than "require" should be used. Consider using "request". An RC, BA, and TOP can't force the recipient of the directive to repeat it back. They can ask or request it be repeated back though.
Yes
We largely agree with the measures with the exception that a conforming change needs to be made to M1 if the

suggestion regarding "require" in Q4 is accepted.
No
If the suggestion regarding "require" in Q4 is accepted, conforming changes to the VSL need to be made. Additionally, we believe the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct and the repeat was correct. In the Severe, we believe the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct but the repeat was incorrect. We agree that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive correctly, but the responsible entity did not acknowledge the recipient was correct. Severe VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.
Yes
No
We agree with many of the changes. However, we believe R5 is not necessary for reliability. We agree the RC should notify impacted entities when the transmission problem has been mitigated; however, if the RC fails to notify the impacted entities, it will not result in an Adverse Reliability Impact. Thus, it is not necessary as a sanctionable requirement.
No
Measurement 5 needs to be struck if R5 is struck per question 8.
No
The Commission stated in their order on VSLs in June of 2008 their preference for as many VSLs as possible. We believe two VSLs are possible for R1 based on whether the RC is acting or directing actions to prevent versus mitigate. Failure to mitigate should be Severe. Failure to prevent should be High because if the RC fails to act or direct action to prevent, the Adverse Reliability Impact may still not happen if system conditions change. For the Moderate VSL of R2, please remove the clause "but not all". It is not necessary.
No
Requirements R2 and R8 need additional work. R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, it inappropriately places the burden on the same RC to obtain the agreement of impacted RCs. No RC can be forced to agree. Rather R2 should remove the bullet to require agreement from the impacted RC and a new requirement should be written to require the impacted RC to acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given as the reason for not agreeing with the Operating Process, Procedure or Plan. This contributes to reliability by forcing the impacted RC to take action if the action is reasonable. Further, the drafting team needs to clarify that R2 also applies to the mitigation plan in R7. Because R7 requires the RC experiencing the Adverse Reliability Impact to develop the mitigation plan, the mitigation plan may not be agreed to by the impacted RC. The impacted RC may have a perfectly valid reliability, statutory, legal, or regulatory reason for not agreeing to the mitigation plan. R8 still obligates the RC to implement the mitigation plan developed in R7 though it may be contrary to reliability. R8 needs to allow the RC to refuse to implement the mitigation plan if the impacted RC has a reliability, statutory, legal or regulatory reason. Further the drafting team should consider if the impacted RC could refuse because the RC experiencing the Adverse Reliability Impact has not implemented comparable measures in their own area. R8 as written could allow an RC to simply pass cost on to the neighboring RC in the name of reliability. For example, the RC may not want to order a unit to be committed to avoid certain startup costs but they ask the neighboring RC to start up a unit in their footprint.
No
Conforming changes to the Measurements will be required for accepted changes from question 11.
No
In the Commission's June 2008 order on VSLs, they expressed their preference for having as many VSLs as possible. We believe that four VSLs could be written for R4 based on the number of conference calls that are participated in. We also believe this would be consistent with the Commission's guideline 4 because the requirement is written in the plural, that is conference calls, so all conference calls must be considered in aggregate. Thus, failure to participate in more than one conference call does not represent distinct violations but a single violation. Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any.

## Consideration of Comments on Reliability Coordination — Project 2006-06

The Reliability Coordination Standard Drafting Team (RC SDT) thanks all commenters who submitted comments proposed revisions to the standards for Project 2006-06: Reliability Coordination. These standards were posted for a 30-day public comment period from July 10, 2009 through August 9, 2009. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 31 sets of comments, including comments from more than 87 different people from over 62 companies representing 8 of the 10 Industry Segments as shown in the table on the following pages.

All comments received have been reformatted so that all comments received in response to the first question appear following the first question, etc. All comments have been posted at the following site:

[http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)

**Changes to Requirements, Measures and Violation Severity Levels in COM-001-2:** Stakeholders suggested that there is a need to define Interpersonal Communications for this standard. The RC SDT is proposing the following definitions:

**Interpersonal Communication:** Any method that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any method that is able to serve as a substitute for and is redundant to normal Interpersonal Communication and does not utilize the same infrastructure (medium) as normal Interpersonal Communications.

Other stakeholders suggested edits to the requirements. The RC SDT revised the wording of R2 to add clarity and revised R3 to include the phrase “unless dictated by law...” to address legal requirements in some areas.

Several stakeholders suggested removing the mitigation plan from R1 and M1. The RC SDT agreed and made revisions to other measures to reflect changes to the requirements.

Stakeholders suggested adding more VSLs for R2. The RC SDT agreed and drafted additional VSLs reflecting timing and the number of entities notified. Other changes to the VSLs were made based on revisions to the requirements.

Stakeholders suggested removing the Distribution Provider and Generator Operator from the Data Retention section for R1 of COM-001. Since these are not applicable entities in R1, they were removed from Data Retention for the requirement.

The standard and the proposed definitions will be posted for an additional comment period.

**Changes to Requirements, Measures and Violation Severity Levels in COM-002-3** Stakeholder consensus has been achieved with respect to the retirement of R1 and M1 from the last approved version of the standard. In response to the majority of the comments, the drafting team has modified and rearranged the order of the remaining requirements, and coined a definition for “Reliability Directive”. The drafting team is also coordinating with the RTO SDT (Project 2007-03) and the OPCP SDT (Project 2007-02) on the definition and usage of the term “Reliability Directive”.



Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.

As a reference, we have included the existing definition of Emergency:

Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

In accord with the majority of commenters, the drafting team made changes to the Measures to bring them into conformance with the adopted suggestions from question 4 for improving the Requirements.

### **Changes to Requirements, Measures and Violation Severity Levels in IRO-001-2**

Stakeholders generally agreed with the revisions to the requirements. Several stakeholders suggested adding the words “an issued” before “directive” in R3. The RC SDT agreed and made the change. No further revisions were made to the requirements. The proposed revisions to the definition of Adverse Reliability Impacts is being posted for comment.

Stakeholders agreed with the measures for IRO-001-2. The measure M3 was revised to reflect the revision to R3. No other revisions were suggested for the measures.

The VLS for R3 was revised to add the word “issued” before directive to match the revised requirement. Stakeholders suggested minor revisions to the VSLs for R4 and R5. The RC SDT agreed and made the revisions.

The RC SDT believes that stakeholder consensus has been achieved on IRO-001-2. The definition of Adverse Reliability Impacts is included in this posting for comment.

### **Changes to Requirements, Measures and Violation Severity Levels in IRO-014-2**

Stakeholders suggested revising R8 to include provisions for avoiding implementing actions that would violate safety, equipment or regulatory or statutory requirements. The RC SDT agreed and added this to the requirement. Other stakeholders suggested adding “For conditions or activities that impact other Reliability Coordinator Areas,...” at the beginning of R1 and R3. The RC SDT agreed and added this to the requirements. The Time Horizons for R2 were revised as suggested to “Same Day Operations and Operations Planning”. Several stakeholders expressed concerns regarding having R6-R8 as separate requirements. The intent of R6, R7, and R8 is to handle those things that arise that may not have had a plan identified in advance. The RC SDT contends the requirements should be separate requirements as they identify distinctly different actions and are adequate as written.

Stakeholders agreed with the Measures, except to make conforming changes for revisions to the requirements. The RC SDT has revised the measures based on the new requirements. One stakeholder suggested revision to the Data Retention for R5-R8. Data Retention was revised for R5 to 12 months, however the RC SDT believes that three years is the correct period for R6-R8.

Several stakeholders suggested developing four VSLs for R5. Typically, in the course of BES operations, the number of impacted Reliability Coordinators will be a small number. The SDT effort in this regard was to write the VSLs to represent both the large and small

scenarios containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios. Other stakeholders suggested four VSLs for R4. The essence of R4 is written to require impacted RC's to talk at least weekly and is singular in nature. VSL's can not be written for conference calls that exceed the singular requirement.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at [gerry.adamski@nerc.net](mailto:gerry.adamski@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

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<sup>1</sup> The appeals process is in the Reliability Standards Development Procedures:  
<http://www.nerc.com/standards/newstandardsprocess.html>.

**Index to Questions, Comments, and Responses**

1. Do you agree with the revisions made to the Requirements in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area. ....10

2. Do you agree with the revisions made to the Measures in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area.....23

3. Do you agree with the revisions made to the Violation Severity Levels in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area. ....29

4. Do you agree with the revisions made to the Requirements in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area. ....33

5. Do you agree with the revisions made to the Measures in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area.....45

6. Do you agree with the revisions made to the Violation Severity Levels in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area. ....49

7. Do you agree with the revisions to the definition of Adverse Reliability Impacts (IRO-001-2)? If not, please explain in the comment area.....55

8. Do you agree with the revisions to the Requirements in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.....58

9. Do you agree with the revisions to the Measures in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.....63

10. Do you agree with the revisions to the Violation Severity Levels in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.....66

11. Do you agree with the revisions to the Requirements in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.....70

12. Do you agree with the revisions to the Measures in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.....79

13. Do you agree with the revisions to the Violation Severity Levels in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.....82

14. If you have any other comments, not expressed in questions above, for the RC SDT on any of the other changes made to this set of standards and their associated implementation plans, please provide them here.....88

**Consideration of Comments on Project 2006-06 Reliability Coordination**

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

		Commenter	Organization	Industry Segment										
				1	2	3	4	5	6	7	8	9	10	
1.	Group	Russell A. Noble	Northwest LSE Group			X								
		<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region Segment Selection</b>										
		1. Rick Paschall	Pacific Northwest Generating Cooperative	WECC 3										
2.	Group	Guy Zito	Northeast Power Coordinating Council											X
		<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region Segment Selection</b>										
		1. Ralph Rufrano	New York Power Authority	NPCC 5										
		2. Alan Adamson	New York State Reliability Council, LLC	NPCC 10										
		3. Paul Kiernan	New York Independent System Operator	NPCC 2										
		4. Roger Champagne	Hydro-Quebec TransEnergie	NPCC 2										
		5. Kurtis Chong	Independent Electric System Operator	NPCC 2										
		6. Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC 1										
		7. Edward Dahill	National Grid	NPCC 1										
		8. Bohdan M. Dackow	US Power Generating Company (USPG)	NPCC NA										
		9. Chris de Graffenried	Consolidated Edison Co. of New York	NPCC 1										
		10. Brian D. Evans-Mongeon	Utility Services	NPCC 8										

**Consideration of Comments on Project 2006-06 Reliability Coordination**

	Commenter	Organization	Industry Segment																	
			1	2	3	4	5	6	7	8	9	10								
11. Mike Garton	Dominion Resources Services, Inc.	NPCC	5																	
12. Brian L. Gooder	Ontario Power Generation Incorporated	NPCC	5																	
13. Kathleen Goodman	ISO - New England	NPCC	2																	
14. David Kiguel	Hydro One Networks Inc.	NPCC	1																	
15. Michael R. Lombardi	Northeast Utilities	NPCC	1																	
16. Randy MacDonald	New Brunswick System Operator	NPCC	2																	
17. Greg Mason	Dynegy Generation	NPCC	5																	
18. Bruce Metruck	New York Power Authority	NPCC	6																	
19. Chris Orzel	FPL/NextEra Energy	NPCC	5																	
20. Robert Pellegrini	The United Illuminating Company	NPCC	1																	
21. Michael Schiavone	National Grid	NPCC	1																	
22. Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3																	
23. Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10																	
24. Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10																	
25. Gregory Campoli	New York Independent System Operator	NPCC	2																	
3.	Group	Jim Case	SERC OC Standards Review Group	X		X														
	<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>																
1.	Jack Kerr	Dominion Virginia Power	SERC	1, 3																
2.	Steve Fritz	ACES Power Marketing	SERC	6																
3.	Joel Wise	Tennessee Valley Authority	SERC	1, 3, 5, 9																
4.	Hugh Francis	Southern Co.	SERC	1, 3, 5																
5.	Alan Jones	Alcoa Power Generation	SERC	1, 5																
6.	Scott McGough	Oglethorpe Power Corporation	SERC	5																
7.	Keith Steinmetz	E.ON US Services	SERC	1, 3, 5																
8.	Mike Hardy	Southern Co.	SERC	1, 3, 5																
9.	Steve McElhane	South Mississippi Electric Membership Corp.	SERC	1, 3, 5																
10.	Gary Hutson	South Mississippi Electric Membership Corp.	SERC	1, 3, 5																
11.	John Rembold	Southern Illinois Power Cooperative	SERC	1, 3, 5																

**Consideration of Comments on Project 2006-06 Reliability Coordination**

	Commenter	Organization	Industry Segment											
			1	2	3	4	5	6	7	8	9	10		
12.	Timmy LeJeune	Louisiana Generating, LLC	SERC	1, 3, 5										
13.	Wayne Pourciau	Georgia System Operations Corp.	SERC	3										
14.	Tim Hattaway	PowerSouth Energy Cooperative	SERC	1, 3, 5										
15.	Tony Halcomb	Cogentrix Energy, LLC	SERC	5, 6										
16.	Robert Thomasson	Big Rivers Electric Cooperative	SERC	1, 3, 5										
17.	Wes Davis	SERC Reliability Corp.	SERC	10										
18.	John Troha	SERC Reliability Corp.	SERC	10										
4.	Group	Denise Koehn	Bonneville Power Administration		X		X		X	X				
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	Steven Davis	Generation Support	WECC	1										
5.	Group	Sam Ciccone	FirstEnergy		X		X	X	X	X				
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	Dave Folk	FE	RFC											
2.	Doug Hohlbaugh	FE	RFC											
3.	John Martinez	FE	RFC											
4.	Kevin Querry	FE	RFC											
6.	Group	Ben Li	IRC Standards Review Committee			X								
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	Patrick Brown	PJM	RFC	2										
2.	James Castle	NYISO	NPCC	2										
3.	Anita Lee	AESO	WECC	2										
4.	Bill Phillips	MISO	MRO	2										
5.	Steve Myers	ERCOT	ERCOT	2										
6.	Lourdes Estrada-Salinero	CAISO	WECC	2										
7.	Charles Yeung	SPP	SPP	2										
8.	Matt Goldberg	ISO-NE	NPCC	2										

**Consideration of Comments on Project 2006-06 Reliability Coordination**

		Commenter	Organization	Industry Segment										
				1	2	3	4	5	6	7	8	9	10	
7.	Group	Jason L. Marshall	Midwest ISO Standards Collaborators		X									
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	Joe Knight	Great River Energy	MRO	1										
2.	Bob Thomas	IMEA	SERC	4										
3.	Barb Kedrowski	We Energies	RFC	3, 4, 5										
4.	Jim Cyrulewski	JDRJC Associates	RFC	8										
8.	Individual	Steve Alexanderson	Central Lincoln			X								
9.	Individual	Virginia Cook	JEA	X		X		X						
10.	Individual	Daniel Duff	Liberty Electric Power LLC					X						
11.	Individual	Mike Davis	WECC Reliability Coordinator											X
12.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X					
13.	Individual	Brent Hebert	Calpine Corporation					X	X					
14.	Individual	Brandy A. Dunn	Western Area Power Administration	X					X					
15.	Individual	Hugh Francis	Southern Company	X		X		X						
16.	Individual	Rao Somayajula	ReliabilityFirst Corporation											X
17.	Individual	James H. Sorrels, Jr.	American Electric Power	X		X		X	X					
18.	Individual	Brent Ingebrigtsen	E.ON U.S.	X		X		X	X					
19.	Individual	Kasia Mihalchuk	Manitoba Hydro	X		X		X	X					
20.	Individual	Troy Willis	Georgia Transmission Corporation	X										

**Consideration of Comments on Project 2006-06 Reliability Coordination**

		Commenter	Organization	Industry Segment										
				1	2	3	4	5	6	7	8	9	10	
21.	Individual	Bob Thomas	Illinois Municipal Electric Agency				X							
22.	Individual	Chris Scanlon	Exelon	X		X		X	X					
23.	Individual	Roger Champagne	Hydro-Québec TransEnergie (HQT)	X										
24.	Individual	Scott Berry	Indiana Municipal Power Agency				X							
25.	Individual	Greg Rowland	Duke Energy	X		X		X	X					
26.	Individual	Jianmei Chai	Consumers Energy Company			X	X	X						
27.	Individual	Michael R. Lombardi	Northeast Utilities	X		X		X						
28.	Individual	Dan Rochester	Independent Electricity System Operator		X									
29.	Group	Carol Gerou	MRO NSRS											
30.	Individual	Alice Murdock	Xcel Energy											
31.	Individual	Jason Shaver	American Transmission Company	X										



**1. Do you agree with the revisions made to the Requirements in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

**Summary Consideration: Most stakeholders agreed with the requirements in COM-001.** Stakeholders suggested that there is a need to define Interpersonal Communications for this standard. The RC SDT is proposing the following definitions:

**Interpersonal Communication:** Any method that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any method that is able to serve as a substitute for and is redundant to normal Interpersonal Communication and does not utilize the same infrastructure (medium) as normal Interpersonal Communications.

Other stakeholders suggested edits to the requirements. The RC SDT revised the wording of R2 to add clarity, revised R3 to include the phrase “unless dictated by law...” to address legal requirements in some areas, and removed references to the mitigation plan in R1.

Organization	Yes or No	Question 1 Comment
Central Lincoln		<p>Comments: The inclusion of load serving entities and distribution providers does not address any present reliability gap. R4 is extremely vague, and is not likely to be interpreted consistently. What form of evidence will be acceptable? Photos of telephones?</p>
<p><b>Response: The RC SDT thanks you for your comment. The LSE and DP were added as applicable entities to R3 as a result of stakeholder comments during the previous posting. The DP and GOP were added as applicable entities in R4 per FERC Order 693 directives. The Measure M4 for Requirement R4 was revised to:</b></p> <p>M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.)</p>		
JEA		<p>R2 I would suggest that R2 be clarified so that it is understood that the 60 minutes starts at the beginning of the outage (or the end of the 30 minute period, if that was instead the intent) so that there can be no confusion about when the clock starts for notification periods. Otherwise, the wording of these standards is clearer than the current version.</p> <p>R4 I am concerned that with the word "capabilities" that the DP/GO's will be expected by the auditors to demonstrate that its "capability" was working every single second of every day since their last audit, especially since you have not included a data retention period(especially since this is rated a "high" VRF).</p>

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 1 Comment
<p><b>Response: The RC SDT thanks you for your comment.</b></p> <p><b>R2: We have revised the wording to clarify the intent:</b></p> <p>Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal Interpersonal Communications capabilities that lasts 30 minutes or longer. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p> <p><b>R4: The Measure 4 for Requirement R4 was revised to:</b></p> <p>M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.)</p> <p>Data retention for R4, M4 was added to the revised standard.</p>		
Northwest LSE Group	No	<p>The RC STD has done a commendable effort. However, it is questionable how expanding the applicability to include LSEs, DPs, &amp; PSEs that are non-scheduling/tagging entities will increase reliability of the BES. In fact, we believe that increasing the applicability could do just the opposite. Many of these entities that are only registered as a LSE, DP, and/or PSE do not have a 24/7 desk/dispatch facility to receive RC/BA/TOP reliability directives, and are too small (10s of MW) to effectively assist during a reliability crisis. In addition, the Regional Entities (WECC in this case) are overwhelmed as it is, asking them to take on even more audit responsibilities is unrealistic, and not worth the effort.</p> <p>In addition, for the small Registered Entity, what would constitute compliance with R3 &amp; R4 if no TOP/BA real-time directives were received? Everyone employed speaks English and there is at least one phone on the premises? Will the small DP and/or LSE be required to monitor its communication system 24/7 with competent personnel for an unlikely TOP/BA directive?</p>
<p><b>Response: The RC SDT thanks you for your comment. The LSE, DP and PSE were added as applicable entities to R3 as suggested by other stakeholders in the last posting. The Distribution Provider and Generator Operator are in R4 per FERC Order 693 directives.</b></p> <p><b>The measures for the requirements specify what would constitute evidence needed to demonstrate compliance. Note that R3 and R4 are not focused solely on communication related to “directives.” Requirement R3 is focused on all “. . . inter-entity Bulk Electric System (BES) reliability communications . . . “ The drafting team feels that R4 as written allows flexibility to the entities in meeting the performance requirement. Note that R4 only applies to Distribution Providers and Generator Operators, not to LSEs.</b></p>		
American Transmission Company	No	<p>We believe that the team needs to define the term “interpersonal communications capabilities”. It’s our understanding that the term refers to how entities will communicate (i.e. phone, cell phone, video conferencing, email or satellite phone) with each other, but that is not being clearly communicated by the requirement. A clear definition of the term “interpersonal communication capabilities” will likely provide needed clarity to the requirement.</p>

**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 1 Comment
		<p>Requirement 1 seems to imply that an entity will be judge based on a single test of its alternative communication system within any given quarter, and if that test fails they must develop a mitigation plan. Our concern is that the requirement should allow for multiple testing and only if all or a reoccurring issue is found should you document and fix the issue. (Example: An entity performs weekly tests of its alternative communication system. One of the test’s fails. All other tests, following the failed test, are successful. Would the entity have to develop a mitigation plan based on the one failure, or are the other successful tests sufficient to show compliance?)</p> <p>In R2, we assume that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. To clarify, we suggest that the language be changed to: Each RC, TOP and BA shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communication systems lasting longer than 30 minutes.</p>
<p><b>Response: The RC SDT thanks you for your comment. Several stakeholders have expressed a concern with the definition of interpersonal communications capabilities. The RC SDT concurs and has drafted a definition that will be posted for comment.</b></p> <p><b>R1: Other stakeholders also expressed concern with developing a mitigation plan in this requirement. The RC SDT has revised the requirement to:</b></p> <p>R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>The RC SDT feels that this will address your comment.</b></p> <p><b>R2: We concur and have revised the requirement as you suggest.</b></p>		
Northeast Power Coordinating Council	No	<p>Interpersonal communication includes more than voice, such as instant messaging, text messaging and email. This Standard needs a definition of interpersonal communication.</p> <p>Having alternative interpersonal communications should be specified as a requirement.</p> <p>Work communication within Québec must be in French according to the law. It is understood and agreed that communication outside Québec with adjacent entities would be, and in fact is already, in English. Accordingly, R3 should be modified as the proposition below: R3. Unless dictated by law or otherwise agreed to,</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT agrees that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to:</b></p> <p>Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions.</p> <p><b>The RC SDT agrees with your comment regarding the alternate interpersonal communications capability and has revised the requirement to read:</b></p> <p>R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal</p>		

**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 1 Comment
<p>Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>We concur with your suggestion regarding R3 and have made the suggested revision.</b></p>		
SERC OC Standards Review Group	No	The STD should clarify what types of communications are considered in the standard is it voice or data communications or both?
<p><b>Response: The RC SDT thanks you for your comment. Interpersonal communication does not include data (see IRO-010-1) and includes more than voice, such as instant messaging, text messaging and email. The RC SDT has developed a draft definition of interpersonal communications capabilities that will be posted for comment which meets the FERC Order 693 directive to:</b></p> <p>Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions.</p>		
IRC Standards Review Committee	No	<p>(1) We do not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary and will only delay repairing the interpersonal communication capability as it would have to be completed first before fixing the system. If repairing the system would be a lengthy process, then a mitigation plan may be developed to document that the entity is in process to fix the system. There is no associated requirement to have an alternate interpersonal communication capability along with R1 to test it. Thus, if a responsible entity did not have an alternate interpersonal communication capability, R1, in essence, does not apply. We suggest adding a requirement to have an alternate interpersonal communication capability to address this gap. Alternatively, the requirement to have an alternate interpersonal communication capability along with requirements to test and fix it could be stipulated in the Organization Certification Requirements.</p> <p>(2) In R2, we assume that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. We think this would be clearer if the requirement were revised to: "Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes."</p> <p>(3) R3 is not necessary. This requirement results in the waste of compliance resources managing and auditing documentation associated with it with no measurable improvement to reliability.</p>
<p><b>Response: The RC SDT thanks you for your comment. 1) The RC SDT agrees with your comment regarding the mitigation plan and the requirement for alternate interpersonal communications capability and has revised the requirement to read:</b></p> <p>R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to</p>		

**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 1 Comment
		<p>restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p>2) <b>We concur with your comment and have revised the requirement accordingly.</b></p> <p>3) <b>The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement.</b></p>
Midwest ISO Standards Collaborators	No	<p>We do not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary and will only delay repairing the interpersonal communication capability as it would have to be completed first before fixing the system.</p> <p>In R2, we assume that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. We think this would be clearer if the requirement were revised to: "Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes."</p> <p>R3 is not necessary as it would be impossible to meet many other requirements if a common language such as English was not used. This requirement results in the waste of compliance resources managing and auditing documentation associated with it.</p>
		<p><b>Response: The RC SDT thanks you for your comment. 1) The RC SDT agrees with your comment regarding the mitigation plan and the requirement for alternate interpersonal communications capability and has revised the requirement to read:</b></p> <p>R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p>2) <b>We concur with your comment and have revised the requirement accordingly.</b></p> <p>3) <b>The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement.</b></p>
ReliabilityFirst Corporation	No	FERC 693 excludes distribution providers if they are not a user, owner or operator of BES. This should be reflected in R4 of the standard
		<p><b>Response: The RC SDT thanks you for your comment. FERC Order 693 endorses the NERC Statement of Compliance Registry criteria (paragraph 512) and also adopted the proposal to require the ERO to modify COM-001 to apply to distribution providers and generator operators (paragraph 493).</b></p>

**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 1 Comment
E.ON U.S.	No	<p>E.ON U.S. suggests deleting “interpersonal” from the term “interpersonal communications capabilities”. The need for and meaning of the term “interpersonal” isn’t clear. Does it infer communications must be to/from a specific individual rather than to/from another reliability entity? Verbal vs electronic communications? All non-data communications? E.ON U.S. believes that the term “interpersonal” must be clarified if it is to remain in the standard.</p> <p>In the proposed R1 “how extensive must the quarterly testing be “ establish contact or verify all functions? Does the term “alternative” include the "normal" communication medium or only the “backup” mediums? Does the alternative imply ALL possible communication alternatives? E.ON U.S. suggests replacing the term “alternative” with “planned backup” or similar. Quarterly testing needs to be limited to only established/planned backup communication methods not any potential "alternative" communication method.</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT agrees with several stakeholders that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to:</b></p> <p>Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions.</p> <p><b>The testing requirement is to ensure that the alternative (not “normal”) interpersonal communications capability works as a minimum. Entities may go above and beyond the requirement if they desire. The requirement was edited to identify the alternative and test it.</b></p> <p>R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its alternative Interpersonal Communication capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]</i></p>		
Manitoba Hydro	No	<p>do not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary as it would delay repairing the interpersonal communication capability.</p> <p>R2 assumed that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. We think this would be clearer if the requirement were revised to: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes?</p> <p>R3 is not necessary as it would be impossible to meet many other requirements if a common language such as English was not used. This requirement results in the waste of compliance resources managing and auditing documentation associated with it.</p>
<p><b>Response: The RC SDT thanks you for your comment. 1) The RC SDT agrees with your comment regarding the mitigation plan and the requirement</b></p>		

**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 1 Comment
<p><b>for alternate interpersonal communications capability and has revised the requirement to read:</b></p> <p>R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>2) We concur with your comment and have revised the requirement accordingly.</b></p> <p><b>3) The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement.</b></p>		
Georgia Transmission Corporation	No	<p>Per the NERC Reliability Standards Development Procedure, under the definition of a Reliability Standard? The obligations or requirements must be material to reliability and measurable? With regards to R3. - It goes without saying that inter-entity BES reliability communications must be in a common language between the entities for understanding operation instructions. From an audit/measurability standpoint, the evidence to the requirement would not converge to a finite amount of material. The amount of evidence required to demonstrate compliance of this requirement would be a huge administrative burden. It seems this concept (for use of the English language) could be captured under the "Entity Tasks and Interrelationships" section of the NERC Reliability Functional Model which defines the set of functions that must be performed to ensure the reliability of the bulk electric system. It also explains the relationship between and among the entities responsible for performing the tasks within each function. Additionally, this concept (for use of the English language) could further be explained under each applicable registration type (BA, GOP, TSP, LSE, PSE, and DP) in the NERC Reliability Functional Model. The Second option for R3 is to remove the Requirement from the continent wide Standards and have the effected entities/regions create a "Regional Standard" where entities involved in inter-entity BES reliability communications have a history of language barrier concerns.</p> <p>As a separate issue to R3, it also seems conflicting that a written requirement would provide the option of "Unless agreed to otherwise". This option described in the language of the requirement implies that it is not a requirement but an option which further supports the suggestions above.</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement. The Reliability Functional Model is not an enforceable standard.</b></p>		
Illinois Municipal Electric Agency	No	<p>The IMEA supports comments submitted by the MISO Standards Collaboration Group indicating R3 is not necessary. Similarly, IMEA questions the necessity of R4. Therefore, we question the need to expand the applicability of COM-001 to DP, LSE, and PSE since R3 and R4 are the only two Requirements applicable to those functions.</p>

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 1 Comment
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement. R4 is included per FERC Order 693 directive.</b></p>		
Exelon	No	<p>Agree with the revisions with the following exception/recommendation: COM-001: purpose is to address communication facilities / capabilities (technical/hardware). COM-002: purpose is to address effectiveness (protocols).COM-001: R.1-3 address telecommunication facility requirements. R4 requires English use. Recommend the drafting team move COM-001 R4 (use English) to COM-002 where effectiveness of communications (protocols) between entities is addressed.</p>
<p><b>Response: The RC SDT thanks you for your comment. COM-001 Requirement R3 (English use) is being incorporated into COM-003-1 by the Operations Personnel Communications Protocols SDT (Project 2007-02). It will be retired from this standard upon approval of COM-003-1. We see no benefit to moving it to COM-002 at this time.</b></p>		
Hydro-Québec TransEnergie (HQT)	No	<p>Interpersonal communication includes more than voice, such as instant messaging, text messaging and email. This Standard needs a definition of interpersonal communication.</p> <p>Having alternative interpersonal communications should be specified as a requirement since there is actually no requirement to have that alternative way of communication in the first place.</p> <p>Work communication within Québec must be in French according to the law. It is understood and agreed that communication outside Québec with adjacent entities would be, and is in fact already, in English. Accordingly, R3 should be modified as the proposition below: R3. Unless determined by law or otherwise agreed to,</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT agrees that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to:</b></p> <p>Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions.</p> <p><b>The RC SDT agrees with your comment regarding the alternate interpersonal communications capability and has revised the requirement to read:</b></p> <p>R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>We concur with your suggestion regarding R3 and have made the suggested revision.</b></p>		
Duke Energy	No	<p>R1 requires an entity to “develop a mitigation plan” if a test of alternative communications capabilities is unsuccessful. We believe that this phrase should be changed to “take action”, reflecting that an entity’s response to an unsuccessful test may</p>



**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 1 Comment
		<p>be to simply call or email a repair order. The phrase “develop a mitigation plan” implies that an entity must establish a backup to the alternative communications capabilities rather than just restore the alternative communications capabilities.</p>
<p><b>Response: The RC SDT thanks you for your comment. We concur with your comment regarding the mitigation plan and have revised the requirement to:</b></p> <p>R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its alternative Interpersonal Communication capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]</i></p>		
Northeast Utilities	No	<p>It is understood that the use of the term "interpersonal communications" and "interpersonal communications capabilities" were selected by the RC SDT to better reflect the intent of the Standard. However, NU reviewers are concerned over the new terminology and believe that it is unclear and not universally accepted to mean the same thing to all parties. NU's belief is that the original use of the terms "telecommunications" and "telecommunications facilities" are clearer and universally understood. NU recommends that the original terms be re-instated or the term "interpersonal communications" be replaced to reflect the intent of the Standard is to ensure "voice and text equipment" is adequate for communicating real-time operating information.</p> <p>R1 ? the requirement has evolved to test alternative equipment, versus a requirement to have primary and alternative equipment. Standard should require entities to have the equipment such as in the -1 version.R2 is to notify impacted entities in the event of a loss of normal communications. With backup communications operating correctly do we assume there is no impact and therefore notification is not required? This is unclear from a compliance perspective and unnecessary if backup communications are available. Alternative communications often go several layers deep including cell phones, satellite phones, radio, etc.</p>
<p><b>Response: The RC SDT thanks you for your comment. Several stakeholders have expressed a concern about the definition of interpersonal communications. The RC SDT is proposing a definition that will be posted for comment to address those concerns as well as your comment.</b></p> <p><b>R1: The intent of the requirement is as you suggest. This requirement has been revised to:</b></p> <p>R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>Notification of a failure of the normal interpersonal communications is still required by R2. The testing requirement is for one designated alternative. No notification is required for the failure of a non-designated alternative.</b></p>		

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Organization	Yes or No	Question 1 Comment
Independent Electricity System Operator	No	<p>We suggest the SDT review the applicability to Transmission Service Providers, Load-Serving Entities and Purchasing Entities from a real time operating perspective. We do not believe they are active participants in real time operation for which they require to have the same communication capability as the RCs, TOPs, BAs and DPs.</p> <p>Interpersonal communication includes more than voice, such as instant messaging, text messaging and email. This Standard needs a definition of interpersonal communication.</p> <p>Having alternative interpersonal communications should also be specified as a requirement.</p> <p>Work communication within Quebec must be in French according to the law. It is understood and agreed that communication outside Québec with adjacent entities would be, and already is, in English. Accordingly, R3 should be modified as proposed below: R3. Unless dictated by law or otherwise agreed to,</p> <p>R4: We believe “Interconnection” should be replaced by “interconnection” since the former is not a defined term.</p>
<p><b>Response: The RC SDT thanks you for your comment. TSP, LSE and PSE are not required to have the same Interpersonal communication as RC, TOP or BA. The only requirement applicable to TSP, LSE and PSE is R3 (English language).</b></p> <p><b>The RC SDT agrees that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to:</b></p> <p>Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions.</p> <p><b>The RC SDT agrees with your comment regarding the alternate interpersonal communications capability and has revised the requirement to read:</b></p> <p>R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>We concur with your suggestion regarding R3 and have made the suggested revision.</b></p> <p><b>R4: Interconnection is a defined term in the NERC Glossary of Terms (Updated on April 20, 2009).</b></p>		
MRO NSRS	No	<p>(1) The MRO NSRS does not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary and will only delay repairing the interpersonal communication capability as it would have to be completed first before fixing the system. Please create a definition for the interpersonal communication capability (or systems) term used in the response to comments to draft 1 in the summary of consideration for question 1.</p> <p>(2) In R2, MRO NSRS assumes that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. MRO NSRS thinks this would be clearer if the requirement were revised to: “Each Reliability Coordinator,</p>

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Organization	Yes or No	Question 1 Comment
		<p>Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes.”</p> <p>(3) R3 is not necessary as it would be impossible to meet many other requirements if a common language such as English was not used. This requirement results in the waste of compliance resources managing and auditing documentation associated with it.</p>
<p><b>Response: The RC SDT thanks you for your comment. 1) The RC SDT agrees with your comment regarding the mitigation plan and the requirement for alternate interpersonal communications capability and has revised the requirement to read:</b></p> <p>R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p>The team has drafted a definition for both the term “Interpersonal Communication” and the term, “Alternative Interpersonal Communication.”</p> <p><b>2) We concur with your comment and have revised the requirement accordingly.</b></p> <p><b>3) The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement.</b></p>		
Xcel Energy	No	<p>(1) While an improvement from the terminology used in version 1, the term "interpersonal communications" is still vague. We feel the intent of the drafting team was to include non-verbal communication as well, like email. However, as drafted, this point is not clear. We feel a definition is needed in order avoid disparity in its interpretation.</p> <p>(2) It appears that the requirement for RCs, TOPs and BAs to have communication capabilities (whether primary or backup/alternative) was removed from the standard. Yet, R1 requires the RC, TOP and BA to test alternative communications capabilities. Requirements to have primary and backup/alternative communication capabilities should be explicitly stated.</p> <p>(3) Additionally, we feel that the DP and GOP should have testing requirements for their communication capabilities with their TOP and BA.</p>
<p><b>Response: The RC SDT thanks you for your comment. 1) The RC SDT agrees that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to:</b></p> <p>Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions.</p> <p><b>2) The RC SDT does not agree with your assertion regarding R1. The requirement for alternate interpersonal communications capability implies that primary interpersonal communications are in place.</b></p>		

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Organization	Yes or No	Question 1 Comment
<p><b>3) The DP and GOP were added as applicable entities in R4 per FERC Order 693 directives. The RC SDT does not agree with your assertion regarding the need for testing requirements. However, your concerns may be addressed in the Measure 4 revision:</b></p>		
<p>M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.)</p>		
Western Area Power Administration	Yes	R4 should say "Generator Operator" rather than "Generation Operator"
<p><b>Response: The RC SDT thanks you for your comment. We have made this revision.</b></p>		
American Electric Power	Yes	AEP does generally agree with the revisions, but the use of the term "interpersonal communication capabilities" needs a NERC-approved definition. Otherwise, what is in scope? Are e-mail or text messages acceptable, and, if so, what type of guaranteed delivery is necessary?
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT agrees that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to:</b></p> <p>Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions.</p>		
FirstEnergy	Yes	We agree with many of the changes made to the standard including the change of title to reflect communications (voice and text messages). The parenthesis around 30 minutes or longer should be removed as parenthesis by definition mean a word, phrase, or sentence inserted in a passage to explain or modify the thought. This phrase is more than an explanation of the term failure. It sets forth a time requirement that is an integral part of R1. We suggest rewording the requirement as "Each RC, TOP, and BA shall notify impacted entities within 60 minutes of a failure of its normal interpersonal communications capabilities that lasts 30 minutes or longer."
<p><b>Response: The RC SDT thanks you for your comment. We concur with your comment and have revised the requirement accordingly.</b></p>		
Bonneville Power Administration	Yes	
PacifiCorp	Yes	
Southern Company	Yes	

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Organization	Yes or No	Question 1 Comment
Calpine Corporation	Yes	

**2. Do you agree with the revisions made to the Measures in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

**Summary Consideration:** Most commenters agreed with the measures for COM-001. The measures were revised based on revisions to the requirements as well as comments received below. Several stakeholders suggested removing the mitigation plan from R1 and M1. The RC SDT agreed and made the revision. M3 and M4 were revised as:

M3. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that its personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected BES. If a language other than English is used, each party shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language or the law that requires the use of an alternate language. (R3.)

M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information (R4).

Organization	Yes or No	Question 2 Comment
Northwest LSE Group	No	To demonstrate compliance the small Registered Entities will be in the position of proving a negative: i.e., there is no real-time BES operational communication from or to any other entity. Currently, for the smaller entities, communication with the Transmission Operator or Balancing Authority is strictly for operational safety and local reliability of service, not operational reliability for the BES as defined by NERC. It is not clear how the small entity will show compliance. If R4 requires the small load-only DP and/or LSE to have 24/7 monitoring of its phone, and contracted answering service is unable to contact anyone, will this be a violation?
<p><b>Response:</b> The RC SDT thanks you for your comment. R4 is applicable only to registered Distribution Providers and Generator Operators. The RC SDT has revised the measure to prevent having to prove a negative:</p> <p>M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information</p>		

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Organization	Yes or No	Question 2 Comment
<p><b>There is no 24/7 monitoring requirement in R4.</b></p>		
<p>Northeast Power Coordinating Council</p>	<p>No</p>	<p>See our comment for R3 in Q1. Accordingly, M3 should be modified as the proposition below: M3. “ that will be used to determine that personnel used English “or another language” as the language for all inter-entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. If a language other than English is used, both parties shall have and provide upon request, evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement shall be provided to explain the use of the alternate language. (R3.) M3 allows a language other than English. Must the agreement for non-English be in place in advance of the call?</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT has revised the measure to conform to revisions in the requirement:</b></p> <p>M3. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. If a language other than English is used, both parties shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language or the law that requires the use of an alternate language.</p> <p><b>The RC SDT feels that agreement is not required prior to the call, but only prior to the conversation using the alternate language.</b></p>		
<p>Bonneville Power Administration</p>	<p>No</p>	<p>Issue #1: Measure M3 The measure states that entities “shall have and provide” evidence that “personnel used English as the language for all” communications. This infers that all communications must be documented in some form or fashion and that any outage of the normal communication system must be met with alternative processes which will meet this measure, even if the alternative is the preparation of handwritten notes of each person’s conversations, noting that the communications occurred in English. Unfortunately, there have been times where our Dictaphone stopped recording phone calls, and nobody knew it for days! This measure sets us up for a violation! It’s just a matter of time.</p>
<p><b>Response: The RC SDT thanks you for your comment. The measure as written is consistent with the requirement. The RC SDT did not receive any other comments to modify this measure.</b></p>		
<p>IRC Standards Review Committee</p>	<p>No</p>	<p>Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.</p>
<p><b>Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.</b></p>		

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Organization	Yes or No	Question 2 Comment
Midwest ISO Standards Collaborators	No	Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.
<b>Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.</b>		
Central Lincoln	No	Comments: M4 is of little help regarding R4. How does an entity perform this demonstration, especially in the case of an off-site audit? If left to the regions, there will be no consistency.
<b>Response: The RC SDT thanks you for your comment. Based on comments received on R4 and M4, the RC SDT has revised M4 to:</b> M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.)		
ReliabilityFirst Corporation	No	No measures are posted for R4 of the revised standard
<b>Response: The RC SDT thanks you for your comment. A measure M4 is in both the redline and clean version of the posted standard.</b>		
E.ON U.S.	No	E.ON U.S. believes that he M1 must be clarified to address whether the testing entity is responsible to develop and implement a mitigation plan when a test is unsuccessful due to an issue at the other end (i.e. non-testing entity).
<b>Response: The RC SDT thanks you for your comment. We have removed the mitigation plan from the requirement and measure.</b>		
Manitoba Hydro	No	Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.
<b>Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.</b>		
Georgia Transmission Corporation	No	See comments to Question 1 in regards to measurability.
<b>Response: The RC SDT thanks you for your comment. Please see response to question 1.</b>		



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Organization	Yes or No	Question 2 Comment
Illinois Municipal Electric Agency	No	Conforming changes are required to the Measures based on the suggested modifications to the requirements in Question 1.
<b>Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.</b>		
Exelon	No	See answer to #1
<b>Response: The RC SDT thanks you for your comment. See response to question 1.</b>		
Hydro-Québec TransÉnergie (HQT)	No	Comments: See our comment for R3 in Q1. Accordingly, M3 should be modify to read as the proposition below: M3. “ that will be used to determine that personnel used English “or another language determine otherwise” as the language for all inter- entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. If a language other than English is used, upon request, evidence shall be provided to explain the use of the alternate language. (R3.)M3 allows a language other than English. Must the agreement for non-English be in place in advance of the call?
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT has revised the measure to conform to revisions in the requirement:</b></p> <p>M3. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that its personnel used English as the language for all inter- entity BES reliability communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected BES. If a language other than English is used, both parties shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language or the law that requires the use of an alternate language.</p> <p><b>The RC SDT feels that agreement is not required prior to the call, but only prior to the conversation using the alternate language.</b></p>		
Duke Energy	No	Replace the phrase “develop a mitigation plan” with the phrase “take action” per our comment on Requirement R1 above. Also, the DP and GOP should be deleted from the Data Retention section requirements for R1/M1 and R2/M2. Need to add a Data Retention requirement for R4/M4 for the DP and GOP.
<b>Response: The RC SDT thanks you for your comment. The measure M1 was revised to conform to suggested revisions to R1. We have also revised the Data Retention section.</b>		
Independent Electricity System	No	M3 and M4 may need to be revised depending on the response to our comments under Q1, above.

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Organization	Yes or No	Question 2 Comment
Operator		
<p><b>Response: The RC SDT thanks you for your comment. Conforming revisions were made to the measures based on revisions to the requirements.</b></p>		
MRO NSRS	No	Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.
<p><b>Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.</b></p>		
Xcel Energy	No	Measures should be modified to reflect changes to requirements suggested in question 1.
<p><b>Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.</b></p>		
American Transmission Company	No	See our comment to question 1
<p><b>Response: The RC SDT thanks you for your comment. See response to question 1.</b></p>		
JEA	Yes	<p>M1 - very nice, probably we will also be held responsible for completing the mitigation plans, so perhaps you should go ahead and add that so no one gets caught without sufficient evidence in that regard</p> <p>M2 – fine</p> <p>M3 - this measure would indicate that operators have the authority to agree among themselves to speak other languages, rather than a more formal agreement between entities, which is how I read the language of the requirement. If that is not what is meant, then I would suggest the examples include Memorandums of Agreement or Understanding, Contracts or other more formal mechanisms.</p> <p>M4 - fine</p>
<p><b>Response: The RC SDT thanks you for your comment. M1: We removed the mitigation plan from R1 and M1.</b></p> <p><b>M3: The requirement does not preclude individuals from using an alternate language as long as they agree to do so prior to the conversation.</b></p>		
FirstEnergy	Yes	However, it is not clear whether to show compliance the voice recordings and associated transcripts are of the test done or of the conversations across those facilities.
<p><b>Response: The RC SDT thanks you for your comment. Since the requirement is to test, the evidence provided should be sufficient to show that the test</b></p>		

**Consideration of Comments on Project 2006-06 Reliability Coordination**

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Organization	Yes or No	Question 2 Comment
<b>was performed and any appropriate follow up actions taken (in case of failure).</b>		
Western Area Power Administration	Yes	M4 should say "Generator Operator" rather than "Generation Operator"
<b>Response: The RC SDT thanks you for your comment. We have made this revision.</b>		
SERC OC Standards Review Group	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Southern Company	Yes	
American Electric Power	Yes	
Northeast Utilities	Yes	

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**3. Do you agree with the revisions made to the Violation Severity Levels in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

**Summary Consideration:** Stakeholders suggested adding more VSLs for R2. The RC SDT agreed and drafted additional VSLs reflecting time and the number of entities notified. Other changes to the VSLs were made based on revisions to the requirements.

Organization	Yes or No	Question 3 Comment
Northwest LSE Group	No	With the vague verbiage of R4 coupled with the High and Severe VSL, it is important to clarify R4 with the small DP in mind, and possibly include Lower and Moderate VSLs for smaller load-only DP violations.
<p><b>Response: The RC SDT thanks you for your comment. Based on the requirement, the RC SDT does not feel that additional VSLs can be written for R4. The intent of the requirement is missed if the responsible entity does not have Interpersonal Communication Capabilities with both its TOP or its BA.</b></p>		
Northeast Power Coordinating Council	No	see M3 comment for question 2
<p><b>Response: The RC SDT thanks you for your comment. See response to question 2.</b></p>		
IRC Standards Review Committee	No	<p>(1) Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1.</p> <p>(2) FERC expressed its desire in the June 2008 order on VSLs to have as many VSLs as possible. We suggest since R2 also has a time component in the requirement four VSLs could be written based on the timeliness of the notification as well as the number of impacted entities that were not notified. The VSLs should reflect both components.</p>
<p><b>Response: The RC SDT thanks you for your comment. 1) Conforming changes were made to the VSLs based on the modifications to the requirements. 2) We have added VSLs based on the time requirements.</b></p>		
Midwest ISO Standards Collaborators	No	<p>Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1.</p> <p>In addition, we suggest since R2 has a time component in the requirement, four VSLs could be written based on the timeliness of the notification. This would be consistent with the FERC's expressed desire in the June 2008 order on VSLs in which they stated that as many VSLs should be developed as possible.</p>
<p><b>Response: The RC SDT thanks you for your comment. Conforming changes were made to the VSLs based on the modifications to the requirements.</b></p>		

**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 3 Comment
<b>We have added VSLs based on the time requirements.</b>		
Central Lincoln	No	The severity levels have little or no relationship to reliability. Failure to provide a evidence of an agreement per R3, for example, has no impact on reliability by itself; yet it carries the maximum VSL. In reality, the impact would only be severe if the use of an alternate language resulted in a miscommunication.
<b>Response: The RC SDT thanks you for your comment. The VSLs are a metric applied after a requirement has been violated. The intent is to provide a relative measure of how far the action or inaction was from the threshold set in the requirement. Some requirements lend themselves to a relative measure of meeting the threshold (i.e. “almost met”, 12 minutes when the requirement was 10 minutes, etc), and some do not. Those that do not are often termed “binary” requirements (either you meet the threshold or you do not). The relative risk to the bulk electric system of not meeting a requirement is specifically reflected in the requirement’s VRF. The relative size of a registered entity is beyond the scope of the standard drafting team and is addressed through the NERC Statement of Compliance Registry Criteria or taken into account as a mitigating factor through the Regional compliance enforcement programs.</b>		
E.ON U.S.	No	E.ON U.S. suggests that R1 be modified to include the language that when an RC, BA and/or TOP issue a directive it must state: “This is a directive” and the entity receiving the directive must state: "I understand this is a directive". E.ON U.S. also requests that language be added to the requirement that states that this communication protocol is only for reliability related directives and not for other operational directives.
<b>Response: The RC SDT thanks you for your comment. The RC SDT does not agree with your assertion regarding R1. The purpose of R1 is to ensure that operating entities have adequate Interpersonal Communications capabilities.</b>		
Manitoba Hydro	No	Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1. In addition, since R2 has a time component in the requirement four VSLs could be written based on the timeliness of the notification.
<b>Response: The RC SDT thanks you for your comment. Conforming changes were made to the VSLs based on the modifications to the requirements. We have also added VSLs based on the time requirements.</b>		
Georgia Transmission Corporation	No	Again, Requirement 3 seems to be an option.
<b>Response: The RC SDT thanks you for your comment. The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives.</b>		

**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 3 Comment
Illinois Municipal Electric Agency	No	Conforming changes are required to the VSLs based on the suggested modifications to the requirements in Question 1.
<b>Response: The RC SDT thanks you for your comment. Conforming changes were made to the VSLs based on the modifications to the requirements.</b>		
Hydro-Québec TransEnergie (HQT)	No	see M3 comment for question 2
<b>Response: The RC SDT thanks you for your comment. See response to question 2.</b>		
Duke Energy	No	Replace the phrase “develop a mitigation plan” with the phrase “take action to restore the capabilities” per our comment on Requirement R1 above.
<b>Response: The RC SDT thanks you for your comment. Mitigation plan was removed from the requirement.</b>		
Independent Electricity System Operator	No	The VSLs for R3 may have to be changed based on the outcome of our comments in Q2 regarding the language of communication.
<b>Response: The RC SDT thanks you for your comment. Conforming changes were made to the VSLs based on the modifications to the requirements.</b>		
MRO NSRS	No	Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1.  In addition, the MRO NSRS suggests since R2 has a time component in the requirement four VSLs could be written based on the timeliness of the notification. This would be consistent with the FERC’s expressed desire in the June 2008 order on VSLs in which they stated that as many VSLs should be developed as possible.
<b>Response: The RC SDT thanks you for your comment. Conforming changes were made to the VSLs based on the modifications to the requirements. We have also added VSLs based on the time requirements.</b>		
SERC OC Standards Review Group	Yes	
Bonneville Power Administration	Yes	

**Consideration of Comments on Project 2006-06 Reliability Coordination**

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Organization	Yes or No	Question 3 Comment
FirstEnergy	Yes	
JEA	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power	Yes	
Northeast Utilities	Yes	

**4. Do you agree with the revisions made to the Requirements in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area.**

**Summary Consideration:** Stakeholder consensus has been achieved with respect to the retirement of R1 (the requirement for the TOP and BA to each have data and voice communication with RCs, BAs and TOPs). In response to the majority of the comments, the drafting team has added a new R1 to require that “Reliability Directives” be identified as such, revised and rearranged the two requirements from the last posting so that the new R2 focuses on repeating the intent of a reliability directive and the new R3 focuses on responding to that repeated directive. The drafting team is also coordinating with the RTO SDT and the OPCP SDT (Project 2007-02) on the definition and usage of the term “Reliability Directive”.

The new R1 through R3 are:

R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]

R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat the intent of the Reliability Directive back to the issuer of the Reliability Directive. [Violation Risk Factor: High][Time Horizon: Real-Time]

R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that identifies an action as a Reliability Directive shall acknowledge the response from the recipient of the Reliability Directive in R2 as correct or reissue the Reliability Directive to resolve any misunderstandings. [Violation Risk Factor: High][Time Horizon: Real-Time]

The proposed definition for Reliability Directive is:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.

Organization	Yes or No	Question 4 Comment
Northwest LSE Group	No	<p>It would be advantageous to exempt certain smaller Registered Entities (LSE, DP, &amp; PSE) that are non-scheduling/tagging entities. In addition to not having a scheduling/tagging desk, many of these entities do not have a 24/7 desk to receive RC/BA/TOP reliability directives/calls, and are too small (10s of MW) to even be substantially significant in a reliability crisis. Instead of making this Standard applicable to all DPs, LSEs, and PSEs, we suggest that the RC, BAs, and TOPs to yearly publish those LSEs, DPs, and PSEs responsible for responding to emergency reliability directives.</p> <p>Also, it would be advisable for the RC, BA, and TOP giving a reliability directive to clearly preface the instruction with “The following is an emergency reliability directive” to differentiate from normal operations communications. Many smaller entities</p>



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Organization	Yes or No	Question 4 Comment
		<p>do not have the resources to install reliable voice recording equipment, but having access to such recordings would be beneficial towards compliance documentation; thus, it would be helpful to require the directive issuing RC, BA, or TOP to provide a digital copy of the voice recording, or transcript if available on request to the recipient of the directive. Short of a recording or transcript of the recording, it will be difficult to determine how a small entity without recorded line would show compliance other than writing down the directive as it is given and reading it back to the issuer. If the directive is lengthy, this will slow down the process and probably defeat the purpose and value of quick action. Further, there is no guarantee that the receiver will accurately retain a complicated directive if not immediately documented in some way to allow review.</p> <p>Last of all, what is meant by the word “intent”? Must the recipient understand and demonstrate the “why” the directive is given and the intended “outcome,” or merely paraphrase the directive to demonstrate understanding? If the recipient repeats word for word the directive back to the issuer without any other indication that the directive is understood, is this a violation??</p>
<p><b>Response: The RC SDT thanks you for your comment. The requirements of COM-002 for LSE, DP and PSE simply state that the entity has to repeat the intent of the directive back. The issue you raise concerning smaller entities is valid, but this standard is not the venue at which to make this argument. Registration criteria are outside the scope of this project.</b></p> <p><b>We have included a new requirement R1:</b></p> <p>R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p><b>The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is:</b></p> <p>A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p> <p><b>The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team.</b></p> <p><b>The word “intent” was chosen so that the recipient did not have to repeat the directive verbatim and to also indicate an understanding of the directive. If a recipient repeats the directive verbatim, it is not a violation of the requirement, as it would also capture the intent.</b></p>		
Northeast Power Coordinating Council	No	<p>Support the intent but not the existing language. Do not support Requirements that include some examples since the examples can be confused with the Requirement. Do not support one written Requirement that has two requirements. Recommend the following Requirements: A new R1 - Each Entity shall have Operational Procedure requiring that communications directives be repeated back to the issuer. R2 leave as is. A new R3 If not repeated, then issuer shall request the receiving Entity to repeat the communication directive. A new R4 The issuer will acknowledge the correctness of the repetition of the communications directive.</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT does not see a reliability benefit to having an Operational Procedure requirement, as</b></p>		

**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 4 Comment
<p><b>it would be redundant since the standard COM-002 would be mandatory and enforceable and requires the actions in the Operational Procedure that you suggest. The RC SDT feels that we have the same requirements that you suggest but in a different arrangement.</b></p>		
<p>SERC OC Standards Review Group</p>	<p>No</p>	<p>The term “emergency” has a broad definition and other standards use “adverse conditions” or “adverse reliability impact”. There should be a consistency of terms when describing a system condition. The STD should include a definition of “directive” that includes more than “Emergency” operational conditions. Should this requirement be modified to include the term “Directive” and the definition of this term added to the NERC Glossary?</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. The RC SDT appreciates the baggage that comes with the defined term “Emergency”. However, it is the best fit with the normal messaging that has historically occurred in the bulk electric reliability community. Our proposed definition is:</b></p> <p>A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p> <p><b>This term has been included in the requirements of COM-002. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team.</b></p>		
<p>Midwest ISO Standards Collaborators</p>	<p>Yes</p>	<p>We largely agree with the changes to the requirements and believe it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as directives. This makes it clear that only directives that are required for operating emergencies require three way communication. We believe that the SDT could further support resolution to this directive issue by developing a definition for directive. We propose the following definition: Directive or Directive A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority that requires action by the recipient to prevent or mitigate an Adverse Reliability Impact.</p> <p>In requirement 1, we do believe that another word than “require” should be used. Consider using “request”. An RC, BA, and TOP can’t force the recipient of the directive to repeat it back. They can ask or request it be repeated back though.</p>
<p><b>Response: The RC SDT thanks you for your comment. 1) The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is:</b></p> <p>A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p> <p><b>This term has been included in the requirements of COM-002. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team.</b></p> <p><b>2) The RC SDT has revised the requirement to remove that part since original R2 required the recipient to repeat the intent of the directive.</b></p>		

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Organization	Yes or No	Question 4 Comment
Central Lincoln	No	The inclusion of load serving entities and distribution providers does not address any present BES reliability gap.
<p><b>Response: The RC SDT thanks you for your comment. Loads are under the direct control of Load Serving Entities while underfrequency relays are often under the direct control of distribution providers. Current NERC standards do not address the possibility that a Reliability Directive may be issued to either of these entities. The requirements of COM-002 for LSE and DP simply state that the entity has to repeat the intent of the directive back since these entities may receive reliability directives.</b></p>		
JEA	No	R1: just to avoid possible auditor misunderstandings the SDT might consider replacing the words "or repeat the original statement" to "reissue the directive" so that the RC does not get into trouble if the second statement is not verbatim of the first. This also helps clarify that another statement is required from the recipient along with a final acknowledgement from the RC that the intent is correct.
<p><b>Response: The RC SDT appreciates your comment. You have identified a potential problem; the RC SDT agrees with your comment and has replaced the words "repeat the original statement" with "reissue the Reliability Directive".</b></p>		
Liberty Electric Power LLC	No	The proposed standard does not require the RC, TO, or BA to declare an emergency to the GO when issuing a directive. There has been confusion at times in the past as to whether the entity is issuing a directive based on economics or due to an emergency. The standard should be amended to require the RC/TO/BA to state the directive is due to a declared emergency. The GO is required to repeat back the intent of an emergency directive, but is not required to repeat back the intent of economic directive. This can lead to a finding of a severe VSL non-compliance on the part of the GO due to a failure of the RC/TO/BA to clearly state the nature of the directive.
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is:</b></p> <p>A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p> <p><b>This term has been included in the requirements of COM-002. The RTOSDT (Project 2007-03) is also working on a similar path and the RC SDT are coordinating with that team. A new R1 has been developed that states:</b></p> <p>When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p>		
ReliabilityFirst	No	FERC 693 excludes distribution providers if they are not a user, owner or operator of BES. This should be reflected in R2 of

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 4 Comment
Corporation		the standard
<p><b>Response:</b> The RC SDT thanks you for your comment. Any distribution provider excluded by FERC Order 693 would not be held to the standard since standards only apply to registered entities. FERC Order 693 endorses the NERC Statement of Compliance Registry criteria (paragraph 512) and also adopted their proposal to require the ERO to modify COM-002 to apply to distribution providers and generator operators (paragraph 512). The Functional Model describes the real-time relationships between entities. Among those relationships, the DP:</p> <ul style="list-style-type: none"> <li>Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority</li> </ul> <p>Such directives fall under COM-002 requirements.</p>		
Illinois Municipal Electric Agency	No	<p>IMEA questions the necessity of expanding the applicability of COM-002 as proposed in R2, particularly to the DP, LSE, and PSE functions. IMEA recommends accomplishing the intent of COM-002-3 R2 by simply referring to COM-002-3 R1 in IRO-001-2 R2 which requires those entities to comply with the RC directive. Thus it would be understood that the functional entity had repeated the directive in order to comply with it; thereby avoiding the necessity of expanding applicability to another reliability standard.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT feels that there is a difference between complying with a directive and communicating the directive effectively. The requirements of COM-002 for LSE, PSE and DP simply state that the entity has to repeat the intent of the directive back since these entities may receive reliability directives. The drafting team feels that the current draft adds clarity to the requirements.</p>		
Exelon	No	See answer # 1
<p><b>Response:</b> The RC SDT thanks you for your comment. See response to answer #1.</p>		
Hydro-Québec TransEnergie (HQT)	No	<p>Support the intent but not the existing language. Do not support Requirements that include some examples since the examples can be confused with the Requirement. Do not support one written Requirement that has two requirements. Recommend the following Requirements A new R1 - Each Entity shall have Operational Procedure requiring that communications directives be repeated back to the issuer R2 leave as is. A new R3 If not repeated, then issuer shall request the receiving Entity to repeat the communication directive. A new R4 The issuer will acknowledge the correctness of the repetition of the communications directive</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. There are no examples in any of the requirements of COM-002-3 as posted. There are no compound requirements remaining in COM-002-3 as posted. The RC SDT does not see a reliability benefit to having an Operational Procedure requirement, as it would be redundant since the standard COM-002 would be mandatory and enforceable and requires the actions in the Operational Procedure that you suggest. The RC SDT feels that we have the same requirements that you suggest but in a different arrangement that is internally consistent.</p>		

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Organization	Yes or No	Question 4 Comment
Indiana Municipal Power Agency	No	<p>The requirements do not consider a pre-recorded communication that might be sent out from the Transmission Operator to Generator Operators or any other entity. If this communication is a directive associated with a real-time operational emergency condition (depending on the judgment used by an entity or auditor), it does not make sense to repeat back a pre-recorded message on the phone. It might be good to clearly state in the standard that pre-recorded messages do not need to be repeated back.</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is:</b></p> <p>A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p> <p><b>This term has been included in the requirements of COM-002. The RC SDT can not envision a situation, regardless of the technology, where a Reliability Directive would be issued without confirmation from the recipient and acknowledgement of accuracy. However, even if there were an occasion as suggested by your comment, the bulk electric system can only remain reliable by coordinating actions between reliability entities. A pre-recorded communication is a broadcast, not a coordinating activity. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT are coordinating with that team.</b></p>		
Duke Energy	No	<p>We agree with adding the clarification that these requirements refer to “emergency” communications, but we think the word “Emergency” should be capitalized to further clarify that it is a defined term in the NERC Glossary.</p> <p>Also, the phrase “require the recipient of the verbal directive to repeat the intent of the directive back” should be changed to “have the recipient of the verbal directive repeat the intent of the directive back”. This avoids making the issuer of the directive make a statement requiring a repeat back unless the recipient actually fails to repeat back as normally expected.</p>
<p><b>Response: The RC SDT thanks you for your comment. We have removed the word “emergency” and are proposing a definition of Reliability Directive which includes the defined term “Emergency” and which is being posted for comment.</b></p> <p><b>The RC SDT agrees with the intent of your comment. The phrase you mention has been removed from R1 as it is required by R2. We have made other edits to tighten the requirements as well.</b></p>		
Consumers Energy Company	No	<p>COM-002 R2 specifies the Generator Operator that receives a directive from the Transmission Operator, Reliability Coordinator or Balancing Authority must repeat the intent of the directive back to the Transmission Operator. COM-002 M2 specifies that evidence must be retained in the form of either voice recordings or transcripts by the generator operator. Since the Transmission Operator, Reliability Coordinator and Balancing Authority already have voice recording capability (centrally located), it is not necessary for the Generator to also install voice recording capability at each generating station. We suggest the wording of COM-002 be changed such that only the Transmission Operator, Reliability Coordinator and Balancing</p>

**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 4 Comment
		Authority be required to keep voice recordings or transcripts.
<p><b>Response: The RC SDT thanks you for your comment. While recordings may be available from other entities, a Generator Operator has mandatory requirements with which it must comply. Generator Operators must have evidence that they complied with the requirement. The evidence mentioned in the measures is a suggestion of possible methods of evidence. We have revised the measure to include "...which could include, but is not limited to, voice recordings, transcripts of voice recordings or operator logs..."</b></p>		
Independent Electricity System Operator	No	<p>(i) We suggest the word "emergency" be capitalized since it is a defined term which generally covers the conditions under which directives are issued.</p> <p>(ii) We further suggest that to avoid confusion between operating instructions and directives, the term directive should be defined as suggested below: Directive or Directive A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority that requires complying action by the recipient to prevent or mitigate an Adverse Reliability Impact.</p> <p>(iii) Since R1 contains two requirements, there may be some benefit in separating these since that would make the VSLs clearer, i.e. separate the requirements placed on the issuer of the directive to (a) request the recipient to repeat the intent of the directive and (b) to acknowledge the response of the recipient as correct.</p>
<p><b>Response: The RC SDT thanks you for your comment.</b></p> <p><b>i) We have removed the word "emergency" and are proposing a definition of Reliability Directive which includes the defined term "Emergency" and which is being posted for comment.</b></p> <p><b>ii) The RC SDT is proposing a definition of Reliability Directive that will be posted for comment. Our proposed definition is:</b></p> <p>A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p> <p><b>iii) The RC SDT agrees and has modified R1. Since R2 requires the recipient to repeat the intent of the directive, we have removed the part of R1 that states the issues shall require the recipient to repeat the directive. This removed the compound requirement.</b></p>		
MRO NSRS	No	<p>The MRO NSRS largely agrees with the changes to the requirements and believes it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as directives. This makes it clear that only directives that are required for operating emergencies require three way communication. MRO NSRS believes that the SDT could further support resolution to this directive issue by developing a definition for directive. MRO NSRS proposes the following definition:</p> <p>Directive or Directive – A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority</p>

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Organization	Yes or No	Question 4 Comment
		<p>that requires action by the recipient to prevent or mitigate an Adverse Reliability Impact.</p> <p>In requirement 1, MRO NSRS does believe that another word than “require” should be used. Consider using “request”. An RC, BA, and TOP can’t force the recipient of the directive to repeat it back. They can ask or request it be repeated back though.</p>
<p><b>Response: The RC SDT thanks you for your comment. 1) The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is:</b></p> <p>A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p> <p><b>This term has been included in the requirements of COM-002. The RTOSDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team.</b></p> <p><b>We have removed the “require” part of R1 since R2 is an enforceable requirement for repeating the directive.</b></p>		
American Transmission Company	No	<p>are supportive of the language regarding “directives” which clarifies that directives are those which involve operating emergencies. However, in R1, we believe that the word “requires” should be changed to “request”. An entity can request that another entity repeat back a directive but we cannot “require” it.</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT is proposing a definition of Reliability Directive that will be posted for comment. Our proposed definition is:</b></p> <p>A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p> <p><b>We have removed the “require” part of R1 since R2 is an enforceable requirement for repeating the directive.</b></p>		
IRC Standards Review Committee	Yes	<p>(1) We largely agree with the changes to the requirements and believe it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as Directives. This makes it clear that only Directives that are required for operating emergencies require three way communication. We believe that the SDT could further support resolution to this Directive issue by developing a definition for Directive. We propose the following definition: Directive A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority that requires action by the recipient to prevent or mitigate an Adverse Reliability Impact. Please note that AESO already has this term defined. The above suggested definition may be different from the AESO’s definition.</p> <p>(2) In requirement 1, we do believe that another word than “require” should be used. Consider using “request”. An RC, BA,</p>

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Organization	Yes or No	Question 4 Comment
		and TOP can't force the recipient of the Directive to repeat it back. They can ask or request it be repeated back though.
<p><b>Response: The RC SDT thanks you for your comment.</b></p> <p><b>1) The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is:</b></p> <p>A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p> <p><b>This term has been included in the requirements of COM-002. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team.</b></p> <p><b>2) The RC SDT has revised the requirement to remove that part since original R2 required the recipient to repeat the intent of the directive.</b></p>		
Calpine Corporation	Yes	Calpine supports three part communications when verbal directives are issued during real-time operational emergency conditions. Calpine believes all issued directives should be explicitly identified as such.
<p><b>Response: The RC SDT thanks you for your comment. A new R1 has been developed that states:</b></p> <p>When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p>		
Western Area Power Administration	Yes	This is a very good improvement. Some Regional Entities were interpreting every communication from a control room as a "directive" and stating that "directives" were equal to any "normal instruction" that related to operations of the power system. Making it clear that the directives are associated with emergency conditions is a big improvement. The drafting team may wish to consider additional clarification, such as, "The entity that issues a verbal directive shall make it known during the communication that, "This is a directive"? . All parties to the communication would be clear that the real-time situation was an emergency condition, and that the requirements for repeating the intent were in effect.
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is:</b></p> <p>A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p> <p><b>This term has been included in the requirements of COM-002. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team. A new R1 has been developed that states:</b></p>		



**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 4 Comment
<p>When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p>		
American Electric Power	Yes	<p>AEP does generally agree with the revisions, but we have concerns with the much wider scope of three part communications that expand the required voice or transcript evidence. There is no rationale provided for changing the text in R1 and M1, and adding a new R2 and M2. We would recommend that these items remain as stated in Version 2.</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT's intent was to create a consistent set of noncompound requirements and to provide clarity according to the scope of the drafting team.</b></p>		
Manitoba Hydro	Yes	<p>For the most part agree with the changes to the requirements and believe it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as directives. This makes it clear that only directives that are required for operating emergencies require three way communication. The SDT could further support resolution to this directive issue by developing a definition for directive.</p> <p>In requirement 1, I would use another word than "require". Consider using "request". An RC, BA, and TOP can't force the recipient of the directive to repeat it back. They can ask or request it be repeated back though.</p>
<p><b>Response: The RC SDT thanks you for your comment.</b></p> <p><b>1) The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is:</b></p> <p>A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p> <p><b>This term has been included in the requirements of COM-002. The RTOSDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team. 2) The RC SDT has revised the requirement to remove that part since original R2 required the recipient to repeat the intent of the directive.</b></p>		
FirstEnergy	Yes	<p>1. We agree with the clarification in R1 that a directive per COM-002-3 is a "verbal directive associated with real-time operational emergency conditions". We understand this to be a "Reliability" directive used during times of emergency or in situations where reliability may be an issue. Also, with this clarification, it confirms that the term "directive", as used in this standard, does not include "Operational" directives issued by System Operators during normal system conditions to change the status of an element such as a circuit breaker.</p> <p>2. The industry does not appear to have a clear, consistent definition of what constitutes a directive. We suggest the standard require the person issuing a directive to use the phrase "I am directing you to ?", "I am ordering you to ?" or something similar</p>

**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 4 Comment
		<p>to invoke the three part communication requirement.</p> <p>3. Since this standard deals with communications and coordination during emergency conditions, it may be helpful to change the title of the standard to "Communications and Coordination Emergency Conditions".</p> <p>4. The phrase "the intent of the directive" could be difficult to comply with and measure. The words "the intent of" should be removed from Requirements R1 and R2.</p>
<p><b>Response: The RC SDT thanks you for your comment. 1) The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is:</b></p> <p>A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p> <p><b>This term has been included in the requirements of COM-002. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team.</b></p> <p><b>2) We agree and have included a new R1 that states:</b></p> <p>When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p><b>3) The RC SDT disagrees. This standard covers all interpersonal communications, not just emergency communications. The title stays as is.</b></p> <p><b>4) The phrase was included so that the recipient did not have to repeat the directive verbatim and to also indicate an understanding of the directive. If a recipient repeats the directive verbatim, it is not a violation of the requirement, as it would also capture the intent. The goal of the RC SDT is to assure continued reliability without creating a trap by requiring word-for-word repetition.</b></p>		
Northeast Utilities	Yes	
Xcel Energy	Yes	
Bonneville Power Administration	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	

**Consideration of Comments on Project 2006-06 Reliability Coordination**

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Organization	Yes or No	Question 4 Comment
Southern Company	Yes	
Georgia Transmission Corporation	Yes	

**Consideration of Comments on Project 2006-06 Reliability Coordination**

**5. Do you agree with the revisions made to the Measures in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area.**

**Summary Consideration:** Stakeholder consensus has been achieved with respect to the retirement of R1 and M1 from the last approved version of this standard. In accord with the majority of commenters, the drafting team made changes to the Measures to bring them into conformance with the adopted suggestions from question 4 for improving the Requirements. Specifically, a new R1 was added to require that reliability directives be identified as such – and the two requirements from the last posting were rephrased and rearranged for clarity. The Measures were changed to match the revised requirements.

Organization	Yes or No	Question 5 Comment
Illinois Municipal Electric Agency		Conforming changes are required to the Measures based on the suggested modifications to the requirements in Question 4.
<b>Response: The RC SDT thanks you for your comment. The measures were revised to reflect changes to the requirements.</b>		
Hydro-Québec TransEnergie (HQT)	No	Address the new proposed Requirements above in Question 4.
Northeast Power Coordinating Council	No	Addressed the new proposed Requirements above in Question 4.
<b>Response: The RC SDT thanks you for your comment. The measures were revised to reflect changes to the requirements.</b>		
Duke Energy	No	Change “emergency” to “Emergency” per comment on R1 above. Also change the phrase “required the recipient of the verbal directive to repeat” to “had the recipient of the verbal directive repeat” per our comment on R1 above.
<b>Response: The RC SDT thanks you for your comment. We have removed the word “emergency” and are proposing a definition of Reliability Directive which includes the defined term “Emergency” and which is being posted for comment.</b>		
Northwest LSE Group	No	Only in making the Measures agree with the suggested changes to the requirements above.
<b>Response: The RC SDT thanks you for your comment. See response to Question 4. The measures have been revised to reflect changes to the requirements.</b>		

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Organization	Yes or No	Question 5 Comment
Central Lincoln	No	M2 goes beyond R2 in requiring recordings. This will be cost prohibitive for small entities that have little impact on the BES. Telephone recording equipment will be needed on company phones, and some way to handle the recording of directives and responses that occur after hours on home or cell phones must be handled. Drafters seem to have missed the fact that not all the applicable entities have 24/7 dispatch centers.
<p><b>Response: The RC SDT thanks you for your comment. The measure lists possible examples of evidence to prove compliance with the requirement. It does not impose any additional requirements or the purchase of recording systems. We have revised the measure to include "...which could include, but is not limited to, voice recordings, transcripts of voice recordings or operator logs..."</b></p>		
JEA	No	Not all entities have recorded lines. The standard does not directly require the to record their lines, but the measure implies it. It seems that a written log should be sufficient. Since both sides of the conversation gets audited, the auditors will have ample opportunity to check up on both sides.
<p><b>Response: The RC SDT thanks you for your comment. The measure lists possible examples of evidence to prove compliance with the requirement. It does not impose any additional requirements or the purchase of recording systems. We have revised the measure to include "...which could include, but is not limited to, voice recordings, transcripts of voice recordings or operator logs..."</b></p>		
Northeast Utilities	No	NU agrees with expanding the applicability of the Standard beyond the Reliability Coordinators, Balancing Authorities and Transmission Operators to ensure that the recipient of a verbal directive repeats back the directive to the issuer (R2). Despite NU's agreement with R2, NU believes that M2 is duplicative to the intent of M1 and unnecessarily requires the installation of voice recording capabilities at the entities other than a RC, BA or TOP. It is our belief that the voice recordings of the RC, BA and TOP (M1) provide the evidentiary support required by all applicable entities.
<p><b>Response: The RC SDT thanks you for your comment. The measure lists possible examples of evidence to prove compliance with the requirement. It does not impose any additional requirements or the purchase of recording systems. We have revised the measure to include "...which could include, but is not limited to, voice recordings, transcripts of voice recordings or operator logs..."</b></p>		
Independent Electricity System Operator	No	Comments: Some changes may be necessary based on the SDT's response to our suggestion in Q4.
<p><b>Response: The RC SDT thanks you for your comment. See response to your comments on question 4.</b></p>		
MRO NSRS	No	MRO NSRS largely agrees with the measures with the exception that a conforming change needs to be made to M1 if the suggestion regarding "require" in Q4 is accepted.

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Organization	Yes or No	Question 5 Comment
<b>Response: The RC SDT thanks you for your comment. "Require" was removed from the requirement and the measure edited appropriately.</b>		
American Transmission Company	No	See our comments to question 4
<b>Response: The RC SDT thanks you for your comment. See response to your comments on question 4.</b>		
IRC Standards Review Committee	Yes	We largely agree with the measures with the exception that a conforming change needs to be made to M1 if the suggestion regarding "require" in Q4 is accepted.
Midwest ISO Standards Collaborators	Yes	We largely agree with the measures with the exception that a conforming change needs to be made to M1 if the suggestion regarding "require" in Q4 is accepted.
<b>Response: The RC SDT thanks you for your comment. "Require" was removed from the requirement and the measure edited appropriately.</b>		
American Electric Power	Yes	As described in the question 4 response, there is no rationale provided for changing the text in R1 and M1, and adding a the new R2 and M2. We would recommend that these items remain as stated in Version 2.
<b>Response: The RC SDT thanks you for your comment. See response to question 4.</b>		
Manitoba Hydro	Yes	For the most part agree with the measures with the exception that a conforming change needs to be made to M1 if the suggestion regarding "require" in Q4 is accepted.
<b>Response: The RC SDT thanks you for your comment. "Require" was removed from the requirement and the measure edited appropriately.</b>		
SERC OC Standards Review Group	Yes	
Bonneville Power Administration	Yes	
FirstEnergy	Yes	

**Consideration of Comments on Project 2006-06 Reliability Coordination**

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Organization	Yes or No	Question 5 Comment
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
Georgia Transmission Corporation	Yes	

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**6. Do you agree with the revisions made to the Violation Severity Levels in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area.**

**Summary Consideration:** Several stakeholders suggested revisions to the VSLs based on suggested revisions to the requirements. The RC SDT made changes to the VSLs to conform to revisions to the requirements.

Organization	Yes or No	Question 6 Comment
Northwest LSE Group	No	Only in making the Measures agree with the suggested changes to the requirements above.
<b>Response: The RC SDT thanks you for your comment. The Measures have been revised to reflect changes to the requirements.</b>		
Northeast Power Coordinating Council	No	Address the new proposed Requirements.
<b>Response: The RC SDT thanks you for your comment. The RC SDT feels that we have the same requirements that you suggest but in a different arrangement. The new proposed Requirements have been addressed.</b>		
Bonneville Power Administration	No	<p>Comments: Issue #1: Violation Severity Level. The Moderate and Severe VSLs for Requirement R1 can lead to confusion. For instance, the Moderate VSL states that the responsible entity “did not acknowledge the recipient was correct in the repeated directive OR (emphasis theirs) failed to repeat the intent of the original statement to resolve any misunderstandings. ”What is it saying here? Is it dinging the responsible entity for making no response at all to the recipient after they repeated the intent of the message? Or is that what the Severe VSL is dinging for when it includes an AND rather than an OR in the statement? I can’t tell what the drafting team was intending with their statements, but one of the statements seem to infer that the responsible entity can actually be dinged for not doing both, acknowledging the recipient as being correct in their response and at the very same time repeating the intent of the original statement to resolve any misunderstandings because the recipient was incorrect in their response. This then argues that the recipient can be both correct and incorrect at the same time. I didn’t think that was possible “similar to binary code” either you get a one or a zero, but not both and never neither!</p> <p>I would argue that the drafting team should rewrite their VSLs to succinctly state that the responsible entity failed to respond after the recipient repeated the intent of the message. With that in mind, either the Moderate or the Severe VSL will be rewritten in an understandable way and the other VSL will disappear in the realms of impossible things.</p>
<b>Response: The RC SDT thanks you for your comment. We have eliminated the Moderate VSL and only have the Severe.</b>		



**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 6 Comment
IRC Standards Review Committee	No	<p>If the suggestion regarding “require” in Q4 is accepted, conforming changes to the VSL need to made. Additionally, we believe the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the Directive was correct and the repeat was correct. In the Severe, we believe the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the Directive was correct but the repeat was incorrect. We agree that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal Directive associated with real-time operating emergency conditions and the recipient repeated the intent of the Directive correctly, but the responsible entity did not acknowledge the recipient was correct. Severe VSL: The responsible entity issued a verbal Directive associated with real-time operating emergency conditions and the recipient repeated the intent of the Directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.</p>
<p><b>Response: The RC SDT thanks you for your comment. We have modified all the requirements in a way that addresses your comments. Conforming changes to the VSLs have been made.</b></p>		
Midwest ISO Standards Collaborators	No	<p>If the suggestion regarding “require” in Q4 is accepted, conforming changes to the VSL need to made. Additionally, we believe the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct and the repeat was correct. In the Severe, we believe the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct but the repeat was incorrect. We agree that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive correctly, but the responsible entity did not acknowledge the recipient was correct. Severe VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.</p>
<p><b>Response: The RC SDT thanks you for your comment. We have modified all the requirements in a way that addresses your comments. Conforming changes to the VSLs have been made.</b></p>		
American Electric Power	No	<p>AEP is concerned that the severe VSL assigned to Requirement 2 is excessive and should be reconsidered.</p>
<p><b>Response: The RC SDT thanks you for your comment. We believe that R2 is a binary requirement which results in a Severe VSL. The entity either performed the requirement or did not.</b></p>		

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Organization	Yes or No	Question 6 Comment
Manitoba Hydro	No	<p>If the suggestion regarding “require” in Q4 is accepted, conforming changes to the VSL need to made. Additionally, believe the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct and the repeat was correct. In the Severe, we believe the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct but the repeat was incorrect. We agree that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive correctly, but the responsible entity did not acknowledge the recipient was correct. Severe VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.</p>
<p><b>Response: The RC SDT thanks you for your comment. We have modified all the requirements in a way that addresses your comments. Conforming changes to the VSLs have been made.</b></p>		
Illinois Municipal Electric Agency	No	<p>Conforming changes are required to the VSLs based on the suggested modifications to the requirements in Question 4.</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT feels that there is a difference between complying with a Reliability Directive and communicating the Reliability Directive effectively. The requirements of COM-002 for LSE, PSE and DP simply state that the entity has to repeat the intent of the directive back since these entities may receive Reliability Directives. The drafting team feels that the current draft adds clarity to the requirements. The VSLs were revised to match the revised requirements.</b></p>		
Hydro-Québec TransEnergie (HQT)	No	<p>address the new proposed Requirements.</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT does not see a reliability benefit to having an Operational Procedure requirement, as it would be redundant since the Standard COM-002 would be mandatory and enforceable and requires the actions in the Operational Procedure that you suggest. The RC SDT feels that we have the same requirements that you suggest but in a different arrangement.</b></p>		
Duke Energy	No	<p>Change “emergency” to “Emergency” in the VSLs per our comment on R1 above. Also, we don’t see a tangible difference between the Moderate and Severe VSLs, and the High VSL should really be the Severe VSL. We suggest having just a High and a Severe VSL as follows:” High VSL: “The responsible entity issued a verbal directive associated with real-time operating Emergency conditions and had the recipient repeat back the intent of the directive, but did not either acknowledge the recipient was correct in the repeated directive or failed to repeat the intent of the original statement to resolve any misunderstandings.” Severe VSL: “The responsible entity issued a verbal directive associated with real-time operating</p>

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Organization	Yes or No	Question 6 Comment
		Emergency conditions, but did not have the recipient repeat back the intent of the directive.”
<p><b>Response: The RC SDT thanks you for your comment. We have removed the word “emergency” and are proposing a definition of Reliability Directive which will be posted for comment. Our proposed definition is:</b></p> <p>A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p> <p><b>We have removed the “require” part of R1 since R2 is an enforceable requirement for repeating the directive. Conforming changes to the VSLs have been modified.</b></p>		
Independent Electricity System Operator	No	<p>The sequence of communication required under R1 is intended to ensure that directives from the issuing entities are clearly understood. The earlier this sequence is broken, the greater the uncertainty that this goal is achieved and the greater should be the severity level. Thus, failure to request that the recipient entity repeat the intent of the directive “ the earliest step in the sequence - should attract the “Severe” VSL.Also, failing to repeat the original directive when there is any misunderstanding, again, in our view, leaves the intent of the directive equally unclear and should also attract a “Severe” VSL.Failing to acknowledge the recipient was correct in the repeating the intent of the directive “ the last step in the sequence “ is already assigned a “Moderate” VSL and this should not be repeated in the “Severe” VSL.We therefore suggest that the two conditions under “High” and “Severe” in R1 be combined as one under “Severe” as follows: The responsible entity issued a verbal directive associated with real-time operating emergency conditions but did not require the recipient to repeat the intent of the directive;ORThe responsible entity issued a verbal directive associated with real-time operating emergency conditions and required the recipient to repeat the intent of the directive, but failed to repeat the intent of the original statement to resolve any misunderstandings.</p>
<p><b>Response: The RC SDT thanks you for your comment. In the revised standard, R2 requires the recipient to repeat the intent of the directive. We have removed the part of R1, (now R3), that states the issuer shall “require” the recipient to repeat the directive. We have made revisions to the VSLs to match the requirements.</b></p>		
MRO NSRS	No	<p>If the suggestion regarding “require” in Q4 is accepted, conforming changes to the VSL need to made. Additionally, MRO NSRS believes the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct and the repeat was correct. In the Severe, MRO NSRS believes the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct but the repeat was incorrect. MRO NSRS agrees that these distinctions make sense but offer the following changes to clarify the intent.</p> <p>Moderate VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive correctly, but the responsible entity did not acknowledge the recipient</p>

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Organization	Yes or No	Question 6 Comment
		<p>was correct.</p> <p>Severe VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT is proposing a definition of Reliability Directive that will be posted for comment. Our proposed definition is:</b></p> <p>A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p> <p><b>We have removed the “require” part of R1 since R2 is an enforceable requirement for repeating the directive. Conforming changes to the VSLs have been modified.</b></p>		
SERC OC Standards Review Group	Yes	If R1 changes as suggested in Question 4, the VSLs will need to be changed also.
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is:</b></p> <p>A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p> <p><b>The VSLs have been revised to reflect the proposal.</b></p>		
FirstEnergy	Yes	
JEA	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	

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Organization	Yes or No	Question 6 Comment
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
Georgia Transmission Corporation	Yes	
Northeast Utilities	Yes	

**7. Do you agree with the revisions to the definition of Adverse Reliability Impacts (IRO-001-2)? If not, please explain in the comment area.**

**Summary Consideration:** Stakeholders suggested removing the word “outages” after “cascading” as per the NERC Glossary of Terms and a FERC Directive issued December 27, 2007. The RC SDT made the revision. There were no other suggested revisions to the definition.

Organization	Yes or No	Question 7 Comment
Northeast Power Coordinating Council	No	Remove the word “outages” that appears after “cascading” as per NERC Glossary and FERC Directive issued Dec. 27, 2007.
Hydro-Québec TransEnergie (HQT)	No	Remove the word “outages” that appears after “cascading” as per NERC Glossary and FERC Directive issued Dec. 27, 2007.
Northeast Utilities	No	Remove the word “outages” that appears after “cascading” as per NERC Glossary and FERC Directive issued Dec. 27, 2007.
Independent Electricity System Operator	No	Comments: Remove the word “outages” that appears after “cascading” as per NERC Glossary and FERC Directive issued Dec. 27, 2007.
<b>Response: The RC SDT thanks you for your comment. The RC SDT agrees and has removed “outages”. We have also capitalized “Cascading”</b>		
FirstEnergy	Yes	If the term "cascading" used in the definition is referring to the NERC-defined term, it should be capitalized.
<b>Response: The RC SDT thanks you for your comment. The RC SDT agrees and has capitalized “Cascading”</b>		
IRC Standards Review Committee	Yes	The drafting team should consider that NERC is moving away from using the term "cascading outages". FERC has directed NERC to rescind this definition, and use the defined term "cascading" instead.
<b>Response: The RC SDT thanks you for your comment. The RC SDT agrees and has removed “outages”. We have also capitalized “Cascading”</b>		
SERC OC Standards Review Group	No	What is the difference between “Adverse Reliability Impacts” and the definition of an IROL? Is this going to replace an IROL?

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Organization	Yes or No	Question 7 Comment
<p><b>Response: The RC SDT thanks you for your comment. Adverse Reliability Impacts is already a defined term that the RC SDT is proposing to revise. IROL is a limit, while ARI is the impact of events. ARI will not replace IROL.</b></p>		
Northwest LSE Group	Yes	
Bonneville Power Administration	Yes	
Midwest ISO Standards Collaborators	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power	Yes	

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Organization	Yes or No	Question 7 Comment
Manitoba Hydro	Yes	
Georgia Transmission Corporation	Yes	
Illinois Municipal Electric Agency	Yes	
Duke Energy	Yes	
MRO NSRS	Yes	
Xcel Energy	Yes	
American Transmission Company	Yes	



**8. Do you agree with the revisions to the Requirements in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

**Summary Consideration:** Stakeholders generally agreed with the revisions to the requirements. Several stakeholders suggested adding the words “an issued” before “directive in R3. The RC SDT agreed and made the change. No further revisions were made to the requirements.

Organization	Yes or No	Question 8 Comment
Northwest LSE Group	No	<p>To reduce the compliance burden on smaller entities that would never receive a Reliability Coordinator directive and reduce needless Regional Entity auditing, it would be most helpful to require the RC to publish its list of entities responsible for receiving reliability directives.</p> <p>Also, any Registered Entity should be able to request copies of digital audio recordings or transcripts of the audio recordings if available from the RC.</p>
<p><b>Response: The RC SDT thanks you for your comment. An RC may issue a directive to any registered entity within its footprint. The burden of compliance is assigned by the NERC registration process and is outside of the scope of this drafting team.</b></p> <p><b>The requirements of IRO-001 do not preclude an entity from requesting copies of digital audio recordings or transcripts from the RC.</b></p>		
Northeast Power Coordinating Council	No	<p>Add “an issued” to the wording as shown following: The Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and/or Purchasing-Selling Entity shall immediately confirm the ability to comply with the directive or inform the its Reliability Coordinator upon recognition of its inability to perform the issued directive.</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT agrees and has added “an issued” before directive. We have also changed directive to Reliability Directive and included the definition at the beginning of IRO-001 and COM-002</b></p> <p>Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p>		
SERC OC Standards Review Group	No	<p>If R2 of IRO-001-1 is retired, what process is in place to ensure that reliability plans are kept up to date and are reviewed to approve footprint changes?</p>
<p><b>Response: The RC SDT thanks you for your comment. As stated in the posted implementation of IRO-001, this is covered in NERC Rules of Procedure, Section 503, item 2.2:</b></p>		

**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 8 Comment
<p><b>“Regional entities shall verify that all balancing authorities and transmission operators are under the responsibility of a reliability coordinator”.</b>  <b>The RC SDT proposed retiring R2 and R5 as the regional reliability plan is a “how” document that shows how an RC will comply with all other NERC Standards, making this requirement redundant.</b></p>		
FirstEnergy	No	<p>Regarding the retirement of IRO-001-1 R7 We are not convinced that this requirement is redundant with IRO-014-1 R1. The existing requirement requires the RC to "have clear, comprehensive coordination agreements with adjacent RCs to ensure that SOL or IROL violation mitigation requiring actions in adjacent RC areas are coordinated". IRO-014-1 R1 requires agreements for coordination of actions between RCs to support Interconnection reliability, but it does not specifically require "clear" and "comprehensive" agreements to mitigate SOL or IROL violations. For IRO-001-1 R7 to be properly retired, the "mitigation of SOL and IROL violations" should be explicitly stated in IRO-014-2 R1 as one of the items to be addressed in the RC's Operating Procedure, Process, or Plan.</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT believes that R1.6 of IRO-014-2 addresses your concern as the procedures, processes or plans include:</b></p> <p style="padding-left: 40px;">Authority to act to prevent and mitigate conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas.</p> <p><b>The definitions of each are:</b></p> <p><b>IROL: A System Operating Limit that, if violated, could lead to instability, uncontrolled separation, or Cascading Outages that adversely impact the reliability of the Bulk Electric System.</b></p> <p><b>Adverse Reliability Impacts: The impact of an event that results in Bulk Electric System instability; uncontrolled separation or Cascading.</b></p>		
Midwest ISO Standards Collaborators	No	<p>We agree with many of the changes. However, we believe R5 is not necessary for reliability. We agree the RC should notify impacted entities when the transmission problem has been mitigated; however, if the RC fails to notify the impacted entities, it will not result in an Adverse Reliability Impact. Thus, it is not necessary as a sanctionable requirement.</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT concurs that Adverse Reliability Impacts will not result from an RC not notifying impacted entities when a problem has been mitigated. However, impacted entities may have taken actions when the problem arose. These entities need to be informed that the problem has been mitigated so that they can return to normal operations. R5 notifies entities when the system is in a stable state and facilitates Interpersonal Communication between entities.</b></p>		
Liberty Electric Power LLC	No	<p>Similar objection to COM-002-3: There should be a requirement to the RC to declare the nature of the directive, emergency or economic.</p>
<p><b>Response: The RC SDT thanks you for your comment. The reliability standards do not address economic issues. The RC SDT has developed a</b></p>		

**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 8 Comment
<p><b>proposed definition of Reliability Directive that should address your concern.</b></p> <p><b>Reliability Directive:</b> A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p>		
Manitoba Hydro	No	R5 does not make sense as it doesn't create an adverse reliability impact should the RC fail to notify impacted entities.
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT concurs that Adverse Reliability Impacts will not result from an RC not notifying impacted entities when a problem has been mitigated. However, impacted entities may have taken actions when the problem arose. These entities need to be informed that the problem has been mitigated so that they can return to normal operations. R5 let's entities know when the system is in a stable state and facilitates Interpersonal Communication between entities.</b></p>		
Illinois Municipal Electric Agency	No	<p>IMEA supports the comments submitted by the MISO Standards Collaboration Group.</p> <p>In addition, while we agree with the proposed revisions to IRO-001-2 R2, IMEA recommends (as indicated in our comments to Question 4) that a reference be made to COM-002-3 R1 in IRO-001-2 R2. By including this reference, it is understood the applicable entities successfully repeated the directive in order to comply with the directive.</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT concurs that Adverse Reliability Impacts will not result from an RC not notifying impacted entities when a problem has been mitigated. However, impacted entities may have taken actions when the problem arose. These entities need to be informed that the problem has been mitigated so that they can return to normal operations. R5 notifies entities when the system is in a stable state and facilitates Interpersonal Communication between entities.</b></p> <p><b>We have included our proposed definition of Reliability Directive in both COM-002 and IRO-001 and used the term in the appropriate requirements. This will provide the linkage you suggest.</b></p>		
Hydro-Québec TransEnergie (HQT)	No	Add "an issued" to the wording as shown following: Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform "an issued" directive.
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT agrees and has added "an issued" before directive. We have also changed directive to Reliability Directive and included the definition at the beginning of IRO-001 and COM-002.</b></p> <p><b>Reliability Directive:</b> A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p>		
Northeast Utilities	No	The intent of R3 is not clear - i.e., " shall inform its Reliability Coordinator upon recognition of its inability to perform a directive". Does this requirement pre-suppose a directive has been given? Suggest adding clarifying language that

**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 8 Comment
		indicates that the requirement is applicable subsequent to a directive being received. It is our belief that the wording of Measure M3 supports the suggested changes to R3.
<p><b>Response: The RC SDT thanks you for your comment. R3 has been revised to add clarity per your comment:</b></p>		
<p>R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform an issued Reliability Directive. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i></p>		
Independent Electricity System Operator	No	Comments: Change “inability to perform a directive.” to “inability to perform an issued directive.”
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT agrees and has added “an issued” before directive. We have also changed directive to Reliability Directive and included the definition at the beginning of IRO-001 and COM-002.</b></p>		
<p><b>Reliability Directive:</b> A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency</p>		
MRO NSRS	No	MRO NSRS agrees with many of the changes. However, we believe R5 is not necessary for reliability. MRO NSRS agrees the RC should notify impacted entities when the transmission problem has been mitigated; however, if the RC fails to notify the impacted entities, it will not result in an Adverse Reliability Impact. Thus, it is not necessary as a sanctionable requirement.
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT concurs that Adverse Reliability Impacts will not result from an RC not notifying impacted entities when a problem has been mitigated. However, impacted entities may have taken actions when the problem arose. These entities need to be informed that the problem has been mitigated so that they can return to normal operations. R5 notifies entities when the system is in a stable state and facilitates Interpersonal Communication between entities.</b></p>		
Xcel Energy	No	R6 – while this requirement has merits, it does not appear to fall under the stated purpose of the standard “To establish requirements for issuance of and complying with Reliability Coordinator directives or notification within the Reliability Coordinator Areas.”. Either the purpose should be modified or this requirement should be placed in a more appropriate location, e.g. IRO-002-2 (along with R8).
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT moved this requirement into IRO-001 from IRO-002 rather than have a single requirement standard.</b></p>		

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Organization	Yes or No	Question 8 Comment
Western Area Power Administration	Yes	Suggest changing the word "complying" to "compliance" in the purpose statement.
<b>Response: The RC SDT thanks you for your comment. The RC SDT had made the suggested edit.</b>		
Bonneville Power Administration	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power	Yes	
Georgia Transmission Corporation	Yes	
Duke Energy	Yes	
American Transmission Company	Yes	

9. Do you agree with the revisions to the Measures in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.

**Summary Consideration:** Stakeholders agreed with the measures for IRO-001-2. The measure M3 was revised to reflect the revision to R3 and the word, “directive” was changed to the defined term, “Reliability Directive” in M1 through M3. No other revisions were suggested for the measures.

Organization	Yes or No	Question 9 Comment
Northwest LSE Group	No	Only in making the Measures agree with the suggested changes to the requirements above.
<b>Response: The RC SDT thanks you for your comment. The measures were revised as appropriate to reflect revisions to the requirements.</b>		
SERC OC Standards Review Group	No	The measures should indicate how long records should be kept to verify compliance with the requirements.
<b>Response: The RC SDT thanks you for your comment. This is covered in the Data Retention section of the Standard.</b>		
Midwest ISO Standards Collaborators	No	Measurement 5 needs to be struck if R5 is struck per question 8.
<b>Response: The RC SDT thanks you for your comment. The RC SDT retained R5 and M5. Please see discussion above in Q8.</b>		
Manitoba Hydro	No	Measure for R5 would need to be struck should R5 be struck as per question 8.
<b>Response: The RC SDT thanks you for your comment. The RC SDT retained R5 and M5. Please see discussion above in Q8.</b>		
Illinois Municipal Electric Agency	No	IMEA supports the comments submitted by the MISO Standards Collaboration Group.
<b>Response: The RC SDT thanks you for your comment. The RC SDT retained R5 and M5. Please see discussion above in Q8.</b>		

**Consideration of Comments on Project 2006-06 Reliability Coordination**

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Organization	Yes or No	Question 9 Comment
MRO NSRS	No	Measurement 5 needs to be struck if R5 is struck per question 8.
<b>Response: The RC SDT thanks you for your comment. The RC SDT retained R5 and M5. Please see discussion above in Q8.</b>		
Northeast Power Coordinating Council	Yes	
Bonneville Power Administration	Yes	
FirstEnergy	Yes	
IRC Standards Review Committee	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst	Yes	

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Organization	Yes or No	Question 9 Comment
Corporation		
American Electric Power	Yes	
Georgia Transmission Corporation	Yes	
Hydro-Québec TransEnergie (HQT)	Yes	
Duke Energy	Yes	
Northeast Utilities	Yes	
Independent Electricity System Operator	Yes	
American Transmission Company	Yes	



**10. Do you agree with the revisions to the Violation Severity Levels in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

**Summary Consideration:** Several stakeholders suggested revisions to the VSLs for R4 and R5. The RC SDT concurs that improvements are warranted for the VSLs for R4 and R5. The VSLs have been changed accordingly. The VSL for R3 was revised to add the word “issued” before Reliability Directive to match the revised requirement. The VSLs for R4 and R5 were modified to clarify that if the responsible entity did not notify any others, then this is a Severe VSL.

Organization	Yes or No	Question 10 Comment
Northwest LSE Group	No	Only in making the Measures agree with the suggested changes to the requirements above.
<b>Response: The RC SDT thanks you for your comment. The measures were revised to reflect changes to the requirements as necessary.</b>		
Northeast Power Coordinating Council	No	(i) R4: Since failing to issue an alert to 3 entities already attracts a “High” VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a “Severe” VSL. We suggest to change the High VSL to: “failed to issue an alert to three, but not all, impacted”. and the Severe VSL to: “failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a “Severe” violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a “High” violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a “Severe” violation.  (ii) (ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
<b>Response: The RC SDT thanks you for your comment. We concur that improvements are warranted for the VSLs for R4 and R5. The VSLs have been revised per your suggestion accordingly.</b>		
Midwest ISO Standards Collaborators	No	The Commission stated in their order on VSLs in June of 2008 their preference for as many VSLs as possible. We believe two VSLs are possible for R1 based on whether the RC is acting or directing actions to prevent versus mitigate. Failure to mitigate should be Severe. Failure to prevent should be High because if the RC fails to act or direct action to prevent, the Adverse Reliability Impact may still not happen if system conditions change. For the Moderate VSL of R2, please remove the clause “but not all”. It is not necessary.
<b>Response: The RC SDT thanks you for your comment. The VSL for R1 was revised as recommended. There is not a Moderate VSL for R2.</b>		
Liberty Electric Power LLC	No	The VSL's have a "Severe" VSL attached to a GO who fails to inform the RC when the Go becomes aware it is are unable to fully comply with a directive. However, the RC failing to inform two TO's - who potentially could have many

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Organization	Yes or No	Question 10 Comment
		GOs supplying power to their systems - of an emergency is only a "Moderate" VSL.
<b>Response: The RC SDT thanks you for your comment. The VSLs for R4 and R5 have been revised to more closely fit the intent of the requirements.</b>		
E.ON U.S.	No	E.ON U.S. suggests that the VSL for R4 should be binary with the Severe VSL for failing to notify all entities as per R4. Partially meeting R4 is not consistent with the language in R4. E.ON U.S. also suggests that the VSL for R5 should be binary with the Severe VSL for failing to notify all entities as per R5. Partially meeting R5 is not consistent with the language in R5 but the reliability impact of partially meeting R5 is low.
<b>Response: The RC SDT thanks you for your comment. The requirements R4 and R5 are not binary in nature and therefore do not meet the VSL guideline for binary. We have revised the High and Severe VSLs for R4 and R5 (see comment of NPCC above).</b>		
Manitoba Hydro	No	Believe two VSLs are possible for R1 based on whether the RC is acting or directing actions to prevent versus mitigate. Failure to mitigate should be Severe. Failure to prevent should be High because if the RC fails to act or direct action to prevent, the Adverse Reliability Impact may still not happen if system conditions change. For the Moderate VSL of R2, please remove the clause "but not all". It is not necessary.
<b>Response: The RC SDT thanks you for your comment. We concur with your suggestion to split the single VSL into two separate VSLs, one addressing prevention and one mitigation. The VSLs for R1 have been changed accordingly.</b>		
Illinois Municipal Electric Agency	No	IMEA supports the comments submitted by the MISO Standards Collaboration Group.
<b>Response: The RC SDT thanks you for your comment. Please review the response to MISO SCG comments.</b>		
Hydro-Québec TransEnergie (HQT)	No	<p>(i) R4: Since failing to issue an alert to 3 entities already attracts a "High" VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a "Severe" VSL. We suggest to change the High VSL to: "failed to issue an alert to three, but not all, impacted". and the Severe VSL to: "failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a "Severe" violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a "High" violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a "Severe" violation.</p> <p>(ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.</p>
<b>Response: The RC SDT thanks you for your comment. We concur that improvements are warranted for the VSLs for R4 and R5. The VSLs have been</b>		

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Organization	Yes or No	Question 10 Comment
<b>revised as you suggest.</b>		
Northeast Utilities	No	(i) R4: Since failing to issue an alert to 3 entities already attracts a “High” VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a “Severe” VSL. We suggest to change the High VSL to: “failed to issue an alert to three, but not all, impacted”. and the Severe VSL to: “failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a “Severe” violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a “High” violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a “Severe” violation.(ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
<b>Response: The RC SDT thanks you for your comment. We concur that improvements are warranted for the VSLs for R4 and R5. The VSLs have been revised as you suggested.</b>		
Independent Electricity System Operator	No	(i) R1: For clarity, we suggest changing “it” to “that”.R4: Since failing to issue an alert to 3 entities already attracts a “High” VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a “Severe” VSL. We suggest to change the High VSL to: “failed to issue an alert to three, but not all, impacted”. and the Severe VSL to: “failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a “Severe” violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a “High” violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a “Severe” violation.(ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
<b>Response: The RC SDT thanks you for your comment. We concur that improvements are warranted for the VSLs for R4 and R5. The VSLs have been revised as you suggested.</b>		
MRO NSRS	No	The Commission stated in their order on VSLs in June of 2008 their preference for as many VSLs as possible. MRO NSRS believes two VSLs are possible for R1 based on whether the RC is acting or directing actions to prevent versus mitigate. Failure to mitigate should be Severe. Failure to prevent should be High because if the RC fails to act or direct action to prevent, the Adverse Reliability Impact may still not happen if system conditions change.  For the Moderate VSL of R2, please remove the clause “but not all”. It is not necessary.
<b>Response: The RC SDT thanks you for your comment. We concur with your suggestion to split the single VSL into two separate VSLs, one addressing prevention and one mitigation. The VSLs for R1 have been changed accordingly.  There is not a Moderate VSL for R2.</b>		

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Organization	Yes or No	Question 10 Comment
SERC OC Standards Review Group	Yes	
Bonneville Power Administration	Yes	
FirstEnergy	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power	Yes	
Georgia Transmission Corporation	Yes	
Duke Energy	Yes	

**11. Do you agree with the revisions to the Requirements in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.**

**Summary Consideration:** Stakeholders suggested revising R8 to include provisions for avoiding implementing actions that would violate safety, equipment or regulatory or statutory requirements. The RC SDT agreed and added this to the requirement. Other stakeholders suggested adding "For conditions or activities that impact other Reliability Coordinator Areas,..." at the beginning of R1 and R3. The RC SDT agreed and added this to the requirements. The Time Horizons for R2 were revised as suggested to "Same Day Operations and Operations Planning". Several stakeholders expressed concerns regarding having R6-R8 as separate requirements. The intent of R6, R7, and R8 is to handle those things that arise that may not have had a plan identified in advance. The RC SDT contends the requirements are adequate as written.

Organization	Yes or No	Question 11 Comment
Northwest LSE Group		Abstain
Northeast Power Coordinating Council	No	The intents of Requirements R7 and R8 are addressed in R6, and do not add anything. Suggest removing R7 and R8.
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (a requirement that contained multiple separate requirements). Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details.</p> <p><a href="http://www.nerc.com/docs/standards/sar/IRO-014-2_Implementation_Plan_Clean_2009July9.pdf">http://www.nerc.com/docs/standards/sar/IRO-014-2_Implementation_Plan_Clean_2009July9.pdf</a></p>		
SERC OC Standards Review Group	No	Does the STD intend to give a Reliability Coordinator the authority to direct reliability outside their reliability area? This appears to be in conflict with IRO-001.
<p><b>Response:</b> The RC SDT thanks you for your comment. IRO-014 deals with coordinating plans, processes and procedures ahead of time. The requirements state that RCs will follow these agreed to plans, processes or procedures.</p>		
FirstEnergy	No	See our comments from Questions 8. If IRO-001 R7 is retired and deemed covered by IRO-014 R1, then IRO-014 R1 should include the "mitigation of SOL and IROL violations" as one of the items to be addressed in the RC's Operating Procedure, Process, or Plan.

Organization	Yes or No	Question 11 Comment
<p><b>Response: The RC SDT thanks you for your comment. Please see response to question 8. The RC SDT did not make any revisions as this issue is covered by R1.6 relating to Adverse Reliability Impacts.</b></p>		
<p>IRC Standards Review Committee</p>	<p>No</p>	<p>(1) R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, placing the burden on the same RC to obtain the agreement of impacted RCs may not be appropriate since the RC experiencing the Adverse Reliability Impact may not be able to force impacted RC to concur. We suggest the SDT to consider: a. Remove the bullet to require agreement from the impacted RC; b. Add a new requirement that the impacted RC shall acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given.</p> <p>(2) We realize that R7 implies that the RC experiencing the Adverse Reliability Impact has come up with an alternative plan when its initial plan was not agreed to, but the alternative may still be disagreed by the impacted RC. Simply implementing the alternative plan, as stipulated in R8, could expose the impacted RC to operate in an unreliable or unsafe domain. We therefore request the SDT to assess if any requirements need to be introduced to resolve this difference with due regard to reliability concerns in both RC areas when agreement cannot be reached even on the alternative plan.</p>
<p><b>Response: The RC SDT thanks you for your comment.</b></p> <p><b>1) R2 deals with procedures, processes and plans identified and developed ahead of time. If the plan of one RC requires action from another RC, the RC SDT feels it is necessary to get agreement from the second RC to take action, otherwise the plan is not a plan that will maintain reliability. The intent of R6, 7, and 8 is to handle those things that arise that may not have had a plan identified in advance. The RC SDT believes the requirements are adequate as written.</b></p> <p><b>2) We have modified R8 to allow RCs to avoid implementing actions that violate safety, equipment or regulatory or statutory requirement.</b></p> <p>R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. . <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations</i></p>		
<p>Midwest ISO Standards Collaborators</p>	<p>No</p>	<p>Requirements R2 and R8 need additional work. R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, it inappropriately places the burden on the same RC to obtain the agreement of impacted RCs. No RC can be forced to agree. Rather R2 should remove the bullet to require agreement from the impacted RC and a new requirement should be written to require the impacted RC to acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given as the reason for not agreeing with the Operating Process, Procedure or Plan. This contributes to reliability by forcing the impacted RC to take action if the action is reasonable.</p>

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Organization	Yes or No	Question 11 Comment
		<p>Further, the drafting team needs to clarify that R2 also applies to the mitigation plan in R7. Because R7 requires the RC experiencing the Adverse Reliability Impact to develop the mitigation plan, the mitigation plan may not be agreed to by the impacted RC. The impacted RC may have a perfectly valid reliability, statutory, legal, or regulatory reason for not agreeing to the mitigation plan. R8 still obligates the RC to implement the mitigation plan developed in R7 though it may be contrary to reliability. R8 needs to allow the RC to refuse to implement the mitigation plan if the impacted RC has a reliability, statutory, legal or regulatory reason. Further the drafting team should consider if the impacted RC could refuse because the RC experiencing the Adverse Reliability Impact has not implemented comparable measures in their own area. R8 as written could allow an RC to simply pass cost on to the neighboring RC in the name of reliability. For example, the RC may not want to order a unit to be committed to avoid certain startup costs but they ask the neighboring RC to start up a unit in their footprint.</p>
<p><b>Response: The RC SDT thanks you for your comment.</b></p> <p><b>R2 deals with procedures, processes and plans identified and developed ahead of time. If the plan of one RC requires action from another RC, the RC SDT feels it is necessary to get agreement from the second RC to take action, otherwise the plan is not a plan that will maintain reliability. The intent of R6, R7, and R8 is to handle those things that arise that may not have had a plan identified in advance. The RC SDT believes the requirements are adequate as written.</b></p> <p><b>R7/R8: We have modified R8 to allow RCs to avoid implementing actions that violate safety, equipment or regulatory or statutory requirement.</b></p> <p>R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. . <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i></p> <p><b>The second comment deals with economic issues and not with reliability. We cannot address economic issues, but it would be reasonable to expect that plans developed in advance could include equity considerations. Also, it is possible to postulate a scenario where the RC experiencing the Adverse Reliability Impact may not have actions to take that are effective and the other impacted RC could have very effective actions to take and should take them regardless of whether the RC developing the mitigation plan has taken comparable measures in its own area.</b></p>		
Southern Company	No	<p>IRO-001-1 Requirement 3 states that, “The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing- Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System.” This does not give one RC the authority to direct another RC. Requirement 7 and 8 would allow one RC to give a directive to another RC if they disagree. This would allow an RC with bad information to require another RC to carry out a mitigation plan that could degrade system reliability. For example, RC1 identifies a possible SOL violation in RC2s reliability area due to RC1s generation pattern. RC1 and RC2 can’t agree that there is a problem. In order to mitigate the SOL a mitigation plan is developed by RC1 that requires RC2 to redispatch generation and reconfigure transmission in RC2’s area so that the generation and transmission in RC1’s area won’t have</p>

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Organization	Yes or No	Question 11 Comment
		<p>to be redispached or reconfigured. Suggested rewording of R7 and R8</p> <p>R7. When Reliability Coordinators can not agree that a problem exists a mitigation plan will be developed by each Reliability Coordinator that will restore system reliability in their respective reliability areas. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p> <p>R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed to relieve the identified Adverse Reliability Impact in their reliability area when the impacted Reliability Coordinators can not agree that a problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p>
<p><b>Response: The RC SDT thanks you for your comment. IRO-014 deals with coordinating plans, processes and procedures ahead of time. The requirements state that RCs will follow these plans processes or procedures. We have modified R8 to allow RCs to avoid implementing actions that violate safety, equipment or regulatory or statutory requirement. The intent of R6, R7, and R8 is to handle those things that arise that may not have had a plan identified in advance.</b></p> <p>R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. . [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</p>		
Manitoba Hydro	No	<p>Requirements R2 and R8 need additional work. R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, it inappropriately places the burden on the same RC to obtain the agreement of impacted RCs. No RC can be forced to agree. Rather R2 should remove the bullet to require agreement from the impacted RC and a new requirement should be written to require the impacted RC to acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given as the reason for not agreeing with the Operating Process, Procedure or Plan. This contributes to reliability by forcing the impacted RC to take action if the action is reasonable.</p> <p>Further, the drafting team needs to clarify that R2 also applies to the mitigation plan in R7. Because R7 requires the RC experiencing the Adverse Reliability Impact to develop the mitigation plan, the mitigation plan may not be agreed to by the impacted RC. The impacted RC may have a perfectly valid reliability, statutory, legal, or regulatory reason for not agreeing to the mitigation plan. R8 still obligates the RC to implement the mitigation plan developed in R7 though it may be contrary to reliability. R8 needs to allow the RC to refuse to implement the mitigation plan if the impacted RC has a reliability, statutory, legal or regulatory reason. Further the drafting team should consider if the impacted RC could refuse because the RC experiencing the Adverse Reliability Impact has not implemented comparable measures in their own area. R8 as written could allow an RC to simply pass cost on to the neighboring RC in the name of reliability. For example, the RC may not want to order a unit to be committed to avoid certain startup costs but they ask the neighboring RC to start up a unit in their footprint.</p>



Organization	Yes or No	Question 11 Comment
<p><b>Response:</b> The RC SDT thanks you for your comment.</p> <p>R2 deals with procedures, processes and plans identified and developed ahead of time. If the plan of one RC requires action from another RC, the RC SDT feels it is necessary to get agreement from the second RC to take action, otherwise the plan is not a plan that will maintain reliability. The intent of R6, R7, and R8 is to handle those things that arise that may not have had a plan identified in advance. The RC SDT contends the requirements are adequate as written.</p> <p><b>R8: We have modified R8 to allow RCs to avoid implementing actions that violate safety, equipment or regulatory or statutory requirement.</b></p> <p>R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. . <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations</i></p> <p><b>The second comment deals with economic issues and not with reliability. We cannot address economic issues, but it would be reasonable to expect that plans developed in advance could include equity considerations. Also, it is possible to postulate a scenario where the RC experiencing the Adverse Reliability Impact may not have actions to take that are effective and the other impacted RC could have very effective actions to take and should take them regardless of whether the RC developing the mitigation plan has taken comparable measures in its own area.</b></p>		
Hydro-Québec TransEnergie (HQT)	No	The intents of Requirements R7 and R8 are addressed in R6, and do not add anything. Suggest removing R7 and R8.
<p><b>Response:</b> The RC SDT thanks you for your comment. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement. Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details.</p> <p><a href="http://www.nerc.com/docs/standards/sar/IRO-014-2_Implementation_Plan_Clean_2009July9.pdf">http://www.nerc.com/docs/standards/sar/IRO-014-2_Implementation_Plan_Clean_2009July9.pdf</a></p>		
Duke Energy	No	<p>R1 introduces the concept of “impacted Reliability Coordinators” which is unclear. Revise R1 as follows: R1. For conditions or activities that may impact other Reliability Coordinator Areas, each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for notification, exchange of information or coordination of actions with those impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following:</p> <p>R2 Time Horizon should not include Long-term Planning.</p> <p>R3 is unclear. Revise R3 as follows:R3. For conditions or activities that may impact other Reliability Coordinator Areas, each Reliability Coordinator shall make notifications and exchange reliability-related information with those impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans, or other available means to</p>

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Organization	Yes or No	Question 11 Comment
		<p>accomplish the notifications and exchange of reliability-related information.</p> <p>R4 could be interpreted to require a weekly conference call even if there is no need for a call. Revise R4 as follows:R4. When there are conditions or activities that may impact other Reliability Coordinator areas, each Reliability coordinator shall participate in agreed upon conference calls, at least weekly, and other communication forums with those impacted Reliability Coordinators.”</p> <p>R5 “ Insert the word “all” before impacted Reliability Coordinators for clarity.”</p> <p>R6, R7 and R8 are interrelated and unclear. Combine these three requirements into one clear requirement as follows:</p> <p>R6. When the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, the Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan and each impacted Reliability Coordinator shall implement the plan.</p>
<p><b>Response: The RC SDT thanks you for your comment.</b></p> <p><b>R1: We have revised R1 to include the phrase “For conditions or activities that impact other Reliability Coordinator Areas,...” We removed the word “may” to tighten up the requirement.</b></p> <p><b>R2: The RC SDT removed Long term Planning and revised the Time Horizon of R2 to match that of R1: <i>Same Day Operations and Operations Planning</i></b></p> <p><b>R3: We have revised R3 to include the phrase “For conditions or activities that impact other Reliability Coordinator Areas,...” We removed the word “may” to tighten up the requirement.</b></p> <p><b>R4: The collective experience of the RC SDT members indicates a clear need to have at least weekly conference calls among impacted Reliability Coordinators among impacted Reliability Coordinators.</b></p> <p><b>R5: The RC SDT agrees and added the word “all” as suggested.</b></p> <p><b>R6-8: These requirements were developed from IRO-016, R1 which was a compound requirement (it contained multiple requirements for different actions in a single requirement). The RC SDT separated these into distinct requirements for clarity and measurability.</b></p>		
Northeast Utilities	No	The intents of Requirements R7 and R8 are addressed in R6, and do not add anything. Suggest removing R7 and R8.
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (it contained multiple requirements for different actions in a single requirement. Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details.</b></p> <p><a href="http://www.nerc.com/docs/standards/sar/IRO-014-2_Implementation_Plan_Clean_2009July9.pdf">http://www.nerc.com/docs/standards/sar/IRO-014-2_Implementation_Plan_Clean_2009July9.pdf</a></p>		

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Organization	Yes or No	Question 11 Comment
Independent Electricity System Operator	No	<p>(i) Definition of Adverse Reliability Impact is duplicated as it is already defined in IRO-001-2</p> <p>(ii) We do not see the need for R7 and R8 since R6 already stipulates the necessary actions to be taken, it is not necessary for the Reliability Coordinator with the identified Adverse Reliability Impact to develop (re-develop?) a mitigation plan when the impacted Reliability Coordinators did not agree that the problem exists. What may be needed is the insertion of “shall develop a mitigation plan” before “notify impacted Reliability Coordinators” in R5. We suggest removing these requirements (R7 and R8).</p>
<p><b>Response: The RC SDT thanks you for your comment. i)...The SDT acknowledges that the definition of Adverse Reliability Impact is duplicated in IRO-001-2 and in IRO-014-2. The SDT repeated it in the two standards to facilitate review and consistency. When the standards are approved, the definition will be moved into the NERC Glossary of Terms...only once.</b></p> <p><b>ii) The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (it contained multiple requirements for different actions in a single requirement. Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details.</b></p> <p><a href="http://www.nerc.com/docs/standards/sar/IRO-014-2_Implementation_Plan_Clean_2009July9.pdf">http://www.nerc.com/docs/standards/sar/IRO-014-2_Implementation_Plan_Clean_2009July9.pdf</a></p>		
MRO NSRS	No	<p>In bullet 2.1 of Requirement R2, what does the requirement that all RCs that are required to take action must agree to it really mean? Does this mean that if the RCs don't agree that in reality an Operating Procedure, Process or Plan doesn't really exist and thus is not subject to R2? Further, how can one RC require another RC to agree with an Operating Procedure, Process or Plan? Either they agree or they don't. Isn't what is really needed is a requirement for the impacted RC to review and acknowledge the plan? That is give it a thumbs up or a thumbs down?</p> <p>In requirement R4, the clause “at least weekly” should be struck. If the RCs agree that a bi-weekly call is sufficient unless conditions change significantly why must they be held to a weekly standard. Our experience has been that most RCs participate in daily calls anyway based on an agreed need.</p> <p>Please strike IRO-014-2 R7 as it is redundant with IRO-001-2 R1. IRO-001-2 R1 already requires that RC with the identified Adverse Reliability Impact to act or direct actions to prevent or mitigate the magnitude or duration of the event.</p> <p>MRO NSRS does not believe IRO-014-2 R8, yet properly considers why the RCs may not agree on a mitigation plan. If RC A develops a mitigation plan for an identified Adverse Reliability Impact on their system and RC B does not agree with RC A's mitigation plan, RC B will be in violation of R8 if they do not follow the mitigation plan. What if the mitigation plan has an Adverse Reliability Impact on RC B's footprint? They should not have to follow the mitigation plan.</p>
<p><b>Response: The RC SDT thanks you for your comment. Requirement R2 addresses processes, procedures, and plans developed in advance. Such plans reasonably can be expected to contain agreement. The goal is to ensure reliability; refusal to agree based upon equity issues is unacceptable. If inability to agree is based upon differing opinions as to whether the problem exists, then the coordination requirements are out of</b></p>		

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Organization	Yes or No	Question 11 Comment
<p>compliance. Technical assessments reasonably can be expected to predict the same effects upon the system.</p> <p>The collective experience of the RC SDT members indicates a clear need to have at least weekly conference calls.</p> <p><b>IRO-014-2 R7 applies to scenarios and coordination between RCs. IRO-001-2 R1 applies to scenarios and coordination between an RC and TOPs, BAs, GOPs, TSPs, LSEs, DPs, and PSEs within its RC Area. The SDT believes it is appropriate to leave both requirements in place.</b></p> <p><b>R8: We have modified R8 to allow RCs to avoid implementing actions that violate safety, equipment or regulatory or statutory requirement.</b></p> <p>R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. . <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations</i></p>		
Bonneville Power Administration	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power		Not applicable.

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Organization	Yes or No	Question 11 Comment
Georgia Transmission Corporation		N/A
<b>Response: The RC SDT thanks you for your comment.</b>		

**12. Do you agree with the revisions to the Measures in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.**

**Summary Consideration:** Stakeholders agreed with the Measures, except to make conforming changes for revisions to the requirements (M1, M3 and M8). The RC SDT has revised the measures based on the new requirements. One stakeholder suggested revision to the Data Retention for R5-R8. Data Retention was revised for R5 to 12 months, however the RC SDT believes that three years is the correct period for R6-8.

Organization	Yes or No	Question 12 Comment
Northwest LSE Group		Abstain
Northeast Power Coordinating Council	No	The intents of Measures M7 and M8 are addressed in M6, and do not add anything. Suggest removing M7 and M8.
<b>Response: The RC SDT thanks you for your comment. R7 and R8 were not removed, therefore the measures will remain in place.</b>		
IRC Standards Review Committee	No	Conforming changes to the Measurements will be required if changes as suggested in Question 11 are introduced.
<b>Response: The RC SDT thanks you for your comment. The measures were revised to conform to the revised requirements.</b>		
Midwest ISO Standards Collaborators	No	Conforming changes to the Measurements will be required for accepted changes from question 11.
Manitoba Hydro	No	Conforming changes to the Measurements will be required for accepted changes from question 11.
<b>Response: The RC SDT thanks you for your comment. The measures were revised to conform to the revised requirements.</b>		
Hydro-Québec TransEnergie (HQT)	No	The intents of Measures M7 and M8 are addressed in M6, and do not add anything. Suggest removing M7 and M8.

**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Yes or No	Question 12 Comment
<b>Response: The RC SDT thanks you for your comment. R7 and R8 were not removed, therefore the measures will remain in place</b>		
Duke Energy	No	Need to revise the Measures to coincide with the recommended changes to the requirements in #11 above. Also under Data Retention, 12 months of evidence is needed for R3, R4 and M3, M4. However 3 years plus the current year is required for R5 through R8 and M5 through M8. We see no reason the data requirements to be different and believe 12 months is the proper amount of data retention.
<b>Response: The RC SDT thanks you for your comment. The measures were revised to conform to the revised requirements. The RC SDT concurs with the suggested revision to Data Retention for R5. The infrequency of occurrences of R6-8 clearly support a 3 year retention period.</b>		
Northeast Utilities	No	The intents of Measures M7 and M8 are addressed in M6, and do not add anything. Suggest removing M7 and M8.
<b>Response: The RC SDT thanks you for your comment. R7 and R8 were not removed, therefore the measures will remain in place</b>		
Independent Electricity System Operator	No	Depending on the response of the SDT, changes to M5 to M8 may be required.
<b>Response: The RC SDT thanks you for your comment. The measures were revised to conform to the revised requirements</b>		
MRO NSRS	No	Conforming changes to the Measurements will be required for accepted changes from question 11.
<b>Response: The RC SDT thanks you for your comment. The measures were revised to conform to the revised requirements</b>		
SERC OC Standards Review Group	Yes	
Bonneville Power Administration	Yes	
FirstEnergy	Yes	
Liberty Electric Power LLC	Yes	

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Organization	Yes or No	Question 12 Comment
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power		Not applicable.
Georgia Transmission Corporation		N/A



**13. Do you agree with the revisions to the Violation Severity Levels in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.**

**Summary Consideration:** Several stakeholders suggested developing four VSLs for R5. Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSLs to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios. Other stakeholders suggested four VSLs for R4. The essence of R4 is written to require impacted RC's to talk at least weekly and is singular in nature. VSL's can not be written for conference calls that exceed the singular requirement.

Organization	Yes or No	Question 13 Comment
Northwest LSE Group		Abstain
Northeast Power Coordinating Council	No	(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe, if the VSLs are graded according to the number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more. (ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT's response to our comments under Q11.
<p><b>Response:</b> The RC SDT thanks you for your comment. Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSLs to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios.</p> <p>The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (a single requirement that contained multiple requirements). Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details; as such, the VSL's remain.</p>		
IRC Standards Review Committee	No	(1) In the Commission's June 2008 order on VSLs, they expressed their preference for having as many VSLs as possible. We believe that four VSLs could be written for R4 based on the number of conference calls that are participated in. We also believe this would be consistent with the Commission's guideline 4 because the requirement is written in the plural, that is conference calls, so all conference calls must be considered in aggregate. Thus, failure to participate in more than

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Organization	Yes or No	Question 13 Comment
		<p>one conference call does not represent distinct violations but a single violation.</p> <p>(2) Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any. Note: CAISO abstains from these comments.</p>
<p><b>Response: The RC SDT thanks you for your comment.</b></p> <p>1) The Commission’s June 2008 stated a preference for as many as possible, however the SDT believes the essence of this statement was to write multiple VSLs only where appropriate, not to do so simply because it is possible. Further, the essence of R4 is written to require impacted RC’s to talk at least weekly and is singular in nature. VSL’s can not be written for conference calls that exceed the singular requirement.</p> <p>2) Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSLs to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC’s. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC’s. The SDT felt the VSL’s appropriately addressed the large and small scenarios.</p>		
Midwest ISO Standards Collaborators	No	<p>In the Commission’s June 2008 order on VSLs, they expressed their preference for having as many VSLs as possible. We believe that four VSLs could be written for R4 based on the number of conference calls that are participated in. We also believe this would be consistent with the Commission’s guideline 4 because the requirement is written in the plural, that is conference calls, so all conference calls must be considered in aggregate. Thus, failure to participate in more than one conference call does not represent distinct violations but a single violation.</p> <p>Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any.</p>
<p><b>Response: The RC SDT thanks you for your comment. The Commission’s June 2008 stated a preference for as many as possible, however the SDT believes the essence of this statement was to write multiple VSLs only where appropriate, not to do so simply because it is possible. Further, the essence of R4 is that it is written to require impacted RC’s to talk at least weekly and is singular in nature. VSL’s can not be written for conference calls that exceed the singular requirement.</b></p> <p><b>Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSL to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC’s. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC’s. The SDT felt the VSL’s appropriately addressed the large and small scenarios.</b></p>		
Southern Company	No	<p>Reliability problems identified in other reliability areas are based on modeling information obtained from another reliability region. The fact that one RC will not agree that the model of an adjacent RC’s reliability area may be more accurate than their model of the adjacent reliability area is no reason to impose a severe violation on the RC with the more accurate</p>

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Organization	Yes or No	Question 13 Comment
		<p>model of their own reliability region.</p> <p>Example: RC1 identifies a contingency overload of a transformer bank in an adjacent reliability area. The transformer bank was replaced the week before with a larger bank. When RC1 contacts RC2, RC2 explains that the bank overload is not valid because of the replacement. RC2 does not identify a problem due to the fact that the model RC2 is using has been updated with the new transformer bank. RC1 will not agree and requires RC2 to open a tie line with another reliability area to relieve the contingency overload. If RC2 does not follow the instructions of RC1, making the interconnection weaker to relieve a problem that does not exist, RC2 is out of compliance and a severe violation will be imposed.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. The scenario you describe is essentially a modeling problem, as such the discrepancy would be vetted and corrected during the discovery phase. Further, an RC1 cannot tell RC2 how to rate facilities owned by entities within the RC2 area. The SDT believes that your scenario would play out like this: RC1 calls RC2 and says, “we show an overload on transformer bank X.” RC2 says, “we do not, what rating are you using?” RC1 replies with the old rating, RC2 states that it is wrong, and here is the correct rating, which RC1 implements, problem solved. RC1 cannot come back and say the rating that you have for transformer bank X is incorrect. Each entity within the RC Area (TO or GO) is responsible for the rating of the facilities it owns. (Taking the scenario even farther, if RC1 believes that the TO or GO has an incorrect rating, then RC1 can challenge the rating methodology of that TO or GO under the FAC standards.)</p>		
Manitoba Hydro	No	<p>Believe that four VSLs could be written for R4 based on the number of conference calls that are participated in. Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. In regards to R4: The essence of R4 is that it is written to require impacted RC’s to talk at least weekly and is singular in nature. VSL’s can not be written for conference calls that exceed the singular requirement.</p> <p>In regards to R5: Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSL to represent a typical scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC’s. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC’s.</p>		
Hydro-Québec TransÉnergie (HQT)	No	<p>(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe, if the VSLs are graded according to the number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more.</p> <p>(ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT’s response to our comments under Q11.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. Typically, in the course of BES operations, impacted Reliability Coordinators will be a</p>		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 13 Comment
<p>small number. The SDT effort in this regard, was to write the VSL to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios.</p> <p>The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (a single requirement that contained multiple requirements). Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details; as such, the VSL's remain.</p>		
Duke Energy	No	Need to revise the VSLs to coincide with recommended changes to the requirements in #11 above.
<p><b>Response:</b> The RC SDT thanks you for your comment. The VSLs were modified to align with changes made to the requirements. Please see the response to #11. The SDT adopted several, but not all of your suggestions.</p>		
Northeast Utilities	No	<p>(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe, if the VSLs are graded according to the number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more.(ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT's response to our comments under Q11.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSL to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios.</p> <p>The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (a single requirement that contained multiple requirements). Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details; as such, the VSL's remain.</p>		
Independent Electricity System Operator	No	<p>(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe if the VSLs are graded according to then number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more.(ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT's response to our comments under Q11.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. Typically, in the course of BES operations, impacted Reliability Coordinators will be a</p>		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 13 Comment
<p>small number. The SDT effort in this regard, was to write the VSL to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios.</p> <p>The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (a single requirement that contained multiple requirements). Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details; as such, the VSL's remain.</p>		
MRO NSRS	No	<p>In the Commission's June 2008 order on VSLs, they expressed their preference for having as many VSLs as possible. The MRO NSRS believes that four VSLs could be written for R4 based on the number of conference calls that are participated in. We also believe this would be consistent with the Commission's guideline 4 because the requirement is written in the plural, that is conference calls, so all conference calls must be considered in aggregate. Thus, failure to participate in more than one conference call does not represent distinct violations but a single violation.</p> <p>Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any.</p>
<p><b>Response:</b> The RC SDT thanks you for your comment. The Commission's June 2008 stated a preference for as many as possible, however the SDT believes the essence of this statement was to write multiple VSLs only where appropriate, not to do so simply because it is possible. Further, the essence of R4 is written to require impacted RC's to talk at least weekly and is singular in nature. VSL's can not be written for conference calls that exceed the singular requirement.</p> <p>Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSLs to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios.</p>		
SERC OC Standards Review Group	Yes	
Bonneville Power Administration	Yes	
FirstEnergy	Yes	

**Consideration of Comments on Project 2006-06 Reliability Coordination**

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Organization	Yes or No	Question 13 Comment
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power		Not applicable.
Georgia Transmission Corporation		N/A

**14.If you have any other comments, not expressed in questions above, for the RC SDT on any of the other changes made to this set of standards and their associated implementation plans, please provide them here.**

**Summary Consideration:** Stakeholders suggested removing the Distribution provider and Generator Operator from the Data Retention section for R1 of COM-001. Since these are not applicable entities in R1, they were removed from Data Retention for the requirement.

Organization	Question 14 Comment
Northeast Power Coordinating Council	NPCC appreciates the work of the Drafting Team. No additional comments.
<b>Response: The RC SDT thanks you for your comment.</b>	
SERC OC Standards Review Group	"The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
<b>Response: The RC SDT thanks you for your comment.</b>	
Bonneville Power Administration	<p>Issue #2: Data Retention Why would the Distribution Provider and Generator Operator be required to store historical data (three years in the case of Requirement R1 and Measure M1; twelve months in the case of Requirement R2 and Measure M2) to show that these requirements and measures have been successfully implemented when these two entities (Distribution Provider and Generator Operator) aren't even included either in Requirements R1 and R2 or in Measure M1 and M2?It would appear that they should only have to provide historical data for three months as required by the data retention time for Requirement 3 and Measure 3.</p> <p>Issue #1: Data Retention: The first bullet in this section states that all entities are responsible for retaining documents associated with all Requirements and Measures associated with this standard. In reality, Requirements R1, R4, R5 and R6 and the corresponding Measures are the responsibility of the Reliability Coordinator. Requirements R2 and R3 and their corresponding Measures are implemented by the Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity and the Load Serving Entity. The Data Retention section should be rewritten to reflect this so that entities are not required to maintain documents that they aren't suppose to even possess in some cases.</p>
<b>Response: The RC SDT thanks you for your comment. COM-001 removed DP and GOP from the data retention section regarding R1 and R2. IRO-001-2 changed "all" to "applicable."</b>	

**Consideration of Comments on Project 2006-06 Reliability Coordination**

Organization	Question 14 Comment
IRC Standards Review Committee	AESO abstains from commenting on VSLs. VSLs for Alberta will be developed by provincial authorities.
<b>Response: The RC SDT thanks you for your comment.</b>	
E.ON U.S.	COM-001-2 R1 and R2 and the associated M1 and M2 are only applicable to the RC, TOP and BA but the “Data Retention” for R1/R2 and M1/M2 require the DP and GOP to retain data for the Requirements and Measures. E.ON U.S. suggests that the requirement for data retention of the DP and GOP be eliminated from the standard.
<b>Response: The RC SDT thanks you for your comment. COM-001 removed DP and GOP from the data retention section regarding R1 and R2.</b>	
Illinois Municipal Electric Agency	In order to minimize the number of reliability standards and the details covered in requirements - particularly those dealing with communications - it is recommended that an up-front provision/requirement be included as part of the compliance registration process that certain functional entities (e.g., DP, LSE, PSE, etc.) shall be responsible for providing the necessary information to transact services and for complying with the directives/requests of certain functional authorities (e.g., BA, PC, RC, etc.) in order to maintain/enhance reliability of the BES.
<b>Response: The RC SDT thanks you for your comment. The registration process is not in the scope of this SDT project</b>	
Northeast Utilities	Northeast Utilities appreciates the work of the Drafting Team. No additional comments.
<b>Response: The RC SDT thanks you for your comment.</b>	
Independent Electricity System Operator	In our comments on the previous posting, we expressed a disagreement with a proposed to remove IRO-005, in particular the latter part of R13, which stipulated that: In instances where there is a difference in derived limits, the Reliability Coordinator and its Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall always operate the Bulk Electric System to the most limiting parameter. Our rationale was that The FAC standards cover the methodology used in calculating SOLs and IROLs. Regardless of how these limits are calculated, in practice there always exists the possibility that different entities may come up with SOLs/IROLs, especially of the inter-ties, that could be different. Operating to the lowest SOLs/IROLs when more than one set exists is a necessary requirement for reliable operation. The SDT responded by suggesting that this requirement is redundant with FAC-014 which -014 states the requirement for developing and sharing SOL and IROL between the RC, PA, TP and TOP in both the planning and operating time frames. However, this response fails to address the situation where during operation, the situation of disagreeing SOLs or IROLs does arise. FAC-014 or any other standards do not currently have a requirement to ensure that all entities operate to the lower limit before the difference is resolved. This leaves room for unreliable operation. We suggest the SDT to consider restating this requirement somewhere. Note that this requirement is similar to R6 of IRO-014



Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Question 14 Comment
	that when in doubt, the more conservative approach should be taken. If it is necessary to have an R6 to deal with an uncertain identification/notification of an Adverse Reliability Impact, we don't see why it is not necessary to operate to a lower SOL or IROL when there is an unresolved difference.
<b>Response: The RC SDT thanks you for your comment. The SDT team still feels this is covered in FAC-010, 011, and 14. For real-time operations, as you mention, this is covered with IRO-014, R6</b>	

### **Standard Development Roadmap**

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

#### **Development Steps Completed:**

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
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9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.

#### **Proposed Action Plan and Description of Current Draft:**

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the first draft. The team is seeking comments on the revised standards.

#### **Future Development Plan:**

<b>Anticipated Actions</b>	<b>Anticipated Date</b>
1. Respond to comments on third posting	March 2010
2. Post Standards for pre-ballot period.	April 2010
3. Standards posted for initial and recirculation ballots.	May 2010
4. Standards sent to BOT for approval.	July 2010
5. Standards filed with regulatory authorities.	September 2010

### Definitions of Terms Used in Standard

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

**Interpersonal Communication:** Any method that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any method that is able to serve as a substitute for and is redundant to normal Interpersonal Communication and does not utilize the same infrastructure (medium) as normal Interpersonal Communications.

## A. Introduction

1. **Title:** Communications
2. **Number:** COM-001-2
3. **Purpose:** To ensure that operating entities have adequate Interpersonal Communication capabilities.
4. **Applicability:**
  - 4.1. Transmission Operators.
  - 4.2. Balancing Authorities.
  - 4.3. Reliability Coordinators.
  - 4.4. Distribution Providers.
  - 4.5. Generator Operators.
  - 4.6. Transmission Service Providers.
  - 4.7. Load-Serving Entities.
  - 4.8. Purchasing-Selling Entities.
5. **Effective Date:** The first day of the first calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption.

## B. Requirements

- R1.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]
- R2.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal Interpersonal Communications capabilities that lasts 30 minutes or longer. [*Violation Risk Factor: Medium*][*Time Horizon: Real-time Operations*]
- R3.** Unless dictated by law or otherwise agreed to, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected BES. [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]
- R4.** Each Distribution Provider and Generator Operator shall have Interpersonal Communications capability with its Transmission Operator and Balancing Authority

for the exchange of Interconnection and operating information. *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*

**C. Measures**

- M1.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to dated test records, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that it identified and tested, on a quarterly basis, alternative Interpersonal Communications capabilities used for communicating real-time operating information. If the test was unsuccessful, the entity shall have and provide upon request evidence that it took action within 60 minutes to restore the identified alternative or identified a substitute Interpersonal Communications capability. (R1.)
- M2.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, it notified impacted entities within 60 minutes of the detection of a failure of its normal communications capabilities that lasted 30 minutes or longer. (R2.)
- M3.** Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that its personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected BES. If a language other than English is used, each party shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language or the law that requires the use of an alternate language. (R3.)
- M4.** Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.)

**D. Compliance**

- 1. Compliance Monitoring Process**
  - 1.1. Compliance Enforcement Authority**
    - Regional Entity
  - 1.2. Compliance Monitoring and Enforcement Processes**
    - Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

### **1.3. Data Retention**

The Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall keep the most recent three years of historical data (evidence) for Requirement R1, Measure M1.

Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall keep the most recent twelve months of historical data (evidence) for Requirement R2, Measure M2.

Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall keep evidence for Requirement R3, Measure M3 for the most recent 3 months. If a Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider or Generator Operator is found non-compliant with a requirement, it shall keep information related to the noncompliance until the Compliance Enforcement Authority finds it compliant.

Each Distribution Provider and Generator Operator shall keep the most recent three years of historical data (evidence) for Requirement R4, Measure M4.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

### **1.4. Additional Compliance Information**

None

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	<p>The responsible entity tested Alternative Interpersonal Communications capability but failed to take action within 60 minutes to restore the identified alternative</p> <p>OR</p> <p>Failed to identify a substitute Alternative Interpersonal Communications capability</p>	N/A	N/A	<p>The responsible entity failed to test its Alternative Interpersonal Communications capability on a quarterly basis.</p>
R2	<p>The responsible entity failed to notify the impacted entities in more than 60 minutes but less than or equal to 70 minutes.</p>	<p>The responsible entity notified at least one, but not all, impacted entities of the failure of its normal Interpersonal Communications capabilities within 60 minutes.</p> <p>OR</p> <p>The responsible entity failed to notify the impacted entities in more than 70 minutes but less than or equal to 80 minutes.</p>	<p>The responsible entity failed to notify the impacted entities in more than 80 minutes but less than or equal to 90 minutes.</p>	<p>The responsible entity failed to notify any impacted entities of the failure of its normal Interpersonal Communications capabilities within 60 minutes.</p> <p>OR</p> <p>The responsible entity failed to notify the impacted entities in more than 90 minutes.</p>
R3	N/A	N/A	N/A	<p>The responsible entity failed to provide evidence of legal requirements or concurrence to use a language other than English for communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected BES when a language other than English was used.</p>

Standard COM-001-2 — Communications

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R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R4	N/A	N/A	The responsible entity failed to have Interpersonal Communications capability with its Transmission Operator <b>or</b> Balancing Authority.	The responsible entity failed to have Interpersonal Communications capability with its Transmission Operator <b>and</b> Balancing Authority.



**E. Regional Differences**

None identified.

**F. Associated Documents**

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
2	TBD	Revised per SAR for Project 2006-06, RC SDT	Revised

### Standard Development Roadmap

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**None**

## A. Introduction

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## B. Requirements

- R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Aalternative ~~i~~Interpersonal ~~C~~ommunications capability~~y~~~~ies~~ used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes ~~develop a mitigation plan~~ to restore the identified alternative or identify -a substitute Alternative ~~its i~~Interpersonal ~~C~~ommunications capability~~y~~~~ies~~. [*Violation Risk Factor: ~~Lower~~High*][*Time Horizon: Real-time Operations*]
- R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (~~30 minutes or longer~~) of its normal ~~i~~Interpersonal ~~C~~ommunications capabilities that lasts 30 minutes or longer. [*Violation Risk Factor: Medium*][*Time Horizon: Real-time Operations*]
- R3. Unless dictated by law or otherwise agreed to ~~otherwise~~, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control ~~and or~~ operation of the interconnected BES. [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]

- R4.** Each Distribution Provider and Generation Operator shall have Interpersonal eCommunications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]

### C. Measures

- M1.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to dated test records, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that it identified and tested, on a quarterly basis, alternative Interpersonal eCommunications capabilities used for communicating real-time operating information. If the test was unsuccessful, the entity shall have and provide upon request evidence that it took action within 60 minutes developed a mitigation plan to restore the identified alternative or identified a substitute Interpersonal eCommunications capabilities. (R1.)
- M2.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, it notified impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of their-its normal communications capabilities that lasted 30 minutes or longer. (R2.)
- M3.** Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that its personnel used English as the language for all inter-entity Bulk Electric SystemBES reliability communications between and among operating personnel responsible for the real-time generation control and-or operation of the interconnected Bulk Electric SystemBES. If a language other than English is used, each party shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language or the law that requires the use of an alternate language. (R3.)
- M4.** Each Distribution Provider and Generation Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had demonstrate the existence of its Interpersonal eCommunications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.)

### D. Compliance

1. **Compliance Monitoring Process**
  - 1.1. **Compliance Enforcement Authority**

Regional Entity

## 1.2. Compliance Monitoring and Enforcement Processes

Compliance Audits  
Self-Certifications  
Spot Checking  
Compliance Violation Investigations  
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Complaints

## 1.3. Data Retention

The Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

Each Reliability Coordinator, Transmission Operator, and Balancing Authority, ~~Distribution Provider, and Generator Operator~~ shall keep the most recent three years of historical data (evidence) for Requirement R1, Measure M1.

Each Reliability Coordinator, Transmission Operator, and Balancing Authority, ~~Distribution Provider, and Generator Operator~~ shall keep the most recent twelve months of historical data (evidence) for Requirement R2, Measure M2.

Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall keep evidence for Requirement R3, Measure M3 for the most recent 3 months. If a Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider or Generator Operator is found non-compliant with a requirement, it shall keep information related to the noncompliance until the Compliance Enforcement Authority finds it compliant.

Each Distribution Provider and Generator Operator shall keep the most recent three years of historical data (evidence) for Requirement R4, Measure M4.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

## 1.4. Additional Compliance Information

None

2. Violation Severity Levels

Requirement	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	<p>The responsible entity tested <del>A</del>alternative <del>i</del>nterpersonal <del>C</del>ommunications capability<del>ies</del> but failed to <u>take action within 60 minutes to restore the identified alternative</u></p> <p><u>OR</u></p> <p><u>Failed to identify a substitute Alternative Interpersonal Communications capability</u><del>develop a mitigation plan when the test failed.</del></p>	N/A	N/A	<p>The responsible entity failed to test <del>the-its A</del>alternative <del>i</del>nterpersonal <del>e</del>Communications capability<del>ies</del> on a quarterly basis.</p>
R2	<p><u>The responsible entity failed to notify the impacted entities in more than 60 minutes but less than or equal to 70 minutes.</u><del>N/A</del></p>	<p>The responsible entity notified at least one, but not all, impacted entities of the failure of its normal <del>I</del>nterpersonal <del>C</del>ommunications capabilities within 60 minutes.</p> <p><u>OR</u></p> <p><u>The responsible entity failed to notify the impacted entities in more than 70 minutes but less than or equal to 80 minutes.</u></p>	<p><u>The responsible entity failed to notify the impacted entities in more than 80 minutes but less than or equal to 90 minutes.</u><del>N/A</del></p>	<p>The responsible entity failed to notify any impacted entities of the failure of <del>their</del> its normal <del>I</del>nterpersonal <del>C</del>ommunications capabilities within 60 minutes.</p> <p><u>OR</u></p> <p><u>The responsible entity failed to notify the impacted entities in more than 90 minutes.</u></p>
R3	N/A	N/A	N/A	<p>The responsible entity failed to provide evidence of <u>legal requirements or</u> concurrence to use a language other than English for communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected BES when a language other than English was used.</p>



R4	N/A	N/A	The responsible entity failed to have <b>I</b> nterpersonal <b>C</b> ommunications capability <del>ies</del> with its Transmission Operator <b>or</b> Balancing Authority.	The responsible entity failed to have <b>I</b> nterpersonal <b>C</b> ommunications capability <del>ies</del> with its Transmission Operator <b>and</b> Balancing Authority.
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**E. Regional Differences**

None identified.

**F. Associated Documents**

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
2	TBD	Revised per SAR for Project 2006-06, RC SDT	Revised

## Implementation Plan for COM-001-2 — Communications

### Defined Terms in the NERC Glossary:

The Reliability Coordination Standard Drafting Team proposes the following new definitions:

- **Interpersonal Communication:** Any method that allows two or more individuals to interact, consult, or exchange information.
- **Alternative Interpersonal Communication:** Any method that is able to serve as a substitute for and is redundant to normal Interpersonal Communication and does not utilize the same infrastructure (medium) as normal Interpersonal Communications.

### Prerequisite Approvals:

- None

### Conforming Changes to Requirements in Already Approved Standards:

- None

### Revision Summary:

The RC SDT revised the standard and is proposing retiring three requirements (R1, R5 and R6). Changes were made to eliminate redundancies between standards (existing and proposed), to align with the ERO Rules of Procedure and to address issues in FERC Order 693.

### Effective Dates:

The first day of the first calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption.

**Revisions or Retirements to Already Approved Standards**

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> <b>Where applicable, these facilities shall be redundant and diversely routed.</b> <i>[Violation Risk Factor: High]</i></p>	<p>The RC SDT contends that COM-001-1, R1 and its subrequirements are low level facilitating requirements that are more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards. Examples include:</p> <p>IRO-001-1, R3 requires adequate telecommunication for the Reliability Coordinator to direct actions of multiple entities, including TOPs and BAs.</p> <p>TOP-005-1, R1 and R3 require adequate telecommunications for BAs and TOPs to provide each other with operating data as well as providing data to the RC.</p> <p>TOP-001-1, R3 requires adequate telecommunications facilities for the TOP, BA, and GOP to be able to receive directives from the RC.</p> <p>TOP-006-1, R1 requires adequate telecommunications for the GOP to inform the BA and TOP of resources. The BA and TOP will then inform the RC, other TOP and BAs of all transmission and generation available for use.</p> <p>The retirement of this requirement also facilitates one of the FERC Order 693 directives for COM-001-1 to “includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions”.</p>
<p><b>Notes:</b> Based on the above information, the RC SDT recommends retiring R1 and its subrequirements.</p>	

Already Approved Standard	Proposed Replacement Requirement(s)
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## Implementation Plan for COM-001-2 — Communications

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<p><b>COM-001-1</b></p> <p><b>R2.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications. <i>[Violation Risk Factor: Medium]</i></p>	<p><b>COM-001-2:</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b> The RC SDT contends that the first sentence of COM-001-1, R2 is a low level facilitating requirements that is more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards as described in R1 above. We propose revising R2 as shown above to focus on the testing of capabilities that are not used on a routine basis.</p>	

**Implementation Plan for COM-001-2 — Communications**

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Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R3.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas.  <i>[Violation Risk Factor: Lower]</i></p>	<p><b>COM-001-2</b></p> <p><b>R2.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal Interpersonal Communications capabilities that lasts 30 minutes or longer.  <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>

**Implementation Plan for COM-001-2 — Communications**

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R4.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. <i>[Violation Risk Factor: Medium]</i></p>	<p><b>COM-001-2</b></p> <p><b>R3.</b> Unless dictated by law or otherwise agreed to, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b> COM-001 Requirement R3 is being incorporated into COM-003-1 by the Operations Personnel Communications Protocols SDT (Project 2007-02). It will be retired from this standard upon approval of COM-003-1. The RC SDT expanded the list of applicable entities to include the TSP, LSE and PSE and to delete the explanatory sentence at the end of the requirement.</p>	

**Implementation Plan for COM-001-2 — Communications**

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R5.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>EOP-008-0</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements:</p> <p><b>R1.1.</b> The contingency plan shall not rely on data or voice communication from the primary control facility to be viable.</p> <p><b>R1.2.</b> The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules.</p> <p><b>R1.3.</b> The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities.</p> <p><b>R1.4.</b> The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas.</p> <p><b>R1.5.</b> The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.</p> <p><b>R1.6.</b> The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans.</p> <p><b>R1.7.</b> The plan shall be reviewed and updated annually.</p> <p><b>R1.8.</b> Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.</p>
<p><b>Notes:</b> The RC SDT proposes retiring COM-001-1 R5 as it is redundant with EOP-008-0 Requirement R1.</p>	



**Implementation Plan for COM-001-2 — Communications**

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R6.</b> Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, “NERCNet Security Policy.” <i>[Violation Risk Factor: Lower]</i></p>	<p><b>None - retire</b></p>
<p><b>Notes:</b> The RC SDT is recommending that R6 be retired. This is an ERO procedural issue and should not be in a reliability standard. It should be included in the ERO Rules of Procedure.</p>	

Already Approved Standard	Proposed Replacement Requirement(s)
	<p><b>COM-001-2</b></p> <p><b>R4.</b> Each Distribution Provider and Generation Operator shall have Interpersonal Communications capability with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Operations Planning]</i></p>
<p>Notes: This is a new requirement based on the following FERC Order 693 directive:</p> <p>“expands the applicability to include generator operators and distribution providers and includes Requirements for their telecommunications facilities”</p>	

**Implementation Plan for COM-001-2 — Communications**

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**Functions that Must Comply with the Requirements in the Standards:**

<b>Standard</b>	<b>Functions that Must Comply With the Requirements</b>							
	<b>Reliability Coordinator</b>	<b>Balancing Authority</b>	<b>Purchasing Selling Entity</b>	<b>Transmission Operator</b>	<b>Transmission Service Provider</b>	<b>Load Serving Entity</b>	<b>Generator Operator</b>	<b>Distribution Provider</b>
COM-001-2 Communication	X	X	X	X	X	X	X	X

## Implementation Plan for COM-001-2

### Defined Terms in the NERC Glossary

The RC SDT proposes the following new definitions:

- **Interpersonal Communication:** Any method that allows two or more individuals to interact, consult, or exchange information.
- **Alternative Interpersonal Communication:** Any method that is able to serve as a substitute for and is redundant to normal Interpersonal Communication and does not utilize the same infrastructure (medium) as normal Interpersonal Communications.

### **Prerequisite Approvals**

- None

### **Conforming Changes to Requirements in Already Approved Standards**

- None

### **Revision Summary**

- The RC SDT revised the standard and is proposing retiring three requirements (R1, R5 and R6). Changes were made to eliminate redundancies between standards (existing and proposed), to align with the ERO Rules of Procedure and to address issues in FERC Order 693.

### **Effective Dates**

The first day of the first calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption. ~~To be determined.~~

**Revisions or Retirements to Already Approved Standards**

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></p>	<p>The RC SDT contends that COM-001-1, R1 and its subrequirements are low level facilitating requirements that are more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards. Examples include:</p> <p>IRO-001-1, R3 requires adequate telecommunication for the Reliability Coordinator to direct actions of multiple entities, including TOPs and BAs.</p> <p>TOP-005-1, R1 and R3 require adequate telecommunications for BAs and TOPs to provide each other with operating data as well as providing data to the RC.</p> <p>TOP-001-1, R3 requires adequate telecommunications facilities for the TOP, BA, and GOP to be able to receive directives from the RC.</p> <p>TOP-006-1, R1 requires adequate telecommunications for the GOP to inform the BA and TOP of resources. The BA and TOP will then inform the RC, other TOP and BAs of all transmission and generation available for use.</p> <p>The retirement of this requirement also facilitates one of the FERC Order 693 directives for COM-001-1 to “includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions”.</p>
<p><b>Notes:</b> Based on the above information, the RC SDT recommends retiring R1 and its subrequirements.</p>	

**Implementation Plan for COM-001-2**  
**Telecommunications Communications**

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R2.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall <u>manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications. [Violation Risk Factor: Medium]</u></p>	<p><b>COM-001-2:</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall <u>identify and operationally</u> test, on a quarterly basis <u>its</u> <del>At a minimum, alternative</del> <u>Interpersonal C</u>telecommunications <del>facilities capability ies used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes develop a mitigation plan to restore the identified alternative or identify a substitute its</del> <u>Alternative i</u>Interpersonal <u>C</u>ommunications <del>capability ies. to ensure the availability of their use when normal telecommunications facilities fail. manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications. [Violation Risk Factor: High Medium</del> <u>Lower</u>][Time Horizon: Real-time Operations]</p>
<p><b>Notes:</b> The RC SDT contends that the first sentence of COM-001-1, R2 is a low level facilitating requirements that is more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards as described in R1 above. We propose revising R2 as shown above. <u>to focus on the testing of capabilities that are not used on a routine basis.</u></p>	

Implementation Plan for COM-001-2  
**Telecommunications**Communications

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R3.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>COM-001-2</b></p> <p><b>R2.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities <u>within 60 minutes of the detection of a</u> <del>ef</del> failure <del>(30 minutes or longer)</del> of <del>their</del> <u>its</u> normal <u>interpersonal C</u>ommunications capabilities <u>that lasts 30 minutes or longer.</u> <del>telecommunications facilities,</del> and verify the alternate means of telecommunications are functional. <del>provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas.</del> <i>[Violation Risk Factor: Medium Lower][Time Horizon: Real-time Operations]</i></p>

Implementation Plan for COM-001-2  
**Telecommunications**Communications

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R4.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. <i>[Violation Risk Factor: Medium]</i></p>	<p><b>COM-001-2</b></p> <p><b>R3.</b> Unless <u>dictated by law or otherwise</u> agreed to <del>otherwise</del>, each Reliability Coordinator, Transmission Operator, <del>and</del> Balancing Authority, Generator Operator, <u>Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity</u>, and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (<u>BES</u>) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected <del>Bulk Electric System</del><u>BES</u>. <del>Transmission Operators and Balancing Authorities may use an alternate language for internal operations.</del><i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b> COM-001 Requirement R3 is being incorporated into COM-003-1 by the Operations Personnel Communications Protocols SDT (Project 2007-02). It will be retired from this standard upon approval of COM-003-1. <u>The RC SDT expanded the list of applicable entities to include the TSP, LSE and PSE and to delete the explanatory sentence at the end of the requirement.</u></p>	

Implementation Plan for COM-001-2  
**Telecommunications**Communications

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R5.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>EOP-008-0</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements:</p> <p><b>R1.1.</b> The contingency plan shall not rely on data or voice communication from the primary control facility to be viable.</p> <p><b>R1.2.</b> The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules.</p> <p><b>R1.3.</b> The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities.</p> <p><b>R1.4.</b> The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas.</p> <p><b>R1.5.</b> The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.</p> <p><b>R1.6.</b> The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans.</p> <p><b>R1.7.</b> The plan shall be reviewed and updated annually.</p> <p><b>R1.8.</b> Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.</p>
<p><b>Notes:</b> The RC SDT proposes retiring COM-001-1 R5 as it is redundant with EOP-008-0 Requirement R1.</p>	



Implementation Plan for COM-001-2  
**Telecommunications**Communications

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R6.</b> Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, "NERCNet Security Policy." <i>[Violation Risk Factor: Lower]</i></p>	<p><b>None - retire</b></p>
<p><b>Notes:</b> The RC SDT is recommending that R6 be retired. This is an ERO procedural issue and should not be in a reliability standard. It should be included in the ERO Rules of Procedure.</p>	

Already Approved Standard	Proposed Replacement Requirement(s)
	<p><b>COM-001-2</b></p> <p><b>R4.</b> <u>Each Distribution Provider and Generation Operator shall have Interpersonal Communications capability with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Operations Planning]</i></u></p>
<p>Notes: This is a new requirement based on the following FERC Order 693 directive:</p> <p>"expands the applicability to include generator operators and distribution providers and includes Requirements for their telecommunications facilities"</p>	

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	<u>Purchasing Selling Entity</u> <del>Interchange Authority</del>	Transmission Operator	Transmission <u>Service Provider</u> <del>Owner</del> or	<u>Load Serving Entity</u> <del>Generator Owner</del>	Generator Operator	Distribution Provider
COM-001-2 <del>Telecommuni</del> <u>Communi-</u> cations	X	X	<u>X</u>	X	<u>X</u>	<u>X</u>	X	X

## Unofficial Comment Form for Reliability Coordination – Project 2006-06

Please **DO NOT** use this form. Please use the [electronic comment form](#) at the link below to submit comments on the proposed revisions to the standards for Project 2006-06 — Reliability Coordination. Comments must be submitted by **February 3, 2010**. If you have questions please contact Stephen Crutchfield at [stephen.crutchfield@nerc.net](mailto:stephen.crutchfield@nerc.net) or by telephone at 609-651-9455.

[http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)

### Background Information:

The Reliability Coordination Standards Drafting Team (RC SDT) was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of the project, the NERC standards staff revised the Reliability Standards Development Plan and noted several areas of overlapping scope between certain projects. The original SAR for Project 2006-06 called for revisions to PER-004 — Reliability Coordination – Staffing and PRC-001 — System Protection Coordination. Based on scope overlap, it was determined that PER-004 and PRC-001 would best be served by moving the proposed work to Project 2006-01: System Personnel Training and Project 2007-06: System Protection, respectively.

The RC SDT proposed revisions to the set of standards under the project in August and September 2008. The RC SDT made revisions to the set of standards based on stakeholder feedback and the results of the IROL Standards Drafting Team work. Since the inception of this project, the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for three new Standards which included revisions to other IRO standards. With the approval of the IROL set of standards, certain requirements were retired from other IRO standards (see below summaries for specific examples under the RC SDT project).

**1. Do you agree with the proposed definition of Interpersonal Communication (COM-001-2)? If not, please explain in the comment area.**

- Yes
- No

Comments:

**2. Do you agree with the proposed definition of Alternative Interpersonal Communication (COM-001-2)? If not, please explain in the comment area.**

- Yes
- No

Comments:

**3. Do you agree with the revisions made to Requirement 1 in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

- Yes
- No

Comments:

**4. Do you agree with the definition of Reliability Directive (COM-002-2)? If not, please explain in the comment area.**

- Yes
- No

Comments:

**5. Do you agree with the revisions to the Requirements in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

- Yes
- No

Comments:

**6. Do you agree with the use of the defined term "Reliability Directive" in revisions to the Requirements in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

- Yes
- No

Comments:

**7. Do you agree with the revisions to the Requirements in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

- Yes
- No

Comments:

**8. Do you have any other comment, not expressed in questions above, for the RC SDT?**

Comments:



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

## Standards Announcement

Comment Period Open

January 4–February 3, 2010

Now available at: [http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)

### Project 2006-06: Reliability Coordination

The Reliability Coordination Standards Drafting Team is seeking comments on the following standards and associated implementation plans **until 8 p.m. EST on February 3, 2010**:

- COM-001-2 — Communications
- COM-002-3 — Communications and Coordination
- IRO-001-2 — Reliability Coordination – Responsibilities and Authorities
- IRO-014-2 — Coordination Among Reliability Coordinators

This is the third comment period for the proposed standards and implementation plans. The drafting team has made revisions to the documents based on stakeholder feedback. Explanations of the changes are included in the comment form. The drafting team has also posted its consideration of industry comments received during the previous comment period.

### Instructions

Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Lauren Koller at [Lauren.Koller@nerc.net](mailto:Lauren.Koller@nerc.net). An off-line, unofficial copy of the comment form is posted on the project page:

[http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)

### Next Steps

The drafting team will draft and post responses to comments received during this period. The drafting team will also determine whether to post the standards for an additional comment period or seek approval from the Standards Committee to proceed to balloting.

### Project Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team, and two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap.

### Applicability of Standards in Project

Reliability Coordinator  
Balancing Authority

Purchasing Selling Entity  
Transmission Service Provider  
Transmission Operator  
Distribution Provider  
Generator Operator  
Load Serving Entity

### **Proposed Glossary of Terms Changes**

#### **New terms:**

Reliability Directive  
Interpersonal Communication  
Alternative Interpersonal Communication

#### **Modified term:**

Adverse Reliability Impact

### **Standards Development Process**

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance,  
please contact Shaun Streeter at [shaun.streeter@nerc.net](mailto:shaun.streeter@nerc.net) or at 609.452.8060.*



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

## Standards Announcement

### Comment Period Extension

#### **Project 2006-06: Reliability Coordination**

The comment period for this project has been extended **until 8 p.m. EDT on February 18, 2010**. The extension provides a 45-day period to review the definition of Reliability Directive, which was not part of the previous comment periods for this project.

Project page: [http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)

#### **Standards Development Process**

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance,  
please contact Shaun Streeter at [shaun.streeter@nerc.net](mailto:shaun.streeter@nerc.net) or at 609.452.8060.*

- Individual or group. (69 Responses)**
- Name (51 Responses)**
- Organization (51 Responses)**
- Group Name (18 Responses)**
- Lead Contact (18 Responses)**
- Question 1 (62 Responses)**
- Question 1 Comments (69 Responses)**
- Question 2 (63 Responses)**
- Question 2 Comments (69 Responses)**
- Question 3 (65 Responses)**
- Question 3 Comments (69 Responses)**
- Question 3.1 (64 Responses)**
- Question 3.1 Comments (69 Responses)**
- Question 3.2 (64 Responses)**
- Question 3.2 Comments (69 Responses)**
- Question 3.3 (65 Responses)**
- Question 3.3 Comments (69 Responses)**
- Question 3.4 (58 Responses)**
- Question 3.4 Comments (69 Responses)**
- Question 4 (64 Responses)**
- Question 4 Comments (69 Responses)**
- Question 5 (0 Responses)**
- Question 5 Comments (69 Responses)**
- Question 6 (51 Responses)**
- Question 6 Comments (69 Responses)**
- Question 7 (53 Responses)**
- Question 7 Comments (69 Responses)**

Individual
Ray Mason
ReliabilityFirst
No
TPL-001-2 Draft 5 is much better than Draft 4. There is still one significant concern, that I do not believe the drafting team adequately addressed. It is unclear as to what "Planning Assessment results" and "results of its Planning Assessment" entail. The Draft 5 response that "Planning Assessment" is a defined term does not fully address this concern. "Planning Assessment results" or "results of its Planning Assessment" is not necessarily the same thing as "Planning Assessment". As written, "Planning Assessment results" or "results of its Planning Assessment" could be anything from a single sentence, to a few brief high level



paragraphs, to a detailed and technically complete Planning Assessment. The Standard needs to more clearly state what is required in the report to other entities. Based on the drafting team response in Draft 4, it seems that replacement of "Planning Assessment results" or "results of its Planning Assessment" with the term "Planning Assessment" or "its Planning Assessment" would be appropriate. Violation Severity Levels: R8 The failure to provide documented responses to documented comments to "Planning Assessment results" is deemed to be a higher severity level than failing to distribute "results of its Planning Assessment". Failure to distribute denies functional entities an opportunity to comment, and could prevent coordinated planning, and thus should be deemed to be more severe than failing to provide documented responses to documented comments.

Individual

Greg Rowland

Duke Energy

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

We support the changes.

Yes

Yes

Individual

Catherine Mathews

NorthWestern Energy (NWMT)

Yes

Yes

Yes

Yes

Yes

Yes
Yes
Yes
<p>Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a relay13 protecting the Faulted element to operate as designed”. As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: “Single failure of a protection relay13 protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following”. In Table 1, P2 and P3, the last column “Non-Consequential Load Loss Allowed” where the requirement “No12” appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote “b”. This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote “b” in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, “Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers.”</p>
No
<p>Measure M6 is too vague. It is unclear how to identify the conditions of Cascading, voltage instability, or uncontrolled islanding. The Glossary of Terms defines Cascading as “The uncontrolled successive loss of system elements triggered by an incident at any location. Cascading results in widespread electric service interruption that cannot be restrained from sequentially spreading beyond an area predetermined by studies.” Does the loss of system elements have to extend beyond the Control Area to be considered “Cascading”? Is there a Megawatt threshold that must be satisfied? Is there a time duration involved? Also, “cascading outages” needs to be defined. In addition, “voltage instability” and “uncontrolled islanding” should both be defined.</p>
Yes
Individual
Phuong Tran
Lakeland Electric

Yes
Shouldn't the "Implementation Plan for TPL-001-1" document be for TPL-001-2? Also, "TPL-001-1" is referenced throughout the document.
No
"the latest" is not needed from the second sentence of R1, since the sentence already ended with "...shall represent projected System conditions". R1 Part 1.1.2 Suggest adding this clarification at the end "... six months during the period under study". This language addition helps clarify the point that if an outage occurs during the summer and the entity's system peak occurs in the winter, then the system peak Load study case (model) does not have to include this particular outage.
No
Please consider removing R.2.6.2
No
A "measurable change in performance" can be interpreted as not meeting one of the performance requirements as specified in Table 1 in order for the condition to be selected as a sensitivity. This will cause utilities to perform sensitivity analysis for all system conditions listed in R2.1.4 to determine which one fails to meet one of the performance requirements in Table 1, as one may not be able to tell performance impact until after the studies are performed. Suggested change: "...one of the following conditions by a sufficient amount...system conditions that may demonstrate a measurable change in system response."
Yes
No
Please consider removing R2.6.2. The "any material change" language can cause utilities perform studies due to material changes outside of and remote to its system.
Yes
The performance requirements of Table 1 do not allow the loss of non-consequential load for single and multiple contingency events. The disallowance of load loss does not provide any real benefit to the reliability of the BES and is an unnecessary overreach into local quality of service issues that are best addressed by State, Provincial or Municipal authorities. There may be circumstances such as high local transmission costs or local opposition to transmission construction where prohibition of non-consequential load loss represents a poor cost/benefit or quality of life tradeoff. Having a provision at the regional level that a PA or TP can have a certain amount of non-consequential load loss designed or planned in to its system that would be reasonable if it is acceptable to the RE and does not have an adverse impact on the remaining BES. In lieu of such a RE provision, providing a quantitative cap in non-consequential load loss such as 100 MW may be rationale compromise in the goal of limiting load loss for the more probable outage events. Our preference would be to retain the capability of limited non-consequential load loss. It is our understanding that footnote 9 is under consideration as part of Project 2010-11 and should be noted as such for clarification.
No
please consider remove "the latest" from M1
No
The requirement to distribute the Planning Assessment should be more flexible and allow for making the Planning Assessment available, such that those entities that desire the

information can have it readily available. R8 should be modified as follows: Each Planning Coordinator and Transmission Planner shall make available its Planning Assessment results to adjacent Planning Coordinators and Transmission Planners and to any functional entity that indicates a reliability related need for the Planning Assessment results.

Individual

Tom Duane

PNM

Yes

We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent "[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models". As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: "Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response".

Yes

Yes

Yes

Yes

Yes

Yes

Table 1, P5 currently requires the study of "[d]elayed Fault Clearing due to the failure of a relay13 protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay13 protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No12" appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet

this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Group

NERC Staff

Mallory Huggins

Yes

NERC staff supports the change to allow Corrective Action Plans to include tripping of Non-Consequential Load and curtailment of Firm Transmission Service for 7 years. This seems long, but staff understands the stakeholder concern that it could take that long to plan, site, and construct facilities required for compliance with the standard.

Yes

NERC staff supports the revisions to the definition of Year One. However, we believe an associated change should be made where this term is used in part 2.1.1 of Requirement 2 which requires modeling of "System peak Load for either Year One or year two, and for year five." It seems the new definition of Year One would negate the need to refer to year two. NERC staff recommends that part 2.1.1 be changed to "System peak Load for Year One and for year five."

No

NERC staff suggests that the added sentence in R1 be deleted and "Normal System" in Table 1 be replaced with "No unplanned Element outages." We have a problem with R1 establishing "normal system condition." "Normal" is not defined, but the system condition that most people would define as "normal" is the System operating within its limits. There are no checks required on the projected system conditions to guarantee "operation within limits." Staff realizes that if this were the case, the categories tested would all pass their respective tests. (In other words, the category tests may define operating limits that in turn define "normal" from a planning perspective.) Thus, the added sentence in R1 should be deleted. In Table 1, the use of the term "Normal System" in the column "Initial System Condition" really means "No unplanned Element outages." All Elements that do not have a planned outage are assumed in-service (for transmission Elements) or available for dispatch (for generators). Contrast the term "Normal System" with categories P3 and P6, which have the loss of an Element (which is unplanned) followed by the loss of a second Element (also unplanned). "Normal System" should be replaced with "No unplanned Element outages."

Yes

NERC staff supports the use of qualified past studies for the Near Term horizon.
Yes
NERC staff supports removing the phrase "not already included in the studies" from the parts 2.1.4 and 2.4.3 of Requirement R2. We believe that the requirement is more clear and less subject to interpretation without this phrase.
No
NERC staff understands why the SDT has inserted the word "expected" before "dynamic behavior of Loads," but we have concerns with this addition. We understand that a PC or TP that models the best current industry understanding of load behavior should not need to worry about compliance if that model does not match actual load response for all possible system conditions. However, we are concerned that this change to part 2.4.1 of Requirement R2 may be too accommodating. If a PC or TP has unrealistic expectations about load behavior, would this permit the use of unrealistic models? While we have struggled to develop an alternative proposal, we hope that the SDT will identify a way to address this concern.
Yes
NERC staff supports inserting the word "material" in the reference to assessing the impact of proposed generation. We have some concern that this change leaves this part of the requirement open to interpretation, but we also understand the need to permit some degree of engineering judgment to be applied. It would not be appropriate to require that every potential generation addition be included in the assessment where some proposed additions may by inspection be deemed to be immaterial due to size and/or interconnection location.
Yes
NERC staff supports the changes to the header notes in Table 1.
NERC staff is concerned with P5 and footnote 9 and thus cannot support these changes in their entirety. First, a revision to the Draft 4 definition of P5 should be used in lieu of the current Draft 5 version: "Loss of multiple elements caused by the Fault clearing consistent with failure of a single Protection System while clearing a fault on one of the following: . . ." After reviewing the P5 contingency throughout various drafts of this standard, along with existing Table 1 for TPL-001 through TPL-004, NERC staff's primary concern is that this most recent version is going in the wrong direction by becoming too limiting regarding which Protection System component failures are covered. Draft 5 is an improvement because it removes the reference to loss of multiple elements in Draft 4 (which defined P5 as "Loss of multiple elements caused by the failure of a single Protection System while clearing a fault on one of the following: . . ."). Draft 5 takes a step backward, however, by referring to Delayed Fault Clearing. The advantage of not referring to Delayed Fault Clearing is that for cases where redundant protection systems are provided, the fault clearing may not be delayed even when a single Protection System failure occurs. Ideally, NERC staff believes that P5 should refer to "failure of any component of a Protection System," but NERC staff recognizes that we cannot get there until the term Protection System is redefined and Project 2009-07—Reliability of Protection Systems is underway. Until that change is possible, NERC staff encourages the SDT to use the revised version of P5 proposed above. A second concern is with footnote 9, which is used numerous times in Table 1. System adjustments may be used in two different settings: the first is to address the aftermath of a particular Contingency; the second is to prepare for the next Contingency. Staff suggests that the current footnote 9 have this language added: "Post-Contingency Ccurtailment of Firm Transmission Service to address the simulated contingency, when coupled with ...." Footnote 9 is used in the column labeled "Interruption of Firm Transmission Service Allowed" whenever a "No" is provided. The footnote 9 in this column has to do with System adjustments that address the aftermath of the Contingency

that is being simulated. Therefore, no footnote 9 appears appropriate for category P0 (No Contingency). The reference in footnote 9 to no load loss and staying within applicable Facility rating, including those on a neighboring system, is sufficient for addressing the aftermath of the Contingency being simulated. To address next Contingency, an additional footnote is needed in the "Initial System Condition" column for category P3 and category P6. The following is suggested: "System adjustments to prepare for the next Contingency must be completed within 30 minutes." Footnote 9 is used in the column labeled "Initial System Condition" for category P3 and category P6, and these two categories define the loss of an Element "followed by System adjustments" and then followed by the loss of a second Element. It is unclear whether the intent in footnote 9 in these two cases is meant to address the same issue referenced above (i.e. the aftermath of the Contingency being simulated) or whether it is intended to address the next Contingency. Thus, both situations need to be addressed using the suggestions indicated above.

Yes

NERC staff supports the changes to the Measures.

Yes

NERC staff supports the changes to the VSL for Requirement R8.

Individual

Doug Hohlbaugh

FirstEnergy

Yes

We appreciate the effort of the standard drafting team and the changes reflected in the current draft of the TPL-001-1 standard. The changes are improvements that should move the standard towards greater industry consensus. The extended Implementation Plan aligns with suggestions in FE's prior ballot comments. We support the Implementation Plan change made by the team.

Yes

The change in the Year One definition provides greater flexibility for the industry and also addresses a prior FE comment during the 1st ballot. We appreciate the team's careful consideration of the industry feedback and support the change.

Yes

Yes

Yes

Yes

Yes

Yes

Table 1, P5 currently requires the study of "[d]elayed Fault Clearing due to the failure of a relay (footnote 13) protecting the Faulted element to operate as designed". To the extent fully redundant relaying exists with no expected delay in Fault Clearing its understood that the P5 event would not be a concern for the redundant system design. The drafting team has taken appropriate steps within the TPL standard to focus on relaying failures to provide clarity in what is required for P5 planning event.

Yes
Yes
Individual
John Collins
Platte River Power Authority
Yes
We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: “Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response”.
Yes
Yes
No
I like that you have requirements for qualifying past studies, but Part 2.6.2 is confusing. Please change Part 2.6.2 to read something like: “For steady state, short circuit or Stability analysis: no material changes have occurred to the System represented in the study or, if material changes have occurred, a technical rationale can be provided to explain that the changes do not impact the performance results in the study area.”
Yes
Yes
For consistency, use the qualifier “expected” in the second sentence of Part 2.4.1 also, such that it reads “...represents the overall expected dynamic behavior...”
Yes
I like the flexibility you give the PC and TP to define what ‘material’ means in their ‘documentation to support the technical rationale for determining material changes.’ In Part 2.5 this rationale will decide whether or not any Long-Term Stability studies are required for the Planning Assessment. And in Part 2.6.2 this rationale will be a factor in qualifying a past study.
Yes
I like the flexibility you give the PC and TP in Requirements R3 and R4 to develop their rationale for the Contingencies they select for evaluation.
No. Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure



of a relay13 protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay13 protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No12" appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue). In Table 1 - Planning Events - Suggest changing the description for Events P2-3, P2-4, P4 and P4-6 to use the term 'Bus-tie Breaker' or 'non-Bus-tie Breaker' as applicable. In Table 1 - Extreme Events - Stability - Items 2a-2d, do you mean 'Protection System failure' here, or do you want to change to 'relay failure' to be consistent with changes in P5?

Yes

Yes

Group

SERC Planning Standards Subcommittee

Philip Kleckley

Yes

Yes

No

The definition does not adequately address normal (pre-contingency) operating procedures or system configurations. Language should be added to the requirement (perhaps as R1.1.7) to include normal operating procedures or system configurations in place prior to any contingency occurring.

Yes

Yes
Yes
Yes
Yes
Yes
Yes
Comments: We wish to make a comment on R4.3.1: it appears that this requires stability simulations of both successful and unsuccessful high-speed reclosing for all contingency simulations regardless of whether high-speed reclosing is used on the faulted line. We suggest the following wording be used to replace the first bullet: "Successful high-speed reclosing and unsuccessful high-speed reclosing onto a fault, where such reclosing is applied, and where such additional simulations are deemed appropriate by the PC or TP." We wish to make a comment on the stability extreme event table: Changes were made in planning event P5 to narrow the focus to specific relay failures. The same changes are needed for stability extreme event 2a, 2b, 2c, and 2d.
Individual
Aaron Staley
Orlando Utilities Commission
Yes
Yes
Yes
No
Allowing the use of past studies in lieu of new studies for part or all of an assessment when the underlying system hasn't changed in a significant change if very prudent. However the wording in 2.6.2 of "unless a technical rationale can be provided to demonstrate that System changes do not impact the performance results in the study area" is of concern. By this wording is it intended that the planner must demonstrate that every material change has no impact? In essence doing more work to prove that a study isn't required then the study would take? Or that the planner must essentially have a technical rationale (overarching) for determining when a material change is "material enough" to impact system performance?
No
What is meant by "measurable change in performance"? Is this a measure that the sensitivty should move the system from meeting the performance requirements to not meeting the performance requirements? Or just a measurable change in system response, IE the loading was 45% on this corridor but is now 76%.
Yes

No
I agree with what I think is the intent. The word "Material" is meant to allow for changes in model to occur that are "small" relative to the TP/PC. For example the 400 MW generator that might be built in 10 years by another utility over a hundred miles, several dozen buses and generators away to not force new study work. However as written in 2.5 it requires you to define what a material change is, and could be applied to mean every change must be identified and explained rather than an overarching rationale that would only have you looking for changes that meet the material criteria. But then in 2.6.2 the word material is used with no obligation to explain what material is, only to explain if a material change would not impact the results in a study area. I recommend leaving the term material, but setting a requirement, measure, or definition that requires the TP/PC to define what they consider material specific to their system and circumstance. Since this will by the hetroegenous nature of the grid be different for each it may not be reasonable to pre-define what is realibale. Just as was done with many items in the ATC (MOD) standards, require that it be documented and questions on that rationale be answered. If a specific level of technical oversight is desired, consider requiring that description to be on file with the regional entity and approved by their planning committee. I think the team is heading in a good direction, it's just how the words will be applied that concern me. This may be a case where an Example or two would go a long way towards providing guidance to entities and auditors.
Yes
I am assuming you mean the header notes on the performance table
I generally agree with the direction the team has gone. Footnote 9 should also be highlighted as being part of the project 2010-11 discussion just as footnote 12 is.
Yes
No
R8 should require that the PC and TP make available it's planning assessment results when requested, rather than requiring the preemptive transmittal. There is no reliablity purpose served by providing unsolicited information.
Individual
Kasia Mihalchuk
Manitoba Hydro
Yes
Yes
Yes
Yes
Yes
No
The last two sentences "System peak Load levels shall include a Load model which represents the expected dynamic behavior of Loads that could impact the study area, considering the behavior of induction motor Loads. An aqgreqate System Load model which

represents the overall dynamic behavior of the Load is acceptable." belong in the MOD standards. They are not required in TPL-001-2.

No

Adding the word "material" does not clarify Part 2.5. The word "material" can be interpreted in many ways and is subjective. In order to have a consistent approach by all TPs, the drafting team should add a definition of the term "material". One TP may consider a new 200 MW unit as not being material because there are several larger units in the TPs system.

Yes

In point g, violations are noted in terms of post-Contingency voltage deviations rather than post-Contingency voltage limits. This may lead to confusion, as some utilities evaluate performance based on a post-Contingency voltage deviation criterion while other utilities evaluate performance based on post-Contingency voltage limits. This same comment applies to Requirement R5. Suggested rewording for point g: System steady state voltages and post-Contingency voltages or voltage deviations shall be within acceptable limits as established by the Planning Coordinator and the Transmission Planner. Suggested rewording for the first sentence in Requirement R5: Each Transmission Planner and Planning Coordinator shall have criteria for acceptable System steady state voltage limits, post-Contingency voltages or voltage deviations, and the transient voltage response for its System. Note 12 states that an outstanding issue related to non-consequential load loss is being discussed. This will create a lot of uncertainty. Manitoba Hydro could not support this standard unless the resolution of Note B is known.

Yes

Yes

Individual

Randi Woodward

Minnesota Power

Yes

Yes

Yes

No

Requirement 2 - This requirement states that Stability analyses be performed as part of the annual Planning Assessments. Minnesota Power would like to see the term "Stability analysis" more clearly defined as there are several different types of stability related analysis that can be performed for power systems including: transient stability, voltage stability and small signal stability.

Yes

Yes

Yes

Yes
None.
Yes
Yes
Group
Northeast Power Coordinating Council
Guy Zito
No
Requirement R1 Part 1.1 and following states "System models shall represent:... 1.1.5. Known commitments for firm Transmission Service and Interchange. It was commented during a previous posting that 1.1.5 should be reworded to read: Known commitments for Firm Transmission Service, and, additionally, other types of transactions provided they have been demonstrated to not violate existing reliability constraints. The response was that "The SDT believes that the defined term 'Interchange' covers other transfers as described in your comment. No change made." It is agreed that known Interchanges should be modeled. However, it is imperative that existing reliability constraints not be violated in the process. That is, Interchange relating to economic transactions should not drive planning studies. Reliability related investments should not be driven by congestion related to economic transactions incorporated into planning models. Following is a preferred/revised wording: • 1.1.5. Known commitments for firm Transmission Service and Interchange. Interchange is meant to refer to energy transactions other than firm Transmission Service. While rigorous planning studies have been conducted to permit the uninterrupted implementation of firm Transmission Service without jeopardizing the reliable operation of the Interconnected System, other types of energy transaction only take place whenever system conditions permit them. They are usually of very short duration relative to planning assessment periods (usually spanning for a few hours to a few days) and deemed highly interruptible subject to reliability issues that may arise during operation of the system. In other words, the term Interchange refers to economic transactions that are permitted when the system is secure and there are reasonable reliability margins to effect dispatch changes to lower operating costs. As such, Interchange should not be reflected in system representation meant to assess system reliability in adherence to reliability criteria delineated in documents such as TPL-001.
No
The definition of Year One could be eliminated, and its wording used in place of Year One within the text of the requirement. The proposed definition has now added ambiguity with respect to "year two" and "year five" which are not defined. Year two could be deleted and R.2.1.1 modified as follows: System peak Load representing a point in time 12-24 months and another point in time 48-65 months into the future from the time the study is initiated. Define Year Five as the twelve month period 4 to 6 calendar years from the date of the Planning Assessment.
Yes
No
The revisions made to Requirement R2 Part 2.1 appear to resolve the concern that past studies could not be used to comply with the short-term steady state study requirements. This revision must be carried through to other sections (R2.2, 2.2.1). However, the

language of Requirement R2 Part 2.2 still seems to suggest that current annual studies are always required for the long-term steady state assessment to be compliant. This may have been an oversight, for consistency Requirement R2 Part 2.2 should be modified to similarly read as Requirement R2, Part 2.1. Regarding R2.2, the language should be consistent with 2.1. For example, use "current or qualified past studies" instead of "the following annual current study". Revisions made to Requirement R2.1.5 have made it worse than was originally drafted. This would require the PC & TP to study (meaning performing a technical analysis) of the impact and probability of the possible unavailability of any piece of equipment with a lead time of one year or more. Such an evaluation of spare equipment strategies would require significant additional resources and data, but provide no benefit to system reliability, as it is redundant to the existing N-1-1 contingency requirement (P6). R2.7 requires that Corrective Action Plans are included in each Planning Assessment and states "Such actions may include..." followed by a list of actions. Restricting allowable actions, and excluding runback/tripping of HVDC would have a direct impact on multiple existing facilities in New York and would adversely impact the reliability planning of the NYCA. Runback/tripping of HVDC must be added to the list, and also suggest revising to "Such actions may include but not be limited to:".

No

Part 2.1.4, requires an entity to vary one or more conditions to demonstrate a change in performance. If the cases were initially stressed, this may force an entity to simulate conditions with less severe stresses. At this point, there is limited to no value to this additional workload. Having a requirement to test at least one sensitivity as a blanket requirement may not be informative by itself and is more unclear since sensitivities are being required on an undefined base set of conditions. If an entity does a case with a stressed set of assumptions, is it necessary to do a non-stressed case? Additionally, our concern involves wording under 2.1.4 and 2.4.3 that sensitivities are required varying one or more conditions. Subsequently, in requirement 2.7.2 corrective action plans need to be developed to resolve performance deficiencies "only" if identified in multiple conditions or require a rationalization why no corrective action plan is necessary. Multiple conditions sensitivities under 2.1.4 and 2.4.3 are necessary to satisfy requirement 2.7.2. Requirement 2.7.2 adds ambiguity and should be removed. If not, a suggested revision to Requirement 2.7.2 as follows: 2.7.2. Corrective Action Plans are not required for performance deficiencies identified in a sensitivity analysis. In general, the scope of this requirement is too broad and non-specific, and only results in undue study burden. Is it necessary for sensitivity analysis to be included in requirements since in accordance with good engineering practices a conservative approach should be used in studies? The standard is referring to requirements for sensitivity and other issues without a reference to base assumptions as commented in issue #3. The standard must describe base assumptions. To define a sensitivity condition, NERC must define base assumptions.

No

There is insufficient information and experience regarding dynamic load modeling. It may also be included as a "sensitivity" analysis in 3.2, rather than requiring and expecting accurate representation of a dynamic load model. If this requirement is kept, a modeling standard must be written that is specific to dynamic loads. Change belongs in a modeling standard, not in TPL-001.

Yes

No

Header note (i) in the first Table 1 (p. 10) could imply that voltage-varying load shall not be used to meet steady state performance requirements. Steady state load models in use include voltage-varying loads. The explicit representation of (voltage-dependent) load

models is perfectly consistent with the requirements defined in R1 (which calls for a comprehensive representation of system components and their expected operating status in the planning assessment period) and the impetus to the creation of more specific load models in dynamic assessments found Requirement 2.4 of this draft of TPL-001-2. It is a known that depressed voltage conditions cause certain system elements to perform below their rated capacity. For example, capacitors provide less voltage support and voltage controlling transformers are impeded by their finite tap range to direct VAR flow into areas affected by low voltage conditions. Certain load types, on the other hand, provide a self-compensating relief to depressed voltage by naturally decreasing demand in a manner proportional to their characteristics, without operator intervention. Choosing to negate the voltage-dependence of one of these system elements (load, in our case) results in an inaccurate system representation that, in turn, may lead to erroneous assessments of the reliability state of the interconnected system and, potentially, to the implementation of unwarranted system upgrades. This note should be revised to only reference loads which are disconnected due to voltage.

To support the change to P5, other items need to also be modified. In Table 1 - Steady State & Stability Performance Extreme Events (p. 12), in the Stability Section, the language should be made similar to wording in P5. Protection System should be removed and replaced with the words "relay failure". This change should be made for 2a through 2d: 2. Local or wide area events affecting the Transmission System such as: a. 3Ø fault on generator with stuck breaker<sup>10</sup> or a relay failure resulting in Delayed Fault Clearing. b. 3Ø fault on Transmission circuit with stuck breaker<sup>10</sup> or a relay failure resulting in Delayed Fault Clearing. c. 3Ø fault on transformer with stuck breaker<sup>10</sup> or a relay failure resulting in Delayed Fault Clearing. d. 3Ø fault on bus section with stuck breaker<sup>10</sup> or a relay failure resulting in Delayed Fault Clearing. Note 11 (p. 14) needs clarification as shown: Excludes circuits that share a common structure (Planning event P7, Extreme event steady state 2a) or common Right-of-Way (Extreme event, steady state 2b) for a total of 1 mile or less. There are two tables labeled "Table 1". Suggest that the extreme events table be renamed "Table 2".

Yes

No

Requirement 8 is an administrative burden to TPs and PCs that adds no value to Bulk Power System reliability. PCs should be including TPs, neighboring PCs and interested parties in its planning processes when developing the Planning Assessments. Therefore, the inclusion of a set of VSLs for Requirement 8 is unnecessary. Should the VSLs for Requirement 8 remain, Requirement 8.1 should be revised to reflect that comments only to the final Assessment (not drafts developed during a process) need a response as follows: If a recipient of the planning assessment final results provides documented comments on the results, the respective Planning Coordinator or Transmission Planner shall provide a documented response to such recipient within 90 calendar days of receipt of those comments. If Requirement 8 and 8.1 are retained, they should be revised to reflect that comments only to the final Assessment (not drafts developed during a process) need a response and there should be a limit on the comment period as follows: If a recipient of the planning assessment final results provides documented comments on the results within 90 days of receipt, the respective Planning Coordinator or Transmission Planner shall provide a documented response to such recipient within 90 calendar days of receipt of those comments. Other comments not addressed by this Comment Form as follows: Section 3.3 - The last sentence of 3.3.1 should be removed. This is addressed in PRC-023. Line ratings are addressed in PRC-023. PRC-023 requires coordination with the Reliability Coordinator. Remove "Tripping of Transmission elements where relay loadability limits are exceeded."

Section 4.3 - High speed reclosing is not defined, and to help eliminate any confusion that it may introduce into the standard it will be worthwhile for the SDT to define this term. Several specific examples from previous comments on sensitivity analysis and guidance for base case assumptions: The requirements for sensitivity analysis already address issues going beyond what is expected to meet reliability requirements. Requiring extreme event analysis is requiring two layers of event analysis beyond what is required and there is no requirement for corrective action if anything is identified. The standard is referring to requirements for sensitivity and other issues without a reference to base assumptions. The standard must describe base assumptions. To define a sensitivity condition, NERC must define base assumptions. As for allowing con-consequential load loss for Categories P1 through P5, suggest approval at the Regional level, with a concept of allowing it in a "local area" that does not impact BPS reliability. All references to 300 kV in document should be replaced with EHV (for example in the Introduction, Section 5). The first phrase of Note 3 on p. 14 should be revised as follows: "Bulk Electric System (BES) level references include extra-high voltage (EHV) Facilities defined as those representing the backbone of the System, generally at voltage greater than 300 kV, and high voltage (HV) Facilities defined as those not representing the backbone of the System, as determined by the Planning Coordinator and approved by Regional Entity."

Individual

Martin Bauer

US Bureau of Reclamation

Yes

With exception of the definitions.

No

The language implies a requirement. The language "Year One must include the forecasted peak Load period for one of the following two calendar years" is a requirement and not a statement of clarification. If the definition is that "Year One" can also be the period used for forecast peak load, then it should be stated so. It is suggested that either the language in the definition is modified or the language is deleted from the definition and moved to the body of the standard.

Yes

No

The question is misleading in that R2 also include current studies. The overall structure of the standard could be greatly improved if the standard were segmented into Near Term and Long Term with sub segments for each specific type of analysis to be performed. Second, the standard does not use consistent terms. The Planning Assessment is to include Near Term and Long Term portions which must have steady state analysis, short circuit analysis, and stability analysis (ref. R2). Requirement R 2.1 introduces sensitivity analysis for the Near Term portion, and then refers to the Planning Analysis which is in reality both Near Term and Long Term portions. That implies that sensitivity analysis must be required for both? The standard repeats the requirement for annual stability studies in 2.4 which was already a requirement for Planning Assessments. The requirement 2.1.5 is one the most problematic requirements in this standard. This requirement implies that an entity must have spare equipment and a strategy to employ it. That is beyond the scope of the Energy Policy Act 2005. Spare equipment is not on-line and does not contribute to the reliability of the existing system. The Energy Policy Act of 2005 specifically prohibits the requirement to enhance or modify the system. The use, application, or requirement to have spare equipment violates that prohibition. This section should be removed. In addition, this requirement suffers from an ability to implement. In the first case, the requirement is



invoked if the spare equipment strategy could result in unavailability of transmission equipment. How is that determined? There is no nexus to that determination. The unavailability may have already occurred once the transmission equipment has failed. The only way to avoid unavailability if the transmission equipment that fails has a hot stand-by with automatic fail-over. The presence or not of a suitable replacement will still result in unavailability by virtue of the failure of the first piece of transmission equipment. Next problem, who will second guess the owner of the replacement. Where is the requirement to make the replacement strategy available? The standard should focus on system performance with existing equipment to meet current and future loads.

No

Sensitivity analysis is not included in R2. This gets back to the structure of the standard. There should a clear indication of the studies that are to be included in the Near-Term and Long-Term portions of the Planning Assessments.

No

Not included in R2. See response to Question 3.2

No

The term "material" is arbitrary. It is suggested that a specific value be used to trigger the assessment.

No

The language implies that the responsible entity may choose to not distribute it if it feels the entity making the request does not have a "reliability related need". It is not clear why that distinction is being made?

Group

Exelon Transmission Planning

Eric Mortenson

Yes

Yes

Yes

Yes

No

No

The term 'material changes' is subjective. It is very difficult to determine a base case to study combinations of generator additions on a changing transmission network in the 6 to 10 year time period to be used for dynamic simulations. Dynamic studies should be performed whenever new generator interconnections are proposed and it is at that time

where meaningful calculations can be performed. The long term six to ten year out dynamic studies for groupings of potential units should be done at a high level, if at all.

Yes

Comments: The term 'HV' in the performance table should be defined as 'Bulk Electric System elements up to 300 kV, not simply all elements 'below 300 kV'. Footnote 12 should be clarified to specifically state the requirements before voting takes place. The performance criteria should be based on the voltage level of the element experiencing stress due to the contingency, not based on the voltage level of the outaged element. It does not seem to make sense that the loss of a 500 kV bus would not allow for any non-consequential load shedding unless the bus contained a 500 to 230 kV transformer, in which case additional load shedding would be allowed. If outages on a 230 kV system, such as bus fault with stuck breaker, were to cause overloads on a 500 kV network it is acceptable to shed load, but if the outages were on the 500 kV system originally it would not be acceptable to shed additional load. It seems as if it should be the severity of the situation and the elements involved that would dictate allowable remedial actions and not the initial cause of the disturbance. If, for example, there was a 500 kV contingency outage that caused problems on the 230 kV system there would be a problem that may require load shedding on the 230 kV system. If there were a 230 kV contingency or series of contingencies that caused overloads on the 500 kV system, it would be more difficult to find enough lower voltage load to shed to bring the 500 kV system back to applicable ratings or conditions. The inability to shed non-consequential load could theoretically be resolved by hanging a small EHV / HV transformer on a particular bus, or by tapping a EHV line with an auto transformer.

Yes

Yes

Individual

Paul Rocha

CenterPoint Energy

No

The SDT did not incorporate CenterPoint Energy's previous comment regarding R1; therefore, CenterPoint Energy's concerns remain.

No

The SDT did not incorporate CenterPoint Energy's previous comments regarding R2; therefore, CenterPoint Energy's concerns remain.

No

The SDT did not incorporate CenterPoint Energy's previous comments regarding R2; therefore, CenterPoint Energy's concerns remain.

No

The SDT did not incorporate CenterPoint Energy's previous comments regarding R2; therefore, CenterPoint Energy's concerns remain.

No

The SDT did not incorporate CenterPoint Energy's previous comments regarding R2; therefore, CenterPoint Energy's concerns remain.

Yes
CenterPoint Energy appreciates the effort put forth by the SDT in revising the performance table. The current draft of P5 is preferable to previous versions.
Individual
Tim Ponseti, VP
TVA Transmission Planning & Compliance
Yes
TVA supports the change from five years to seven years for the implementation plan period.
Yes
TVA supports the change in the Year One definition - but would suggest that the word "started" should be changed to "completed" since a Planning Assessment may be started in one calendar year and finished in the next calendar year.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
TVA is concerned about footnote 12 (known as footnote b in existing TPL standards). TVA believes that utilities should be given some freedom in dropping local load in response to N-1 events as long as overall BES reliability is not impacted. Otherwise significant capital improvements will be required that will have no overall reliability gain for the Bulk Electric System. TVA does agree with the revisions made specifically to the P5 event. TVA wishes to make a comment on the stability extreme event table: Changes were made in planning event P5 to narrow the focus to specific relay failures. The same changes are needed for stability extreme event 2a, 2b, 2c, and 2d.
Yes
Yes
Additional TVA comments: TVA wishes to make a comment on R4.3.1: it appears that this requires stability simulations of both successful and unsuccessful high-speed reclosing for all contingency simulations. Does high speed reclosing occur in less than 60 cycles or 60 seconds? If a utility does not have reclosing on a transmission line - then must the utility still perform stability studies assuming that there is reclosing? TVA suggests the following wording be used to replace the first bullet: "Successful high-speed reclosing and unsuccessful high-speed reclosing onto a fault, where such reclosing is applied, and where such additional simulations are deemed appropriate by the PC or TP." In R4.1.1, TVA is concerned that no generating unit shall pull out of synchronism in a local area only (thus

not impacting the overall reliability of the BES) for Planning Event P1, while the standard does allow generator runback/tripping for the same event. Thus the generating unit may be tripped by a special protection scheme - but may not be tripped by an out of step relay. TVA believes that out of step relaying should be allowed for this unit tripping as long as this does not affect the overall reliability of the BES.

Individual

Dan Rochester

Independent Electricity System Operator

Yes

We agree with this change. We further suggest that this change and the additional wording: "or in those jurisdictions where no regulatory approval is required on the first day of the first calendar quarter, 84 months after Board of Trustees adoption" be added to P. 3 of the standard that starts with "For 84 calendar months..." to be totally consistent.

Yes

Yes

Yes

Yes

Yes

Yes

We do not have a concern with this change but we don't think it is necessary. It is not a requirement, and appropriate wording in the Measures can take care of it.

Yes

Yes

Yes

Group

Southern Company

Andy Tillery

Yes

Yes

No

The definition does not adequately address normal (pre-contingency) operating procedures or system configurations. Language should be added to the requirement (perhaps as R1.1.7) to include normal operating procedures or system configurations in place prior to any contingency occurring.

Yes

Yes
Yes
Yes
Yes
NO We wish to make a comment on the stability extreme event table: Changes were made in planning event P5 to narrow the focus to specific relay failures. The same changes are needed for stability extreme event 2a, 2b, 2c, and 2d.
Yes
No
We wish to make a comment on R4.3.1: it appears that this requires stability simulations of both successful and unsuccessful high-speed reclosing for all contingency simulations regardless of whether high-speed reclosing is used on the faulted line. We suggest the following wording be used to replace the first bullet: "Successful high-speed reclosing and unsuccessful high-speed reclosing onto a fault, where such reclosing is applied, and where such additional simulations are deemed appropriate by the PC or TP." Also, we wish to make a comment on footnote #13 of Table 1. 13. Applies to any of the following relay functions or types: pilot (#85), distance (#21), differential (#87), current (#50, 51, & 67), voltage (#27 & 59), directional (#32 & 67), and associated tripping (#86 & 94) relays.
Group
Hydro One Networks Inc.
David Kiguel
Yes
Yes
Yes
Yes
No
The scope of this requirement is too broad and non-specific and only results in undue study burden.
No
There is insufficient information and experience regarding dynamic load modeling. Hence, this should not be a requirement but a guide or an item to be considered to the extent possible. It may also be included as a "sensitivity" analysis in 3.2, rather than requiring and expecting accurate representation of dynamic load model.
Yes
Yes

No selection boxes in this question. Yes, we support.
Yes
Yes
Requirement 8 is an administrative burden and adds little or no value to the BPS reliability. Therefore, the inclusion of a set of VSLs for Requirement 8 is unnecessary.
Group
jWestern Electricity Coordinating Council
Steve Rueckert
Yes
<p>We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on various requirements not identified in the questions below; therefore, we have included our comments here:</p> <p>Requirement and 2.6 and 2.6.1: A study that is five years old is very likely to be out of date. The entity's BES may have not changed much in five years but the entity cannot be certain whether or not their neighbor's system may have changed. Changes outside the immediate entity's system can impact results of studies within their system. Suggest that two years is a maximum that past studies should be allowed. Requirement 3.4.1 and 4.4.1 require PCs and TPs to coordinate with adjacent PCs and TPs to ensure that Contingencies on adjacent Systems which may impact their Systems are included in the Contingency list. Please clarify whether this means that a PC or TP must coordinate with others to identify contingencies on other Systems that the PC or TP must now include on their Contingency list to simulate and address any performance violations on their own System, or does it mean that the PC or TP must coordinate with others to identify contingencies on their System that the PC or TP must now include on their Contingency list to simulate and address any performance violations on other Systems. In either case, the standard does not seem to clearly state what must be done, or whose responsibility it is to mitigate, if a contingency in one System causes a performance violation in another System. Requirement R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent "[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models". As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: "Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response".</p>
No
<p>We recognize that the drafting team made changes to the definition of Year One based on industry comments. However, we believe that the revised language could allow for a situation where an entity could use its next season's operating study as its Year One planning study. For example, if the entity does its study in the fall of 2011, the proposed definition would allow the entity to use its summer 2012 operating study as its Year One study. This is a very short period to address any issued identified. Suggest working into the requirement that Planning Studies must look out at least 12 months beyond when the study is performed. This would still allow for the provision in the current definition example ("if a</p>

Planning Assessment was started in 2011, then Year One must include the forecasted peak Load period for either 2012 or 2013) because the entity would be able to use their 2013 Load period, but it would prevent the entity from using the 2012 Load period if they started the assessment late in 2011.

Yes

Yes

Yes

Yes

Yes

Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a relay<sup>13</sup> protecting the Faulted element to operate as designed”. As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: “Single failure of a protection relay<sup>13</sup> protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following”. In Table 1, P2 and P3, the last column “Non-Consequential Load Loss Allowed” where the requirement “No<sup>12</sup>” appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote “b”. This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote “b” in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, “Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers.” Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Individual

Dilip Mahendra

SMUD

R2.7.1, last bullet: Please provide specifics on the types of acceptable 'Corrective Actions' covered by 'rate applications and DSM' and the planning horizon for which they are considered acceptable. As an alternative, NERC should develop a process by which what is considered acceptable is published and continuously updated. (With due apologies for not raising this point earlier).

What is the significance of changing the wording for section R2.1.5 from 'assessed' to 'studied' and 'Planning Assessments' to 'studies'?

For the Western Interconnection, the performance level for a Bus-tie breaker fault under TPL-001-2, Table 1, Item P2-4, Notes (a) and (f), requires no thermal overloads and no cascading. While, FAC-010-2.1, R1.2, R2.5-R2.6, as modified by E1.1, E1.1.7, E1.3, and E1.3.1 requires a different performance level of no cascading. Please explain why this regional variance is not included under TPL-001-2, Item E.

Group

Arizona Public Service Company

Jana Van Ness, Director Regulatory Compliance

Yes

We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent "[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models". As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: "Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response".

Yes

Yes

Yes

Yes

Yes



Yes
<p>Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a relay<sup>13</sup> protecting the Faulted element to operate as designed”. As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: “Single failure of a protection relay<sup>13</sup> protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following”. In Table 1, P2 and P3, the last column “Non-Consequential Load Loss Allowed” where the requirement “No<sup>12</sup>” appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote “b”. This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote “b” in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, “Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers.” Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).</p>
Individual
RoLynda Shumpert
South Carolina and Gas
Yes
Yes
Yes
Yes
Yes

Yes
Yes
Yes
Yes
Yes
Yes
Yes
We wish to make a comment on the revisions to R4.3.1. We believe that the analysis of both successful and unsuccessful high speed reclosing for all cases is not justified and should be left to the discretion of the Transmission Planner.
Individual
Brian Keel
SRP
Yes
We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: “Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response”.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a

relay13 protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay13 protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No12" appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Individual

Darcy O'Connell

California ISO

Yes

Yes

Yes

Yes

No

Requirement 2.7.2 could be revised as follows: 2.7.2. Corrective Action Plans are not required for performance deficiencies identified in a sensitivity analysis. If a Planning Coordinator includes Corrective Action Plans to resolve performance deficiencies identified in multiple sensitivity analysis, the Planning Coordinator shall provide documentation to support those Plans.

Yes

Yes
Yes
We support these changes, although we suggest that the proposed footnote 12 include an interim provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers."
Yes
No
Requirement 8 is an administrative burden to TPs and PCs that adds no value to reliability. PCs should be including TPs, neighboring PCs and interested parties in its planning processes when developing the Planning Assessments. Therefore, the inclusion of a set of VSLs for Requirement 8 is unnecessary. Should the SDT decide to leave the VSLs for Requirement 8, Requirement 8.1 should be revised to reflect that comments only to the final Assessment (not drafts developed during a process) need a response as follows: 8.1 If a recipient of the planning assessment final results provides documented comments on the results, the respective Planning Coordinator or Transmission Planner shall provide a documented response to such recipient within 90 calendar days of receipt of those comments. For a Planning Coordinator (PC) who distributes the Planning Assessment to many different entities (to adjacent PCs, TPs, and other functional entities), a concern regarding the Requirement R8 VSL is that it is overly restrictive to apply a violation for failing to distribute the results of its Planning Assessment to only one PC, TP, or functional entity (and to apply a High VSL for failing to distribute to more than one entity), particularly since an entity's contact is subject to change over time, and since Measure M8 allows for publicly posting the results of its Planning Assessment to its website. Should the SDT decide to include the VSLs for Requirement 8, would recommend revising to use a percentage approach rather than applying a violation to a Planning Coordinator who fails to provide the results of its Planning Assessment to one PC, TP, or other functional entity (or applying a High VSL for failing to distribute to more than one entity.) Recommend applying a similar percentage approach to the VSLs drafted by NERC Staff for Project #2007-23 VSLs (e.g., for FAC-013-1) to be considered for the TPL-001-2 R8 VSLs. For example, • Lower VSL: The responsible entity failed to provide the Planning Assessment final results to 5% or less of the required entities. • Moderate VSL: The responsible entity failed to provide the Planning Assessment final results to more than 5% up to (and including) 10% of the required entities. • High VSL: The responsible entity failed to provide the Planning Assessment final results to more than 10% up to (and including) 15% of the required entities. • Severe VSL: The responsible entity failed to provide the Planning Assessment final results to more than 15% of the required entities OR [the existing language for the Severe VSL]. Explanation: The VSLs were modified for consistency with other standards and VSLs. Reference: Link to VSLs drafted by NERC Staff for Project #2007-23 VSLs (e.g., for FAC-013-1): <a href="http://www.nerc.com/docs/standards/sar/Staff_Proposed_VSLs_2010July27.pdf">http://www.nerc.com/docs/standards/sar/Staff_Proposed_VSLs_2010July27.pdf</a>
Individual

Scott Inglebritson
Seattle City Light
Yes
No
The definition of Year One is now too flexible and does not meet the intent of the standard. For example, our system peak is generally in January of the year. If I perform TPL studies in November 2011, studying the peak in January 2012 is acceptable according to the new definition. This is only two months from the date of the study. The intent of the TPL standard should be that entities must study and plan for inadequacies found in the studies. A one- or two-month lead time is not adequate to address any problems identified. Year One should be the year containing the first peak 12 months or more from the current date. Otherwise, TPL studies become merely seasonal operational studies, not planning studies. Alternative Language: "For the Planning Assessment started in a given year, Year One should contain the first system peak that occurs twelve months or more after the date of the Planning Assessment."
Yes
Yes
Yes
Yes
Yes
Yes
Table 1, P5 does not recognize the existence of redundant (or backup) relays. These are an integral part of the protection system design and should be considered in analysis of SLG faults. The TPL standard should encourage redundant, fail-safe systems, not ignore them. In Table 1, P2 and P3, we have a concern about not allowing non-consequential load loss. Project 2010-11 is deciding on this issue, but is not completed (see footnote 12). Should the standard become effective before this project is completed, no non-consequential load loss would be allowed, requiring many transmission additions and reconfigurations. Please change the "NO" in the last column to "YES" until the completion of Project 2010-11.
Yes
Yes
Individual
Ean O'Neill
California Energy Commission
Yes
We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability

analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: “Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response”.

Yes

Yes

Yes

Yes

Yes

Yes

Yes

No. Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a relay<sup>13</sup> protecting the Faulted element to operate as designed”. As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: “Single failure of a protection relay<sup>13</sup> protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following”. In Table 1, P2 and P3, the last column “Non-Consequential Load Loss Allowed” where the requirement “No<sup>12</sup>” appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote “b”. This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote “b” in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, “Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or

supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Individual

Kathleen Goodman

ISO New England Inc.

Yes

No

The definition of Year One could be deleted and used in place of Year One within the text of the requirement. The proposed definition has now added ambiguity with respect to "year two" and "year five" which are not defined. Year two could be deleted and R.2.1.1 modified as follows: System peak Load representing a point in time 12-24 months and another point in time 48-65 months into the future from the time the study is initiated.

No

R1.1 Part 1.1.2. With respect to known outages, there needs to be greater flexibility in the standards (e.g. more tolerance to non-consequential load shedding or limitations to the contingencies that need to be considered (e.g. P0, P1, & P2)). Regional allowances for load shedding under this condition should be approved. Duration of known outages should be increased from six months to one year; R1.1 Part 1.1.6 Delete "required for Load". Resources may also be used for export to other areas, not just internal load.

No

We can agree with R2.1 however with respect to R2.2 Language should be consistent with 2.1 for example - use "current or qualified past studies" instead of "the following annual current study."

No

Part 2.1.4, requires an entity to vary one or more conditions to demonstrate a change in performance. If the cases were initially stressed, this may force an entity to simulate conditions with less severe stresses. At this point, there is limited to no value to this additional workload. Having a requirement to test at least one sensitivity as a blanket requirement may not be informative by itself and is more unclear since sensitivities are being required on an undefined base set of conditions. Additionally, our concern involves wording under 2.1.4 and 2.4.3 that sensitivities are required varying one or more conditions. Subsequently, in requirement 2.7.2 corrective action plans need to be developed to resolve performance deficiencies "only" if identified in multiple conditions or require a rationalization why no corrective action plan is necessary. Multiple conditions sensitivities under 2.1.4 and 2.4.3 are necessary to satisfy requirement 2.7.2. Requirement 2.7.2 adds ambiguity and should be removed. Requirement 2.7.2 should be revised as follows: 2.7.2. Corrective Action Plans are not required for performance deficiencies identified in a sensitivity analysis.

Yes

Yes

Yes
We are supportive of the change to P5. However, in making this modification, other items need to also be changed. In Table 1 – Stability, the language should be made similar to wording in P5. Protection System should be removed and replaced with the words “relay failure”. This change should be made for 2a through 2d: 2. Local or wide area events affecting the Transmission System such as: a. 3Ø fault on generator with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. b. 3Ø fault on Transmission circuit with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. c. 3Ø fault on transformer with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. d. 3Ø fault on bus section with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. We also believe that Note 11 needs clarifying wording as shown below: "Excludes circuits that share a common structure (Planning event P7, Extreme event steady state 2a) or common Right-of-Way (Extreme event, steady state 2b) for a total of 1 mile or less"
Yes
Yes
Requirement 8 and 8.1, should be revised to reflect that comments only to the final Assessment (not drafts developed during a process) need a response and there should be a limit on the comment period as follows: If a recipient of the planning assessment final results provides documented comments on the results within 90 days of receipt, the respective Planning Coordinator or Transmission Planner shall provide a documented response to such recipient within 90 calendar days of receipt of those comments. We have other comments not addressed by this Comment Form as follows - Sections 2.7, 3.3, 4.3 and overall. R2.7 requires that Corrective Action Plans are included in each Planning Assessment and states “Such actions may include...” followed by a list of actions. Runback/tripping of HVDC should be added to the list. Section 3.3 - We feel that the last sentence of 3.3.1 should be removed. This is handled by PRC-023. Line ratings are addressed by PRC-023. PRC-023 requires coordination with the Reliability Coordinator. Remove “Tripping of Transmission elements where relay loadability limits are exceeded.” Section 4.3 - High speed reclosing needs to be defined.
Individual
Oscar Herrera
Los Angeles Department of Water and Power
Yes
We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: “Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response”.



Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
No. Table 1, P5 currently requires the study of "[d]elayed Fault Clearing due to the failure of a relay <sup>13</sup> protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay <sup>13</sup> protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No <sup>12</sup> " appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).
Yes
Yes
Individual

Orlando A Ciniglio

Idaho Power Co

Yes

We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: “Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response”.

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a relay<sup>13</sup> protecting the Faulted element to operate as designed”. As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge redundant relays for primary protection: “Single failure of a protection relay<sup>13</sup> protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following”. In Table 1, P2 and P3, the last column “Non-Consequential Load Loss Allowed” where the requirement “No<sup>12</sup>” appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote “b”. This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We

suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers."

Yes

Yes

Individual

David Bradt

United Illuminating

Yes

No

Year One should be used within the text of the requirement. Do not have a definition for Year One.

No

For R1 Ambiguity regarding base case assumptions, in combination with lack of clarity and clear direction of purpose regarding the sensitivity analysis, undermines the objectives of the standard; R1.1 Part 1.1.2. With respect to known outages, there needs to be greater flexibility in the standards (e.g. more tolerance to non-consequential load shedding or limitations to the contingencies that need to be considered (e.g. P0, P1, & P2)). Regional allowances for load shedding under this condition should be approved. Duration of known outages should be increased from six months to one year; R1.1 Part 1.1.6 Delete "required for Load". Resources may also be used for export to other areas, not just internal load.

No

We can agree with R2.1 however with respect to R2.2 Language should be consistent with 2.1 for example - use "current or qualified past studies" instead of "the following annual current study".

No

If an entity does a stressed set of assumptions do they always need to do a non-stressed case?

Yes

Yes

Yes

In Table 1 – Stability, Make language similar to wording in P5. "Protection System" should be removed and replaced with the words "relay failure". This would avoid future interpretation issues about the intent of this requirement (as we understand it) to exclude more severe though less likely failures such as battery systems. This change should be made for 2a through 2d on page 12). In Note 11 (page 14) ADD the wording shown in

"quotes" below: Excludes circuits that share a common structure (Planning event P7, Extreme event steady state 2a) or common Right-of-Way (Extreme event, steady state 2b) for "a total of" 1 mile or less.

Yes

Yes

General Comment: We have other comments not addressed by this Comment Form as follows - Section 3.3, Section 4.3 and overall Section 3.3 - We feel that the last sentence of 3.3.1 should be removed. This is handled by PRC-023. Line ratings are addressed by PRC-023. PRC-023 requires coordination with the Reliability Coordinator. Remove "Tripping of Transmission elements where relay loadability limits are exceeded." Section 4.3 - High speed reclosing is not defined. Overall - ISO New England and New England Transmission Owners have previously made comments which have not been addressed in the current version of the proposed standard. Support for the standard can at most be limited without addressing comments. We have previously commented on sensitivity analysis and guidance for base case assumptions. Also, extreme event analysis should not be mandated in this standard as no corrective action is required.

Group

Transmission Issues Subcommittee

Bob Cummings

No Comment

No Comment

Yes

No Comment

No comment

No

TIS believes that the term "expected" leaves the question as to "whose expectation." It should be stated as to "expected...by the Transmission Planner."

No comment

No

Delete the word "voltage" from the last header note J concerning Stability Only. All types of transient stability must be observed.

No comment

No comment

No comment

Group

SERC Dynamics Review Subcommittee

Robert Jones

Yes

"The comments expressed herein represent a consensus of the views of the above named members of the SERC Engineering Committee Dynamics Review Subcommittee only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."

Yes

Yes

Yes
Yes
Yes
Yes
Yes
Yes. The SERC DRS supports the revisions.
Yes
Yes
We wish to make a comment on R4.3.1: it appears that this requires stability simulations of both successful and unsuccessful high-speed reclosing for all contingency simulations regardless of whether high-speed reclosing is used on the faulted line. We suggest the following wording be used to replace the first bullet: "Successful high-speed reclosing and unsuccessful high-speed reclosing onto a fault, where such reclosing is applied." We wish to make a comment on the stability extreme event table: Changes were made in planning event P5 to narrow the focus to specific relay failures. The same changes are needed for stability extreme event 2a, 2b, 2c, and 2d.
Individual
John Sullivan
Ameren
Yes
Yes
No
The definition does not adequately address normal (pre-contingency) operating procedures or system configurations. Language should be added to the requirement (perhaps as R1.1.7) to include normal operating procedures or system configurations in place prior to any contingency occurring.
Yes
Yes
No
Industry needs guidance regarding how to provide reasonable induction motor representation as opposed to generic models.
Yes
Yes

No
For measurements M3 and M4, there is some question as to what is to be provided as evidence of a study. Would the study results alone provide sufficient evidence, or does the entire powerflow, stability, or short circuit effort need to be documented in a formal study report? There are no measures for the creation and coordination of contingency lists that are to be developed in R3.4, R3.5, R4.4, and R4.5. Are these contingency lists required to be a documented part of the study?
No
The sharing issues of requirement R8 are still not clear, therefore the R8 VSL is not clear. It is not clear if the intent of the SDT is for the PC to share the assessments with PCs and TPs are to share the assessments with TPs, or whether the intent is for the TP to share its assessments with its PC. Will posting the assessment to a secure web-site meet the intent of the requirement? Although the comment form is not designed to allow for such, we need to comment on R4.3.1: As written, it appears that this requires stability simulations of both successful and unsuccessful high-speed reclosing for all contingency simulations, regardless of whether high-speed reclosing is actually implemented. A suggested wording change for the first bullet: "Successful high-speed reclosing and unsuccessful high-speed reclosing onto a fault, where such reclosing is applied, and where such additional simulations are deemed appropriate by the PC or TP." Another comment needs to be made regarding the stability extreme event table: Changes were made in planning event P5 to concentrate on specific relay failures. The same changes need to be made for stability extreme events 2a, 2b, 2c, and 2d. The proposed standard will significantly increase the amount of work required to develop more detailed and complex system models, to perform and document the engineering studies to meet the performance requirements, and to develop the assessments necessary for compliance. All of these increased engineering activities are perceived to provide marginal benefit to the reliability of the bulk electric system, but will require significant increases in manpower across the industry. Further, the manpower is presently not available to develop these more detailed models and to perform these studies with any reasonable assuredness. It will be a continuing challenge to the industry to obtain and keep the engineering talent needed to perform these compliance activities for such marginal benefits.
Individual
Si Truc PHAN
Hydro-Quebec TransEnergie
Yes
Yes
Yes
No
Requirement R2 Part 2.2 should be modified to read as 2.1 (not impose current annual studies as the only requirement for assessment)
No
It is questionable that sensitivity analysis be included in Requirements since a conservative approach should already be used in studies, in accordance with good engineering practices.
No
There is insufficient data available to accurately model system wide motor loads.

Yes
Yes
In table 1 on page 12 (Stability section), Relay failure should replace Protection System
Yes
Yes
<ul style="list-style-type: none"> <li>• All references to 300 kV in document should be replaced with EHV (In the introduction, section 5)</li> <li>• The first phrase of Note 3 on p 14 should be revised as follows: "Bulk Electric System (BES) level references include extra-high voltage (EHV) Facilities defined as those representing the backbone of the System, generally at voltage greater than 300 kV, and high voltage (HV) Facilities defined as those not representing the backbone of the System, as determined by the Planning Coordinator and approved by Regional Entity."</li> </ul>
Group
MRO's NERC Standards Review Subcommittee
Carol Gerou
Yes
Yes
Yes
We propose the following changes and questions: R1 – We offer the minor suggestion of replacing the wording of "maintain System models within their respective areas" with "maintain System models of elements that are interconnected to any portion of the BES that is owned or operated by the TP or PC". This wording would avoid the ambiguity that can occur when a BA that is associated primarily with one TP declares ownership of a bus in another TP's geographic area, but expects its primary TP to maintain the BA's model data for the remote generation or load. R1.1.2 – We request the SDT opinion on how two individual outages should be modeled if they are both in excess of six months duration and they overlap by less than six months. Should the overlapping condition only be modeled if the condition is expected to last more than six months?
Yes
R2.1.3 – We offer the minor suggestion of revising R2.1.3 to state, "Known outages of generation or Transmission Facilities with a duration of at least six months be simulated along with P1 events for the System peak or Off-Peak conditions when the outages are scheduled to occur." We interpret that the requirement should only call for the simulation of individual outages with duration of six months or more and not imply the simulation of sequential (back-to-back) outages where each individual outage is less than six months, but the composite duration of the back-to-back outages is more than six months. We also interpret that if two or more known outages with duration of at least six months are overlapping, then the overlapping outage condition would only be simulated for the conditions when the overlapping outages are scheduled to occur if the duration of the overlapping condition is at least six months. R2.1.5 – We offer a major suggestion regarding the phrase "could result in the unavailability of major transmission equipment" because this phrase is ambiguous and not defined. So, there is a significant risk of different and possibly contradictory interpretations by TPs, PCs, and auditors. We proposed adding that the TP and PC "shall provide documentation to support the technical rationale for defining unavailability of major transmission equipment" similar to R2.5.

No
<p>R2.1.4 &amp; R2.4.3 – We offer a major suggestion regarding the terms of ‘credible’ and ‘measurable change’ because these terms are ambiguous and not defined. So, there is a significant risk of different and possibly contradictory interpretations by TPs, PCs, and auditors. We proposed adding that the TP and PC “shall provide documentation to support the technical rationale for determining the range of credible conditions and measurable change in performance” similar to R2.5. R2.1.4 &amp; R2.4.3 bullet items – We offer the minor suggestion that the number and description of the bullet items in R2.1.4 match the bullet points in R2.4.3. Otherwise, please explain the reasons for any differences between the bullet items in R2.1.4 and R2.4.3. R2.1.4 bullet #2 &amp; # 5 – We suggest that the wording in bullet #2 be changed to “Expected transfers and other generation dispatch scenarios”. This modification would put the transfer and dispatch element, which are complementary, together in the same bullet item, rather than grouping the ‘generation dispatch’ (operating level) element together with the generation capacity elements in bullet item #5. R2.1.4 bullet #7 – We offer the minor suggestion that the term “planned” be replaced with “known” to be consistent with R1.1.2 and R2.1.3. Besides the term “planned outage” has a specific meaning in the Reliability Standards that are specific to the Operating horizon. R2.7.2 – With regard to “include actions to resolve performance deficiencies identified in multiple sensitivity studies”, we do not think that mitigation plans should be required for deficiencies found in multiple sensitivity studies because the conditions in some sensitivity studies are more extreme and less likely than base case conditions. It’s impractical to require corrective actions for longer term horizon sensitivities due to how fast the electric grid changes. We believe sensitivity analyses are valuable to improving the development of mitigation plans to address base case performance limit concerns. Some of the sensitivity study conditions are not credible or plausible enough to warrant the implementation of mitigation measures. What is the interpretation of multiple sensitivity studies - more than one or a majority of the number that were studied?</p>
Yes
Yes
Yes
<p>We offer the major suggestion that Requirements not be created in the Performance Table and be absent from the Requirement section. Requirements should only be referred to in the Performance Table after they already exist in the Requirement section. a. Notes “f” and “g” under “Steady State Only” section in the Table 1 header create requirements (e.g. use the verb, “shall”) that do not appear in the Requirements section. We suggest adding R3.3.5, which could read, “Applicable System Operating Limits for the planning horizon shall not be exceeded.” [After R3.3.5 is added, Notes “f” and “g” should be revised and refer to R3.3.5.]. b. Note “i” under “Steady State Only” section in the Table 1 header creates a requirement (e.g. use the verb, “shall”) that does not appear in the Requirements section. We suggest adding R3.3.6, which could read, “The response of voltage sensitive Load including Load that is disconnected from the System by end-user equipment associated with an event shall not be used to meet steady state voltage requirements.” [After R3.3.6 is added, Note “d” should be revised to refer to R3.3.6. c. Note “j” under the “Stability Only” section in the Table 1 header creates a requirement (e.g. use the verb, “shall”) that does not appear in the Requirements section. We suggest adding R4.1.4, which could read, “Transient voltage response shall be within acceptable limits established by the Planning Coordinator and the Transmission Planner”. [After R4.1.4 is added, Note “j” should be revised to refer to R4.1.4.]</p>
We offer the major suggestion that the P3 Category performance criteria be modified to



apply only to the loss of two generators. The SDT properly recognizes that generator outages are significantly more probable than line or transformer outages and should be "higher" in the category list. However given the clearly higher probability of generator outages, the probability of the loss of two generators is clearly higher than the loss of a generator and line or the loss of a generator and transformer. Therefore, if the loss of two generators is in the P3 category, then the loss of a generator and line or transformer should be clearly "lower" in the category list. We suggest the listing of: the loss of a generator and some other element (e.g. transmission circuit, transformer, shunt device, and single pole of DC line) be moved to a lower event category, such as the P6 Category by adding "1. Generator" to the listing in the Initial System Condition (Loss of . . .) column. Item 2.a in the Extreme Events, Steady State section – Clarify the meaning of the loss of multiple circuits in Item 2.a by using wording similar to P7. We suggest this text: "a. Loss of three or more circuits that share a common structure." Footnote 6 – Further clarify the applicable shunt devices in Footnote 6 with this suggested text: "6. Requirements which are applicable to shunt devices, also apply to FACTS devices that are connected to ground, but not instrument voltage transformers or surge arresters."

Yes

Yes

Other Comments: 1. How are backup relays handled (TPL-002-0, R1.3.10 & TPL-001-2 R1 & P5)? What does FERC construe as normal system for a protection system. The TPL-001-2 R1 & P5, this standard doesn't appear to address primary protection and how this handled. 2. Revise the Planning Assessment definition to more explicitly apply to the BES and the TPL-001 requirements. We suggest text of: "Planning Assessment: Documented evaluation of future Transmission System performance and Corrective Action Plans to remedy identified deficiencies in the BES from the steady state and stability performance requirements set forth in the TPL-001 standard." 3. R2.1.5 – We propose replacing the term 'major Transmission' with "BES" because BES is a well defined term, while the term, 'major Transmission', is not. 4. Add R2.3.1 – We suggest the addition of a R2.3.1 requirement to emulate the distinction between the requirement to perform a short circuit assessment and conduct required studies or analysis to support the assessment (e.g. R2.1/R2.1.1 and R2.2/R2.2.1). We propose wording such as, "Perform an analysis for at least one year in the Near Term Transmission Planning Horizon." This requirement would set an expectation that an analysis should be conducted to at least one or more years in the near-term planning horizon, rather than imply that an analysis of all five years in the near-term planning horizon must be conducted. 5. R2.7.4 – We suggest that the wording of R2.7.4 be the same as R.2.8.2. Otherwise, we propose that R2.7.4 and R2.8.2 be revised with wording like, ". . . implementation status of identified Corrective Action Plans for System Facilities and Operating Procedures." to clarify that the identified system facilities and operating procedures refer only to those that were in the previous year's Corrective Action Plans. 6. R3.3.1 – The term of 'controls' is ambiguous and not defined, unlike the term, 'Protection Systems', which is defined. Therefore, we suggest that this item be defined or more clearly described to avoid the risk of different and possibly contradictory interpretations by TPs, PCs, and auditors. 7. R3.3.1, bullet #1 - We suggest qualifying which generating units to consider and which voltage limits to simulate with revised wording like, "Trip generating units that are connected to the BES when actual or assumed minimum generator steady state or ride through voltage limits are known and simulations show voltages may fall below the voltage limit. If assumed voltage limits are used, then they should be included in the assessment". The requirement should not apply to all relevant generating units until one of the MOD standards requires all Generator Owners to provide their minimum generating unit voltage limits to the TP and PC. If the wording of

R3.3.1 bullet #1 must be different from its counterpart, R4.3.1 bullet #2, then please explain the reasons for any differences. 8. R3.4.1 – Compliance with the requirement “to coordinate” is problematic and non-measurable We suggest replacing it with the requirement “to communicate”. 9. R3.5 - We interpret that R3.5 requires the TP and PC to conduct an evaluation of possible actions to reduce the likelihood or impact of extreme events, which produce the more severe impacts, if cascading outages may occur. Does the drafting team intend for the TP and PC to fulfill this requirement for at least one event in each of the five categories (i.e. 3 steady state and 2 stability) or in each of the 21 categories/sub-categories (i.e. 14 steady state and 7 stability). Also, if the resulting cascading outages do not result in any overloads, under-voltages, voltage collapse, or loss of generator synchronization, then should the evaluation of possible actions to reduce likelihood or impact be required? 10. R4.1.1 – We suggest that there should be some qualification of which generating units are referred to in this requirement. We propose that the requirement say, “No generating unit connected to the BES shall pull out of synchronism.” For example, some utilities include smaller generation units that are connected at voltages below 100 kV and even down to distribution voltage in their base cases. 11. R4.1.2 – We propose that the wording of this requirement be revised to reflect the same BES qualification of the generating unit that we noted in R4.1.1 above. 12. R4.3.1 – This requirement refers to high speed reclosing and we presume that this is special high speed reclosing that is completed in several cycles, rather than the normal high speed reclosing that is completed in a number of seconds. We recommend that the term high speed reclosing be more clearly defined for this sub-requirement. 13. R5 – This requirement should remove the criterion item, “post-Contingency voltage deviation”, because this criterion is not used widely enough in the industry to be well established criterion. 14. R8 – This requirement should be revised to limit the need to provide the Planning Assessment as follows “adjacent Planning Coordinators and adjacent Transmission Planners and to any registered functional entity...” This suggestion is added to the requirement to clarify that the word adjacent also applies to Transmission Planners and to clarify that the functional entity must be registered in order for the entity to be applicable to the requirement.

Individual

Sergio Garza

LCRA TSC

Yes

Yes

Yes

Yes

No

The first bullet item in Section 3.3.1 should be the same as the second bullet in Section 4.3.1. The wording is somewhat confusing in both. Also, the wording as proposed does not recognize that a high voltage limit could also be violated. Edits to the item as shown below are suggested. Tripping of generators where simulations show generation bus voltages or high side generation step up (GSU) voltages are outside known limits, or assumed to be outside generator steady state limits, or have reached the generator ride through voltage limit. Include in the assessment any assumptions made.

Yes
No
<p>The third bullet of 4.3.1 requires the addition of relay models for stability studies. This type of analysis is performed today by scripting the tripping of multiple lines due to breaker failure events. The inclusion of relay models into the stability study will result in added complexity and an over reliance on relay models for system stability assessment. The stability assessment should assess stability resulting from the operation of relays as opposed to reliance on a relay model for proper system representations. Assurance of the proper operation of relays results from the analysis performed to set relays not from stability studies. From Section 4.3.1: "Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models." Section 4.5 requires that "The rationale for those Contingencies selected for evaluation shall be available as supporting information." This will have to be developed. Requirement R5 requires the establishment of criteria for transient voltage response of the system. This seems unnecessary given the proposed changes to Table 1. The proposed changes to table 1 seem to make clear the type of system response that is allowable through its specification of what is allowable in terms of interruptions to Firm Transmission and Non-Consequential loads. R5 states: "Each Transmission Planner and Planning Coordinator shall have criteria for acceptable System steady state voltage limits, post-Contingency voltage deviations, and the transient voltage response for its System. For transient voltage response, the criteria shall at a minimum, specify a low voltage level and a maximum length of time that transient voltages may remain below that level."</p>
<p>An important footnote to Table 1 is omitted from this proposed revision. This omission prevents adequate evaluation of the footnote. Footnote 12 in Table 1 is no longer applied to P2.1, P2.2, P2.3, P4, and P5. The footnote states: "Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here." The footnote should be removed from the proposed revision until Project 2010-11 is concluded.</p>
Individual
Saurabh Saksena
National Grid
Yes
No
<p>Year One should be used within the text of the requirement. Do not have a definition for Year One. Year two could be deleted and R.2.1.1 modified as follows: For the Planning Assessment started in a given calendar year, the first year that is studied must include the forecasted peak Load period for one of the following two calendar years. An additional Near-term study must be performed that is four calendar years beyond the first year that is studied.</p>
No
<p>For R1: Ambiguity regarding base case assumptions, in combination with lack of clarity and clear direction of purpose regarding the sensitivity analysis, undermines the objectives of the standard; R1.1 Part 1.1.2. With respect to known outages, there needs to be greater flexibility in the standards (e.g. more tolerance to non-consequential load shedding or limitations to the contingencies that need to be considered (e.g. P0, P1, &amp; P2)). Regional</p>

allowances for load shedding under this condition should be approved. Duration of known outages should be increased from six months to one year; R1.1 Part 1.1.6 Delete "required for Load". Resources may also be used for export to other areas, not just internal load.

No

We can agree with R2.1 however with respect to R2.2 Language should be consistent with 2.1 for example - use "current or qualified past studies" instead of "the following annual current study".

No

If an entity does a stressed set of assumptions do they always need to do a non-stressed case?

Yes

Yes

Yes

In Table 1 – Stability, Make language similar to wording in P5. Protection System should be removed and replaced with the words relay failure. This change should be made for 2a through 2d: 2. Local or wide area events affecting the Transmission System such as: a. 3Ø fault on generator with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. b. 3Ø fault on Transmission circuit with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. c. 3Ø fault on transformer with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. d. 3Ø fault on bus section with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. In Note 11 change wording as shown below: Excludes circuits that share a common structure (Planning event P7, Extreme event steady state 2a) or common Right-of-Way (Extreme event, steady state 2b) for a total of 1 mile or less

Yes

Yes

Other Comments: Section 3.3 - We feel that the last sentence of 3.3.1 should be removed. This is handled by PRC-023. Line ratings are addressed by PRC-023. PRC-023 requires coordination with the Reliability Coordinator. Remove "Tripping of Transmission elements where relay loadability limits are exceeded." Section 4.3 - High speed reclosing is not defined. We have previously commented on sensitivity analysis and guidance for base case assumptions. Also, extreme event analysis should not be mandated in this standard as no corrective action is required.

Individual

Charles Lawrence

American Transmission Company

Yes

Yes

No

We propose the following changes and questions: R1 – We offer the minor suggestion of replacing the wording of "maintain System models within their respective areas" with "maintain System models of elements that are interconnected to any portion of the BES

that is owned or operated by the TP or PC". This wording would avoid the ambiguity that can occur when a BA that is associated primarily with one TP declares ownership of a bus in another TP's geographic area, but expects its primary TP to maintain the BA's model data for the remote generation or load. R1.1.2 – We request a SDT opinion on how two individual outages should be modeled if they are both in excess of six months duration and they overlap by less than six months. Should the overlapping condition only be modeled if the condition is expected to last more than six months?

No

R2.1.3 – We offer the minor suggestion of revising R2.1.3 to state, "Known outages of generation or Transmission Facilities with a duration of at least six months be simulated along with P1 events for the System peak or Off-Peak conditions when the outages are scheduled to occur." We interpret that the requirement should only call for the simulation of individual outages with duration of six months or more and not imply the simulation of sequential (back-to-back) outages where each individual outage is less than six months, but the composite duration of the back-to-back outages is more than six months. We also interpret that if two or more known outages with duration of at least six months are overlapping, then the overlapping outage condition would only be simulated for the conditions when the overlapping outages are scheduled to occur if the duration of the overlapping condition is at least six months.

No

R2.1.4 & R2.4.3 – We offer a major suggestion regarding the terms of 'credible' and 'measurable change' because these terms are ambiguous and not defined. So, there is a significant risk of different and possibly contradictory interpretations by TPs, PCs, and auditors. We proposed adding that the TP and PC "shall provide documentation to support the technical rationale for determining the range of credible conditions and measurable change in performance" similar to R2.5. R2.1.4 & R2.4.3 bullet items – We offer the minor suggestion that the number and description of the bullet items in R2.1.4 match the bullet points in R2.4.3. Otherwise, please explain the reasons for any differences between the bullet items in R2.1.4 and R2.4.3. R2.1.4 bullet #7 – We offer the minor suggestion that the term "planned" be replaced with "known" to be consistent with R1.1.2 and R2.1.3. Besides the term "planned outage" has a specific meaning in the Reliability Standards that are specific to the Operating horizon. R2.7.2 – With regard to "include actions to resolve performance deficiencies identified in multiple sensitivity studies", we do not think that mitigation plans should be required for deficiencies found in multiple sensitivity studies because the conditions in sensitivity studies are more extreme and less likely than base case conditions. Some sensitivity study conditions are not credible or plausible enough to warrant the implementation of mitigation measures. What is the SDT interpretation of multiple studies - more than one or a majority of the sensitivities that were studied?

Yes

Yes

No

We offer the major suggestion that Requirements not be created in the Performance Table and be absent from the Requirement section. Requirements should only be referred to in the Performance Table after they already exist in the Requirement section. (a.) Notes "f" and "g" under "Steady State Only" section in the Table 1 header create requirements (e.g. use the verb, "shall") that do not appear in the Requirements section. We suggest adding R3.3.5, which could read, "Applicable System Operating Limits for the planning horizon shall not be exceeded." [After R3.3.5 is added, Note "a" should be revised and refer to

R3.3.5.]. (b.) Note "i" under "Steady State Only" section in the Table 1 header creates a requirement (e.g. use the verb, "shall") that does not appear in the Requirements section. We suggest adding R3.3.6, which could read, "The response of voltage sensitive Load including Load that is disconnected from the System by end-user equipment associated with an event shall not be used to steady state voltage requirements." [After R3.3.6 is added, Note "i" should be revised to refer to R3.3.6.]. (c.) Note "j" under the "Stability Only" section in the Table 1 header creates a requirement (e.g. use the verb, "shall") that does not appear in the Requirements section. We suggest adding R4.1.4, which could read, "Transient voltage response shall be within acceptable limits established by the Planning Coordinator and the Transmission Planner". [After R4.1.4 is added, Note "j" should be revised to refer to R4.1.4.]

We offer the major suggestion that the P3 Category performance criteria be modified to apply only to the loss of two generators. The SDT properly recognizes that generator outages are significantly more probable than line or transformer outages and should be "higher" in the category list. However given the clearly higher probability of generator outages, the probability of the loss of two generators is clearly higher than the loss of a generator and line or the loss of a generator and transformer. Therefore, if the loss of two generators is in the P3 category, then the loss of a generator and line or transformer should be clearly "lower" in the category list. We suggest the listing of: the loss of a generator and some other element (e.g. transmission circuit, transformer, shunt device, and single pole of DC line) be moved to a lower event category, such as the P6 Category by adding "1. Generator" to the listing in the Initial System Condition (Loss of . . .) column. We offer the minor suggestion that Item 2.a in the Extreme Events, Steady State section – Clarify the meaning of the loss of multiple circuits in Item 2.a by using wording similar to P7. We suggest this text: "a. Loss of three or more circuits that share a common structure." We offer the minor suggestion that Footnote 6 – Further clarify the applicable shunt devices in Footnote 6 with this suggested text: "6. Requirements which are applicable to shunt devices, also apply to FACTS devices that are connected to ground, but not instrument voltage transformers or surge arresters." ATC has significant concerns with Q3.2 (R2.1.4 & R2.4.3), Q4 (Table requirements) and Q5 (P3 scope), as noted above. In addition, ATC offers the following suggestions to promote proper Reliability Standard quality and content. (1.) Revise the Planning Assessment definition to more explicitly apply to the BES and the TPL-001 requirements. We suggest text of: "Planning Assessment: Documented evaluation of future Transmission System performance and Corrective Action Plans to remedy identified deficiencies in the BES from the steady state and stability performance requirements set forth in the TPL-001 standard." (2.) R2.1.5 – We propose replacing the term 'major Transmission' with "BES" because BES is a well defined term, while the term 'major Transmission' is not. (3.) Add R2.3.1 – We suggest the addition of a R2.3.1 requirement to emulate the distinction between the requirement to perform a short circuit assessment and conduct required studies or analysis to support the assessment (e.g. R2.1/R2.1.1 and R2.2/R2.2.1). We propose wording such as, "Perform an analysis for at least one year in the Near Term Transmission Planning Horizon." This requirement would set an expectation that an analysis should be conducted to at least one or more years in the near-term planning horizon, rather than imply that an analysis of all five years in the near-term planning horizon must be conducted. (4.) R2.7.4 – We suggest that the wording of R2.7.4 be the same as R.2.8.2. Otherwise, we propose that R2.7.4 and R2.8.2 be revised with wording like, ". . . implementation status of identified Corrective Action Plans for System Facilities and Operating Procedures." to clarify that the identified system facilities and operating procedures refer only to those that were in the previous year's Corrective Action Plans. (5.) R3.3.1 – The term of 'controls' is ambiguous and not defined, unlike the term, 'Protection Systems', which is defined. Therefore, we suggest that this item be defined or more clearly described to avoid the risk of different and possibly contradictory

interpretations by TPs, PCs, and auditors. (6.) R3.3., bullet #1 - We suggest qualifying which generating units to consider and which voltage limits to simulate with revised wording like, "Trip generating units that are connected to the BES when actual or assumed minimum generator steady state or ride through voltage limits are known and simulations show voltages may fall below the voltage limit. If assumed voltage limits are used, then they should be included in the assessment". The requirement should not apply to all relevant generating units until one of the MOD standards requires all Generator Owners to provide their minimum generating unit voltage limits to the TP and PC. If the wording of R3.3.1, bullet #1 must be different from its counterpart, R4.3.1, then please explain the reasons for any differences. (7.) R3.4.1 - Compliance with the requirement "to coordinate" is problematic and non-measurable. We suggest replacing it with the requirement "to communicate". (8.) R3.5 - We interpret that R3.5 requires the TP and PC to conduct an evaluation of possible actions to reduce the likelihood or impact of extreme events, which produce the more severe impacts, if cascading outages may occur. Does the drafting team intend for the TP and PC to fulfill this requirement for at least one event in each of the five categories (i.e. 3 steady state and 2 stability) or in each of the 21 categories/sub-categories (i.e. 14 steady state and 7 stability). Also, if the resulting cascading outages do not result in any overloads, under-voltages, voltage collapse, or loss of generator synchronization, then should the evaluation of possible actions to reduce likelihood or impact be required? (9.) R4.1.1 - We suggest that there should be some qualification of which generating units are referred to in this requirement. We propose that the requirement say, "No generating unit connected to the BES shall pull out of synchronism." For example, some utilities include smaller generation units that are connected at voltages below 100 kV and even down to distribution voltage in their base cases. (10.) R4.1.2 - We propose that the wording of this requirement be revised to reflect the same BES qualification of the generating unit that we noted in R4.1.1 above. (11.) R4.3.1 - This requirement refers to high speed reclosing and we presume that this is special high speed reclosing that is completed in several cycles, rather than the normal high speed reclosing that is completed in a number of seconds. We recommend that the term high speed reclosing be more clearly defined for this sub-requirement. (12.) R5 - We propose removing the criteria item, "post-Contingency voltage deviation", because this criterion has not been developed and used widely enough in the industry to be introduced into the standards. (13.) R7 - Revise part of the requirement text to read, ". . . identify each entity's individual and joint responsibilities . . ." to provide better clarity. Perhaps this requirement should be listed at the beginning of the Requirements section, instead being mentioned near the end of this section. (14.) Change the forward referencing to backward referencing. We agree with R2.6, R3.1, R3.5, R4.1, and 4.2. However, we suggest that the requirements be ordered so that all of the references refer back to earlier text, rather later text to be consistent with the rest of this standard and other referencing in this standard (e.g. R2.1.3, R2.1.4, R2.4.3, R3, R3.3, R3.5, R4, R4.3, R4.4, R4.5), as well as other standards.

Yes

Yes

Individual

Thad Ness

American Electric Power (AEP)

Yes

Yes
Yes
Yes
R2, Part 2.1 – idicates that 'qualified' past studies can be utilized. This is an ambiguous term and we suggest the SDT consider the implications.
Yes
Yes
Yes
Yes
Yes
Yes
Individual
Bill Middaugh
Tri-State Generation & Transmission
Yes
No
Comments: The Year One definition is somewhat clearer now, but there is still some ambiguity. We recommend the removal of the term "Year One, year two, and year five" from R2.1.1. and deletion of the Year One definition (definitions are not required for year two and year five, for instance). The Year One concept can be integrated into the definition of Near-Term Transmission Planning Horizon, which we suggest changing to "The period beginning with the first year following the operating horizon, as determined by the Transmission Planner or Planning Coordinator, through the fifth year." Then, rather than say "Year One, year two, and year five", we can use the phrase "at least one of the first two years of the Near-Term Transmission Planning Horizon, and the fifth year". This will require corresponding changes in R2.1.1 and R2.1.2.
No
We suggest changing the added sentence to "This establishes the Category P0, No Contingency, Initial System Conditions in Table 1."
No
2.1.5 – Change "shall be performed for" to "shall have been performed for."
Yes
No
Rather than specifically call out induction motor loads, we recommend changing the second sentence to "Stability analysis shall include models that represent the expected dynamic



behavior of system elements that could impact the study area.”

Yes

Yes

Table 1, P5 does not seem to account for redundant relays in the Protection System to mitigate potential relay failure. We recommend changing the “Event” to “Delayed Fault Clearing due to the failure of a relay to operate as designed, if that is the only relay protecting the Faulted element, for one of the following:” In Table 1, P2 and P3, the last column “Non-Consequential Load Loss Allowed” where the requirement “No12” appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote “b”. This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote “b” in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, “Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers.” Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue). Second, we are unclear why voltage relays are included in footnote 13 and think they can be removed. Third, in the Extreme Events – Stability section of Table 1, items 2a-2d “Protection System failure” should be changed to “relay failure” to be consistent with Table 1, Category P5.

Yes

Yes

None regarding R8. The following comments refer to parts of the proposed standard for which no questions are asked. R4, Part 4.1.2: The response to our previous comment indicated that our description was for a system Stability issue. R4 is addressing system Stability and we believe the comment still applies and that it was not answered in the response. We have two issues with 4.1.2: Sometimes out-of-step (loss of generator synchronism) is better mitigated through islanding by tripping transmission rather than by tripping generators; the second point is that the ability of present modeling programs does not include the capability to model all types of impedance relays and their associated OOS blocking and tripping capabilities that are available. R4, Part 4.3.1: The third bullet implies that all impedance relays (and perhaps others) will need to be modeled in the stability databases. We question whether the existing simulation programs can accommodate this large magnitude of data inclusion and whether there is any benefit to BES reliability. Certainly using generic models rather than actual models would be of no benefit. We recommend changing the third bullet to “Evaluation of Protection System behavior when transient power swings are detected or predicted to have impedance characteristics that

may approach relay operating characteristics.”
Individual
David Miller
Lakeland Electric
Yes
No
While the definition of Year One addresses the time span this year occupies, it does not address when that time span begins. The example which was added to the definition suggests that Year One begins twelve months from the start of the Planning Assessment, but it does not appear to be specifically stated. The following language is recommended: "The first twelve month period that a Planning Coordinator or a Transmission Planner is responsible for assessing, beginning twelve months from the planned completion date of the Planning Assessment."
No
Consider removing "...the latest..." from R1 and changing R1.1.2 to state "...six months during the period of study."
No
No, the phrase any material changes used in requirement R.2.6.2 will effectively cause all Planning Authorities to run all studies every year regardless of minor changes in the model. The overwhelming majority of PAs use a 10 year set of planning models developed annually by Regions or Subregions. These annual sets of planning models will always have some changes. The annual study requirement is especially problematic for Stability and Short circuit studies that require much more engineering time to complete and are much less likely to have results impacted by minor model changes such as different load forecasts. Uncertainty with audit review of technical rationale documentation will serve to focus Transmission Planning engineering resources on short term compliance to an extent that is counter productive. Please consider removing R.2.6.2
No
It is recommended that the phrase "...measureable change in performance..." be changed to "...measurable change in system response..." A change in performance is unclear, and could suggest that a sensitivity study is valid only if the System is stressed to the point that it no longer performs within the criteria established by Table 1. In addition, it is recommended that the following text appear after the last sentence of 2.4.3: "The condition or conditions to be varied shall be left to the discretion of the Transmission Planner or Planning Coordinator, provided they are selected from the list below."
Yes
Yes
Yes
The performance requirements of Table 1 do not allow the loss of non-consequential load for single and multiple contingency events. The disallowance of load loss does not provide any real benefit to the reliability of the BES and is an unnecessary overreach into local quality of service issues that are best addressed by State, Provincial or Municipal authorities. There may be circumstances such as high local transmission costs or local opposition to transmission construction where prohibition of non-consequential load loss

represents a poor cost/benefit or quality of life tradeoff. Having a provision at the regional level that a PA or TP can have a certain amount of non-consequential load loss designed or planned in to its system that would be reasonable if it is acceptable to the RE and does not have an adverse impact on the remaining BES. In lieu of such a RE provision, providing a quantitative cap in non-consequential load loss such as 100 MW may be rationale compromise in the goal of limiting load loss for the more probable outage events. Our preference would be to retain the capability of limited non-consequential load loss. It is our understanding that footnote 9 is under consideration as part of Project 2010-11 and should be noted as such for clarification.

No

Consider removing "the latest" from M1.

No

The requirement to distribute the Planning Assessment should be more flexible and allow for making the Planning Assessment available, such that those entities that desire the information can have it readily available. R8 should be modified as follows: Each Planning Coordinator and Transmission Planner shall make available its Planning Assessment results to adjacent Planning Coordinators and Transmission Planners and to any functional entity that indicates a reliability related need for the Planning Assessment results.

Group

E.ON U.S.

Brent.Ingebrigtsen@eon-us.com

No

Comments: 2.2.1. A current study assessing expected System peak Load conditions for one of the years in the Long-Term Transmission Planning Horizon and the rationale for why that year was selected. E.ON U.S. believes the scope of the 'current study' should be defined. It is not clear whether the scope is the same as outlined in section 2.1.

No

In the statement: "the Planning Coordinator and Transmission Planner shall coordinate with adjacent Planning Coordinators and Transmission Planners to ensure that Contingencies on adjacent Systems which may impact their Systems are included in the Contingency list." E.ON U.S. believes that the use of the pronoun "their" in the quoted section above is confusing. "Their" could be read as applying to the adjacent Planning Coordinators and not to the Planning Coordinator to whom the standard applies. E.ON U.S. recommends that the word "their" should be changed to "the Planning Coordinator's and Transmission Planner's" in order to make it clear.

E.ON U.S. believes that Table 1 should be formatted to avoid having the tables split by page breakers. In addition, tables spanning across multiple pages should have headers at the top of each page.

Individual

Steve Stafford

GTC
Yes
Yes
Yes
Yes
Yes
No
We have concerns for including induction motor representations in the load models without any study or bench-marking activities to meet the requirements of R2.4.1. This information should be supplied by the LSE as part of the MOD standard. We understand that the proposed standard will accept an aggregate system load model which represents the overall dynamic behavior of the load to relieve the burden of trying to develop specific induction motor load representation at each load bus. However this modeled system response will be considerably different compared to the actual system response which will open up the industry to unwarranted scrutiny and possible compliance violation investigations.
Yes
Yes
Yes
Yes
Individual
Chifong Thomas
Pacific Gas and Electric Company
Yes
We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R3 or R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent "[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models". As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: "Tripping of Transmission lines and transformers where transient swings cause Protection

System operation based on known Protection System response". Section 3.4.1 and 4.4.1 require PCs and TPs to coordinate with adjacent PCs and TPs to ensure that Contingencies on adjacent Systems which may impact their Systems are included in the Contingency list. Please clarify whether this means 1) that a PC or TP must coordinate with others to identify contingencies on other Systems that the PC or TP must now include on their Contingency list to simulate and address any performance violations on their own System, or 2) that the PC or TP must coordinate with others to identify contingencies on their System that this PC or TP must now include on their Contingency list to simulate and address any performance violations on the other Systems. In either case, the standard does not seem to clearly state what must be done, or whose responsibility it is to develop the corrective action plan, if a contingency in one System causes a performance violation in another System.

We recognize that the drafting team made changes to the definition of Year One based on industry comments. However, we believe that the revised language could allow for a situation where an entity could use its next season's operating study as its Year One planning study. For example, if the entity does its study in the fall of 2011, the proposed definition would allow the entity to use its summer 2012 operating study as its Year One study. This is a very short period to address any issued identified. Suggest working into the requirement that Planning Studies must look out at least 12 months beyond when the study is performed. This would still allow for the provision in the current definition example ("if a Planning Assessment was started in 2011, then Year One must include the forecasted peak Load period for either 2012 or 2013) because the entity would be able to use their 2013 Load period, but it would prevent the entity from using the 2012 Load period if they started the assessment late in 2011.

Yes

Yes

Yes

Yes

Yes

PG&E does not support the performance table, as currently revised. Table 1, P5 currently requires the study of "[d]elayed Fault Clearing due to the failure of a relay<sup>13</sup> protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay<sup>13</sup> protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No<sup>12</sup>" appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The

unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Yes

Yes

Group

Florida Reliability Coordinating Council, Inc - Transmission Working Group

Richard BEcker

Yes

No

No, because it is worded to be dependent upon when an assessment is started rather than when the assessment is completed and valid. Assessments don't typically include a "start date". An assessment completed on a calendar date should include (be valid for) the forecasted peak load for a timeframe that begins no more than 24 months from the date that the assessment was completed.

No

No, Since "the latest" data may become available after the study is complete, a planner may not be able to ever complete a study. Please consider removing "the latest" from the second sentence.

No

No, Please consider removing R.2.6.2. The overwhelming majority of PAs use a 10 year set of planning models developed annually by Regions or Subregions. These annual sets of planning models will always have some changes. The annual study requirement is especially problematic for Stability and Short circuit studies that require much more engineering time to complete and are much less likely to have results impacted by minor model changes such as different load forecasts. Uncertainty with audit review of technical rationale documentation will serve to focus Transmission Planning engineering resources on short term compliance to an extent that is counter productive.

No

This change does not clarify the required sensitivity analysis. A measureable change in performance is unclear? Instead of a measurable change in performance, a measureable change in contingency response of the Bulk Electric System would be more appropriate. A change in performance implies not meeting one of the performance requirements as specified in Table 1.

Yes

No
This change does not clarify material. Material should be quantified somehow. We recommend changing the phrase "material generation additions or changes" to "generation in the vicinity with additions of changes larger than 200 MW".
Yes
We support the changes to the performance tables.
Footnote 12 performance requirements of Table 1 should allow the loss of non-consequential load for all contingency categories except for P0. The disallowance of load loss does not provide any real benefit to the reliability of the BES and is an unnecessary overreach into local quality of service issues that are best addressed by State, Provincial or Municipal authorities. There may be circumstances such as high local transmission costs or local opposition to transmission construction where prohibition of non-consequential load loss represents a poor cost/benefit or quality of life tradeoff. Having a provision at the regional level that a PA or TP can have a certain amount of non-consequential load loss designed or planned in to its system that would be reasonable if it is acceptable to the RE and does not have an adverse impact on the remaining BES. In lieu of such a RE provision, providing a quantitative cap in non-consequential load loss such as 100 MW may be rationale compromise in the goal of limiting load loss for the more probable outage events. Our preference would be to retain the capability of limited non-consequential load loss. Footnote 9 should also be under consideration as part of Project 2010-11 and should be noted as such for clarification.
No
It appears that there is a disagreement between R8 and M8, regarding public posting. We Agree with M8 posting option.
No
The requirement to distribute the Planning Assessment should be more flexible and allow for making the Planning Assessment available, such that those entities that desire the information can have it readily available. R8 should be modified to replace distribute with "make available:", so the new requirement would read as follows: Each Planning Coordinator and Transmission Planner shall make available its Planning Assessment results to adjacent Planning Coordinators and Transmission Planners and to any functional entity that indicates a reliability related need for the Planning Assessment results.
Individual
Michael R. Lombardi
Northeast Utilities
Yes
No
NU does not support the revised definition of Year One as we believe it leads to confusion. Our suggestion is that Year One should be the Peak Load Year after the study is initiated. The subsequent years should be counted from Year One (e.g., a study that is started in year 2010 with peak load in 2011 will have Year One as 2011 and Year Two as 2012, etc.).
No
NU believes that the Normal System Conditions as stated in Requirement R1 should establish the base case conditions to be used for the assessment studies. More guidelines for developing base cases should be addressed in the requirements. What the statement in Requirement R1 lacks is the manner of creating generation dispatches and the level of interface flows (level of stress), which are central to any base case to be used to assess the

reliability of the electric power network. Depending upon how the base case dispatches and the level of interface flows are created, a study may reveal reliability violations in the power system. This is a weakness of the existing TPL standards. NU, however, will support the idea of developing regional guidelines in regard to the nature of the base cases to be used for the NERC reliability studies. Comment on Requirement R1.1, Part 1.1.2: With respect to known outages NU requests that the six month duration listed by the requirement should be changed to one year duration. Requirement R1.1 Part 1.1.6: The phrase "required for Load" should be deleted as this confuses the issue [since resources may also be used for export to other areas and not just internal load].

No

The revisions made to Requirement R2 Part 2.1 appear to resolve the concern that past studies could not be used to comply with the short-term steady state study requirements. However, the language of Requirement R2 Part 2.2 still seems to suggest that current annual studies are always required for the long-term steady state assessment to be compliant. This may have been an oversight, for consistency Requirement R2 Part 2.2 should be modified to similarly read as Requirement R2, Part 2.1.

No

The standard is referring to requirements for sensitivity and other issues without a reference to base assumptions as commented in Question #3. The standard must describe base assumptions. To define a sensitivity condition, NERC must define base assumptions.

Yes

Yes

Yes

Checked "No" NU agrees with the changes that have been made to the language of P5. However, for Table 1 (Steady State and Stability Performance Extreme Events) – Stability, the wording "Protection Systems failure" should be changed to "relay failure" similarly to the change in P5. This change should be made for items 2a through 2d.

Yes

Yes

No comments on Question 7. Other Comments: As detailed below, NU has other comments that are not addressed by this Comment Form as follows – Section 3.3, Section 4.3, Non-Consequential Load Loss as referenced in the events Table 1 and studies using extreme event contingencies. Section 3.3 – NU believes that the last sentence of Part 3.3.1 should be removed since this is handled by PRC-023. Line ratings are addressed by PRC-023 which requires coordination with the Reliability Coordinator. NU suggests the removal of the following sentence: "Tripping of Transmission elements where relay loadability limits are exceeded." Section 4.3 - High speed reclosing is not defined and to help eliminate any confusion that it may introduce into the standard it will be worthwhile for the SDT to define this term. Non-Consequential Load Loss – Depending upon the resolution of "Project 2010-11, TPL Table 1, Footnote b" NU may have additional comments regarding this issue. Studies Using Extreme Event Contingencies: The requirements for sensitivity analysis already address issues going beyond what is expected to meet the reliability requirements of the standard. Therefore, requiring extreme event analysis is requiring two layers of event analysis beyond what is required and there is no requirement for corrective action if a concern is identified.



Individual
Christopher L. de Graffenried
Consolidated Edison Co. of New York, Inc.
No
Requirement R1 Part 1.1 and following states "System models shall represent:... 1.1.5. Known commitments for firm Transmission Service and Interchange. It was commented during a previous posting that 1.1.5 should be reworded to read: Known commitments for Firm Transmission Service, and, additionally, other types of transactions provided they have been demonstrated to not violate existing reliability constraints. The response was that "The SDT believes that the defined term 'Interchange' covers other transfers as described in your comment. No change made." It is agreed that known Interchange should be modeled. However, it is imperative that existing reliability constraints not be violated in the process. That is, Interchange relating to economic transactions should not drive planning studies. Reliability-related investments should not be driven by congestion related to economic transactions incorporated into planning models. Con Edison's Preferred approach: • 1.1.5. Known commitments for firm Transmission Service and Interchange. Interchange is meant to refer to energy transactions other than firm Transmission Service. While rigorous planning studies have been conducted to permit the uninterrupted implementation of firm Transmission Service without jeopardizing the reliable operation of the Interconnected System, other types of energy transaction only take place whenever system conditions permit them. They are usually of very short duration relative to planning assessment periods (usually spanning for a few hours to a few days) and deemed highly interruptible subject to reliability issues that may arise during operation of the system. In other words, the term Interchange refers to economic transactions that are permitted when the system is secure and there are reasonable reliability margins to effect dispatch changes to lower operating costs. As such, Interchange should not be reflected in system representation meant to assess system reliability in adherence to reliability criteria delineated in documents such as TPL-001.
No
See NPCC comments
Yes
No
See NPCC comments
No
See NPCC comments
No
There is insufficient information and experience regarding dynamic load modeling. It may also be included as a "sensitivity" analysis in 3.2, rather than requiring and expecting accurate representation of a dynamic load model. If this requirement is kept, a modeling standard should be written that is specific to dynamic loads. This change belongs in a modeling standard, not in TPL-001.
Yes
No
• Header note (i) in the first Table 1 (p. 10) The explicit representation of (voltage-dependent) load models is perfectly consistent with the requirements defined in R1 (which calls for a comprehensive representation of system components and their expected operating status in the planning assessment period) and the impetus to the creation of

more specific load models in dynamic assessments found Requirement 2.4 of this draft of TPL-001-2. It is a known that depressed voltage conditions cause certain system elements to perform below their rated capacity. For example, capacitors provide less voltage support and voltage controlling transformers are impeded by their finite tap range to direct VAR flow into areas affected by low voltage conditions. Certain load types, on the other hand, provide a self-compensating relief to depressed voltage by naturally decreasing demand in a manner proportional to their characteristics, without operator intervention. Choosing to negate the voltage-dependence of one of these system elements (load, in this case) results in an inaccurate system representation that, in turn, may lead to erroneous assessments of the reliability state of the interconnected system and, potentially, to the implementation of unwarranted system upgrades.

See NPCC comments

Yes

No

See NPCC comments

Individual

Spencer Tacke

Modesto Irrigation District

Yes

We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: “Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response”.

No

The definition as it is in the current standards is fine. The new proposed definition is unclear.

Yes

Yes

No

This new requirement will expand the scope of the study work beyond a reasonable extent.

Yes

Yes

Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a relay13 protecting the Faulted element to operate as designed”. As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: “Single failure of a protection relay13 protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following”. In Table 1, P2 and P3, the last column “Non-Consequential Load Loss Allowed” where the requirement “No12” appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote “b”. This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote “b” in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, “Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers.” Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Group

Pepco Holdings, Inc - Affiliates

Richard Kafka

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes
Yes
Yes
Individual
Alex Rost
NBSO
Yes
No
To avoid confusion, the formal definition for Year One should be eliminated and wording used to describe Year One be placed within the appropriate requirement. For example, R2.1.1 could be re-written to state: System peak Load representing a point in time 12-24 months and another point in time 48-65 months into the future from the time the study is initiated.
No
R1 should have some language to state that base case assumptions should be made such that they appropriately stress the system to be tested and are in accordance with good engineering practice.
No
NBSO agrees with the language for R2.1, but the language with R2.2 should be changed to be consistent with R2.1. NBSO disagrees with the revisions to R2.1.5. Requiring PAs to study instead of assess the possible unavailability of equipment with a lead time of a year or more will result in significant demand on resources with little impact on system reliability. NBSO also questions what additional value such studies will bring in addition to the N-1-1 requirements (P6).
No
Base case assumptions should be made such that they appropriately stress the system to be tested and are in accordance with good engineering practice. If the base cases are already stressed, the requirement to study sensitivity cases may result in the study of less severe conditions, and thus require additional time and resources while providing little additional value to the overall assessment.
No
By implication, the response of induction motor load would need to be considered when modeling the expected dynamic behaviour of loads that could impact the study area. NBSO suggests re-wording parts of R2.4.1 as follows: System peak load levels shall include a model which represents the expected dynamic behaviour of loads that could impact the study area. An aggregate system load model which represents the overall expected dynamic behaviour of load is acceptable.
Yes
Yes

For consistency, 'Protection System' should be replaced with 'relay' on Table 1 (p12) Stability Section, items 2a-2d.
Yes
Yes
NBSO suggests considering rewording the VSL so that they address the failure to distribute the final results of planning assessments.
Individual
Curtis A. Beveridge
Central Maine Power Company
Yes
No
The added clarification to the definition of Year One serves to remove most ambiguity with respect to Year One. However, the revision has added further ambiguity to the terms "year two" and "year five" which are not defined. For the Planning Assessment started in a given calendar year, the first year that is studied must include the forecasted peak Load period for one of the following two calendar years. An additional Near-term study must be performed that is four calendar years beyond the first year that is studied. We recommend defining Year Five as the twelve month period 4 to 6 calendar years from the date of the Planning Assessment. We further recommend revising R2.1.1 as follows: "System peak Load for Year One and for Year Five." Alternatively, the definition of Year One could be eliminated and described within the text of the requirements.
No
For R1 Ambiguity regarding base case assumptions, in combination with lack of clarity and clear direction of purpose regarding the sensitivity analysis, undermines the objectives of the standard; R1.1 Part 1.1.2. With respect to known outages, there needs to be greater flexibility in the standards (e.g. more tolerance to non-consequential load shedding or limitations to the contingencies that need to be considered (e.g. P0, P1, & P2)). Regional allowances for load shedding under this condition should be approved. Duration of known outages should be increased from six months to one year; R1.1 Part 1.1.6 Delete "required for Load". Resources may also be used for export to other areas, not just internal load.
No
We completely agree with the revision to R2.1, but this revision must be carried through to other sections (R2.2, 2.2.1) and R2.2 language should be consistent with 2.1 for example - use "current or qualified past studies" instead of "the following annual current study". Revisions made to Requirement R2.1.5 have made it worse than as originally drafted. This would require the PC & TP to study, or in other words perform technical analysis of, the impact and probability of the possible unavailability of any piece of equipment with a lead time of one year or more. Such an evaluation of spare equipment strategies would require significant additional resources and data, but provide no benefit to system reliability, as it is redundant to the existing N-1-1 contingency requirement (P6).
No
These sensitivities need to be considered if not already included in the base case assumptions.
No
We have not determined a need to model dynamic loads, and therefore have not benchmarked any such models. We recommend that prior to this requirement being in place, a modeling standard should exist that is specific to dynamic loads.

Yes
No
Header note (i) in the first Table 1 could imply that voltage-varying load shall not be used to meet steady state performance requirements. NYISO steady state load models include voltage-varying loads. This note should be revised to only reference loads which are disconnected due to voltage.
In Table 1 – Stability, Make language similar to wording in P5. Protection System should be removed and replaced with the words relay failure. This change should be made for 2a through 2d: 2. Local or wide area events affecting the Transmission System such as: a. 3Ø fault on generator with stuck breaker <sup>10</sup> or a relay failure resulting in Delayed Fault Clearing. b. 3Ø fault on Transmission circuit with stuck breaker <sup>10</sup> or a relay failure resulting in Delayed Fault Clearing. c. 3Ø fault on transformer with stuck breaker <sup>10</sup> or a relay failure resulting in Delayed Fault Clearing. d. 3Ø fault on bus section with stuck breaker <sup>10</sup> or a relay failure resulting in Delayed Fault Clearing. In Note 11 change wording as shown below to include the words “a total of”: Excludes circuits that share a common structure (Planning event P7, Extreme event steady state 2a) or common Right-of-Way (Extreme event, steady state 2b) for a total of 1 mile or less
Yes
No
Requirement 8 is an administrative burden to TPs and PCs that adds no value to reliability. PCs should be including TPs, neighboring PCs and interested parties in its planning processes when developing the Planning Assessments. Therefore, the inclusion of a set of VSLs for Requirement 8 is unnecessary. Furthermore, the requirement lacks a specified time frame to receive comments, thereby implying that TPs and PCs would be required to reply to comments forever following the finalization of a Planning Assessment. The NYISO proposes a limit of six months. Should the SDT decide to leave the VSLs for Requirement 8, Requirement 8.1 should be revised to reflect that comments only to the final Assessment (not drafts developed during a process) need a response as follows: If a recipient of the planning assessment final results provides documented comments on the results within 180 calendar days of the issuance of those final results, the respective Planning Coordinator or Transmission Planner shall provide a documented response to such recipient within 90 calendar days of receipt of those comments. We also have other comments not addressed by this Comment Form as follows – Section 2.7, Section 3.3, Section 4.3, and overall: Section 2.7 requires that Corrective Action Plans are included in each Planning Assessment and states “Such actions may include...” followed by a list of actions. Restricting allowable actions, and excluding runback/tripping of HVDC would have a direct impact on multiple existing facilities in New York and would adversely impact the reliability planning of the NYCA. Runback/tripping of HVDC must be added to the list. Section 3.3 - We feel that the last sentence of 3.3.1 should be removed. This is handled by PRC-023. Line ratings are addressed by PRC-023. PRC-023 requires coordination with the Reliability Coordinator. Remove “Tripping of Transmission elements where relay loadability limits are exceeded.” Section 4.3 - High speed reclosing is not defined. Overall – We have previously made comments which have not been addressed in the current version of the proposed standard. Support for the standard can at most be limited without addressing comments. We have previously commented on sensitivity analysis and guidance for base case assumptions. Also, extreme event analysis should not be mandated in this standard as no corrective action is required. The requirements for sensitivity analysis already address issues going beyond what is expected to meet reliability requirements. Requiring extreme event analysis is requiring two layers of event analysis beyond what is required, and there is no

requirement for corrective action if anything is identified. The standard is referring to requirements for sensitivity and other issues without a reference to base assumptions. The standard must describe base assumptions. To define a sensitivity condition, NERC must define base assumptions.

Group

Western Area Power Administration

Brandy A. Dunn

Yes

The whole bullet point section in the Effective Date section referring to Corrective Action Plans could be deleted and instead captured by Requirement R2.7.3. A seven year grace period is probably not favorable to FERC, and a better solution could be developed to meet industry needs. In R2.7.3, a possible example of "beyond the control of the Transmission Planner" could be that the physics of a significant percentage of induction motors in low inertia air-conditioning loads would tend to pull out for certain N-1 events. This may in significant part occur because such motors may have nearly no dynamic stability margin to withstand such N-1 events as close-in 3-phase faults with normal clearing during peak load conditions. So until the Transmission Planner has been able to institute changes in the industry to address the basic physics of such loads, this Requirement 2.7.3 would permit the use of such "Non-Consequential" Load Loss and curtailment of Firm Transmission Service. In this example, it may take longer than a seven year time period to fix the problem. On the other hand, some examples of Non-Consequential Load Loss could perhaps be mitigated in a shorter timeframe. Provided that an entity has a good technical justification and defined margin for "Non-Consequential" Load Loss or curtailment of Firm Transfers, then it may be acceptable. Requirement R2.7.3 seems to move in this direction. Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent "[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models". As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: "Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response".

Yes

Yes, this clarification helps. The drafting team could also define "year five".

No

It's difficult to tell whether Requirement R1 is intended to require only one base case or whether it was intended to require creation of separate models for each possible N-0 condition ("normal system condition") under a variety of stressing scenarios. The inserted language does not seem to provide additional clarity. Suggested language may be "This establishes the initial 'Normal System' condition corresponding to category P0 in Table 1." Also, in Requirement R1.1.5, how are the Firm Transmission Service commitments supposed to be modeled in Power Flow Cases? Are they just to be modeled as loads, generation, and control area interchanges? Suppose a POR or POD is not at a generator or load bus. What selection of generation and load would represent the projected system conditions for this Firm Transmission Service commitment?

No

R 2.1.5: The issue in this Requirement is studied in the Operations next-day; next-week; next-month studies required under the TOP Standards; and are also covered by processes such as the Operational Transfer Capability Policy Committee (OTCPC) seasonal study process within the WECC. It would be quite onerous to run a complete power flow simulation on separate base cases for each transformer (or other equipment with long lead time) initially out of service. The revision in language from "Planning Assessment" to "studies" does not clarify that a power flow simulation is not necessarily required for each situation. A valid assessment could include other methods such as using sound technical reasoning to relate the initial out-of-service condition to a condition that has already been studied. This condition may have taken place in previous operational studies. The language in the standard could be improved to make this clarification – perhaps reference R2.6. Additionally, this Requirement still needs further clarification. Currently the scope of equipment applicable to the requirement could be misinterpreted as larger than that contemplated by FERC. The standard as written seems to say that the responsible entity needs to study the spare equipment strategy for all "major transmission equipment" with long lead times. In the directive to include this requirement, FERC used the term "critical facilities". In the NOPR to Order No. 693 they stated, "Critical facilities are those facilities that impact IROLs and deliverability of generation to firm load" (P1081). In Order No. 693 FERC also said, "if an entity's spare equipment strategy for the permanent loss of a transformer is to use a 'hot spare' or to relocate a transformer from another location in a timely manner, the outage of the transformer need not be assessed under peak system conditions" (P1725). Finally, the drafting team could clarify if this requirement applies to radial branches (such as generator step-ups or step-down to load). Such branches may be construed as "critical facilities" but the impediment to deliverability of generation to firm load is consequential to the initial outage.

Yes

In Requirement 2.1.4, "Sensitivity Analysis". How much change does it take in any of the modeling assumptions (load, generation, voltage support, topology, etc.) to significantly stress the system within a range of credible condition? As this Requirement relates to R2.7, Would it be necessary to have Corrective Action Plan(s) if needed to meet all the Sensitivity Cases? How many Sensitivities before must have Corrective Action Plan? Also – why is it essential to use the qualifier "annual" for "current studies" in Part 2.1? Can a study be considered current if it is conducted less frequently than once per year? Note that Parts 2.3, 2.4 and 2.5 do not use the "annual" qualifier, nor does Requirement R2. Recommend deleting this apparently non-essential qualifier in both R2.1 and R2.2. We are unable to appreciate why the wording in Part 2.3 is not consistent with that in Part 2.1, 2.2, 2.4 or 2.5. Note that the semantics of the wording "... (steady state / stability) analysis shall be assessed annually..." can be interpreted to be much different than the semantics of the Part 2.3 wording "The short circuit analysis... shall be conducted annually ...". The former requires the analysis to be \*assessed\* annually but 2.3 requires the analysis to be \*conducted\* annually without explicitly requiring it be assessed -- is the usage of "conducted" instead of "assessed" consistent with the intent? In Part 2.6.2, the intent is awkwardly conveyed within the phrase "...the System represented in the study shall not include any material changes unless...". In the context of a \*past\* study, how can the System represented possibly include any material changes (that would have presumably occurred after the study)? Suggest modifying Part 2.6.2 to read "For steady state, short circuit or Stability analysis: no material changes have occurred in the System represented in the study or, if material changes have occurred, a technical rationale shall be provided to explain why they do not significantly impact the study results."

Yes



Yes
The drafting team could provide guidance on what is "material". In Part 2.5, should "annually" be inserted after "shall be assessed" to make it consistent with Parts 2.1, 2.2, 2.3 and 2.4? If the omission is intentional in 2.5, please explain why.
Yes
Following is a suggested re-ordering of header notes to replace of the three categories concept – same information: a. Applicable Facility Ratings shall not be exceeded. The System shall remain stable. Cascading and uncontrolled islanding shall not occur. b. Planning event P0 is applicable to steady state only. c. Consequential Load Loss as well as generation loss is acceptable as a consequence of any event except P0. d. The response of voltage sensitive Load including Load that is disconnected from the System by end-user equipment as a consequence of any event shall not be used to meet steady state performance requirements. e. System steady state voltages and post-Contingency voltage deviations shall be within acceptable limits established by the Planning Coordinator and Transmission Planner. f. Transient voltage response shall be within acceptable limits as established by the Planning Coordinator and Transmission Planner. g. Planned System adjustments such as Transmission configuration changes and re-dispatch of generation are allowed if such adjustments are executable within the time duration applicable to the Facility Ratings. h. Simulate the removal of all elements that Protection Systems and other controls are expected to automatically disconnect for each event. Simulate Normal Clearing unless otherwise specified.
In footnotes 9 and 12, two critical issues are being addressed in large part via these "clarifying" footnotes. These are curtailment of "Firm Transmission Service" (which seems primarily to be a contract/scheduling issue) and the loss of "Non-Consequential Load." Perhaps these issues should receive more attention in the actual requirements. In P5 the term "Protection System" was removed and replaced with "relay". How are protection system elements other than relays accounted for? In studying a multiple contingency event with a communication system or control circuitry failure would it be necessary demonstrate P1 performance levels? These details could become critical as industry deals with issues such as FERC's interpretation of TPL-002-0 Requirement R1.3.10 (RM10-6-000). In Table 1 – Extreme Events – Stability – Items 2a-2d, change "Protection System failure" to "relay failure" to be consistent with changes in P5. Table 1, P5 currently requires the study of "[d]elayed Fault Clearing due to the failure of a relay <sup>13</sup> protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay <sup>13</sup> protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". Footnote 13 – Delete "voltage (#27, #59)" since the under/over voltage relays are not called upon to provide the primary protection for fault clearing on Transmission elements. Suggest modifying Event P4 description to be more consistent with Event P5 description by including Delayed Fault Clearing in the description in lieu of "Loss of multiple elements". Suggested Event P4 description is: "Delayed Fault Clearing caused by a stuck non Bus-tie Breaker attempting to clear a fault on one of the following:" In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No12" appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet

this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Yes

Yes

Individual

Darryl Curtis

Oncor Electric Delivery

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Group

IRC Standards Review Committee

Ben Li
Yes
Yes
Yes
Yes
No
The primary concern involves wording under 2.1.4 and 2.4.3 that sensitivities are required by varying one or more conditions. Subsequently, in requirement 2.7.2 corrective action plans need to be developed to resolve performance deficiencies "only" if identified in multiple conditions or require a rationalization why no corrective action plan is necessary. Multiple conditions sensitivities under 2.1.4 and 2.4.3 are necessary to satisfy requirement 2.7.2. Requirement 2.7.2 adds ambiguity and should be removed. Alternatively, Requirement 2.7.2 could be revised as follows: 2.7.2. Corrective Action Plans are not required for performance deficiencies identified in a sensitivity analysis. If a Planning Coordinator includes Corrective Action Plans to resolve performance deficiencies identified in multiple sensitivity analysis, the Planning Coordinator shall provide documentation to support those Plans.
Yes
Yes
However, the requirement infers that a subjective judgment from a compliance auditor will be required.
Yes
Yes
No
(AESO is not a party to the following comments since its VSLs are set by the Alberta regulatory authority.) Requirement 8 is an administrative burden to TPs and PCs that adds no value to reliability. PCs should be including TPs, neighboring PCs and interested parties in its planning processes when developing the Planning Assessments. Therefore, the inclusion of a set of VSLs for Requirement 8 is unnecessary. Should the SDT decide to leave the VSLs for Requirement 8, Requirement 8.1 should be revised to reflect that comments only to the final Assessment (not drafts developed during a process) need a response as follows: 8.1 If a recipient of the planning assessment final results provides documented comments on the results, the respective Planning Coordinator or Transmission Planner shall provide a documented response to such recipient within 90 calendar days of receipt of those comments. For a Planning Coordinator (PC) who distributes the Planning Assessment to many different entities (to adjacent PCs, TPs, and other functional entities), a concern regarding the Requirement R8 VSL is that it is overly restrictive to apply a violation for failing to distribute the results of its Planning Assessment to only one PC, TP, or functional entity (and to apply a High VSL for failing to distribute to more than one entity), particularly since an entity's contact is subject to change over time, and since Measure M8 allows for

publicly posting the results of its Planning Assessment to its website. Should the SDT decide to include the VSLs for Requirement 8, we would recommend revising to use a percentage approach rather than applying a violation to a Planning Coordinator who fails to provide the results of its Planning Assessment to one PC, TP, or other functional entity (or applying a High VSL for failing to distribute to more than one entity.) Recommend applying a similar percentage approach to the VSLs drafted by NERC Staff for Project #2007-23 VSLs (e.g., for FAC-013-1) to be considered for the TPL-001-2 R8 VSLs. For example, • Lower VSL: The responsible entity failed to provide the Planning Assessment final results to 5% or less of the required entities. • Moderate VSL: The responsible entity failed to provide the Planning Assessment final results to more than 5% up to (and including) 10% of the required entities. • High VSL: The responsible entity failed to provide the Planning Assessment final results to more than 10% up to (and including) 15% of the required entities. • Severe VSL: The responsible entity failed to provide the Planning Assessment final results to more than 15% of the required entities OR [the existing language for the Severe VSL]. Explanation: The VSLs were modified for consistency with other standards and VSLs. Reference: Link to VSLs drafted by NERC Staff for Project #2007-23 VSLs (e.g., for FAC-013-1): [http://www.nerc.com/docs/standards/sar/Staff\\_Proposed\\_VSLs\\_2010July27.pdf](http://www.nerc.com/docs/standards/sar/Staff_Proposed_VSLs_2010July27.pdf)

Individual

Jeffrey McKinney

New York State Electric & Gas Corp

Yes

No

The added clarification to the definition of Year One serves to remove most ambiguity with respect to Year One. However, the revision has added further ambiguity to the terms "year two" and "year five" which are not defined. For the Planning Assessment started in a given calendar year, the first year that is studied must include the forecasted peak Load period for one of the following two calendar years. An additional Near-term study must be performed that is four calendar years beyond the first year that is studied. We recommend defining Year Five as the twelve month period 4 to 6 calendar years from the date of the Planning Assessment. We further recommend revising R2.1.1 as follows: "System peak Load for Year One and for Year Five." Alternatively, the definition of Year One could be eliminated and described within the text of the requirements.

No

For R1 Ambiguity regarding base case assumptions, in combination with lack of clarity and clear direction of purpose regarding the sensitivity analysis, undermines the objectives of the standard; R1.1 Part 1.1.2. With respect to known outages, there needs to be greater flexibility in the standards (e.g. more tolerance to non-consequential load shedding or limitations to the contingencies that need to be considered (e.g. P0, P1, & P2)). Regional allowances for load shedding under this condition should be approved. Duration of known outages should be increased from six months to one year; R1.1 Part 1.1.6 Delete "required for Load". Resources may also be used for export to other areas, not just internal load.

No

We completely agree with the revision to R2.1, but this revision must be carried through to other sections (R2.2, 2.2.1) and R2.2 language should be consistent with 2.1 for example - use "current or qualified past studies" instead of "the following annual current study". Revisions made to Requirement R2.1.5 have made it worse than as originally drafted. This would require the PC & TP to study, or in other words perform technical analysis of, the impact and probability of the possible unavailability of any piece of equipment with a lead time of one year or more. Such an evaluation of spare equipment strategies would require

significant additional resources and data, but provide no benefit to system reliability, as it is redundant to the existing N-1-1 contingency requirement (P6).

No

These sensitivities need to be considered if not already included in the base case assumptions.

No

We have not determined a need to model dynamic loads, and therefore have not benchmarked any such models. We recommend that prior to this requirement being in place, a modeling standard should exist that is specific to dynamic loads.

Yes

No

Header note (i) in the first Table 1 could imply that voltage-varying load shall not be used to meet steady state performance requirements. NYISO steady state load models include voltage-varying loads. This note should be revised to only reference loads which are disconnected due to voltage.

In Table 1 – Stability, Make language similar to wording in P5. Protection System should be removed and replaced with the words relay failure. This change should be made for 2a through 2d: 2. Local or wide area events affecting the Transmission System such as: a. 3Ø fault on generator with stuck breaker<sup>10</sup> or a relay failure resulting in Delayed Fault Clearing. b. 3Ø fault on Transmission circuit with stuck breaker<sup>10</sup> or a relay failure resulting in Delayed Fault Clearing. c. 3Ø fault on transformer with stuck breaker<sup>10</sup> or a relay failure resulting in Delayed Fault Clearing. d. 3Ø fault on bus section with stuck breaker<sup>10</sup> or a relay failure resulting in Delayed Fault Clearing. In Note 11 change wording as shown below to include the words “a total of”: Excludes circuits that share a common structure (Planning event P7, Extreme event steady state 2a) or common Right-of-Way (Extreme event, steady state 2b) for a total of 1 mile or less

Yes

No

Requirement 8 is an administrative burden to TPs and PCs that adds no value to reliability. PCs should be including TPs, neighboring PCs and interested parties in its planning processes when developing the Planning Assessments. Therefore, the inclusion of a set of VSLs for Requirement 8 is unnecessary. Furthermore, the requirement lacks a specified time frame to receive comments, thereby implying that TPs and PCs would be required to reply to comments forever following the finalization of a Planning Assessment. The NYISO proposes a limit of six months. Should the SDT decide to leave the VSLs for Requirement 8, Requirement 8.1 should be revised to reflect that comments only to the final Assessment (not drafts developed during a process) need a response as follows: If a recipient of the planning assessment final results provides documented comments on the results within 180 calendar days of the issuance of those final results, the respective Planning Coordinator or Transmission Planner shall provide a documented response to such recipient within 90 calendar days of receipt of those comments. We also have other comments not addressed by this Comment Form as follows – Section 2.7, Section 3.3, Section 4.3, and overall: Section 2.7 requires that Corrective Action Plans are included in each Planning Assessment and states “Such actions may include...” followed by a list of actions. Restricting allowable actions, and excluding runback/tripping of HVDC would have a direct impact on multiple existing facilities in New York and would adversely impact the reliability planning of the NYCA. Runback/tripping of HVDC must be added to the list. Section 3.3 - We feel that the last sentence of 3.3.1 should be removed. This is handled by PRC-023. Line ratings are

addressed by PRC-023. PRC-023 requires coordination with the Reliability Coordinator. Remove "Tripping of Transmission elements where relay loadability limits are exceeded." Section 4.3 - High speed reclosing is not defined. Overall - We have previously made comments which have not been addressed in the current version of the proposed standard. Support for the standard can at most be limited without addressing comments. We have previously commented on sensitivity analysis and guidance for base case assumptions. Also, extreme event analysis should not be mandated in this standard as no corrective action is required. The requirements for sensitivity analysis already address issues going beyond what is expected to meet reliability requirements. Requiring extreme event analysis is requiring two layers of event analysis beyond what is required, and there is no requirement for corrective action if anything is identified. The standard is referring to requirements for sensitivity and other issues without a reference to base assumptions. The standard must describe base assumptions. To define a sensitivity condition, NERC must define base assumptions.

Individual

Bart White

Progress Energy

Yes

Yes

Yes

No

While PE does not disagree with the basic premise of 2.1, PE disagrees with the language to the extent that 2.1 is qualified by language in 2.6 and 2.6.2. The issue of managing modeling of case data is already adequately handled in MOD Standards. Furthermore, PE does not feel that the term "material" can be defined with any mutually agreed-upon boundaries, and could be construed to require any and all Transmission Planners and/or Planning Authorities to make multiple revisions of base cases each year. PE therefore appeals to the SDT to remove the language referring to R2 Part 2.6.2 and furthermore appeals for the deletion of R2.6.2. Furthermore, PE appeals to the SDT to modify R2.6.1 to say "For steady state, short circuit, or Stability analysis: the study shall be five calendar years old or less, unless a technical rationale can be provided to demonstrate the validity of the results of any studies older than five years or any studies using cases containing major modeling differences from other submitted studies."

No

PE does not have concerns in general with either 2.1.4 or 2.4.3. PE does, however, disagree with the wording at the end of the main paragraph of 2.4.3. Whether or not analysis qualifies as sensitivity analysis should not be predicated upon the end results; rather, it should be based upon major case modeling differences. PE therefore recommends that the phrase "...that demonstrate a measurable change in performance" be removed so that the last sentence in the main paragraph read "...by a sufficient amount to stress the System within a range of credible conditions."

Yes

No

PE agrees in general with the changes made to R2.5. PE disagrees, however, with the language stipulating that current and past studies be qualified by the language in R2.6 Part

2.6.2 (see notes for Question 3.1 regarding recommending changes with regard to R2.6.2).

Yes

PE assumes the term "header notes" is referring to the "Planning Performance Events" at the top of Table 1. If this is the case, PE has no concerns with the present language.

PE remains concerned with the present draft of TPL-001-2 regarding the presence or absence of footnotes in particular events. PE believes that, for all events in Table 1 except P0, any "No" designation in the "Non-Consequential Load Loss allowed" column should have Footnote 12 appended to it. Several events do append footnote 12 to a "No" answer, but several do not. PE does not see why certain events should be denied the use of Footnote 12 as long as Footnote 12 is worded in a manner such that the BES will not be adversely affected. PE has additional concerns regarding two Footnotes. Footnote 9 contains language regarding firm transmission service that is very similar to language presently under review in NERC Project 2010-11. PE feels that Footnote 9 should have had a statement at the end similar to that of Footnote 12, such as "Note: Firm Transmission Service is being decided in Project 2010-11. When that project is finalized, the resolution will be copied into Footnote 9." Without such a statement, PE cannot understand why the Firm Transmission language in footnote (b) under Project 2010-11 is being reviewed, while it is apparently no longer being reviewed in Project 2006-02. Footnote 12 contains the following language as a place holder: "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here." PE has filed substantial comments on the footnote (b) issue in previous drafts, pointing out that disallowance of curtailment of non-consequential load is a local load issue and not a BES concern. PE therefore cannot make any positive determination as to whether the draft Standard, TPL-001-2, and its associated Table 1, will be a viable Standard until the language in Footnote 12 is resolved via Project 2010-11. Given the potential for unresolved and confusing issues regarding the parallel development of Project 2006-02 and 2010-11, PE encourages NERC to resolve all issues within Project 2010-11 before taking the draft Standard TPL-001-2 to ballot in Project 2006-02.

Yes

Yes

Group

Bonneville Power Administration

Denise Koehn

Yes

Yes

No

Please clarify R1.1.2 to state "Known outage(s) of generation or Transmission Facility(ies) during the Planning Horizon with a duration of of at least six months."

Yes

Yes

Yes

Yes
It should be noted that if there is more generation proposed in an area than there load and export capability, all proposed material generation additions would not be represented. Determining what future generation additions to include in the Long-Term Transmission Planning Horizon may be based on a non-technical rationale rather than a technical rationale.
Yes
Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a relay <sup>13</sup> protecting the Faulted element to operate as designed”. As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: “Single failure of a protection relay <sup>13</sup> protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following”. In Table 1, P2 and P3, the last column “Non-Consequential Load Loss Allowed” where the requirement “No <sup>12</sup> ” appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore the proposed footnote 12 should include a provision to default to the existing footnote “b” in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, “Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers.”
Individual
L Zotter, M Morais, J Billo, J Conto, S Jue, JC Culberson, J Teixeira, G Gnanam, S Myers
ERCOT ISO
Yes
Yes
Yes
No
Previous Comment unaddressed: Requirement 2.1.5: Including the spare equipment strategy will be difficult for a PC that doesn’t own or manage the transmission equipment or the strategies. This requirement should only be applicable to TP. Furthermore, R7 should be deleted and the responsibilities of each entity should be explicitly stated within the specific requirements.
No
The stress test requirements should be deleted. The purpose of this proposed Standard is to establish planning performance standards that support reliable operation. This is



achieved by imposing performance requirements relative to specific conditions and contingencies. Compliance with the performance metrics within these boundaries is presumably indicative of a reliable system. It is unclear what value is added by stress testing the system in accordance with undefined, vague parameters, as required by Requirements 2.1.4 and 2.4.3. The criteria in the relevant requirements that govern the stress testing are defined by the following ambiguous phrase: 1) "by a sufficient amount"; 2) "range of credible conditions"; and 3) "measurable change of performance". Application of these criteria introduces uncertainty for both the regulated community and the relevant compliance enforcement authorities, which, in turn, creates audit risks for regulated entities. Furthermore, there is no reliability value because the stress test requirements do not establish objective criteria and do not prescribe any actions based on the stress test results. Reliability Standards should set specific obligations that are readily discernible and achievable on a consistent basis. The existing Standard does this by setting specific performance obligations relative to specific conditions and contingencies. Conversely, the stress test requirements introduce ambiguity and uncertainty with no reliability benefit; the only apparent effect is unnecessary audit liability risk for regulated entities. Accordingly, ERCOT believes that these requirements should be deleted.

No

ERCOT ISO suggests adding "best available" as a descriptor to load models. Distribution Providers (DPs)/Load Serving Entities (LSEs) are the appropriate NERC functional entities to provide dynamic load data. Accordingly, Planning Coordinators (PCs) and Transmission Planners (TPs) must rely on those entities for that data. Despite reliance on DPs/LSEs for this data, the Standard proposes to impose an obligation on PCs and TPs to include a load model representative of "expected" dynamic behavior. Simply put, PCs and TPs do not have this information and should not be subject to compliance liability risk for an issue that is beyond their control. This change will still accomplish the goal of reflecting dynamic data in the relevant models, while mitigating PC/TP compliance risk by basing their compliance on information that is within their control – i.e. the "best available" information. Based on this change, the language should read - "System peak Load levels shall include best available Load models which represent the expected dynamic behavior of Loads that could impact the study area, considering the behavior of induction motor Loads". This language is also a more accurate reflection of the Consideration of Comments by the Standard Drafting Team after the March 2010 comment period. To address this issue in the most appropriate manner, the Standard should be revised to establish an appropriate process for collection, reporting and use of dynamic data based on assigning obligations to the appropriate functional entities. In essence, DPs/LSEs should be required to collect the data and report it to TPs. Because TP models are the basis for PC models, the dynamic data will be included in PC models as part of the process. However, DPs and TPs should still only be required to use the "best available" data. Continued use of this language will mitigate the liability risk associated with a requirement related to data that is within the control of a third party. Even under a construct where DPs/LSEs are required to collect and report dynamic data, there is no guarantee they will do so and PCs/TPs should not be held accountable in those circumstances. Accordingly, PC/TP compliance risk will be mitigated by use of a "best available" standard.

Yes

Yes

Yes

Yes

ADDITIONAL COMMENTS: Short circuit analysis (R2.3 and R2.8) should only be applicable to TPs. Fault duty issues are typically local in nature and it would be an overlap for PCs to perform this same analysis done by the local Transmission Planner. Furthermore, R7 should be deleted and the responsibilities of each entity should be explicitly stated within the specific requirements. Previous Comment Unaddressed : Requirement 2.6.2: Reads as if a change is being made to an existing study. It is confusing. Possibly restate: "2.6.2 For steady state, short circuit, or stability analysis: previous studies can be used only if a material change to the system has not occurred or if a change that did occur does not impact the study area." R4.1.2 – Planning Coordinators do not perform protection coordination nor do they have access to the relay settings information required to do this analysis. This requirement should apply to Transmission Planners only because they perform system protection. The substantive scope of the standard is relative to Long-Term Transmission Planning Horizon and Near-Term Transmission Planning Horizon. The Purpose section is described in terms of the “planning horizon” generally. It may be worthwhile aligning the two to mitigate the potential for any confusion. ERCOT proposes the following revisions to the Purpose section: 3.Purpose: Establish Transmission system planning performance requirements within the relevant planning horizon (i.e. Long-Term or Near-Term) to develop a Bulk Electric System (BES) that will operate reliably over a broad spectrum of System conditions and following a wide range of probable Contingencies. In addition, the “Time Horizon” for the Standard is “Long-Term Planning”. Obviously, this necessarily encompasses both Long-Term and Near-Term Transmission Planning Horizons. However, the scope of the Long-Term Planning time horizon is not readily apparent. ERCOT recommends appropriate revisions that clearly define the applicable time horizons.

Individual

Gary Trent

Tucson Electric Power Company

Yes

We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We have included additional comments here since we were not able to find a place to include comments on the following: Requirement R4; Requirement, Parts 2.1.5, 2.3, and 2.8; Requirement 3, Part 3.3.2; and Requirement 4, Parts 4.3.1 and Part 4.3.2 Requirement 2, Part 2.1.5: The spare equipment strategy does not improve reliability performance. If an outage of a long lead time piece of equipment occurs, the system should still be able to operate in a reliable manner that meets the performance measures of Categories P3 and P6. If an entity cannot meet its performance requirements under this standard, a capital project is indicated. Spare equipment being available would not mitigate this need it only increases expenses until the item is needed. Requirement 2, Parts 2.3 and 2.8: Short circuit fault duty is a localized phenomena that is mainly impacted by the addition of new generation or transmission facilities. Due to proprietary concerns of generation and transmission interconnection requests, short circuit studies are performed in forums outside the annual Planning Assessment. Normally, these studies will be conducted before the projects can be included in regional base cases. As such, short circuit analysis should not be included in this Standard since it would provided limited benefit. Requirement 3, Part 3.3.2 and Requirement 4, Part 4.3.2 Steady state response of dynamic control devices should also be included in the Part 3.3.2. and the list of possible devices included should be removed from Part 3.3.2 and 4.3.2. Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual

relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: "Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response".

No

A seasonal reference should be included in the example. Alternative language beginning with the second sentence: For the Planning Assessment started in a given calendar year, Year One must include the forecasted peak load period for the forecasted peak load season that is between 12 and 24 months into the future from the current season. For example, if a Planning Assessment was started in 2011 prior to the forecasted peak season, then Year One must include the forecasted peak load for 2012. If the Planning Assessment was started in 2011 during or after the forecasted peak season, then Year One must include the forecasted peak load for 2013.

No

Proposed changes 1.1.1 Existing Facilities that will not be changed before the study year 1.1.3 New planned Facilities and planned changes to existing facilities

Yes

No

TEP agrees with removing the phrase "not already included in the studies." However, TEP does not understand the purpose of sensitivity studies. TEP is concerned that imposing additional sensitivity studies could lead to requirements that exceed the proposed standards. TEP recommends removing sensitivity analysis from the standard.

Yes

No

If a material change (generator addition/retirement, new generator models based on unit testing, or transmission line or non-distribution transformer addition) is not planned for the longer-term planning horizon, do the longer-term stability studies need to be performed? TEP's agreement/disagreement with Part 2.4.1 is dependent on the response to this question. If the answer is the studies do not need to be performed, then TEP supports these changes.

Yes

Table 1, P5 currently requires the study of "[d]elayed Fault Clearing due to the failure of a relay13 protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay13 protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No12" appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is

clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue). Non-Consequential Load Loss and curtailment of Firm Transmission Service should be allowed for loss of EHV BES elements for Category P4 and P5 events.

Yes

Yes

Individual

Gregory Campoli

New York Independent System Operator

Yes

No

The added clarification to the definition of Year One serves to remove most ambiguity with respect to Year One. However, the revision has added further ambiguity to the terms "year two" and "year five" which are not defined. NYISO recommends defining Year Five as the twelve month period 4 to 6 calendar years from the date of the Planning Assessment. NYISO further recommends revising R2.1.1 as follows: "System peak Load for Year One and for Year Five." Alternatively, the definition of Year One could be eliminated and described within the text of the requirements.

Yes

No

NYISO completely agrees with the revision to R2.1, but this revision must be carried through to other sections (R2.2, 2.2.1). Revisions made to Requirement R2.1.5 have made it worse than as originally drafted. This would require the PC & TP to study, or in other words perform technical analysis of, the impact and probability of the possible unavailability of any piece of equipment with a lead time of one year or more. Such an evaluation of spare equipment strategies would require significant additional resources and data, but provide no benefit to system reliability, as it is redundant to the existing N-1-1 contingency requirement (P6). R2.7 requires that Corrective Action Plans are included in each Planning Assessment and states "Such actions may include..." followed by a list of actions. Restricting

allowable actions, and excluding runback/tripping of HVDC would have a direct impact on multiple existing facilities in New York and would adversely impact the reliability planning of the NYCA. Runback/tripping of HVDC must be added to the list.

No

Our concern involves wording under 2.1.4 and 2.4.3 that sensitivities are required varying one or more conditions. Subsequently, in requirement 2.7.2 corrective action plans need to be developed to resolve performance deficiencies "only" if identified in multiple conditions or require a rationalization why no corrective action plan is necessary. Multiple conditions sensitivities under 2.1.4 and 2.4.3 are necessary to satisfy requirement 2.7.2. Requirement 2.7.2 adds ambiguity and should be removed. Requirement 2.7.2 should be revised as follows: 2.7.2. Corrective Action Plans are not required for performance deficiencies identified in a sensitivity analysis.

No

The NYISO, along with many other systems, has not determined a need to model dynamic loads, and therefore has not benchmarked any such models. The NYISO recommends that prior to this requirement being in place, a modeling standard should exist that is specific to dynamic loads.

Yes

No

Header note (i) in the first Table 1 could imply that voltage-varying load shall not be used to meet steady state performance requirements. NYISO steady state load models include voltage-varying loads. This note should be revised to only reference loads which are disconnected due to voltage.

There are two tables labeled "Table 1". The extreme events table should be renamed "Table 2".

Yes

No

Requirement 8 is an administrative burden to TPs and PCs that adds no value to reliability. PCs should be including TPs, neighboring PCs and interested parties in its planning processes when developing the Planning Assessments. Therefore, the inclusion of a set of VSLs for Requirement 8 is unnecessary. Furthermore, the requirement lacks a specified time frame to receive comments, thereby implying that TPs and PCs would be required to reply to comments forever following the finalization of a Planning Assessment. The NYISO proposes a limit of six months. Should the SDT decide to leave the VSLs for Requirement 8, Requirement 8.1 should be revised to reflect that comments only to the final Assessment (not drafts developed during a process) need a response as follows: If a recipient of the planning assessment final results provides documented comments on the results within 180 calendar days of the issuance of those final results, the respective Planning Coordinator or Transmission Planner shall provide a documented response to such recipient within 90 calendar days of receipt of those comments.

Group

PacifiCorp

Sandra Shaffer

Yes

Yes

Yes
Yes
Yes
Yes
Yes
Yes
Under Category P2 (Single Contingency) and Normal System Conditions, the performance table indicates that, for both HV and EHV, interruption of firm transmission service and non-consequential load loss are not allowed following the opening of a line section without a fault. This section of the performance table should distinguish between EHV and HV – performance requirements following the opening of a line section without a fault should be the same as those for a bus section fault. As with the bus section fault, interruption of firm transmission service and non-consequential load loss should be allowed for HV.
Yes
No
The language for Requirement R8 is ambiguous with regard to which adjacent entities must request in writing the results of the Planning Assessment. The language should be clarified to read: "Upon request made in writing, each Planning Coordinator and Transmission Planner shall distribute its Planning Assessment results to adjacent Planning Coordinators, adjacent Transmission Planners, and any other functional entity that has a reliability related need." The Requirement R8 VSL language should also be revised accordingly.
Individual
Claudiu Cadar
GDS Associates, Inc.
No
We disagree with the Implementation Plan and we suggest changes as follows: - The title should read "Implementation Plan for TPL-001-2" - With regards to the Prerequisite Approvals, NERC project #2010-11 still in progress (Table 1, Footnote 'b') must be implemented before this current TPL-001-2 standard gets implemented. However, while the 2010-11 NERC project does not define any of the new terms such as consequential / non-consequential load, the footnote 'b' cannot be just copied into the new standard (see TPL-001-2 standard Table 1, note 12). Note 'b' may further change to reflect the verbiage in the TPL-001-2 standard. - Not sure what is the intent of the last paragraph. While the proposed changes to Table 1, footnote 'b' are quite precise, are we still open a door to those entities that will continue to trip Non-Consequential Load and curtail Firm Transmission Service? If no penalties for such practices while the proposed standard allows a sufficient time frame to correct any deficiencies, then what is the point to all the effort behind the development of a new TPL standard?
No
The definition it seem both incomplete and exhaustive: - If taken out of the planning

assessment context, the definition is missing the matter that is supposed to identify. We suggest changing the first sentence such as "The first twelve month period to which the functional entity is responsible for the assessment of Transmission System Planning performance." - While it will be a burdensome task to define each year that follows Year One, the definition of Year One may include a sentence that define the rule for the following years such as "All of the twelve months period following Year One shall commence immediately after the end of the preceding twelve months period." - The definition should not include examples.

No

The Time Horizon should be for both Near-Term and Long-Term Planning.

Yes

No

The requirements are extremely burdensome. We recommend changing the last sentence of 2.1.4 requirement by removing "by a sufficient amount to stress the System within a range of credible conditions that demonstrate a measurable change in performance:" because there are instances where listed conditions may not result in measurable changes in performance (Ex. An increase in load in a well built system may not cause any measurable changes in performance because there is sufficient transmission capacity to serve the load).

No

We disagree with the content of this requirement based on several facts: - We believe that the dynamic behavior of the load cannot be accurately estimated beyond current time. We are concern about the effort required to ascertain the dynamic response of the load - The requirement references "Loads that could impact the study area" without specifying how an entity will identify these loads. Perhaps the standard should provide guidelines to determine which loads would impact the study area.

No

We are not sure what will be included in these "material generation additions or changes". Perhaps the standard should provide guidelines to determine what are these material changes or additions?

Yes

Individual

Terry Harbour

MidAmerican Energy

Yes

Yes

No

There are concerns over the FERC outstanding March order on TPL and how FERC interprets "normal" or base case conditions and "assuming" an entities primary protection system is out of service and must rely on its backup protection system to operate. This concept combined with the new tables cannot be perpetuated.

Yes
Yes
R2.1.4 bullet #7 – Replace the adjective “planned” with “known” for consistency with R1.1.2 and R2.1.3. R2.3 Replace “conducted” with “assess” for consistency with R1.1.2 and R2.1.3. R2.4 Replace “current or past studies as qualified” with “current or qualified past studies as indicated” for consistency with R2
No
MidAmerican questions if the widespread use of composite load models really provides significant benefits to additional dynamic analyses over generic load conversion assumptions which have been historically used. The use of composite load models may result in more precise individual load models, but no more accurate dynamic simulations. This poorly worded requirement should be deleted in its entirety as providing additional burden without any additional reliability benefits. If the composite load model requirement must be kept, it should be modified to include the following bolded text: “...System peak Load levels shall include a Load model which represents the expected dynamic behavior of Loads that could impact the study area, considering the behavior of induction motor Loads, but without requiring a detailed load survey be conducted...”
Yes
No
The reference to BES should be placed back into Note a in the header above table 1.
Voting "no" - Footnote 6 – Further clarify the applicable shunt devices in Footnote 6 with this suggested text: 6. Requirements which are applicable to shunt devices, also apply to FACTS devices that are connected to ground, but not instrument voltage transformers or surge arresters
No
Revise measures to be consistent with requirements. 1. R6 Delete “any”. The use of the word any in standards should not be allowed. 2. Revise the Planning Assessment definition to more explicitly apply to the BES and the TPL-001 requirements. We suggest text of: “Planning Assessment: Documented evaluation of future Transmission System performance and Corrective Action Plans to remedy identified deficiencies in the BES from the steady state and stability performance requirements set forth in the TPL-001 standard.” 3. R2.1.5 – We propose replacing the term ‘major Transmission’ with “BES” because BES is a well defined term, while the term, ‘major Transmission’, is not. 4. Add R2.3.1 – We suggest the addition of a R2.3.1 requirement to emulate the distinction between the requirement to perform a short circuit assessment and conduct required studies or analysis to support the assessment (e.g. R2.1/R2.1.1 and R2.2/R2.2.1). We propose wording such as, “Perform an analysis for at least one year in the Near Term Transmission Planning Horizon.” This requirement would set an expectation that an analysis should be conducted to at least one or more years in the near-term planning horizon, rather than imply that an analysis of all five years in the near-term planning horizon must be conducted. 5. R2.7.2 – Delete 2.7.2. With regard to “include actions to resolve performance deficiencies identified in multiple sensitivity studies”, mitigation plans should not be required for deficiencies found in multiple sensitivity studies because the conditions in some sensitivity studies are more extreme and less likely than base case conditions. Some of the sensitivity study conditions are not credible. 6. R2.7.4 – We suggest that the wording of R2.7.4 be the same as R.2.8.2. 7. R3.5 - We interpret that R3.5 requires the TP and PC to conduct an evaluation of possible actions to reduce the likelihood or impact of extreme events, which produce the more severe impacts, if cascading outages may occur. Does the drafting team intend for



the TP and PC to fulfill this requirement for at least one event in each of the five categories (i.e. 3 steady state and 2 stability) or in each of the 21 categories/sub-categories (i.e. 14 steady state and 7 stability). Also, if the resulting cascading outages do not result in any overloads, under-voltages, voltage collapse, or loss of generator synchronization, then should the evaluation of possible actions to reduce likelihood or impact be required? 8. R4.1.1 – We suggest that there should be some qualification of which generating units are referred to in this requirement. We propose that the requirement say, “No generating unit with a Point of Interconnection connected to the BES shall pull out of synchronism.” For example, some utilities include smaller generation units that are connected at voltages below 100 kV and even down to distribution voltage in their base cases. 9. R4.1.2 – We propose that the wording of this requirement be revised to reflect the same BES qualification of the generating unit that we noted in R4.1.1 above. 10. R4.3.1 – This requirement refers to high speed reclosing and we presume that this is special high speed reclosing that is completed in several cycles, rather than the normal high speed reclosing that is completed in a number of seconds. We recommend that the term high speed reclosing be more clearly defined for this sub-requirement. 11. R.4.3.2 – We suggest qualifying which generating units to consider and which voltage limits to simulate with revised wording like, “Trip generating units that are connected to the BES when actual or assumed minimum generator transient voltage limits are known and simulations show voltages may fall below the voltage limit. If assumed voltage limits are used, then they should be included in the assessment”. The requirement should not apply to all relevant generating units until one of the MOD standards requires all Generator Owners to provide their minimum generating unit voltage limits to the TP and PC. If the wording of R4.3.2 must be different from its counterpart, R3.3.2, then please explain the reasons for any differences. 12. R5 – This requirement should allow the applicable entity (such as the TOP / TO) to define a “Post-Contingency Voltage Deviation” as this criteria is not used widely enough in the industry to be a well established criteria. 13. Revise R8 to limit the need to provide the Planning Assessment as follows “adjacent Planning Coordinators and adjacent Transmission Planners and to any registered functional entity...” 14. Data Retention for R3, R5, R6, & R7 - The MRO NSRS proposes that the wording in these elements be revised to change “All” to “The”. The word “All” is unnecessary and could encourage over-the-top compliance monitoring and enforcement. The revised data retention would read as follows: “The studies performed in support....”

Yes

Individual

Catherine Koch

Puget Sound Energy

Yes

We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate

dynamics model files that would add little or no benefit. Please change this bullet to read: "Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response".

Yes

Yes

Yes

Yes

Yes

Yes

Table 1, P5 currently requires the study of "[d]elayed Fault Clearing due to the failure of a relay13 protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay13 protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No12" appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Individual

Joe Tarantino

Sacramento Municipal Utility District
Yes
We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: “Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response”.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a relay <sup>13</sup> protecting the Faulted element to operate as designed”. As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: “Single failure of a protection relay <sup>13</sup> protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following”. In Table 1, P2 and P3, the last column “Non-Consequential Load Loss Allowed” where the requirement “No <sup>12</sup> ” appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote “b”. This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the

proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Individual

Patrick Farrell

Southern California Edison Company

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

SCE supports the revised performance table.

Yes

Yes

Individual

John Mayhan

Omaha Public Power District

Why is Footnote 12 used for some occurrences of the word "No" in the last column of Table 1 but not other occurrences of the word "No"?

## Consideration of Comments on Reliability Coordination (Project 2006-06)

The Reliability Coordination Standard Drafting Team thanks all commenters who submitted comments on the proposed revisions to the standards for Project 2006-06 — Reliability Coordination. These standards were posted for a 45-day public comment period from January 4, 2010 through February 18, 2010. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 42 sets of comments, including comments from more than 150 different people from over 50 companies representing all of the 10 Industry Segments as shown in the table on the following pages.

[http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)

### Summary Consideration:

Stakeholders had three general concerns with the definition of Interpersonal Communications.

- 1) The definition of Interpersonal Communication to be ambiguous in terms of distinguishing between verbal communications and data transfers; The SDT believes that Webster's definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange.

The RCSDT believes that data communication is covered under IRO-010, R3 which states:

Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)

- 2) The definition should also clarify that the communication is between individuals in different entities or physical locations; The SDT believes that the revised Requirements of COM-001-2 satisfy this concern.

- 3) Use of the term "method" may imply a communication style; The RCSDT changed "method" to "medium" in definition.

Several stakeholders indicated that a definition of Alternative Interpersonal Communications was not needed. The RCSDT disagrees because there is an important part of the definition of "Alternative Interpersonal Communications" that distinguishes it from simply being an alternative "Interpersonal Communications". The proposed definition contains the words: "which does not utilize the same infrastructure (medium)". Also, some stakeholders had concerns with the usage of "normal". The RCSDT does not propose defining "Normal" Interpersonal Communications and has removed it from the definition. Based on the consensus of stakeholders, we have revised the two definitions to:

**Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.**

**Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.**

**Stakeholders pointed out that COM-001, R1 was a compound requirement and suggested creating separate requirements. Stakeholders also suggested revising the VRF to "Medium" as it does not meet the guidelines for a "High" VRF. The intent of R1 was three-fold.**

- 1 Identify (have) an Alternative Interpersonal Communication capability**
- 2 Test that capability periodically and**
- 3 If the test failed, fix it or identify another Alternative Communications Capability.**

**Based on comments received, we have revised R1 (now R9) to eliminate the compound requirement and therefore created more specific requirements to delineate Interpersonal and Alternative Interpersonal Communication, and applicable entity responsibility. The VRF is changed to "Medium."**

**The RCSDT also made extensive revisions to COM-001 to provide explicit Interpersonal Communications and Alternative Interpersonal Communications capabilities based on the relationships between various entities. The RCSDT believes that the proposed requirements meet the reliability objectives of the standard as well as the FERC Order 693 directives.**

**The comments received regarding the definition of Reliability Directive (for COM-002 and IRO-001) ranged from the being "too open-ended" (PPL) to not "flexible" enough (Public Service Enterprise Group Companies). The SDT expected and viewed these as attempting to reach middle ground.**

**There were also value added comments such as removing the unnecessary and redundant terms "actual or expected" from the definition, which the SDT agrees with. The definition was revised to:**

**A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency.**

**A number of commenter's expressed a concern about the definition not including three-part communication, clearly identifying a Reliability Directive at the time of issue, and applying to verbal communications. The SDT believes responsibilities should not be imbedded in a definition and, as drafted, the requirements of COM-002 with the proposed definition of Reliability Directive fully address the identification and verbal concerns.**

**The bulk of the comments received on COM-002 regarded the VSL for R3. The SDT agreed with suggestions for the VSLs and has deleted the Severe VSL and moved the High VSL to Severe. We believe that there are two possible actions within the requirement and failure to perform either warrants a Severe VSL.**

**Several commenter's expressed concern about three-part communication. The SDT believes that the requirements as drafted, with the issue, repeat back, and acknowledgement of a Reliability Directive, three-part communication is covered.**

There was one commenter suggesting the addition of the DP to the applicability. The RCSDT notes that, per the Functional Model, a DP may “direct” an LSE to communicate requests for voluntary load curtailment and not reliability situations: Item 9 on page 47 of version 5 of the Functional Model: “Directs Load-Serving Entities to communicate requests for voluntary load curtailment.” Furthermore, The RCSDT will forward this comment to the FMWG for their consideration in revising the language.

The comments regarding the use of Reliability Directive in IRO-001 ranged from small entities being excluded to whether regulatory or statutory requirements covers NERC standards. The SDT addressed these by noting registration is not in the SDT scope and NERC’s general council should be contacted for regulatory issues.

A few commenter’s expressed concern with the VSL for R2 and one suggested the words “per Requirement 2,” should be added. The SDT believes the phrase “per Requirement 2” is not necessary as a VSL is only applied AFTER a compliance violation is determined.

Value added comments such as a concern of the use of the word “threat” as it can be defined as cyber-related and suggested replacing “Operating Personnel” with “System Operator” were also made. The SDT concurred and removed the word “threat” and replaced it with “condition” and also made the revision to System Operator.

There were numerous comments regarding the definition of Reliability Directive with multiple wording suggestions. While slightly out of scope for question six, the SDT expected and viewed these as attempting to reach middle ground.

Some commenter’s expressed concern over clarify that the RC has three separate actions. The RC can act, direct others to act, or issue Reliability Directives. The SDT modified R1 to read: “Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts”

Note: Based on discussions with FERC Staff, the SDT agreed to make the following changes:

IRO-001-2 Requirements R4, R5 and associated Measures and VSLs are moved to IRO-005-4

IRO-001-2 Requirements R6, R7 and associated Measures and VSLs are moved to IRO-002-2

Several commenters made suggestions regarding IRO-014, R2. The original requirement was designed to accomplish in one requirement what is proposed by the commenters as three procedural requirements. R2 is worded to focus on defining what a “compliant plan” is. In the current requirement a “proposed plan” is not the same as a “compliant plan”.

The SDT viewed what the commenters are suggesting as follows:

- The initiating RC would submit its “proposed plan” to the other RCs
- The receiving RCs would provide the initiating RC with their responses indicating whether or not they agree with the proposed roles/actions offered by the initiating RC



- If one or more RCs do not agree with the roles/actions, then the initiating RC would be required to offer an alternative proposal (and go back to the first bullet)
- When all RCs acknowledge that the proposed roles/actions in the revised "proposed plan" are acceptable, then and only then would the "proposed plan" become a "compliant plan"

A closer reading of the current R2 would show the current R2 accomplishes the exact same result but does so without interjecting the need for documenting the intervening processes. The SDT does not see the need to document why each proposal was or was not accepted; nor does the SDT see the need to document the negotiations that are involved in getting to "an agreed to plan". For example the comments' subrequirement to show the RC submitted its plan would require a paper trail for the request; followed by a paper trail for the responses, followed by more paperwork if the RCs are not in agreement. In the end, the only action that matters (in both the SDT version and in the commenters alternative version) is a plan that works, and a plan that if others are involved must have their concurrence that those others will participate.

R2 does not impose a requirement to get agreements; what R2 does is to require that a "compliant plan" be developed. A proposed plan does not solve problems. That proposed plan is NOT compliant with R2 if it only assumes that other RC will effect the actions in the proposal; neither is it compliant if the proposed actions are not acceptable to the other RCs who are required to act. To be compliant the initiating RC must either have the concurrence (i.e. agreement) of the other RCs for their respective part(s) in the proposed plans OR the plan must not include those RCs.

R2 says to be compliant the other RC must agree with the "proposed plan" before that "proposed plan" is acceptable as a "compliant plan". Having a plan that requires someone else to do an action, but that other entity will not effect that action, will not resolve the problem at hand. Further having documentation that someone refuses to participate in the proposed plan does nothing to solve the problem at hand.

In general, the RC SDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with the applicable parts of the directives in FERC Order 693. The work of the RC SDT along with the OCPD SDT and the RTO SDT, as currently recognized, will cover the original intent of COM-002 and still provide a "defense in depth strategy" as suggested by commenters. Consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RC SDT have developed for COM-002. This will further the efforts of the OCPD SDT in achieving stakeholder consensus for their proposed requirements in COM-003. The intent of this DT is to preserve a method for RCs, BAs and TOPs to make the determination of "what actions are required" and clearly communicate the importance to the receiver at a heightened method to normal day-to-day operational communications. The trigger of "Reliability Directive" by the issuer highlights these actions as needed to maintain BES reliability and shall be carried out as directed (unless such actions would violate safety, equipment, regulatory or statutory requirement per the language of the requirement) and all parties to the conversation need to be very cognizant of the system conditions that are requiring actions. The DT has attempted to craft clear and specific language that support BES reliability and hopes that this work can

support and enhance the development of the OPCP SDT. The RCSDT has also attempted to eliminate redundancy and ambiguity while not creating any reliability gaps. Several comments were received on the RC's ability to "act". The RC must "act" (ie. do something, "to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts". This may include analysis, coordination of cooperative actions or the issuance of "Reliability Directives". "Act" does not imply solely the manipulation of BES elements.

RC control of "analysis tools" is critical to maintaining the wide area view. Control by the RC over the tools is imperative and beyond administrative, since it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication are a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES. Failure of the RC to control outages of analysis tools was mentioned as a contributing factor in the 2003 blackout.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at [gerry.adamski@nerc.net](mailto:gerry.adamski@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

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<sup>1</sup> The appeals process is in the Reliability Standards Development Procedures: <http://www.nerc.com/standards/newstandardsprocess.html>.

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**Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06**

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

		Commenter	Organization	Industry Segment											
				1	2	3	4	5	6	7	8	9	10		
1.	Group	Guy Zito	Northeast Power Coordinating Council												X
		Additional Member	Additional Organization	Region					Segment Selection						
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC						10						
2.	Gregory Campoli	New York Independent System Operator	NPCC						2						
3.	Roger Champagne	Hydro-Quebec TransEnergie	NPCC						2						
4.	Kurtis Chong	Independent Electricity System Operator	NPCC						2						
5.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC						1						
6.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC						1						
7.	Brian D. Evans-Mongeon	Utility Services	NPCC						8						
8.	Mike Garton	Dominion Resources Services, Inc.	NPCC						5						
9.	Brian L. Gooder	Ontario Power Generation Incorporated	NPCC						5						
10.	Kathleen Goodman	ISO - New England	NPCC						2						
11.	David Kiguel	Hydro One Networks Inc.	NPCC						1						
12.	Michael R. Lombardi	Northeast Utilities	NPCC						1						
13.	Randy MacDonald	New Brunswick System Operator	NPCC						2						
14.	Greg Mason	Dynegy Generation	NPCC						5						

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	Commenter	Organization	Industry Segment											
			1	2	3	4	5	6	7	8	9	10		
15.	Bruce Metruck	New York Power Authority	NPCC						6					
16.	Chris Orzel	FPL Energy/NextEra Energy	NPCC						5					
17.	Robert Pellegrini	The United Illuminating Company	NPCC						1					
18.	Saurabh Saksena	National Grid	NPCC						1					
19.	Michael Schiavone	National Grid	NPCC						1					
20.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC						3					
21.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC						10					
22.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC						10					
2.	Group	Gerald Beckerle	OC Standards Review Group	X		X								
Additional Member		Additional Organization		Region				Segment Selection						
1.	Laura Lee	Duke							1, 3, 5					
2.	Al DiCaprio	PJM							2					
3.	Gene Delk	SCE&G							1, 3, 5					
4.	Jim Griffith	Southern							1, 3, 5					
5.	Mike Hardy	Southern							1, 3, 5					
6.	Dale Walters	CWLP							1, 3, 5, 9					
7.	Alvis Lanton	SIPC							3, 5					
8.	Larry Rodriguez	Union Power Partners							5					
9.	Tim Lyons	OMU							1, 3, 5					
10.	Barry Hardy	OMU							1, 3, 5					
11.	Dwayne Roberts	OMU							1, 3, 5					
12.	Fred Krebs	Calpine							5					
13.	Tim Hattaway	PowerSouth							3, 5, 9					
14.	Jim Case	Entergy							1, 3					
15.	Rene' Free	Santee Cooper							9, 1, 3, 5					
16.	Glenn Stephens	Santee Cooper							1, 3, 5, 9					
17.	Robert Thomasson	Big Rivers							1, 3, 5, 9					
18.	John Neagle	AECI							3, 5					

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

	Commenter	Organization	Industry Segment										
			1	2	3	4	5	6	7	8	9	10	
19.	John Troha	SERC	10										
3.	Group	Sam Ciccone	FirstEnergy	X		X	X	X	X				
<b>Additional Member</b>		<b>Additional Organization</b>		<b>Region</b>			<b>Segment Selection</b>						
1.	Dave Folk	FE	RFC	1, 3, 4, 5, 6									
2.	Doug Hohlbaugh	FE	RFC	1, 3, 4, 5, 6									
3.	Kevin Querry	FES	RFC	6									
4.	Larry Herman	FE	RFC	3									
4.	Group	Carol Gerou	NERC Standards Review Subcommittee										X
<b>Additional Member</b>		<b>Additional Organization</b>		<b>Region</b>			<b>Segment Selection</b>						
1.	Chuck Lawrence	American Transmission Company	MRO	1									
2.	Tom Webb	WPS	MRO	3, 4, 5, 6									
3.	Terry Bilke	Midwest ISO Inc.	MRO	2									
4.	Jodi Jenson	Western Area Power Administration	MRO	1, 6									
5.	Ken Goldsmith	Alliant Energy	MRO	4									
6.	Dave Rudolph	Basin Electric Power Cooperative	MRO	1, 3, 5, 6									
7.	Eric Ruskamp	Lincoln Electric System	MRO	1, 3, 5, 6									
8.	Joseph Knight	Great River Energy	MRO	1, 3, 5, 6									
9.	Joe DePoorter	Madison Gas & Electric	MRO	3, 4, 5, 6									
10.	Scott Nickels	Rochester Public Utilities	MRO	4									
11.	Terry Harbour	MidAmerican Energy Company	MRO	1, 3, 5, 6									
5.	Group	Jalal Babik	Electric Market Policy	X		X		X	X				
<b>Additional Member</b>		<b>Additional Organization</b>		<b>Region</b>			<b>Segment Selection</b>						
1.	Louis Slade		SERC	1, 4									
2.	Mike Garton		NPCC	5									
6.	Group	Brenda Lyn Truhe	PPL	X				X	X				
<b>Additional Member</b>		<b>Additional Organization</b>		<b>Region</b>			<b>Segment Selection</b>						

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

	Commenter	Organization	Industry Segment														
			1	2	3	4	5	6	7	8	9	10					
1.	Brenda Truhe	PPL Electric Utilities	RFC					1									
2.	Jon Williamson	PPL EnergyPlus	WECC					6									
3.	Mark Heimbach	PPL EnergyPlus	MRO					6									
4.	Mark Heimbach	PPL EnergyPlus	NPCC					6									
5.	Mark Heimbach	PPL EnergyPlus	RFC					6									
6.	Mark Heimbach	PPL EnergyPlus	SERC					6									
7.	Mark Heimbach	PPL EnergyPlus	SPP					6									
8.	Annette Bannon	PPL Generation	RFC					5									
9.	Annette Bannon	PPL Generation	NPCC					5									
10.	Annette Bannon	PPL Generation	WECC					5									
7.	Group	Harry Tom	Operating Personnel Communications Protocols SDT					X	X	X	X	X		X	X		
Additional Member		Additional Organization		Region					Segment Selection								
1.	Lloyd Snyder	GSOC		SERC					1								
2.	Leanne Harrison	PJM		RFC					2								
3.	Laura Zotter	ERCOT		ERCOT					2								
4.	Tom Irvine	HydroOne		NPCC					1, 5, 6, 7								
5.	Bill Ellard	CAISO		WECC					2								
6.	John Stephens	City of Springfield		RFC					4, 8								
7.	Mike Brost	JEA		FRCC					1, 3, 5, 7								
8.	Mark Bradley	ITC		MRO					1								
9.	Fred Waites	Southern Company		SERC					1, 3, 5, 7								
10.	Wayne Mitchell	Entergy		SPP					1, 3, 5, 7								
8.	Group	Howard Gugel	NERC														
Please complete the following information.																	
Additional Member		Additional Organization		Region					Segment Selection								
1.	Laurel Heacock	NERC		NA - Not Applicable													
2.	Bob Cummings	NERC		NA - Not Applicable													

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

	Commenter	Organization	Industry Segment											
			1	2	3	4	5	6	7	8	9	10		
3.	Larry Kezele	NERC												
4.	Ed Ruck	NERC												
5.	Todd Thompson	NERC												
6.	Mark Vastano	NERC												
7.	Roman Carter	NERC												
8.	Jule Tate	NERC												
9.	David Taylor	NERC												
10.	Al McMeekin	NERC												
11.	Maureen Long	NERC												
12.	Andy Rodriquez	NERC												
13.	Michael Moon	NERC												
14.	Stephanie Monzon	NERC												
15.	Gerry Adamski	NERC												
9.	Group	Linda Perez	Western Electricity Coordinating Council											X
<b>Additional Member</b>			<b>Additional Organization</b>	<b>Region</b>					<b>Segment Selection</b>					
1.	Steve Rueckert	WECC	WECC											10
10.	Group	Jason L. Marshall	Midwest ISO Standards Collaborators		X									
<b>Additional Member</b>			<b>Additional Organization</b>	<b>Region</b>					<b>Segment Selection</b>					
1.	Bob Thomas	Illinois Municipal Electric Agency	SERC											4
2.	Jose Medina	NextEra Energy Resources, LLC	WECC											5
3.	Joe O'Brien	NIPSCO	RFC											1
4.	Joe Knight	Great River Energy	MRO											1, 3, 5, 6
5.	Kirit Shah	Ameren	SERC											1
11.	Group	JT Wood	Southern Company Services	X		X								
<b>Additional Member</b>			<b>Additional Organization</b>	<b>Region</b>					<b>Segment Selection</b>					
1.	Hugh Frances		SERC											1



Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

		Commenter	Organization	Industry Segment										
				1	2	3	4	5	6	7	8	9	10	
12.	Group	Frank Gaffney	Florida Municipal Power Agency and Some Members	X		X	X	X	X					
		<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>					<b>Segment Selection</b>					
		1. Jim Howard	Lakeland Electric	FRCC					1, 3, 5					
		2. Greg Woessner	Kissimmee Utilities Authority	FRCC					1, 3, 4, 5					
13.	Group	Kenneth D. Brown	Public Service Enterprise Group Companies	X		X		X	X					
		<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>					<b>Segment Selection</b>					
		1. Jeffrey Mueller	PSE&G	RFC					1, 3					
		2. Dave Murray	PSEG Fossil	RFC					5					
		3. Jim Hebson	PSEG ER&T	ERCOT					5, 6					
		4. Clint Bogan	PSEG Power Connecticut	NPCC					5					
14.	Group	Denise Koehn	Bonneville Power Administration	X		X		X	X					
		<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>					<b>Segment Selection</b>					
		1. Steve Davis	BPA, Generation Support	WECC					3, 5, 6					
		2. Tedd Snodgrass	BPA, Transmission Dispatch	WECC					1					
		3. Tim Loepker	BPA, Transmission Dispatch	WECC					1					
		4. Huy Ngo	BPA, Transmission Control Cntr HW Design & Maint						1					
15.	Group	Ben Li	IRC Standards Review Committee		X									
		<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>					<b>Segment Selection</b>					
		1. Charles Yeung	SPP	SPP					2					
		2. James Castle	NYISO	NPCC					2					
		3. Bill Phillips	MISO	MRO					2					
		4. Lourdes Estrada-Saliner	CAISO	WECC					2					
		5. Steve Myers	ERCOT	ERCOT					2					
		6. Matt Goldberg	ISO-NE	NPCC					2					
		7. Patrick Brown	PJM	RFC					2					

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

		Commenter	Organization	Industry Segment										
				1	2	3	4	5	6	7	8	9	10	
8. Mark Thompson			AESO	WECC					2					
16.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X					
17.	Individual	Brent Ingebrigtsen	E.ON U.S.	X		X		X	X					
18.	Individual	Duncan Brown	Calpine Corporation					X						
19.	Individual	Ron Sporseen	PNGC Power (15 member utilities)				X							
20.	Individual	Chris Scanlon	Exelon	X		X		X	X					
21.	Individual	Steve Alexanderson	Central Lincoln			X								
22.	Individual	Denise Roeder	North Carolina Municipal Power Agency #1			X	X		X					
23.	Individual	Jon Kapitz	Xcel Energy	X		X		X	X					
24.	Individual	Martin Bauer	US Bureau of Reclamation			X								
25.	Individual	Kasia Mihalchuk	Manitoba Hydro	X		X		X	X					
26.	Individual	Howard Rulf	We Energies			X	X	X						
27.	Individual	Michael R. Lombardi	Northeast Utilities	X		X		X						
28.	Individual	CJ Ingersoll	CECD											
29.	Individual	Brandy A. Dunn	Western Area Power Administration	X										
30.	Individual	Michael J Ayotte	ITC Holdings	X										
31.	Individual	Kathleen Goodman	ISO New England Inc		X									

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

		Commenter	Organization	Industry Segment										
				1	2	3	4	5	6	7	8	9	10	
32.	Individual	James H. Sorrels, Jr.	American Electric Power	X		X		X	X					
33.	Individual	Greg Rowland	Duke Energy	X		X		X	X					
34.	Individual	James Sharpe	South Carolina Electric and Gas	X		X		X	X					
35.	Individual	Jason Shaver	American Transmission Company	X										
36.	Individual	Richard Kafka	Pepco Holdings, Inc	X		X		X	X					
37.	Individual	Kirit Shah	Ameren	X		X		X	X					
38.	Individual	Charles Yeung	Southwest Power Pool		X									
39.	Individual	Roger Champagne	Hydro-Québec TransEnergie (HQT)	X										
40.	Individual	Dan Rochester	Independent Electricity System Operator		X									
41.	Individual	Laura Zotter	ERCOT ISO		X									X
42.	Individual	Catherine Koch	Puget Sound Energy	X										

- 1 Do you agree with the proposed definition of Interpersonal Communication (COM-001-2)? If not, please explain in the comment area.

**Summary Consideration: Stakeholders had three general concerns with the definition of Interpersonal Communications.**

- 1) The definition of Interpersonal Communication to be ambiguous in terms of distinguishing between verbal communications and data transfers; The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange.

**The RCSDT believes that data communication is covered under IRO-010, R3 which states:**

Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)

- 2) The definition should also clarify that the communication is between individuals in different entities or physical locations; The SDT believes that the revised Requirements of COM-001-2 satisfy this concern.
- 3) Use of the term “method” may imply a communication style; changed “method” to “medium” in definition.

Organization	Yes or No	Question 1 Comment
Calpine Corporation		
North Carolina Municipal Power Agency #1		
Public Service Enterprise Group Companies		
We Energies		

Organization	Yes or No	Question 1 Comment
Operating Personnel Communications Protocols SDT		No comment
CECD	No	CECD agrees that the term should be very broad and allow a registered entity to establish appropriate communication tools, devices, processes or systems to suit their operation. However, there is a need to include the term "normal" interpersonal communication methods based on the definition of alternative interpersonal communication.
<p><b>Response: The RCSDT thanks you for your comment. RCSDT does not propose defining “Normal” Interpersonal Communications and has removed it from the alternative definition and included “...used for day-to-day operation.” Based on the consensus of stakeholders, we have revised the two definitions to:</b></p> <p><b>Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.</b></p> <p><b>Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.</b></p>		
ITC Holdings	No	Comments: As written, the definition could be interpreted to include data communications. Suggest modifying the definition to “Any method that allows two or more individuals to verbally interact, consult, or exchange information.” Interpersonal Communication to operate the BES must be timely and non voice communication cannot be relied upon to be timely in all situations.
<p><b>Response: The RCSDT thanks you for your comment. The intent of this definition is to exclude data, but not preclude e-mail, text, etc.</b></p> <p><b>The RCSDT believes that data communication is covered under IRO-010, R3 which states:</b></p> <p><b>Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)</b></p>		
NERC	No	Comments: NERC staff believes the definition is unnecessary. “Interpersonal” is a common term and this definition provides no additional clarity. In addition, COM-001 should maintain the current coverage of voice and data. The requirements should address both primary and alternative/backup capabilities for voice and data. Approved standards including TOP-005-1.1 and IRO-010-1, as well as several others under development rely on the communication capabilities specified in COM-001. By limiting the focus of COM-001-

Organization	Yes or No	Question 1 Comment
		2 to this definition of Interpersonal Communication, there will no longer be an obligation to ensure that data telecommunication paths between entities are adequate and reliable.
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT and the industry disagree with NERC staff’s assessment. A strong industry request to clarify “facilities” led to the definition of interpersonal communication which has been modified to:</b></p> <p><b>Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.</b></p> <p><b>Primary communication is inferred when reference to alternative is made. Moreover, the primary capability is used/tested on a daily basis.</b></p> <p><b>The RCSDT contends that IRO-010 covers the requirement for data and information that includes a requirement for providing specified data when automated Real-Time system operating data is unavailable.</b></p>		
Exelon	No	Definition is vague and subject to interpretation. Requirement should be to have primary and backup capabilities. Disagree that a definition is required.
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT and the industry disagree. A strong industry demand to clarify “facilities” led to the definition of interpersonal communication which has been modified to:</b></p> <p><b>Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.</b></p> <p><b>Primary communication is inferred when reference to alternative is made. Moreover, the primary capability is used/tested on a daily basis.</b></p>		
Southern Company Services	No	If there is going to be an alternative definition, than this should be a definition for Normal Interpersonal Communication.
<p><b>Response: The RCSDT thanks you for your comment. Primary communication is inferred when reference to alternative is made. Moreover, the primary capability is used/tested on a daily basis.</b></p>		
Ameren	No	In previous postings, the drafting team confirmed that they intended for COM-001-2 to apply only to verbal communication systems and not data. However, the phrase “or exchange information.” could still imply data (information). We suggest that the team should explicitly exclude data in definition.
Midwest ISO Standards Collaborators	No	In previous postings, the drafting team confirmed that they intended for COM-001-2 to apply only to verbal communication systems. We believe this definition had inadvertently brought data back into the standard. Specifically, we are concerned about “or exchange information.” Data can be considered information and thus some may now interpret SCADA and ICCP being included. We suggest the definition would be sufficient with the “or exchange information” redacted and would avoid this confusion.

Organization	Yes or No	Question 1 Comment
<p><b>Response: The RCSDT thanks you for your comment. The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange.</b></p> <p><b>The RCSDT believes that data communication is covered under IRO-010, R3 which states:</b></p> <p><b>Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)</b></p>		
<p>NERC Standards Review Subcommittee</p>	<p>No</p>	<p>In previous postings, the drafting team confirmed that they intended for COM-001-2 to apply only to verbal communication systems. We believe this definition had inadvertently brought data back into the standard. Specifically, we are concerned about “or exchange information.” Data can be considered information and thus some may now interpret SCADA and ICCP being included. To avoid this confusion, we suggest the definition would be sufficient with the “or exchange information” redacted.</p> <p>We believe the proposed definition for the term “Interpersonal Communication” is too broad and ambiguous. We recommend the following instead: “Verbal Communication between two or more registered entities (not within the same organization) to exchange reliability-related information.” The inclusion of this term “registered entities” removes the ambiguity which we believe is contained in the proposed definition. In addition, the inclusion of the phrase “not within the same organization” clarifies that the focus of definition is to address communication between different registered entities.</p>
<p><b>Response: The RCSDT thanks you for your comment. The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange.</b></p> <p><b>The RCSDT believes that data communication is covered under IRO-010, R3 which states:</b></p> <p><b>Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)</b></p> <p><b>Also, the SDT believes that the revised Requirements of COM-001-2 satisfy your ambiguity concern.</b></p>		
<p>Southwest Power Pool</p>	<p>No</p>	<p>It appears as if the following two definitions have the same meaning: COM-001-2 Interpersonal Communication: Any method that allows two or more individuals to interact, consult, or exchange information. COM-003 -1 Interoperability Communication - Communication between two or more entities to exchange reliability-related information to be used by the entities to change the state or status of an element or facility of</p>

Organization	Yes or No	Question 1 Comment
		<p>the Bulk Electric System. SPP recommends changing the word “method” to medium in Interpersonal Communication. For Alternative Interpersonal Communication, that definition uses the term “infrastructure (medium)” as in type of equipment used. These terms should use consistent words if they are referring to the same thing.</p>
<p><b>Response: The RCSDT thanks you for your comment. We concur and have revised the two definitions to:</b>  <b>Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.</b>  <b>Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.</b></p>		
Duke Energy	No	<p>Need to revise this definition to clarify that Interpersonal Communication is the primary method of communication, and that it is limited to verbal or written communications (not data such as SCADA data), and that it is limited to real-time operations (time horizon is Real-time Operations). Suggested wording:                      Interpersonal Communication: The primary verbal or written method that allows two or more individuals to interact, consult, or exchange information for real-time operations.</p>
<p><b>Response: The RCSDT thanks you for your comment. . The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange.</b></p> <p><b>The RCSDT believes that data communication is covered under IRO-010, R3 which states:</b></p> <p><b>Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)</b></p> <p><b>The RCSDT does not believe “primary” is needed because “primary” communication is inferred when reference to “alternative” is made.</b></p>		
PPL	No	<p>The definition should be clarified to state that it is interpersonal communications between functional entities and not interpersonal communications within the functional entity that the standard is addressing.</p>
<p><b>Response: The RCSDT thanks you for your comment. The SDT believes that the revised Requirements of COM-001-2 satisfy your concern</b></p>		
Hydro-Québec TransEnergie (HQT)	No	<p>The definition should be worded to be more explicit, such as: When two or more individuals interact, consult, or exchange information.</p>



Organization	Yes or No	Question 1 Comment
Northeast Power Coordinating Council	No	The definition should be worded to be more explicit, such as: When two or more individuals interact, consult, or exchange information.
<p><b>Response: The RCSDT thanks you for your comment. We concur and have revised the definition to:</b>  <b>Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.</b></p>		
Electric Market Policy	No	The SDT has proposed a definition that is meant to limit the standard to two-way person-to-person communication between functional entities. However, as written the definition can also be viewed as so open-ended as to apply to pens and papers used by system operators to show another system operator in the same control room some operational data. The proposed standard does further constrain the application to “real-time operation information”, but may be better served to explicitly constrain the definition to functional-entity-to-functional entity. It is these media that the standard means to address.
<p><b>Response: The RCSDT thanks you for your comment. The SDT believes that the revised Requirements of COM-001-2 satisfy your concern</b></p>		
Bonneville Power Administration	No	The term, ‘interpersonal communication’ as defined by common usage and Webster’s Dictionary is sufficient for the work at hand. To provide an additional definition via the NERC Standards Development Process unnecessarily adds to an already convoluted task and provides no further benefit to the user of this proposed standard.
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT and the industry disagree. A strong industry request to clarify “facilities” led to the definition of interpersonal communication which has been modified to:</b>  <b>Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.</b></p>		
Northeast Utilities	No	The use of “Any method” as the start of the definition of Interpersonal Communication is too board a qualifier. In normal interpersonal communications only 5 to 10% of the total communication is verbal while 90 to 95% is non-verbal. As it is not the intent of this standard to address non-verbal communications the use of “Any method” should be eliminated from the definition and more specific terms that clearly convey the intent of the standard should be used.

Organization	Yes or No	Question 1 Comment
<p><b>Response:</b> The RCSDT thanks you for your comment. We concur and have modified the definition to:  <b>Interpersonal Communication:</b> Any medium that allows two or more individuals to interact, consult, or exchange information.</p>		
FirstEnergy	No	<p>This definition should be revised as follows to ensure clarity of scope by excluding electronic data exchange and for consistency with the proposed requirements: "Interpersonal Communication Capability: Any method that allows two or more individuals to interact, consult, or exchange real-time Bulk Electric System operating information using verbal communication equipment."</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. We agree in principle; however, the SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange.</p> <p>The RCSDT believes that data communication is covered under IRO-010, R3 which states:</p> <p><b>Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)</b></p>		
Manitoba Hydro	No	<p>When “Interpersonal Communication” is added to the NERC Glossary without the obvious reference to COM-001-2 which is “To ensure that operating entities have adequate Interpersonal capabilities” could and does infer that the definition means “protocol or forum of speaking, interacting or exchanging” information. The suggested definition does not immediately indicate the normal medium of communications, such a land line, mobile, radio, electronic, etc. A suggested definition: Interpersonal Communication: The normal mediums that carry messages, verbal or electronic, between two or more entities, internal or external, for the operation of the Interconnected Bulk Electric System.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. We agree in principle and have modified the definition to:  <b>Interpersonal Communication:</b> Any medium that allows two or more individuals to interact, consult, or exchange information.  The SDT believes that the revised Requirements of COM-001-2 satisfy your concern of communication between entities.</p>		

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Organization	Yes or No	Question 1 Comment
American Electric Power	Yes	
American Transmission Company	Yes	
Central Lincoln	Yes	
E.ON U.S.	Yes	
Florida Municipal Power Agency and Some Members	Yes	
Independent Electricity System Operator	Yes	
IRC Standards Review Committee	Yes	
ISO New England Inc	Yes	
OC Standards Review Group	Yes	
PacifiCorp	Yes	
Pepco Holdings, Inc	Yes	
PNGC Power (15 member utilities)	Yes	
Puget Sound Energy	No	<p>The proposed definition for this term addresses a method of communication, but not the communication itself. As a result, the defined term is incomplete as proposed. Recommend the addition of the word “capability” so that the defined term is “Interpersonal Communication Capability”. The addition of this word to the term is also consistent with the use of the term in the proposed standard language, where Interpersonal Communication is consistently used in conjunction with the words “capability” or “capabilities”.</p>

Organization	Yes or No	Question 1 Comment
		<p><b>Response: The RCSDT thanks you for your comment. We agree in principle and have modified the definition which replaces “method” with “medium”:</b></p> <p><b>Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.</b></p> <p><b>The RCSDT believes the definition itself infers “capability.”</b></p>
South Carolina Electric and Gas	Yes	
US Bureau of Reclamation	Yes	
Western Area Power Administration	Yes	
Western Electricity Coordinating Council	Yes	
Xcel Energy	Yes	
ERCOT ISO	No	<ol style="list-style-type: none"> <li>1) ERCOT ISO considers the definition of Interpersonal Communication to be ambiguous in terms of distinguishing between verbal communications and data transfers; the definition should specify that it applies to verbal communication systems.</li> <li>2) The definition should also clarify that the communication is between individuals in different physical locations to mitigate any potential for application to communications between employees of the same company communicating to each other in person at the same physical location – e.g. a control center.</li> <li>3) Additionally, use of the term “method” could imply a communication style (e.g. 3-part communications) as opposed to mode. It should be clear that the Standard only applies to modes of communication. Examples should be provided (e.g. phone, email, etc.) to clarify the scope.</li> </ol>
<p><b>Response: The RCSDT thanks you for your comment.</b></p> <ol style="list-style-type: none"> <li>1. <b>The definition of Interpersonal Communication to be ambiguous in terms of distinguishing between verbal communications and data transfers; the SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange.</b></li> </ol> <p><b>The RCSDT believes that data communication is covered under IRO-010, R3 which states:</b></p>		

Organization	Yes or No	Question 1 Comment
		<p>Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)</p> <ol style="list-style-type: none"> <li>2. The SDT believes that the revised Requirements of COM-001-2 satisfy your concern of communication in different physical locations.</li> <li>3. The RCSDT concurs and revised the definition, Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.</li> </ol>

**2 Do you agree with the proposed definition of Alternative Interpersonal Communication (COM-001-2)? If not, please explain in the comment area.**

**Summary Consideration:** Several stakeholders indicated that a definition of Alternative Interpersonal Communications was not needed. The RCSDT disagrees because there is an important part of the definition of “Alternative Interpersonal Communications” that distinguishes it from simply being an alternative “Interpersonal Communications”. The proposed definition contains the words: “which does not utilize the same infrastructure (medium)”. Also, some stakeholders had concerns with the usage of “normal”. The RCSDT does not propose defining “Normal” Interpersonal Communications and has removed it from the definition. Based on the consensus of stakeholders, we have revised the two definitions to:

**Interpersonal Communication:** Any medium that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.

Organization	Yes or No	Question 2 Comment
Calpine Corporation		
North Carolina Municipal Power Agency #1		
Public Service Enterprise Group Companies		
We Energies		
Operating Personnel Communications Protocols SDT		No Comment

Organization	Yes or No	Question 2 Comment
Manitoba Hydro	No	<p>“Alternative Interpersonal Communication” also when added to the NERC Glossary without the obvious reference to COM-001-2 which is “To ensure that operating entities have adequate Interpersonal capabilities” could and does infer that the definition means “ other protocols or forums of speaking, interacting or exchanging” information. The suggested definition does not immediately indicate the backup or alternate mediums of communications, such a redundant land lines, Satellite phones, battery or diesel back up electronics, etc. A suggested definition: Alternative Interpersonal Communication: Backup or alternate mediums that during planned or failure of normal medium systems, that can carry messages, verbal or electronic, between two or more entities, internal or external, for the operation of the Interconnected Bulk Electric System.</p>
<p><b>Response: The RCSDT thanks you for your comment. We have revised the definition to:</b>  <b>Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.</b>  <b>The RCSDT believes “medium” stands alone in the definition and needs no descriptors.</b></p>		
Exelon	No	Disagree that a definition is required.
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT disagrees because there is an important part of the definition of “Alternative Interpersonal Communications” that distinguishes it from simply being an alternative “Interpersonal Communications”. The proposed definition contains the words: “which does not utilize the same infrastructure (medium)”.</b></p>		
Western Electricity Coordinating Council	No	Do not need an alternate definition
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT disagrees because there is an important part of the definition of “Alternative Interpersonal Communications” that distinguishes it from simply being an alternative “Interpersonal Communications”. The proposed definition contains the words: “which does not utilize the same infrastructure (medium)”.</b></p>		
Southern Company Services	No	Interpersonal Communication includes any method. If this includes all possibilities why is an additional definition needed?
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT revised the definition as:</b>  <b>Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.</b>  <b>The RCSDT believes that an important part of the definition of “Alternative Interpersonal Communications” that distinguishes it from simply being an</b></p>		

Organization	Yes or No	Question 2 Comment
<p>alternative “Interpersonal Communications” are the words: “which does not utilize the same infrastructure (medium)”.</p>		
Duke Energy	No	<p>Need to revise this definition to clarify that Alternative Interpersonal Communication is the identified substitute method for the Interpersonal Communication method. Suggested wording: Alternative Interpersonal Communication: The identified verbal or written method that is able to serve as the substitute for and is redundant to Interpersonal Communication and does not utilize the same infrastructure (medium) as Interpersonal Communication.</p>
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT does not believe that the definition should be revised as suggested as “Alternative” is clear when the requirements are viewed.</b></p>		
Southwest Power Pool	No	<p>Replace Alternative Interpersonal Communication definition with: Backup Interpersonal Communication: Any method that is able to serve as a substitute for and is redundant to the primary normal Interpersonal Communication and does not utilize the same infrastructure (medium) as the primary normal Interpersonal Communications. Consistent terms should be used across standards if they are referring to the same thing.</p>
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT feels that the use of “Alternative” is appropriate and provides flexibility within this standard. The RCSDT does not believe that the definition should be revised as suggested as “Alternative” is clear when the requirements are viewed. There is sufficient stakeholder support to retain “Alternative”.</b></p>		
NERC	No	<p>See response to Question 1.</p>
<p><b>Response: The RCSDT thanks you for your comment. Please see response to Question 1.</b></p>		
E.ON U.S.	No	<p>Suggested edit to definition: Alternative Interpersonal Communication: A Interpersonal Communication method that is able to serve as a substitute for and is functionally redundant to the normal Interpersonal Communication method but does not utilize the same infrastructure (medium) as the normal Interpersonal Communication method. The intent of the edit is to clarify that the entity must to have identified one (1) normal Interpersonal Communication and one (1) Alternative Intercommunication method.</p>
<p><b>Response: The RCSDT thanks you for your comment. A definition can not impose requirements that are not explicitly stated in the standard. The suggested edit is not necessary as the requirements define what an entity must do to be compliant. The RCSDT has also removed the words “and is redundant to” from the definition based on other stakeholders comments.</b></p>		



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Organization	Yes or No	Question 2 Comment
Bonneville Power Administration	No	The proposed definition adds value for the user of this proposed standard by adding the ideas of the alternate mode of communications being both independent and redundant to normal communications. However, this having been said, the term chosen by the SDT, the term ‘Alternative Interpersonal Communication’ appears to focus attention on the wrong aspect of what’s being discussed. Since the definition focuses on an alternative mode or ‘method’ of communicating, clarity would be added if the SDT changed the term to be defined to either ‘Alternative Mode of Communication’ or ‘Alternative Method of Communication.’ The use of the word ‘interpersonal’ would be optional, but not necessary.
<p><b>Response: The RCSDT thanks you for your comment. To clarify our intent, the RCSDT changed “method” to “medium” in the definition. The proposed definition is:</b></p> <p><b>Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.</b></p>		
Hydro-Québec TransEnergie (HQT)	No	The proposed definition of Alternative Interpersonal Communication is equally ambiguous as the aforementioned definition of Interpersonal Communication. A precise definition of Interpersonal Communication and “Normal” Interpersonal Communication is required before an agreed upon definition of Alternative Interpersonal Communication can be reached.
Northeast Power Coordinating Council	No	The proposed definition of Alternative Interpersonal Communication is equally ambiguous as the aforementioned definition of Interpersonal Communication. A precise definition of Interpersonal Communication and “Normal” Interpersonal Communication is required before an agreed upon definition of Alternative Interpersonal Communication can be reached.
Northeast Utilities	No	The proposed definition of Alternative Interpersonal Communication is equally ambiguous as the aforementioned definition of Interpersonal Communication. A precise definition of Interpersonal Communication and “Normal” Interpersonal Communication is required before an agreed upon definition of Alternative Interpersonal Communication can be reached.
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT does not propose defining “Normal” Interpersonal Communications and has removed it from the definition. Based on the consensus of stakeholders, we have revised the two definitions to:</b></p> <p><b>Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.</b></p> <p><b>Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same</b></p>		

Organization	Yes or No	Question 2 Comment
<b>infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.</b>		
FirstEnergy	No	The word "normal" in the proposed definition adds some ambiguity to the definition. This definition should be revised as follows to ensure clarity of scope by excluding electronic data exchange and for consistency with the proposed requirements: Alternative Interpersonal Communication Capability: Any verbal communication equipment that is able to serve as a substitute for and is redundant to Interpersonal Communication equipment used during day-to-day operations and does not utilize the same infrastructure as the Interpersonal Communication equipment.
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT does not propose defining “Normal” Interpersonal Communications and have removed it from the definition. Based on the consensus of stakeholders, we have revised the two definitions to:</b></p> <p><b>Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.</b></p> <p><b>Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.</b></p>		
Ameren	Yes	
American Electric Power	Yes	
CECD	Yes	
Central Lincoln	Yes	
Florida Municipal Power Agency and Some Members	Yes	
Independent Electricity System Operator	Yes	
IRC Standards Review Committee	Yes	
ISO New England Inc	Yes	

Organization	Yes or No	Question 2 Comment
Midwest ISO Standards Collaborators	Yes	
OC Standards Review Group	Yes	
PacifiCorp	Yes	
Pepco Holdings, Inc	Yes	
PNGC Power (15 member utilities)	Yes	
PPL	Yes	
Puget Sound Energy	No	<p>As for the proposed term for “Interpersonal Communication”, the proposed definition for this term addresses a method of communication, but not the communication itself. As a result, the defined term is incomplete as proposed. Recommend the addition of the word “capability” so that the defined term is “Alternative Interpersonal Communication Capability”. The addition of this word to the term is also consistent with the use of the term in the proposed standard language, where Alternative Interpersonal Communication is consistently used in conjunction with the words “capability” or “capabilities”.</p>
<p><b>Response: The RCSDT thanks you for your comment. Based on a consensus of stakeholder comments, the RCSDT has revised the proposed definitions to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. The definition itself describes “capability.”</b></p> <p><b>Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.</b></p>		
South Carolina Electric and Gas	Yes	
US Bureau of Reclamation	Yes	
Western Area Power Administration	Yes	

Organization	Yes or No	Question 2 Comment
Xcel Energy	Yes	
American Transmission Company	Yes	However, clarity is needed for the word “infrastructure (medium)”. ATC’s interpretation is that satellite phones, cell phones, radio and land lines are all different mediums.
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT agrees that the types of communication that you list are all different media which could be used as a form of Alternative Interpersonal Communications.</b></p>		
ITC Holdings	Yes	None
NERC Standards Review Subcommittee	Yes	Please clarify. We believe the proposed definition for the term “Interpersonal Communication” is too broad and ambiguous. We recommend the following instead: “Verbal Communication between two or more registered entities (not within the same organization) to exchange reliability-related information.” The inclusion of this term “registered entities” removes the ambiguity which we believe is contained in the proposed definition. In addition, the inclusion of the phrase “not within the same organization” clarifies that the focus of definition is to address communication between different registered entities.
<p><b>Response: The RCSDT thanks you for your comment. The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange.</b></p> <p><b>The RCSDT believes that data communication is covered under IRO-010, R3 which states:</b></p> <p><b>Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)</b></p> <p><b>The SDT believes that the revised Requirements of COM-001-2 satisfy your concern of communication in different physical locations.</b></p>		
Electric Market Policy	Yes	Subject to adequate resolution of comments provided for Question 1
<p><b>Response: The RCSDT thanks you for your comment. Please see response to question 1 comments.</b></p>		
ERCOT ISO	No	Although this definition indirectly clarifies the intent of the definition of Interpersonal Communication by noting that communication mediums/infrastructure are at issue, it does not specify verbal or data communication, and needs to be clarified accordingly; ERCOT notes clarification of Interpersonal Communication (IC) on this issue will indirectly clarify this point with respect to the Alternative IC definition.

Organization	Yes or No	Question 2 Comment
		<p>Furthermore, ERCOT ISO considers the definition of Alternative Interpersonal Communication unnecessary. The Standard could simply say an entity must have multiple (at least two) ICs, one of which is primary and others that serve as back-ups. This would eliminate the need for yet another defined term susceptible to conflicting interpretations.</p> <p>In additions, calling the Alternative Interpersonal Communication a substitute and redundant also seems contradictory, or at least confusing in terms of timing. Redundant implies that the entity has two means that are applied at the same time. Substitute seems to mean that the entity have a back-up that only has to be used when the primary isn't used.</p> <p>Also, if Interpersonal Communication is intended to be verbal communication, what are considered acceptable alternates (i.e.: fax, email, etc)? Examples here would be helpful. Is it sufficient to have redundant/substitute means of verbal communication (i.e.: satellite phones, cell phones, etc.). ERCOT ISO believes non-verbal proxies for verbal communications should be eligible ICs – e.g. email.</p> <p>As noted above, ERCOT ISO believes the most efficient way to approach this is to eliminate the use of Alternative Interpersonal Communication and have the standard require that entities have to have at least two means of Interpersonal Communication.</p>
<p><b>Response: The RCSDT thanks you for your comment.</b></p> <p><b>. The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange.</b></p> <p><b>The RCSDT believes that data communication is covered under IRO-010, R3 which states:</b></p> <p><b>Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)</b></p> <p><b>The RCSDT disagrees that the definition is not needed because there is an important part of the definition of “Alternative Interpersonal Communications” that distinguishes it from simply being an alternative “Interpersonal Communications”. The proposed definition contains the words: “which does not utilize the same infrastructure (medium)”.</b></p> <p><b>We concur and have removed the “redundant” portion of the definition.</b></p> <p><b>Interpersonal Communication can include voice and text; examples are satellite phones, cell phones, radio and land lines. We have revised the proposed definitions to add clarity:</b></p> <p><b>Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.</b></p>		

Organization	Yes or No	Question 2 Comment
<b>Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.</b>		

**3 Do you agree with the revisions made to Requirement 1 in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

**Summary Consideration: Stakeholders pointed out that R1 was a compound requirement and suggested creating separate requirements. Stakeholders also suggested revising the VRF to “Medium” as it does not meet the guidelines for a “High” VRF. The intent of R1 was three-fold.**

- 4 Identify (have) an Alternative Interpersonal Communication capability**
- 5 Test that capability periodically and**
- 6 If the test failed, fix it or identify another Alternative Communications Capability.**

**Based on comments received, we have revised R1, now R9, to eliminate the compound requirement and therefore created more specific requirements to delineate Interpersonal and Alternative Interpersonal Communication, and applicable entity responsibility. The VRF is changed to “Medium.”**

**Requirement R1 is now R9; R2 is now R10; R3 is now R11; R4 is now R7 and R8.**

Organization	Yes or No	Question 3 Comment
Calpine Corporation		
North Carolina Municipal Power Agency #1		
Operating Personnel Communications Protocols SDT		No Comment
American Electric Power	No	AEP is concerned with the use of a sixty minute window without having a broadcast methodology in place to support the required notifications. As mentioned in other comments, perhaps RCIS could be modified to help support communications and the confirmation of such communications.
<p><b>Response: The RCSDT thanks you for your comment. Having a failure of the Alternative Interpersonal Communications per R1 does not indicate that the Interpersonal Communications used in day-to-day operations is out of service. It is expected that the Interpersonal Communications used in day-to-day operations is indeed operational to make the notifications required in R3 regarding alternative failure.</b></p>		

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 3 Comment
We Energies	No	An Alternative Personnel Communications (APC) is intended for use at a Primary Control Center for real-time voice communications. That needs to be clear in the definitions and standards. The time to either restore or recognize that the Alternative Communications cannot be re-established should be aligned with proposed EOP-008 which allows 2 hours. This should also apply to COM-001 R2 which would give an hour past the 2 hours that the APC is unavailable to contact impacted parties. Along with conforming changes to measures and the like...
<p><b>Response: The RCSDT thanks you for your comment. The Alternative Interpersonal Communications capability is intended for use as an alternative for the Interpersonal Communications capability, regardless of whether the normal capability continues to be available or regardless of the location, be it a primary control center or a back-up facility. R1, now R9, includes “...If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.”</b></p>		
ITC Holdings	No	Comments: The intent of the 60 minute requirement is unclear. As written, the 60 minute requirement could be interpreted to apply to the initiation of restoration or, alternatively, to the completion of restoration. If the latter is the intent, then effectively 3 voice communication mediums would be required to ensure compliance which we believe is not warranted. Suggest modifying the requirement to “If the test is unsuccessful, the entity shall take action within 60 minutes to initiate restoration of the identified alternative or...”. In addition, we would suggest separating R1 into two requirements. From an audit perspective, there are two discrete actions being identified: quarterly testing and initiating repairs.
<p><b>Response: The RCSDT thanks you for your comment. We concur with your comment and have changed the requirement R1, now R9, to state “...If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.” The SDT believes that R1, now R9, has a discreet relationship with successful and unsuccessful tests and therefore should remain as one requirement for clarity.</b></p>		
Public Service Enterprise Group Companies	No	Initiating actions within the hour should be specified, rather than taking action. It could take longer than an hour to take (complete) action that resolves the issue.
<p><b>Response: The RCSDT thanks you for your comment. We concur with your comment and have changed the requirement to state “...If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.”</b></p>		
Southern Company Services	No	It is quite possible for entities to interpret this requirement as not applicable if they include all of there communications as interpersonal communication.
<p><b>Response: The RCSDT thanks you for your comment. The requirement states that an entity will “designate” an Alternative Interpersonal</b></p>		



Organization	Yes or No	Question 3 Comment
<p><b>Communications capability. To do so, the entity would not be able to declare all communications as Interpersonal Communications.</b></p>		
FirstEnergy	No	<p>It should be clear that this requirement applies only to BES information. The requirement should be revised as follows to improve clarity: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time Bulk Electric System operating information.</p>
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT does not believe that adding BES to the requirement adds any clarity as NERC standards apply to the BES.</b></p>		
Duke Energy	No	<ul style="list-style-type: none"> <li>o Need to clarify who the RC, TOP and BA are required to have Interpersonal Communications and Alternative Interpersonal Communications capability with (i.e., each other and the DP and GOP). We believe that R4 is redundant to R1, and the entities in R4 could be added to R1, and R4 deleted. Also make conforming changes to the Measures, Data Retention and VSLs.</li> <li>o Need to clarify that that the requirement is to take action to restore the Alternative Interpersonal Communications capability, or take action to identify a substitute within 60 minutes, (not actually restore or identify a substitute within 60 minutes - which may not be possible). Also need to revise the Measure and the Lower VSL to conform with this clarification to the requirement</li> <li>o Need to strike the phrase “used for communicating real-time operating information”, because this should be included in the definition of Interpersonal Communication, as we propose in Comment #1 above, and it would be redundant to also include it in R1.</li> <li>o The VRF for R1 should be Medium instead of High, because this is a quarterly test of the alternative capability - doesn’t meet the criteria for a High VRF.</li> <li>o Need to clarify in Requirement R2 that the 60 minute clock for notifications BEGINS when you KNOW you have a failure that has lasted for 30 or more minutes.</li> <li>o Strike the word “normal” in Requirement R2, because the definition of Interpersonal Communications as proposed above already includes the word “primary”.</li> </ul>
<p><b>Response: The RCSDT thanks you for your comment.</b></p> <ul style="list-style-type: none"> <li>o <b>To provide better clarity the SDT created more specific requirements to delineate Interpersonal and Alternative Interpersonal Communication, and applicable entity responsibility.</b></li> <li>o <b>The RCSDT has revised the requirement R1, now R9, to state “...If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.” The Measure and VSL for R1, now R9, reflect the revision</b></li> </ul>		

Organization	Yes or No	Question 3 Comment
		<ul style="list-style-type: none"> <li>○ The definition was not revised to include the phrase “used for communicating real-time operating information” since the Time Horizon is designated as Real-time Operations.</li> <li>○ VRF: The RCSDT agrees and has revised the VRF to “Medium.”</li> <li>○ R2 now R10: The RCSDT believes the requirement as written satisfies your request. The “detection” of failure is the beginning.</li> <li>○ “Normal”: The RCSDT revised R2, now R10, and deleted “normal.”</li> </ul>
Exelon	No	<p>R1. It is not possible to test without identifying, “identify and” is not required. Suggest the requirement say: The applicable entities shall have primary and backup communication capabilities used for communicating real-time operating information. The entities shall test and demonstrate system capabilities on a quarterly basis. Telling someone to “take action” if they identify a failure in their systems is unnecessary. It must be presumed that an entity will “take action”; otherwise they will be non-compliant with the standard. Allowing an entity to “identify a substitute” in lieu of taking action to restore within 60 minutes points to the difficulties inherent in writing prescriptive requirements. The drafting team recognizes all entities may not be able to restore their capabilities within 60 minutes and therefore provides an alternative. The 60 minute requirement becomes a guideline, not a requirement under these conditions it is left to auditors to evaluate the technical and business case that an entity makes for why they can not make the 60 minute deadline.</p>
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT has revised requirements of COM-001, R1 is now R9, to require an entity to “designate” an Alternative Interpersonal Communication capability rather than to “identify”. The RCSDT agrees with you that an entity must identify something in order to be able to designate it or to test it. An Alternative Interpersonal Communication capability is an alternative regardless of whether one is considering the primary location or a back-up facility. Back-up tends to indicate that it would only be used in the case of the loss of some other primary capability; that is not the intent. The intent is that an alternative is to be designated and periodically tested to verify its continued availability and functionality. The alternative capability may or may not be used in normal operations activities. The SDT changed “take action” to “initiate action” in the requirement and believes the verbiage is needed to identify the start of timing to satisfy “...repair or designate a replacement Alternative Interpersonal Communications within 2 hours.</b></p>		
Manitoba Hydro	No	<p>R1. Removal of “develop a mitigation plan” and replacing with “take action within 60 minutes” has been done, this improves the Requirement.</p> <p>R2. As suggested in a previous SAR, the time line should be delineated further, “if the ICC will not be in service within 30 minutes, the impacted entities shall be notified within 60 minutes of the detection of the failure”.</p> <p>R3. The addition of “dictated by law or otherwise” disclaimers defogs the requirement for Canadian entities that have varying laws, mandates and obligations: Canada’s basic definition of “Official bilingualism” was</p>

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Organization	Yes or No	Question 3 Comment
		found as follows: <ul style="list-style-type: none"> <li>o The federal government must conduct its business and provide services in both official languages English and French.</li> <li>o The law encourages or mandates lower tiers of government such as provinces, territories and municipalities to provide services in both official languages.</li> <li>o The law places obligations on private sectors to provide access to services in both official languages, including that products be labeled in both English and French.</li> <li>o The government provides support to sectors to encourage and promote the use of one or the other of the two official languages, for instance English speaking minorities in Quebec and French Speaking minorities in other provinces.</li> <li>o New Brunswick is the only official bilingual province and Quebec is officially unilingual (French only).</li> </ul>
<p><b>Response: The RCSDT thanks you for your comment. Thank you for your affirmations with respect to R1 and R3. With respect to R2 (now R10), it is the intent of the RCSDT to have notifications performed for outages of 30 minutes or longer within 60 minutes</b></p>		
E.ON U.S.	No	Requiring a 60 minute response to a problem with the Alternative Interpersonal Communication method which is only tested quarterly doesn't seem reasonable. One (or more) entities may need to involve IT/telecom personnel or order parts or material to resolve the problem or agree to the substitute Alternative Interpersonal Communication method. A 48 hour response requirement would be more appropriate.
<p><b>Response: The RCSDT thanks you for your comment. Requirement R1, now R9, has been revised to clarify the intent for the entity to "initiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours."</b></p>		
Puget Sound Energy	Yes	
CECD	No	The requirement to identify an alternative interpersonal communication method within 60 minutes should only apply if the registered entity only has a single alternative interpersonal communication method in place.
<p><b>Response: The RCSDT thanks you for your comment. Requirement R1, now R9, has been revised to clarify the intent for the entity to "initiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours."</b></p>		
NERC	No	There is a disparity in the timing requirements listed in COM-001. If it is important that a known communication path interruption be restored in 60 minutes, why would it be necessary to check a path quarterly only? The drafting team should consider proposing that no concurrent outage of primary and alternative/backup paths can exceed 5 minutes for voice paths. Additionally, NERC staff believes that data path concerns still need to be addressed. As written, there is no requirement coverage for ensuring that data telecommunication paths between entities are adequate and reliable.
<p><b>Response: The RCSDT thanks you for your comment. The requirement R1, now R9, does not state that a communication path be restored in 60</b></p>		

Organization	Yes or No	Question 3 Comment
<p>minutes but “...shall initiate action to repair or designate a replacement Alternative Interpersonal Communication within 2 hours.” The SDT believes that it is not feasible to propose that concurrent outages of a primary or backup communication cannot exceed 5 minutes. The SDT believes that IRO-010-1 Requirement R1 and specifically R1.4, adopted by the NERC BOT, address your concerns regarding data paths.</p>		
Southwest Power Pool	No	<p>This standard does want the RC, TOP, and BA to report in R2 if Interpersonal Communication goes down within 60mins to report it. However, we cannot find a specific requirement that subjects the RC, TOP, and BA to have Interpersonal Communication in the first place.</p>
<p>○ <b>Response: The RCSDT thanks you for your comment. To provide better clarity the SDT created more specific requirements to delineate Interpersonal and Alternative Interpersonal Communication, and applicable entity responsibility.</b></p>		
Hydro-Québec TransEnergie (HQT)	No	<p>We agree with the revisions made to R1 to remove the requirement for developing a mitigation plan but have a concern with “...shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communication Capability”. This can be interpreted to mean completing the repair within 60 minutes, and hence can present a difficulty for the responsible entity if the spare parts to facilitate a repair or if a new piece of equipment cannot be obtained within that time frame. More time is needed to fully repair or replace the lost capability. A suggested rewording is “shall initiate action within 60 minutes to restore....” Alternatively, the requirement can be revised to require the identification of a substitute Alternative Interpersonal Communication means within the 60 minute time frame.</p>
Independent Electricity System Operator	No	<p>We agree with the revisions made to R1 to remove the requirement for developing a mitigation plan but have a concern with “...shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communication Capability”. This can be interpreted to mean completing the repair within 60 minutes, and hence can present a difficulty for the responsible entity if the spare parts to facilitate a repair or if a new piece of equipment cannot be obtained within that time frame. More time is needed to fully repair or replace the lost capability. We suggest the wording be revised to “shall initiate action within 60 minutes to restore....” Alternatively, the requirement can be revised to require the identification of a substitute Alternative Interpersonal Communication means within the 60 minute time frame.</p>
Northeast Power Coordinating Council	No	<p>We agree with the revisions made to R1 to remove the requirement for developing a mitigation plan but have a concern with “...shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communication Capability”. This can be interpreted to mean completing the repair within 60 minutes, and hence can present a difficulty for the responsible entity if the spare parts to facilitate a repair or if a new piece of equipment cannot be obtained within that time frame. More time is needed to fully repair or replace the lost capability. A suggested rewording is "shall initiate action within 60 minutes to</p>

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Organization	Yes or No	Question 3 Comment
		restore..." Alternatively, the requirement can be revised to require the identification of a substitute Alternative Interpersonal Communication means within the 60 minute time frame.
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT agrees and has revised R1, now R9, to clarify the intent for the entity to “initiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.”</b></p>		
Western Electricity Coordinating Council	No	We do not need the definition for alternate, when the definition for interpersonal communication states all methods of communications. What we think the drafting team is getting at is that we need to test our back up communication systems.
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT has revised R1, now R9, and R2, now R10, to clarify that an Alternative Interpersonal Communication capability be designated and that alternative capability to be tested at least monthly to verify an alternative is available should the capability normally used be lost. If the test of the Alternative Interpersonal Communication capability is failed, then the entity must initiate actions within 60 minutes. The RCSDT has intentionally avoided the concept of back-up because back-up could be mistakenly believed to apply only in back-up facilities or in the case of loss of some unnecessarily designated primary capability.</b></p>		
Midwest ISO Standards Collaborators	No	We mostly agree with the revisions and thank the drafting team for modifying the requirement to remove the need for a mitigation plan per our comments from the last posting. However, we do believe that introduction of a requirement to fix the Alternate Interpersonal Communication within 60 minutes could be a compliance problem. Our issue is with the time requirement. For example, our stakeholders have experienced situations with certain communications systems in which a part had to be shipped overnight to fix the communication system. While we still don’t believe a mitigation plan is necessary in this case, we are concerned that ordering the part may not be viewed as taking action. Please confirm that SDT believes that the 60 minutes applies to beginning to repair the Alternative Interpersonal Communication and not to full restoration of the Alternative Interpersonal Communication. Further, please confirm that identification of a substitute Alternative Interpersonal Communication could simply mean relying on an already existing and identified secondary or tertiary Alternative Interpersonal Communication? Similar to our concern identified in Q1, we are concerned about the clause “used for communicating real-time operating information.” We believe data could be drawn into the requirement with this clause. Redacting the clause from the requirement will clarify that the requirement applies to only verbal communications.
NERC Standards Review Subcommittee	No	We mostly agree with the revisions and thank the drafting team for modifying the requirement to remove the need for a mitigation plan per our comments from the last posting. However, we do believe that introduction of a requirement to fix the Alternate Interpersonal Communication within 60 minutes could be a compliance problem. Our issue is with the time requirement. For example, our stakeholders have experienced situations with certain communications systems in which a part had to be shipped overnight to fix the communication system. While we still don’t believe a mitigation plan is necessary in this case, we are concerned that

Organization	Yes or No	Question 3 Comment
		<p>ordering the part may not be viewed as taking action. Please confirm that SDT believes that the 60 minutes applies to beginning to repair the Alternative Interpersonal Communication and not to full restoration of the Alternative Interpersonal Communication. Further, please confirm that identification of a substitute Alternative Interpersonal Communication could simply mean relying on an already existing and identified secondary or tertiary Alternative Interpersonal Communication. Similar to our concern identified in Q1, we are concerned about the clause “used for communicating real-time operating information.” We believe data could be drawn into the requirement with this clause. Redacting the clause from the requirement will clarify that the requirement applies to only verbal communications.</p>
<p><b>Response: The RCSDT thanks you for your comment. R1, now R9, has been revised to clarify the intent for the entity to “intiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.” The verbiage, “used for communicating real-time operating information” is redacted as you suggest. The SDT believes that Alternative Interpersonal Communication is clearly defined.</b></p>		
Ameren	No	<p>We mostly agree with the revisions. However, we believe that introduction of a requirement to fix the Alternate Interpersonal Communication (AIC) within 60 minutes could be a compliance problem. The issue is with the time requirement. It seems illogical to only test the AIC every 90 days but have to replace the capability in 60 minutes when the IC means is working, It seems more reasonable to have the 60 minutes apply when both are out.</p> <p>Similar to our concern expressed in response to Q1 above, we are concerned about the phrase “used for communicating real-time operating information.”, which could also imply data. We suggest that the team should remove this phrase from the requirement to clarify that the requirement applies to only verbal communications.</p>
<p><b>Response: The RCSDT thanks you for your comment. R1, now R9, has been revised to clarify the intent for the entity to “intiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.” Verbiage “used for communicating real-time operating information” is redacted.</b></p>		
OC Standards Review Group	No	<p>We suggest changing “its” in the first sentence to “their respective” such that the sentence will read, “Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, “their respective” .....” We also suggest that the risk factor should be “Medium”</p>
<p><b>Response: The RCSDT thanks you for your comment. The SDT believes that “its” shows appropriate ownership for each respective entity. The risk factor is revised to “Medium” as suggested.</b></p>		
IRC Standards Review	No	<p>We thank the drafting team for modifying the requirement to remove the need for a mitigation plan per our comments from the last posting. However, we do believe that introduction of a requirement to fix the</p>

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Organization	Yes or No	Question 3 Comment
Committee		Alternate Interpersonal Communication within 60 minutes could be a compliance problem. Our issue is with the time requirement. It is possible that a communications system may require a part that is currently not available. The requirement should be simply to initiate action to repair the system or to have another Alternate Interpersonal Communication system available. Further, please confirm that identification of a substitute Alternative Interpersonal Communication could simply mean relying on an already existing and identified secondary or tertiary Alternative Interpersonal Communication? To resolve these issues, we suggest the wording be revised to “shall initiate action within 60 minutes to restore....” Alternatively, the requirement can be revised to require the identification of a substitute Alternative Interpersonal Communication means within the 60 minute time frame.
ISO New England Inc	No	We thank the drafting team for modifying the requirement to remove the need for a mitigation plan per our comments from the last posting. However, we do believe that introduction of a requirement to fix the Alternate Interpersonal Communication within 60 minutes could be a compliance problem. Our issue is with the time requirement. It is possible that a communications system may require a part that is currently not available. The requirement should be simply to initiate action to repair the system or to have another Alternate Interpersonal Communication system available. Further, please confirm that identification of a substitute Alternative Interpersonal Communication could simply mean relying on an already existing and identified secondary or tertiary Alternative Interpersonal Communication? To resolve these issues, we suggest the wording be revised to “shall initiate action within 60 minutes to restore....” Alternatively, the requirement can be revised to require the identification of a substitute Alternative Interpersonal Communication means within the 60 minute time frame.
<p><b>Response: The RCSDT thanks you for your comment. R1, now R9, has been revised to clarify the intent for the entity to “initiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.” The SDT believes that Alternative Interpersonal Communication is clearly defined.</b></p>		
Pepco Holdings, Inc	No	Why is a requirement for alternate communications given a VRF of High while a requirement (R2) for normal communications given a VRF of Medium?
<p><b>Response: The RCSDT thanks you for your comment. The VRF for R1, now R9, has been revised to “Medium.”</b></p>		
Bonneville Power Administration	Yes	
Central Lincoln	Yes	

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Organization	Yes or No	Question 3 Comment
Florida Municipal Power Agency and Some Members	Yes	
Northeast Utilities	Yes	
PacifiCorp	Yes	
PNGC Power (15 member utilities)	Yes	
PPL	Yes	
South Carolina Electric and Gas	Yes	
US Bureau of Reclamation	Yes	
Western Area Power Administration	Yes	
Xcel Energy	Yes	
American Transmission Company	Yes	If the “infrastructure” is defined as we have noted in question 2, then we support the revisions to this Requirement.
<b>Response: The RCSDT thanks you for your comment.</b>		
Electric Market Policy	Yes	Subject to adequate resolution of comments provided for Question 1
<b>Response: The RCSDT thanks you for your comment. Please see response to question1.</b>		
ERCOT ISO	No	To follow on the concern noted in Question 1, ERCOT ISO requests that the scope of Interpersonal Communication be clarified. Without specifically limiting Alternative Interpersonal Communication to verbal communications, ERCOT ISO considers this requirement to be too broad in that it could potentially encompass all types of data exchanges and the means for such exchanges.



Organization	Yes or No	Question 3 Comment
		<p>ERCOT ISO also has concerns regarding the intent of the 60 minute requirement. Is noting the failure and identified remedy within 60 minutes sufficient? If not, it may take significantly longer to acquire new equipment or parts to address a problem thereby making compliance with the 60-minute timeframe practically impossible. ERCOT ISO recommends that the 60 minute requirement be replaced with “as soon as practical/possible” to provide the flexibility necessary to cover those types of situations. ERCOT recognizes that the requirement gives the entity the option of restoring the means within 60-minutes <b>or</b> identifying another alternative, but to the extent an entity only has two options available and/or identified, the 60-minute restoration option would practically be the only option. With respect to the third option (i.e. the option if the first “alternative” fails), the requirement does not state any need to test that communication option. It only requires the entity to identify the additional alternative. If the intent is that the second alternative needs to be tested, that should be clarified. If the intent is merely to identify it and then test it on the next quarterly schedule, that should also be clarified./</p> <p>Also, the need to “identify” the Alternative ICs for the quarterly test seems pointless. The Alternative ICs would already be identified; presumably the entity would have established these means in advance of having to test them. It seems like a pointless exercise to “identify” means already identified. The requirement should impose an obligation to establish ICs and Alternative ICs, and the testing of those should be an independent requirement.</p> <p>With respect to R2, ERCOT recommends clarifying the scope of “impacted entities”. ERCOT ISO believes that the scope should be left to the discretion of the RC/TOP/BA, or that it should be expressly limited to the entities that were the subject of the failed communication.</p> <p>For R3, ERCOT ISO recommends deleting the pre-condition language related to “inter entity” BES “reliability communications”. This introduces confusion as to the scope and timing of communications under this requirement, especially where other standards are subject to Reliability Directives. For example, is a reliability communication a Reliability Directive? If not, what constitutes a reliability communication? The requirement should simply state that English is required for communications from the relevant functional entities.</p> <p>Finally, the risk factor seems inappropriate for the requirement. This is a testing requirement, not real time. The entity has 60 minutes to correct any issues or have a third option already identified and ready to deploy. This requirement does not seem to indicate the need for a high risk factor.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. R1 is now R9; R2 is now R10; R3 is now R11; R4 is now R7 and R8.</p> <p>The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange and, SDT believes that data communication is covered under IRO-010, R3 which states:</p> <p><b>Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission</b></p>		

Organization	Yes or No	Question 3 Comment
		<p>Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)</p> <p>The SDT believes that the revised Requirements of COM-001-2 now satisfy your concern regarding R1, R2 and R3.</p>

4 Do you agree with the definition of Reliability Directive (COM-002-2)? If not, please explain in the comment area.

**Summary Consideration:**

The comments received regarding the definition of Reliability Directive ranged from the being “to open-ended” (PPL) to not “flexible” enough (Public Service Enterprise Group Companies). The SDT expected and viewed these as attempting to reach middle ground.

There were also value added comments such as removing the unnecessary and redundant terms “actual or expected” from the definition, which the SDT agrees with.

A number of commenter’s expressed a concern about the definition not including three-part communication, clearly identifying a Reliability Directive at the time of issue, and applying to verbal communications. While valid concerns, the SDT believes responsibilities should not be imbedded in a definition and, as drafted, the requirements of COM-002 fully address the identification and verbal concerns.

While outside of the scope of question four, one commenter suggested assigning the COM standard project to either the OPCPRC or RCSDT projects. The SDT explained the close coordination and collaboration between the two projects.

Organization	Yes or No	Question 4 Comment
Calpine Corporation		
North Carolina Municipal Power Agency #1		
Operating Personnel Communications Protocols SDT		The OPCP SDT received NERC staff comments to our proposed draft of COM-003-1. In those comments NERC staff proposed the term “Operating Communication”, defined as “communication with the intent to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.” The OPCP SDT is accepting this proposed term in the next version of COM-003-1 for posting. Per agreement reached during the November 17, 2009 joint meeting of the OPCP, RC and RTO SDTs in Charlotte, NC,

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Organization	Yes or No	Question 4 Comment
		<p>pending the outcome of the industry evaluation of your proposed “Reliability Directive” term, the OPCP SDT will incorporate the term into COM-003-1 Requirement R?. The OPCP SDT recommends adding the Transmission Owner to the entities that may issue a Reliability Directive because in many cases (e.g., PJM) Transmission Owners “operate” the transmission system from local control centers.</p> <p>The OPCP SDT points out however that the RC SDT have not adhered to scope coordination efforts between our projects. At the outset of both SDT’s work, the OPCP project would focus upon Requirement R2 of COM-002-2 and the RC SDT would focus on Requirement R1 of COM-002-2.</p>
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT does not believe that the Transmission Owner should be added to the definition as this would be inconsistent with the Functional Model and the registration process.</b></p> <p><b>Regarding the scope issue: The RCSDT received strong consensus comments on our first posting to make revisions to the original R2. The RCSDT began making these revisions in response to stakeholder comments.</b></p>		
American Electric Power	No	<p>AEP would recommend that the words "actual or expected" be removed from the definition as unnecessary and redundant. Since, Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System, then an "expected emergency" is by definition the same as an emergency. If you already have an 'expected' emergency that causes intervention of some sort, then you are already in and "emergency." Therefore, you are either in an emergency condition or not in an emergency condition.</p>
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT agrees with your comment and we have struck “actual or expected” from the proposed definition.</b></p>		
Southwest Power Pool	No	<p>By NERC’s Functional Model the RC, BA, TOP, and DP issues directives. (DP to LSE)Reliability Directive - A communication initiated by a RC, TOP, BA or DP where action by the recipient is necessary to address an actual or expected Emergency.</p>
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT notes that, per the Functional Model, a DP may “direct” an LSE to communicate requests for voluntary load curtailment and not reliability situations:</b></p> <p><b>Item 9 on page 47 of version 5 of the Functional Model: “Directs Load-Serving Entities to communicate requests for voluntary load curtailment.”</b></p> <p><b>The RCSDT will forward this comment to the FMWG for their consideration in revising the language.</b></p>		
Public Service Enterprise Group	No	<p>It is reasonable to require the directing entity to identify which of its communications is a Reliability Directive</p>

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Organization	Yes or No	Question 4 Comment
Companies		either when first communicated or if questioned by the recipient. Flexibility is the key.
<p><b>Response:</b> The RCSDT thanks you for your comment. <b>The SDT agrees it might be reasonable however, it is not appropriate to imbed requirements in definitions.</b></p>		
<p><b>Also please see Requirement R1 of COM-002-3 (When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient.) If the RC, BA, and TOP comply with R1 there is no need for the recipient to question if it is Reliability Directive.</b></p>		
NERC	No	<p>NERC staff proposed the term “Operating Communication” in our comments to Project 2007-02 Operating Personnel Communications Protocols. Operating Communication would be defined as “communication with the intent to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.” This captures all communication that affects BES reliability, not just communication between function entities and Reliability Coordinators. If the proposed COM-003 is adopted with the definition of “Operating Communication” and the corresponding three-part communication requirements, this term “Reliability Directive” is not needed in the COM standard family. However because we cannot pre-judge the outcome of the changes proposed in Project 2007-02, we must view the proposal here on its own merits. The proposal herein limits the scope of coverage to emergency situations, a regression from the current coverage in FERC-approved COM-002 and eliminates a key component of the defense in depth strategy the standards as a body attempt to provide.</p> <p>Furthermore, we believe that COM-002 is outside the scope of Project 2006-06 Reliability Coordination and should properly be addressed by Project 2007-02 Operating Personnel Communications Protocols. The fact that two teams are addressing aspects of the same standard and requirements is confusing and because the projects are not linked, there is a real potential to be disjointed if one or the other project modifies its approach. This could create a gap in reliability coverage. One team should be the primary “owner” of this issue. Analysis of past Bulk Electric System reliability events has shown that the lack of three-part communication has been a contributing factor to adverse reliability issues. We believe it is absolutely imperative that standards concerning all verbal instructions to change or maintain the state of a BES element must involve three-part communication in order to provide defense-in-depth and reduce human error in these events.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. <b>The RCSDT believes that we are addressing the Blackout Recommendation #26 regarding “tighten communications protocols, especially during alert and emergency situations”. Our contention is that we have made a good faith effort at addressing the scope of our SAR and feel that this current position has been validated by stakeholder comments and the NERC Standards Committee (see November 17, 2009 meeting of RCSDT, OPCPSDT and RTOSDT concerning this issue). We understand the concerns expressed above and fully support proceeding with the efforts of the OPCP SDT at improving all communications protocols.</b></p> <p><b>However, the RCSDT recognizes that the scope of our proposed revisions to COM-002 is limited to Emergency situations only. The RCSDT feels that</b></p>		

Organization	Yes or No	Question 4 Comment
<p>the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RCSDT along with the OPCPSDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy”. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RCSDT have developed for COM-002. This will further the efforts of the OCPC SDT in achieving stakeholder consensus for their proposed requirements in COM-003.</p>		
Western Electricity Coordinating Council	No	<p>No, we think IRO 001 R3 covers this more effectively and may be expanded to include transmission operators and balancing authorities. “The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes.”</p>
<p><b>Response: The RCSDT thanks you for your comment. The revised IRO-001, R3 is to establish the authority of the RC to act or issue Reliability Directives. It does not identify the protocols under which a Reliability Directive needs to be issued, acknowledged and carried out. This is handled through the proposed definition as well as the requirements of COM-002.</b></p>		
Manitoba Hydro	No	<p>Reliability Directive is more clearly defined in the FRCC website: “Reliability Directives are used during times of emergency or in situations where reliability may be an issue. A Reliability Directive is usually issued to control or prevent emergency situations. ”Extrapolated from proposed and FRCC: Reliability Directive: An instruction initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority that is used during emergencies or reliability issue which will be used to prevent, control or resolve the situation. This definition makes it clear that it is for reliability issues (Thus Reliability Directive) and clarifies better that this is to be used to control or prevent emergency situations. The existing proposed definition doesn’t fully infer this. With the addition of this glossary term, so should the addition of a definition for Operational Directive (though not used in this requirement). The new items would further compliment and assist each other in the understanding of the two new Glossary terms. From the FRCC website: “Operational Directives are issued by System Operators when it is necessary to perform a critical function on the BPS, i.e., to manipulate or change the status of a BES element such as a circuit breaker or substation disconnects. For example, Balancing Authorities often issue Operational Directives to Generator Operators to raise or lower the MW or MVAR output of generators during the course of balancing load and generation on the BPS. Transmission Operators often issue Operational Directives to substation operators to change the status of voltage control devices or clearing BPS substation equipment or transmission lines for routine maintenance, etc”. Extrapolated from proposed and FRCC: Operational Directive: An instruction initiated by a Transmission Operator or Balancing Authority that is used to perform planned or routine critical functions on the Bulk Power System.</p>
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT believes that our proposed definition of Reliability Directive along with the existing</b></p>		

Organization	Yes or No	Question 4 Comment
<p>definition of Emergency address all of the concepts that you suggest.</p> <p>The comments regarding Operational Directive are more suited to the work of the OPCP SDT as they are developing requirements along this line. We will forward your comment to that team for their consideration.</p>		
Midwest ISO Standards Collaborators	No	<p>The combination of the COM-002-3 standard and the definition of Reliability directive do not clearly specify that the communication is verbal and between only two responsible entities. Otherwise, the communication could be considered a blast call, written correspondence or conversation between operators within the same responsible entity. We believe that the Reliability Directive definition should be: “A verbal communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority to another responsible entity where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”</p>
NERC Standards Review Subcommittee	No	<p>The combination of the COM-002-3 standard and the definition of Reliability directive do not clearly specify that the communication is verbal and between only two responsible entities. Otherwise, the communication could be considered a blast call, written correspondence or conversation between operators within the same responsible entity. We believe that the Reliability Directive definition should be: “A verbal communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority to another registered entity where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”</p>
<p><b>Response: The RCSDT thanks you for your comment. First issue: verbal communication: The intent of the definition is to not preclude text or other forms of communication for issuing Reliability Directives. However, entities are still obligated to comply with the requirements of COM-002.</b></p> <p><b>Second issue: “to another registered entity”:</b> The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Adding this verbiage is not appropriate.</p> <p><b>Third issue: By adding “clearly identifies in the communication that this is a Reliability Directive”, we would have added a requirement to the definition. This is better included in the requirements rather than the definition.</b></p>		
We Energies	No	<p>The measures of COM-002-3 imply verbal one-to one communication which needs to be clear within the definition. Recommend replacing “A communication” with the draft defined term “Interpersonal Communication” assuming it gets approved.</p>
<p><b>Response: The RCSDT thanks you for your comment. The intent of the definition and requirements of COM-002 is to not preclude text or other forms of communication to issue Reliability Directives. However, entities are still obligated to comply with the requirements of COM-002. Interpersonal Communications is a medium rather than a protocol or message.</b></p>		

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 4 Comment
PPL	No	The proposed definition is too open-ended especially since this definition will be used in other standards. Limiting the application of the standard to announced Reliability Directives in the definition itself will ensure only announced Reliability Directives are covered by this standard and other standards.
<p><b>Response: The RCSDT thanks you for your comment. Including the language that you suggest would impose a requirement within the definition. Potential use of the definition in other requirements would have to be reconciled with COM-002 requirements through the standard development process.</b></p>		
E.ON U.S.	No	The term “Interoperability Communication” has been proposed and defined in COM-003 (Project 2007-02), but, the term and definition have not been finalized. Is a “Reliability Directive” communication different from, a subset of, or related to Interoperability Communication? The definition of Reliability Directive should recognize and clarify the linkage to Interoperability Communication.
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT believes that we are addressing the Blackout Recommendation #26 regarding “tighten communications protocols, especially during alert and emergency situations” in our proposed definition and requirements for COM-002. The RCSDT feels that the concept of a Reliability Directive is unique and an important tool for the RC, BA and TOP to maintain reliability. The proposed definition and revisions to COM-002 are consistent with parts of the directives in FERC Order 693. The work of the RCSDT and the OPCPSDT (Project 2007-02) compliment each other and will be coordinated.</b></p>		
Southern Company Services	No	This definition is not needed with the way that the requirements of the standard are written. This definition used with the definition of Emergency could be interpreted to include such routine operations as turning on capacitor banks and next day planning. Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority to an entity inside their Reliability, Transmission, or Balancing Areas where action outside of normal operating practices by the recipient is necessary to address an actual or expected Emergency or when an action is identified as a reliability directive.
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT believes that the proposed definition of Reliability Directive, along with the existing definition of Emergency, provides the heightened awareness that is the goal of the standard and it comports with the directives of Order 693.</b></p>		
Ameren	No	We believe that a reference in the question is to COM-002-3 and not -2. The definition of Reliability directive is not clear to indicate that it only applies to verbal communications. We suggest the definition should be: “A verbal communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority to another responsible entity where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”



Organization	Yes or No	Question 4 Comment
<p><b>Response: The RCSDT thanks you for your comment. The question does reference COM-002-3 as suggested. First issue: verbal communication: The intent of the definition is to not preclude text or other forms of communication for issuing Reliability Directives. However, entities are still obligated to comply with the requirements of COM-002.</b></p> <p><b>Second issue: “to another registered entity”:</b> The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Adding this verbiage is not appropriate.</p> <p><b>Third issue: By adding “clearly identifies in the communication that this is a Reliability Directive”, we would have added a requirement to the definition. This is better included in the requirements rather than the definition.</b></p>		
Hydro-Québec TransEnergie (HQT)	No	We believe that the Reliability Directive definition as defined in COM-002-3 should be: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”
Northeast Power Coordinating Council	No	We believe that the Reliability Directive definition as defined in COM-002-3 should be: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”
IRC Standards Review Committee	No	We believe that the Reliability Directive definition should be: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”
ISO New England Inc	No	We believe that the Reliability Directive definition should be: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”
<p><b>Response: The RCSDT thanks you for your comment. First issue: verbal communication: The intent of the definition is to not preclude text or other forms of communication for issuing Reliability Directives. However, entities are still obligated to comply with the requirements of COM-002.</b></p> <p><b>Second issue: “to another registered entity”:</b> The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Adding this verbiage is not appropriate.</p> <p><b>Third issue: By adding “clearly identifies in the communication that this is a Reliability Directive”, we would have added a requirement to the</b></p>		

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 4 Comment
<p><b>definition. This is better included in the requirements rather than the definition.</b></p>		
FirstEnergy	No	<p>We believe that this standard should be either handed to the OPCPSDT (Project 2007-02) or the OPCPSDT should hand over the COM-003-1 standard to this RCSDT (Project 2006-06); and then COM-002 and COM-003 should be merged. For further explanation of our suggestions, <b>see our comments in Question #8.</b></p>
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RCSDT along with the OPCPSDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RCSDT have developed for COM-002. This will further the efforts of the OCPC SDT in achieving stakeholder consensus for their proposed requirements in COM-003. Merging of the two standards is a work in progress and will ultimately be decided by stakeholder consensus.</b></p>		
Independent Electricity System Operator	No	<p>We suggest the Reliability Directive definition be modified as follows to further clarify the communication protocol: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority and made clear by the initiating entity that this is a Reliability Directive which requires action by the recipient to address an actual or expected Emergency.”</p>
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT believes that your suggested revision would impose a requirement within the definition.</b></p>		
Duke Energy	No	<p>We think that Requirement R1 should be folded into the definition, and R1 deleted. Also delete the Measure and VSL. Suggested rewording of the definition: Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority, and identified as a Reliability Directive to the recipient, where action by the recipient is necessary to address an actual or expected Emergency.</p>
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT believes that your suggested revision would impose a requirement within the definition.</b></p>		
Bonneville Power Administration	Yes	
CECD	Yes	
Central Lincoln	Yes	

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 4 Comment
Exelon	Yes	
Florida Municipal Power Agency and Some Members	Yes	
Northeast Utilities	Yes	
OC Standards Review Group	Yes	
PacifiCorp	Yes	
Pepco Holdings, Inc	Yes	
PNGC Power (15 member utilities)	Yes	
Puget Sound Energy	Yes	
South Carolina Electric and Gas	Yes	
US Bureau of Reclamation	Yes	
Xcel Energy	Yes	
American Transmission Company	Yes	Errata comment: It is COM-002-3.
<b>Response: The RCSDT thanks you for your comment. It is COM-002-3.</b>		
ITC Holdings	Yes	None
<b>Response: The RCSDT thanks you for your comment.</b>		
Western Area Power	Yes	Suggested wording to add clarity: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority requiring action by the recipient to address an actual or expected

Organization	Yes or No	Question 4 Comment
Administration		Emergency.”
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT believes that your proposed revision does not materially add clarity to the proposed definition. Stakeholders generally concur with our proposed definition.</b></p>		
Electric Market Policy	Yes	<p>While I technically agree with the definition, I think it should be expanded to state that a directive that meets this definition must be clearly identified as such by the issuing BA, RC or TOP. In other words, action is mandatory on the recipient’s part only if the issuing party clearly states “this is a Reliability Directive”. In many organized markets, participants (particularly LSE, GOP and PSE) are required to follow instructions only if an Emergency is declared. This concept has historically been used throughout this industry although such use may have been implicit.</p>
<p><b>Response: The RCSDT thanks you for your comment. Your concerns are covered by the requirement R1 of COM-002 which states:</b></p> <p>R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient.</p> <p><b>A requirement can not be imposed by a definition.</b></p>		
ERCOT ISO	No	<p>ERCOT ISO is concerned about defining Reliability Directive in terms of “expected” emergencies. Obviously all relevant entities will operate to avoid emergency situations. However, the term “expected” is vague and ambiguous, and, as such, is open to subjective interpretation thereby creating uncertainty for regulated entities. The definition should put entities on clear notice as to when they have to comply with the relevant requirements. The only way to provide that certainty is to establish a clear, identifiable trigger. To accomplish this, the definition should be limited to actual emergencies. Actual emergencies are specifically defined, not subjective, and lend themselves to demonstration of compliance in an audit. The definition of Emergency lends itself to alignment with specific circumstances that clearly indicate to a regulated entity that it must use Reliability Directives and follow the rules that apply to such directives – “expected emergencies” do not.</p> <p>The requirement should also be revised to clarify that Reliability Directives only apply to communications between separate entities in distinct locations and do not apply to employees of the same company communicating in person in the same location – e.g. a control center.</p>
<p><b>Response: The RCSDT thanks you for your comment. We have removed the words “actual or expected” from the definition. The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance.</b></p>		

**5 Do you agree with the revisions to the Requirements in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

**Summary Consideration:** The bulk of the comments were about the VSL. The SDT agreed and has deleted the Severe VSL and moved the High VSL to Severe. We believe that there are two possible actions within the requirement and failure to perform either warrants a Severe VSL

Several commenters’s expressed concern about three-part communication. The SDT believes that as drafted with the issue, repeat back, and acknowledgement three-part communication is covered.

There was one commenter suggesting the addition of the DP to the applicability The RCSDT notes that, per the Functional Model, a DP may “direct” an LSE to communicate requests for voluntary load curtailment and not reliability situations: Item 9 on page 47 of version 5 of the Functional Model: “Directs Load-Serving Entities to communicate requests for voluntary load curtailment.” Furthermore, The RCSDT will forward this comment to the FMWG for their consideration in revising the language.

While outside of the scope of question five, one commenter suggested assigning the COM standard project to either the OPCPRC or RCSDT projects. The SDT explained the close coordination and collaboration between the two projects.

Organization	Yes or No	Question 5 Comment
Calpine Corporation		
North Carolina Municipal Power Agency #1		
Public Service Enterprise Group Companies		
We Energies		
Xcel Energy		

Organization	Yes or No	Question 5 Comment
Operating Personnel Communications Protocols SDT		<p>The OPCP SDT offers the following Requirements language that addresses a Three-Part Communication Protocol. (It is comprised of two primary Requirements and contains a footnote):</p> <p>R_. Each Reliability Coordinator, Balancing Authority, Transmission Operator, and Transmission Owner that issues a Reliability Directive during verbal Operating Communications shall employ three-part Communication Protocol to ensure that the receiving party has repeated the communication, and shall verbally confirm the communication to be correct or reinitiate the communication until a correct response is given by the recipient. An exception is allowed for Reliability Directives that are issued via “All-Call”, during which the initiator shall ensure that all the receiving parties have positively acknowledged receipt of message rather than verbally repeating the message. [Violation Risk Factor: High][Time Horizon: Real-time Operations]</p> <p>R_. Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity, Distribution Provider and Purchasing-Selling Entity that receives a Reliability Directive during verbal Operating Communications shall employ three-part communication protocol [footnote 1] to repeat the communication back to the initiator and await verbal confirmation from the initiator. An exception is allowed for the recipient of an “All-Call” Reliability Directive to acknowledge receipt of the message and is responsible to contact initiator if message is not understood rather than verbally repeating the message. [Violation Risk Factor: High][Time Horizon: Real time]</p> <p>Footnote 1: A Communication Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly (not necessarily verbatim) to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct by the party who initiated the communication.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. The RCSDT believes that we are addressing the Blackout Recommendation #26 regarding “tighten communications protocols, especially during alert and emergency situations” in our proposed definition and requirements for COM-002. We have not precluded issuance of Reliability Directives by non-verbal means and the requirements of proposed COM-002 would apply. Respecting the importance of Reliability Directives during Emergency situations, the RCSDT does not believe that exceptions to the clear, concise three part communications indicated in COM-002 are appropriate regardless of the medium used to communicate. In addition, the current format of the requirements provides more effective way to measure compliance.</p>		
Ameren	No	(1) As stated in #4 above, the definition of Reliability Directive is not clear. (2) The VSLs for R3 appear to have some redundancy. (3) Also in R3, the phrase regarding R2 should be changed to “(as described in R2, above)”
<p><b>Response:</b> The RCSDT thanks you for your comment.</p> <p>1) Please see response to question 4.</p>		

Organization	Yes or No	Question 5 Comment
<p>2) The RCSDT concurs. We have deleted the Severe VSL and moved the High VSL to the Severe category.</p> <p>3) We have revised the phrase to be consistent with the verbiage in R2 as follows: “per Requirement R2” which meets the intent of your comment “as described”.</p>		
Southwest Power Pool	No	<p>1) By NERC’s Functional Model the RC, BA, TOP, and DP issues directives. (DP to LSE)COM-002-3 R2... the recipient of a Reliability Directive issued per Requirement R1, shall repeat the intent of the Reliability Directive back to the issuer of the Reliability Directive.</p> <p>2) COM-003-1 R5... shall use Three-part Communications when issuing a directive during verbal Interoperability Communications. Implementation Plan for COM-002-3 states R2 will stay, for COM-003-1 states that COM_002-3 R2 will go away. The two requirements don’t agree with each other, COM-002-3 R2 wants the Intent repeated back, where COM-003-1 R5 per the Three-part Communication definition “...the information is repeated back correctly to the party that initiated the communication”.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. 1) The RCSDT notes that, per the Functional Model, a DP may “direct” an LSE to communicate requests for voluntary load curtailment and not reliability situations:</p> <p><b>Item 9 on page 47 of version 5 of the Functional Model:</b> “Directs Load-Serving Entities to communicate requests for voluntary load curtailment.”</p> <p>The RCSDT will forward this comment to the FMWG for their consideration in revising the language.</p> <p>2) The RCSDT believes that we are addressing the Blackout Recommendation #26 regarding “tighten communications protocols, especially during alert and emergency situations” in our proposed definition and requirements for COM-002. The RCSDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RCSDT along with the OPCPSDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RCSDT have developed for COM-002. This will further the efforts of the OCPC SDT in achieving stakeholder consensus for their proposed requirements in COM-003. Merging of the two standards is a work in progress and will ultimately be decided by stakeholder consensus.</p>		
Central Lincoln	No	<p>Consider the following example. Director calls Directee. Telephone is answered by the Directee’s receptionist. Director states that he has a Reliability Directive, and proceeds to deliver it. Receptionist manages to parrot the directive, but has no clue what is being asked. Director confirms receptionist has parroted the directive accurately. Both parties have met the requirements (avoiding a high risk, severe violation), but the three way conversation only wasted the time of both parties and delayed the performance of the directive. The Director should be required to attempt to reach someone with the authority and understanding needed to carry out the</p>

Organization	Yes or No	Question 5 Comment
		directive.
<p><b>Response: The RCSDT thanks you for your comment. The requirements of the standard do not consider how staffing at a particular functional entity is achieved. This is covered in the PER standards. It is incumbent on the registered entity to comply with the requirements of the COM-002 standard as well as all other requirements, some of which will likely be violated in the example above.</b></p>		
CECD	No	<p>For R3, the drafting team should clarify that if a directive is reissued due to a misunderstanding the receiving party should repeat the reissued directive so that the RC, BA or TOP can verify that the directive is understood correctly.</p>
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT believes that this situation is covered by R2.</b></p>		
Duke Energy	No	<ul style="list-style-type: none"> <li>o It is not clear whether Requirements R2 and R3 are intended to apply to other than verbal Reliability Directives. We have difficulty envisioning how “repeat back” and “acknowledge the response” would be expected to work with electronic communications.</li> <li>o Delete the phrase “issued per Requirement R1” from R2, since R1 should be deleted per our Comment #4 above.</li> <li>o Revise R3 as follows, to conform to our proposed revised definition in Comment #4 above: “Each Reliability Coordinator, Transmission Operator, and Balancing Authority that initiates a Reliability Directive shall acknowledge the response from the recipient as correct, or reissue the Reliability Directive to resolve any misunderstandings.”</li> <li>o We believe that only 2 VSLs are appropriate for R3.                             <ul style="list-style-type: none"> <li>o Lower - The responsible entity issued a Reliability Directive, but did not acknowledge that the recipient repeated the intent of the Reliability Directive correctly.</li> <li>o Severe - The responsible entity issued a Reliability Directive and failed to reissue the Reliability Directive to resolve any misunderstandings when the intent of the Reliability Directive was not repeated correctly by the recipient.</li> </ul> </li> </ul>
<p><b>Response: The RCSDT thanks you for your comment. The requirements of COM-002 do not preclude non-verbal issuance of directives. It is incumbent on the entity to ensure compliance with the requirements</b></p> <p><b>R2: We have not retired R1 (see response to Q4) and therefore do not feel this is an appropriate revision.</b></p> <p><b>R3: See response to question 4. The RCSDT believes that R3 is appropriate as written.</b></p> <p><b>VSL: The RCSDT has deleted the Severe VSL and moved the High VSL to Severe. We believe that there are two possible actions within the</b></p>		



Organization	Yes or No	Question 5 Comment
<b>requirement and failure to perform either warrants a Severe VSL.</b>		
Exelon	No	Please clarify R2 to 'repeat back' a Directive; the definition of Directive does not distinguish between verbal and other methods of communication. Is an electronic response to a verbal or non-verbal Directive allowed?
<b>Response: The RCSDT thanks you for your comment. The requirements of COM-002 do not preclude non-verbal issuance of directives. It is incumbent on the entity to ensure compliance with the requirements.</b>		
Manitoba Hydro	No	R2 requires “recipient to repeat back” and R3 requires “RC, TOP, BA to acknowledge”. This procedure is NOT identified as Three Part Communication which in fact is. Three Part Communication should be a common theme for all entities, including RC’s. So why not use the same or similar Requirement as used in COM-002-2 R2 Three-Part Communication.
<b>Response: The RCSDT thanks you for your comment. The concept of three part communication is in existing COM-002-2, R2 and a definition for the term is being proposed by the OCPD SDT. The RCSDT feels that the concept of a Reliability Directive is a unique and important tool for RC, BA and TOP to maintain reliability that is separate from that effort. The requirements of COM-002 are explicit for Reliability Directives and are consistent with parts of the directives in FERC Order 693. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RCSDT have developed for COM-002. This will further the efforts of the OCPD SDT in achieving stakeholder consensus for their proposed requirements in COM-003. Merging of the two standards is a work in progress and will ultimately be decided by stakeholder consensus.</b>		
E.ON U.S.	No	See comment to question 8.
<b>Response: The RCSDT thanks you for your comment. Please see response to question 8.</b>		
NERC	No	See response to Question 4.
<b>Response: The RCSDT thanks you for your comment. Please see response to question 4.</b>		
PPL	No	Suggest removing Purchasing-Selling Entity from the standard as a PSE does not receive Reliability Directives from a BA, RC, or TOP.
<b>Response: The RCSDT thanks you for your comment. Prior stakeholder comments (during previous postings of this standard) indicated that PSE should be an applicable entity.</b>		

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 5 Comment
Independent Electricity System Operator	No	The High and Severe VSLs for R3 appear to be the same. We suggest to remove the High VSL and change the Severe VSL to: "The responsible entity issued a Reliability Directive, but did not acknowledge that the recipient in R2 repeated the intent of the Reliability Directive correctly OR resolve any misunderstandings when the intent of the Reliability Directive was not repeated correctly by the recipient."
<p><b>Response: The RCSDT thanks you for your comment. We have deleted the Severe VSL and moved the High VSL to the Severe category. We believe this meets the intent of your comment.</b></p>		
South Carolina Electric and Gas	No	The SDT needs to evaluate the redundancy associated with COM-003-1 Req 5 and COM-002-3 Req 2&3.
<p><b>Response: The RCSDT thanks you for your comment. The RSDT does not believe that there is redundancy between the standards. COM-002 relates only to Reliability Directives while COM-003 deals with other forms of communication.</b></p>		
Hydro-Québec TransEnergie (HQT)	No	The VSLs for R3 appear to have some redundancy. The Severe VSL and the second condition in the High VSL appear to be similar or the same. We suggest remove the High VSL, and revise the Severe VSL to:"The responsible entity issued a Reliability Directive, but did not acknowledge that the recipient in R2 repeated the intent of the Reliability Directive correctly OR resolve any misunderstandings when the intent of the Reliability Directive was not repeated correctly by the recipient."
Northeast Power Coordinating Council	No	The VSLs for R3 appear to have some redundancy. The Severe VSL and the second condition in the High VSL appear to be similar or the same. Suggest removing the High VSL, and revise the Severe VSL to:"The responsible entity issued a Reliability Directive, but did not acknowledge that the recipient in R2 repeated the intent of the Reliability Directive correctly OR resolve any misunderstandings when the intent of the Reliability Directive was not repeated correctly by the recipient."
<p><b>Response: The RCSDT thanks you for your comment. We have deleted the Severe VSL and moved the High VSL to the Severe category. We believe this meets the intent of your comment.</b></p>		
PNGC Power (15 member utilities)	No	There is a chance that a reliability directive given to a smaller entity will be taken by a receptionist or answering service. Requirement R2 should be more specific about contacting an operational authority directly to relay reliability directives.
<p><b>Response: The RCSDT thanks you for your comment. The requirements of the standard do not consider how staffing at a particular functional entity is achieved. This is covered in the PER standards. It is incumbent on the registered entity to comply with the requirements of the COM-002 standard as well as all other requirements, some of which will likely be violated in the example above.</b></p>		

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 5 Comment
Midwest ISO Standards Collaborators	No	<p>We agree with most of this standard and the apparent intent. However, there are some specific issues. For instance, measurement of compliance to R1 could be challenging. As the VSL is written, it would appear the compliance auditor could judge if a Reliability Directive should have been issued. The VSL language that is problematic is “The responsible entity that required actions to be executed”. Who determines that actions were required? One could argue that failure to identify a communication as a Reliability Directive means that actions weren’t required but it is doubtful the compliance authorities would take this approach. Thus, there would appear to be great judgment left to the compliance auditor in determining if a Reliability Directive should have been issued. The combination of the COM-002-3 standard and the definition of Reliability directive do not clearly specify that the communication is verbal and between only two responsible entities. Otherwise, the communication could be considered a blast call, written correspondence or conversation between operators within the same responsible entity. We have offered proposed modifications to the definition of Reliability Directive in Q5 to solve this issue. Alternatively, the issue could be addressed by modifying the requirements. The VSLs for R3 appear to have some redundancy. The Severe VSL and the second condition in the High VSL appear to be similar or the same.</p>
NERC Standards Review Subcommittee	No	<p>We agree with most of this standard and the apparent intent. However, there are some specific issues. For instance, measurement of compliance to R1 could be challenging. As the VSL is written, it would appear the compliance auditor could judge if a Reliability Directive should have been issued. The VSL language that is problematic is “The responsible entity that required actions to be executed”. Who determines that actions were required? One could argue that failure to identify a communication as a Reliability Directive means that actions weren’t required but it is doubtful the compliance authorities would take this approach. Thus, there would appear to be great judgment left to the compliance auditor in determining if a Reliability Directive should have been issued.</p> <p>The combination of the COM-002-3 standard and the definition of Reliability directive do not clearly specify that the communication is verbal and between only two responsible entities. Otherwise, the communication could be considered a blast call, written correspondence or conversation between operators within the same responsible entity. We have offered proposed modifications to the definition of Reliability Directive in Q5 to solve this issue. Alternatively, the issue could be addressed by modifying the requirements.</p> <p>The VSLs for R3 appear to have some redundancy. The Severe VSL and the second condition in the High VSL appear to be similar or the same.</p>
<p><b>Response: The RCSDT thanks you for your comment.</b></p> <p><b>R1: The VSL is a compliance tool that is ONLY used after a violation of the requirement has been determined. COM-002 does not provide guidance on when to issue a Reliability Directive, only that, when they issue Reliability Directives, they comply with the requirements of COM-002. Proposed IRO-</b></p>		

Organization	Yes or No	Question 5 Comment
<p><b>001-2, R1 covers the issue of conditions that merit issuing a Reliability Directive.</b></p> <p><b>Blast Call: The intent of the definition is to not preclude text or other forms of communication for issuing Reliability Directives. However, entities are still obligated to comply with the requirements of COM-002.</b></p> <p><b>VSL: We have deleted the Severe VSL and moved the High VSL to the Severe category. We believe this meets the intent of your comment.</b></p>		
FirstEnergy	No	<p>We believe that this standard should be either handed to the OPCPSDT (Project 2007-02) or the OPCPSDT should hand over the COM-003-1 standard to this RCSDT (Project 2006-06); and then COM-002 and COM-003 should be merged. For further explanation of our suggestions, see our comments in <b>Question #8</b>.</p>
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RCSDT along with the OPCPSDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RCSDT have developed for COM-002. This will further the efforts of the OCPC SDT in achieving stakeholder consensus for their proposed requirements in COM-003. Merging of the two standards is a work in progress and will ultimately be decided by stakeholder consensus.</b></p>		
American Transmission Company	Yes	
Bonneville Power Administration	Yes	
Electric Market Policy	Yes	
Florida Municipal Power Agency and Some Members	Yes	
IRC Standards Review Committee	Yes	
ISO New England Inc	Yes	
OC Standards Review Group	Yes	
PacifiCorp	Yes	

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 5 Comment
Pepco Holdings, Inc	Yes	
Southern Company Services	Yes	
US Bureau of Reclamation	Yes	
Western Area Power Administration	Yes	
Western Electricity Coordinating Council	Yes	
Puget Sound Energy	No	Under the current proposed language of R2, it appears possible that a recipient of a Reliability Directive not identified as such may still be held responsible for failing to comply with R2, because the word “per” has several meanings. While those meanings do include “in accordance with”, it would be clearer to simply use that phrase. As a result, recommend the replacement of the phrase “issued per” with “identified as such in accordance with”.
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT believes that the suggested revision does not provide additional clarity to the requirements.</b></p>		
ITC Holdings	Yes	None
Northeast Utilities	Yes	Support the intent of the changes. However, it is unclear if the mechanics of R1 require the initiator to actually state “This is a Reliability Directive ...”.
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT intends for such a statement to be made. Using that exact verbiage in a requirement is too prescriptive and we leave the exact language up to the issuer as long as they identify it as a Reliability Directive.</b></p>		
American Electric Power	Yes	Why is the term “three part communications” not used in this set of requirements?
<p><b>Response: The RCSDT thanks you for your comment. While the requirements embody three part communications, the RCSDT believes it is clearer to have explicit requirements for each part of the process that requires a specific action.</b></p>		
ERCOT ISO	No	R1: ERCOT ISO recommends that the requirement be revised to simply state that the entity has to identify

Organization	Yes or No	Question 5 Comment
		<p>when it is a reliability directive, such that it reads as follows:</p> <p><b>R1.</b> When applicable, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p>The deleted language introduces subjectivity and is unnecessary. The use of the defined term implicitly determines when Reliability Directives are issued and it is unnecessary to impose the condition precedent of identifying an action as Reliability Directive. This is unnecessary and just creates confusion.</p> <p>R2: ERCOT ISO recommends removal of “the intent” such that it reads as follows:</p> <p><b>R2.</b> Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat the Reliability Directive back to the issuer of the Reliability Directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p>ERCOT ISO believes using “intent” in this requirement was intended to mitigate the practical fact that it is difficult to repeat, verbatim, a directive. However, use of the word intent could introduce confusion. A directive will require certain actions to accomplish a specific purpose or to solve a specific problem. Thus, the intent of a directive has two components to the intent; the first is the specific actions to be taken and the second is the underlying reason for those actions. The recipient will obviously be privy to the former, but perhaps not the latter. To remove any ambiguity as to whether intent means the actions or the issue to be solved by such actions, the word should be removed. ERCOT believes there is little risk that an auditor will issue a violation if a repeated directive is not verbatim, but reflects the actions to be taken pursuant to the directive.</p> <p>Further, ERCOT ISO recommends working closely with the Operating Personnel Communication Protocol SDT to address all-calls as exceptions. It is practically unreasonable to require multiple recipients on the same communication to repeat the directive back. In fact, it is counterproductive because the time it takes to do that would delay the recipients from taking the needed reliability action(s). ERCOT recommends the following language to address “all-calls”:</p> <p><b>(COM-003) R2.</b> Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive shall repeat the Reliability Directive back to the issuer of the Reliability Directive. An exception is allowed for Reliability Directives that are issued via “All-Call” communications. For All-Calls, the entity issuing the directive shall require recipients to acknowledge receipt of message.</p>

Organization	Yes or No	Question 5 Comment
		<p>R3: ERCOT ISO recommends that R3 be combined with R2. Regardless of whether it is combined with R2, the identification precondition should be removed such that the requirement reads as follows:</p> <p><b>R3.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall acknowledge the response from the recipient of the Reliability Directive in R2 as correct or reissue the Reliability Directive to resolve any misunderstandings. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p>The identification pre-condition is unnecessary – again, the defined term is self-executing in terms of situational application. Imposition of this superfluous language merely creates the potential for confusion.</p> <p>M1: ERCOT ISO recommends removing “required actions to be taken” language for the same reason this pre-condition does not make sense in the requirement, as described above.</p> <p>M3: ERCOT ISO recommends that “Directive” be replaced with “Reliability Directive” because Directive is not the full defined term.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment.</p> <p><b>R1:</b> The RCSDT believes that the requirement, as written is clear and disagrees that it introduces subjectivity. COM-002 does not provide guidance on when to issue a Reliability Directive, only that, when they issue Reliability Directives, they comply with the requirements of COM-002. We feel that adding the phrase “When applicable” adds subjectivity to the requirement.</p> <p><b>R2:</b> Without the words “the intent”, the requirement could be interpreted to mean a verbatim repeat of the Reliability Directive. The RCSDT does not intend for this to be the case and believes that the requirement, as written, is clear and provides sufficient flexibility to meet the requirement. The requirements of COM-002 do not preclude non-verbal (e.g. “all calls”) issuance of directives regardless of the medium. It is incumbent on the entity to ensure compliance with the requirements. The RCSDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RCSDT along with the OPCPSDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment.</p> <p><b>R3:</b> The RCSDT believes that the steps in R2 and R3 are separate and distinct actions that require separate requirements. Otherwise, we would have compound requirements. We concur with your suggested edit to R3.</p> <p><b>M1;</b> We did not make the revision to R1 and therefore M1 is sufficient as written.</p> <p><b>M3:</b> We have revised M3 as suggested and to conform to revised R3.</p>		

6 Do you agree with the use of the defined term “Reliability Directive” in revisions to the Requirements in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The comments regarding question six ranged from small entities being excluded to if regulatory or statutory requirements covers NERC standards. The SDT addressed these by noting registration is not in the SDT scope and NERC’s general council should be contacted for regulatory issues.

A few commenter’s expressed concern with the VSL for R2 and one suggested the words “per Requirement 2,” should be added. The SDT believes the phrase “per Requirement 2” is not necessary as a VSL is only applied AFTER a compliance violation is determined.

Value added comments such as a concern of the use of the word “threat” as it can be defined as cyber-related and suggested replacing “Operating Personnel” with “System Operator” were also made. The SDT concurred and removed the word “threat” and replaced it with “condition” and also made the revision to System Operator.

There were numerous comments regarding the definition of Reliability Directive with multiple wording suggestions. While slightly out of scope for question six, the SDT expected and viewed these as attempting to reach middle ground.

Some commenter’s expressed concern over clarify that the RC has three separate actions. The RC can act, direct others to act, or issue Reliability Directives. The SDT modified R1 to read: “ Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts.”

Note: Based on discussions with FERC staff, the SDT agreed to make the following changes:

IRO-001-2 Requirements R4, R5 and associated Measures and VSLs are moved to IRO-005-4

IRO-001-2 Requirements R6, R7 and associated Measures and VSLs are moved to IRO-002-2

Organization	Yes or No	Question 6 Comment
Calpine Corporation		



Organization	Yes or No	Question 6 Comment
Public Service Enterprise Group Companies		
Operating Personnel Communications Protocols SDT		No Comment
FirstEnergy	No	Although we agree that a clear definition of Reliability Directive should be included in IRO-001-2, the definition should be revised per our comments in Question #8.
<b>Response: The RCSDT thanks you for your comment. Please see response to question 8.</b>		
North Carolina Municipal Power Agency #1	No	For IRO-001-2, the VSL for R2 should retain the words "per Requirement 2," because the requirement itself provides for exceptions to when it is permissible for a directive not to be followed. Requirement 3 then addresses the required action an entity must take in a case where these exceptions apply. Without these words, it appears that a VSL of "Severe" may be assigned if a directive isn't followed under any circumstances.
<b>Response: The RCSDT thanks you for your comment. The phrase “per Requirement 2” is not necessary as a VSL is only applied AFTER a compliance violation is determined. The requirement provides the exceptions and compliance will be judged based on this.</b>		
NERC	No	<p>In principle, NERC staff disagrees with the necessity of defining a term “Reliability Directive.” However, the principle involved in the standard is valid. The standard needs to ensure that if the Reliability Coordinator directs an entity to take action that results in an adverse reliability impact, that entity has a chance to raise valid objection to that action.</p> <p>Additional clarification is needed to determine if regulatory or statutory requirements covers NERC standards. One possible solution would be to modify R3 from “its inability to perform” to “its inability or concern to perform.”</p> <p>Furthermore, in R4 and R5 the RC is expected to identify “threats” and notify all impacted parties. We have concerns that “threat” can be defined as cyber-related. Was the standard intended to cover all anticipated threats, or just transmission/operating issues?</p> <p>R6 Since Operating Personnel is not a NERC defined term, we suggest replacing “Operating Personnel” with “System Operator.”</p>
<b>Response: The RCSDT thanks you for your comment.</b>		

Organization	Yes or No	Question 6 Comment
<p><b>“Concern”:</b> We believe that your concern is covered by the “unless such actions would violate safety, equipment, or regulatory or statutory requirements” statement in R2.</p> <p><b>Regulatory:</b> The RCSDT suggests that NERC staff seek input from NERC’s General Counsel in regards to this issue.</p> <p><b>R4 and R5:</b> The word threat was not intended to be cyber related. The CIP standards cover cyber “threats”. To that end, we have removed the word “threat” and replaced it with “condition”. R4, R5 and associated Measures and VSLs are moved to IRO-005-4.</p> <p><b>R6:</b> We concur and have made this revision.</p>		
OC Standards Review Group	No	<p>In R1, we suggest adding “direct” in the sentence to read: “Each Reliability Coordinator shall act, “direct” or issue Reliability Directives....” During adverse reliability impact events, system operators should not be bound by a cumbersome three part communications regime that could prevent prompt responses to the event. The suggested change would allow for non reliability directives to be issued to correct adverse reliability impacts.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. The RCSDT agrees in principle with adding “direct” to the requirement. In addition, the requirements of COM-002 should be complied with, especially in such situations. We have revised R1 to state: Each Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. <b>To address comments received on R1, we have also revised the Purpose Statement to:</b> To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System</p> <p><b>Conforming revisions to M1 and the VSLs for R1 were also made.</b></p>		
Southern Company Services	No	<p>Including the requirement of issuing directives every time an action is required by an entity assumes that entities cannot work in a spirit of cooperation to maintain the reliability of the Bulk Electric System.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. <b>To address your concern, we have revised R1 to state:</b> “Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts.</p> <p><b>To address comments received on R1, we have also revised the Purpose Statement to:</b> To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System</p>		

Organization	Yes or No	Question 6 Comment
We Energies	No	<p>IRO-001-2 R1 opens the door for determining if the RC should have issued a Reliability Directive to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts which goes beyond the intention of Emergency. The RC should have any and all options to achieve the required actions, one of which is a Reliability Directive. Agreed if the RC issues a Reliability Directive it needs to be followed or notified why it can't be followed. In IRO-009 ...."the Reliability Coordinator shall have one or more Operating Processes, Procedures, or Plans that identify actions it shall take or actions it shall direct others to take (up to and including load shedding) to mitigate the magnitude and duration of" .... Recommend "Each Reliability Coordinator, in it's sole discretion, shall take action independently or by others or issue Reliability Directives for actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. "In addition the measures assume the RC only works through others, and others only act under Directive from the RC and do not allow for operational data to be used to show action was taken like SCADA logs, or system parameter records for any entity.</p> <p>The Data Retention is excessive, RC, BA, TOP are on a 3 yr audit cycle, others on a 6yr cycle this is way too long, recommend one full calendar year plus the current year.</p>
<p><b>Response: The RCSDT thanks you for your comment. To address your concern, we have revised R1 to state:</b> Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts.</p> <p><b>To address comments received on R1, we have also revised the Purpose Statement to:</b> To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System</p> <ul style="list-style-type: none"> <li>o <b>We have revised the data retention section to:</b> The Reliability Coordinator shall retain its evidence for 90 days for Requirements R1 and Measures M1.</li> <li>o The Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity or Load Serving Entity shall retain its evidence for 90 days for Requirements R2 and R3, Measures M2 and M3.</li> </ul>		

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 6 Comment
American Electric Power	No	Please refer to our response to question #4.
Hydro-Québec TransEnergie (HQT)	No	Please see our proposed wording change under Q4.
Independent Electricity System Operator	No	Please see our proposed wording change under Q4.
IRC Standards Review Committee	No	Please see our proposed wording change under Q4.
Northeast Power Coordinating Council	No	Please see our proposed wording change under Question 4.
<b>Response: The RCSDT thanks you for your comment. Please see response to Question 4.</b>		
E.ON U.S.	No	See comments to question 4 and question 8.
<b>Response: The RCSDT thanks you for your comment. Please see response to Question 4 and Question 8.</b>		
Ameren	No	See response to #4.
Electric Market Policy	No	See response to Q4
<b>Response: The RCSDT thanks you for your comment. Please see response to Question 4.</b>		
PNGC Power (15 member utilities)	No	Small non 24/7 entities in WECC should be excluded from these requirements. Not doing so will create a financial burden for little discernable effect.
<b>Response: The RCSDT thanks you for your comment. It is beyond the scope of the RCSDT to determine registration or compliance issues.</b>		
Manitoba Hydro	No	The use of this definition in this requirement appears appropriate at this time, but the definition of Reliability Directive issue remain the same as identified on Question 4 of this document.

Organization	Yes or No	Question 6 Comment
<b>Response: The RCSDT thanks you for your comment. Please see response to question 4.</b>		
Central Lincoln	No	These requirements should be waived in the WECC region, where the RC has stated they will not be interacting with most of the registered entities. <a href="http://www.bpa.gov/corporate/business/reliability/Docs/2007/PNSC_RE_Data_Letter_2_070723.pdf">http://www.bpa.gov/corporate/business/reliability/Docs/2007/PNSC_RE_Data_Letter_2_070723.pdf</a>
<b>Response: The RCSDT thanks you for your comment. It is beyond the scope of the RCSDT to determine registration or compliance issues.</b>		
US Bureau of Reclamation	No	This change is problematic in that any automatic protective element operation that trips a BES element could be construed to be an Adverse Reliability Impact. The modification eliminated the phrase “that affects a widespread area of the Interconnection” which clarified the scope of “uncontrolled separation”. We would need the definition to be adjusted to delete “uncontrolled separation” as it is included in the definition of Cascading.
<b>Response: The RCSDT thanks you for your comment. We concur with your comment and have removed “uncontrolled separation” from the proposed definition revision.</b>		
ISO New England Inc	No	We believe that the Reliability Directive definition should be: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”
<b>Response: The RCSDT thanks you for your comment. The RCSDT believes that your suggested revision would impose a requirement within the definition.</b>		
Western Electricity Coordinating Council	No	We do not agree with the definition (see above question 4) but it does clear up when a directive is required.
<b>Response: The RCSDT thanks you for your comment. Please see response to question 4.</b>		
Midwest ISO Standards Collaborators	No	We largely agree with the use of the Reliability Directive term but have some suggested some refinements in the previous questions to the definition and requirements.
NERC Standards Review Subcommittee	No	We largely agree with the use of the Reliability Directive term but have some suggested some refinements in the previous questions to the definition and requirements.

Organization	Yes or No	Question 6 Comment
<p><b>Response: The RCSDT thanks you for your comment. Please see responses to questions 4 and 5.</b></p>		
<p>Duke Energy</p>	<p>No</p>	<p>We propose a revised definition of the term “Reliability Directive” in our Comment #4 above.                      Requirement R1 should be reworded to clarify that the RC has three separate actions. The RC can act, direct others to act, or issue Reliability Directives.                      Requirements R2 and R3 should be revised to include the fact that the listed entities must comply with RC directions as well as Reliability Directives, or inform the RC of their inability to comply.                      Measures and VSLs should also be revised accordingly.</p>
<p><b>Response: The RCSDT thanks you for your comment.</b></p> <p><b>Definition: Please see response to question 4 with respect to the definition.</b></p> <p><b>R1: To address your comment as well as the comments of other stakeholders, we have revised R1 to state:</b> Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts..</p> <p><b>We have also revised the Purpose Statement to:</b> To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System</p> <p><b>Conforming revisions to M1 and the VSLs for R1 were also made.</b></p> <p><b>R2 and R3: The RCSDT believes that revised R2 and R3 now satisfy your requested revision.</b></p>		
<p>American Transmission Company</p>	<p>Yes</p>	
<p>Bonneville Power Administration</p>	<p>Yes</p>	
<p>CECD</p>	<p>Yes</p>	
<p>Exelon</p>	<p>Yes</p>	
<p>Florida Municipal Power Agency</p>	<p>Yes</p>	

Organization	Yes or No	Question 6 Comment
and Some Members		
Northeast Utilities	Yes	
PacifiCorp	Yes	
PPL	Yes	
Puget Sound Energy	Yes	
South Carolina Electric and Gas	Yes	
Southwest Power Pool	Yes	
Western Area Power Administration	Yes	
Xcel Energy	Yes	
ITC Holdings	Yes	None
Pepco Holdings, Inc	Yes	Requirement R1 should recognize the RC's option to "direct others to act"
<p><b>Response: The RCSDT thanks you for your comment. R1: To address your comment as well as the comments of other stakeholders, we have revised R1 to state:</b> Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts.</p> <p><b>We have also revised the Purpose Statement to:</b> To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System</p> <p><b>Conforming revisions to M1 and the VSLs for R1 were also made.</b></p>		
ERCOT ISO	No	As an initial matter, ERCOT ISO disagrees with the definition of Reliability Directive - See response to Question 4.

Organization	Yes or No	Question 6 Comment
		<p>With respect to the use of Reliability Directive in IRO-001-2, ERCOT ISO does not necessarily take issue with using the term in this context. However, by doing so, the Drafting Team should consider whether doing so effectively defines Emergency in terms of the specific conditions that define Adverse Reliability Impact (i.e. instability, uncontrolled separation or cascading), because Reliability Directives, by definition, are only issued during emergencies, and pursuant to R1 of IRO-001-2, the relevant entities issue a Reliability Directive for instances that result in Adverse Reliability Impacts. Accordingly, use of Reliability Directive in this Standard may effectively revise the definition of Emergency (although it is arguable that the relevant specific conditions are clearly Emergency conditions), and ERCOT ISO questions whether this is appropriate. It may be advisable to not use the term here or to revise the definition to explicitly include these conditions.</p> <p>In addition, ERCOT ISO recommends the following non-substantive revisions to R1, R2 and R3.</p> <p style="text-align: center;"><b><u>R1</u></b></p> <p style="text-align: center;"><b>SDT PROPOSED LANGUAGE</b></p> <p><b>R1.</b> Each Reliability Coordinator shall act or issue Reliability Directives for actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i></p> <p style="text-align: center;"><b>ERCOT PROPOSED LANGUAGE</b></p> <p><b>R1.</b> Each Reliability Coordinator shall act to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. RC actions pursuant to this requirement may include the issuance of Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i></p> <p style="text-align: center;"><b><u>R2</u></b></p> <p style="text-align: center;"><b>SDT PROPOSED LANGUAGE</b></p> <p><b>R2.</b> Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall comply with its Reliability Coordinator's Reliability Directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i></p>



Organization	Yes or No	Question 6 Comment
		<p style="text-align: center;"><b>ERCOT PROPOSED LANGUAGE</b></p> <p><b>R2.</b> Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall comply with Reliability Directives issued pursuant to R1 unless such actions would violate safety, equipment, or regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i></p> <p style="text-align: center;"><b><u>R3</u></b></p> <p style="text-align: center;"><b>SDT PROPOSED LANGUAGE</b></p> <p><b>R3.</b> Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform an issued Reliability Directive. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i></p> <p style="text-align: center;"><b>ERCOT PROPOSED LANGUAGE</b></p> <p><b>R3.</b> Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator if it cannot perform a Reliability Directive because it would violate safety, equipment, or regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i></p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses to your comments on questions 4 and 5.</p> <p><b>Definitions:</b> An Emergency is a system condition or event. Adverse Reliability Impact is the result of an Emergency or some other condition or event.</p> <p><b>To address your comment as well as the comments of other stakeholders, we have revised R1 to state:</b> Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts.</p> <p><b>We have also revised the Purpose Statement to:</b> To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System</p> <p><b>Conforming revisions to M1 and the VSLs for R1 were also made.</b></p> <p><b>R1, R2, R3:</b> The RCSDT thanks you for your suggested revisions to R1, R2 and R3. Revised wording best reflects stakeholder consensus. The RCSDT developed wording of the requirements provides clear direction for actions of applicable entities and to provide clarity regarding compliance.</p>		

Do you agree with the revisions to the Requirements in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

**Summary Consideration:** Several commenters made suggestions regarding R2. The original requirement was designed to accomplish in one requirement what is proposed by the commenters as three procedural requirements. R2 is worded to focus on defining what a “compliant plan” is. In the current requirement a “proposed plan” is not the same as a “compliant plan”.

The SDT viewed what the commenters are suggesting as follows:

- The initiating RC would submit its “proposed plan” to the other RCs
- The receiving RCs would provide the initiating RC with their responses indicating whether or not they agree with the proposed roles/actions offered by the initiating RC
- If one or more RCs do not agree with the roles/actions, then the initiating RC would be required to offer an alternative proposal (and go back to the first bullet)
- When all RCs acknowledge that the proposed roles/actions in the revised “proposed plan” are acceptable, then and only then would the “proposed plan” become a “compliant plan”

A closer reading of the current R2 would show the current R2 accomplishes the exact same result but does so without interjecting the need for documenting the intervening processes. The SDT does not see the need to document why each proposal was or was not accepted; nor does the SDT see the need to document the negotiations that are involved in getting to “an agreed to plan”. For example the comments’ subrequirement to show the RC submitted its plan would require a paper trail for the request; followed by a paper trail for the responses, followed by more paperwork if the RCs are not in agreement. In the end, the only action that matters (in both the SDT version and in the commenters alternative version) is a plan that works, and a plan that if others are involved must have their concurrence that those others will participate.

R2 does not impose a requirement to get agreements; what R2 does is to require that a “compliant plan” be developed. A proposed plan does not solve problems. That proposed plan is NOT compliant with R2 if it only assumes that other RC will effect the actions in the proposal; neither is it compliant if the proposed actions are not acceptable to the other RCs who are required to act. To be compliant the initiating RC must either have the concurrence (i.e. agreement) of the other RCs for their respective part(s) in the proposed plans OR the plan must not include those RCs.

R2 says to be compliant the other RC must agree with the “proposed plan” before that “proposed plan” is acceptable as a “compliant plan”. Having a plan that requires someone else to do an action, but that other entity will not effect that action, will not resolve the problem at hand. Further having documentation that someone refuses to participate in the proposed plan does nothing to solve the problem at hand.

Organization	Yes or No	Question 7 Comment
Ameren		
American Transmission Company		
Calpine Corporation		
CECD		
E.ON U.S.		
Exelon		
North Carolina Municipal Power Agency #1		
Northeast Utilities		
Public Service Enterprise Group Companies		
Puget Sound Energy	Yes	
We Energies		
Operating Personnel Communications Protocols SDT		No Comment
PacifiCorp		No comment
Manitoba Hydro	No	

Organization	Yes or No	Question 7 Comment
Hydro-Québec TransÉnergie (HQT)	No	<p>R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, Subrequirement R2.1 places a burden to the initiating RC for actions over which it may not have any control, viz. agreeing to the procedures, process or plan by the receiving RCs that are required to take actions. We believe there should be requirements for:</p> <ul style="list-style-type: none"> <li>a. The initiating RC to seek agreements by the other RCs that are required to take actions;</li> <li>b. The receiving RCs to indicate agreement, or otherwise with a reason; and;</li> <li>c. The initiating RC to revise the procedures, process or plan. These requirements would place the needed responsibilities to the appropriate entities. If the SDT agrees with revising R2 as suggested, then other requirements that may be affected by this change may need to be revised accordingly.</li> </ul> <p>(ii) There is an extra “or” in the R8 clause: “unless such actions would violate safety, equipment, or regulatory or statutory requirements”.</p>
IRC Standards Review Committee	No	<p>(i) R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, Subrequirements R2.1 places a burden to the initiating RC for actions over which it may not have any control, viz. agreeing to the procedures, process or plan by the receiving RCs that are required to take actions. We believe there should be requirements for:</p> <ul style="list-style-type: none"> <li>a. The initiating RC to seek agreements by the other RCs that are required to take actions;</li> <li>b. The receiving RCs to indicate agreement, or otherwise with a reason; and;</li> <li>c. The initiating RC to revise the procedures, process or plan. These requirements would place the needed responsibilities to the appropriate entities. If the SDT agrees with revising R2 as suggested, then other requirements that may be affected by this change may need to be revised accordingly.</li> </ul> <p>(ii) There is an extra “or” in the R8 clause: “unless such actions would violate safety, equipment, or regulatory or statutory requirements”.</p>
Northeast Power Coordinating Council	No	<p>(i) R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, Subrequirement R2.1 places a burden on the initiating RC for actions over which it may not have any control, namely agreeing to the procedures, processes or plans by the receiving RCs that are required to take actions. There should be requirements for:</p> <ul style="list-style-type: none"> <li>a. The initiating RC to seek agreements by the other RCs that are required to take actions;</li> <li>b. The receiving RCs to indicate agreement, or otherwise with a reason; and;</li> <li>c. The initiating RC to revise the procedures, processes or plans. These requirements would place the needed responsibilities on the appropriate entities. If the SDT agrees with revising R2 as suggested, then other requirements may be affected by this change, and may need to be revised accordingly.</li> </ul> <p>(ii) There is an extra “or” in the R8 clause preceding “regulatory”: “unless such actions would violate safety, equipment, or regulatory or statutory requirements”.</p>

Organization	Yes or No	Question 7 Comment
ISO New England Inc	No	<p>R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, Subrequirements R2.1 places a burden to the initiating RC for actions over which it may not have any control, viz. agreeing to the procedures, process or plan by the receiving RCs that are required to take actions. We believe there should be requirements for: a. The initiating RC to seek agreements by the other RCs that are required to take actions; b. The receiving RCs to indicate agreement, or otherwise with a reason; and c. The initiating RC to revise the procedures, process or plan. These requirements would place the needed responsibilities to the appropriate entities. If the SDT agrees with revising R2 as suggested, then other requirements that may be affected by this change may need to be revised accordingly.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. The original requirement was designed to accomplish in one requirement what is proposed by the commenters as three procedural requirements. R2 is worded to focus on defining what a “compliant plan” is. In the current requirement a “proposed plan” is not the same as a “compliant plan”.</p> <p>The SDT viewed what the commenters are suggesting as follows:</p> <ul style="list-style-type: none"> <li>• The initiating RC would submit its “proposed plan” to the other RCs</li> <li>• The receiving RCs would provide the initiating RC with their responses indicating whether or not they agree with the proposed roles/actions offered by the initiating RC</li> <li>• If one or more RCs do not agree with the roles/actions, then the initiating RC would be required to offer an alternative proposal (and go back to the first bullet)</li> <li>• When all RCs acknowledge that the proposed roles/actions in the revised “proposed plan” are acceptable, then and only then would the “proposed plan” become a “compliant plan”</li> </ul> <p>A closer reading of the current R2 would show the current R2 accomplishes the exact same result but does so without interjecting the need for documenting the intervening processes. The SDT does not see the need to document why each proposal was or was not accepted; nor does the SDT see the need for document the negotiations that are involved in getting to “an agreed to plan”. For example the comments’ subrequirement to show the RC submitted its plan would require a paper trail for the request; followed by a paper trail for the responses, followed by more paperwork if the RCs are not in agreement. In the end, the only action that matters (in both the SDT version and in the commenters alternative version) is a plan that works, and a plan that if others are involved must have their concurrence that those others will participate.</p> <p>R2 does not impose a requirement to get agreements; what R2 does is to require that a “compliant plan” be developed. A proposed plan does not solve problems. That proposed plan is NOT compliant with R2 if it only assumes that other RC will effect the actions in the proposal; neither is it compliant if the proposed actions are not acceptable to the other RCs who are required to act. To be compliant the initiating RC must either have the concurrence (i.e. agreement) of the other RCs for their respective part(s) in the proposed plans OR the plan must not include those RCs.</p> <p>R2 says to be compliant the other RC must agree with the “proposed plan” before that “proposed plan” is acceptable as a “compliant plan”. Having a plan that requires someone else to do an action, but that other entity will not effect that action, will not resolve the problem at hand. Further having</p>		

Organization	Yes or No	Question 7 Comment
documentation that someone refuses to participate in the proposed plan does nothing to solve the problem at hand.		
Midwest ISO Standards Collaborators	No	<p>R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, it inappropriately places the burden on the same RC to obtain the agreement of impacted RCs. No RC can be forced to agree. Rather R2 should remove the bullet to require agreement from the impacted RC and a new requirement should be written to require the impacted RC to acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given as the reason for not agreeing with the Operating Process, Procedure or Plan. This contributes to reliability by forcing the impacted RC to take action if the action is reasonable. There is an extra “or” in the R8 clause: “unless such actions would violate safety, equipment, or regulatory or statutory requirements”.</p> <p>IRO-014-2 R2 VSLs differentiate violations based on whether the plans, processes, and procedures were distributed or agreed to. How can another RC agree to them if it has not received them? Because it is unlikely that an RC will make notifications without exchanging reliability information or vice versa for IRO-014-2 R3, we suggest a more appropriate delineation for the VSLs would be based on the number of other impacted RCs that were not informed. IRO-014-2 R4 VSLs should be defined based upon the number of conference calls the RC does not participate in. R4 requires each RC to participate in “agreed upon conference calls”. Because the statement “conference calls” is plural, VSLs need to be set based on the aggregate of calls not participated in. Failure to assign VSLs in this way is equivalent to setting the requirement to “agreed upon conference call” and causes the VSLs to be in violation guideline 3 that the Commission established in their June 2008 Order on VSLs. Guideline 3 states that the VSL must be consistent with the requirement and cannot “redefine or undermine the requirement”. Clearly, these VSLs do. R5’s Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSLs since Severe uses the word any. Based on the SDT’s response to our comment from the last time, we believe instead of any they mean “no impacted”. Unfortunately, “any impacted” could be one or two or higher. If it is one, it matches the Moderate VSL. The VSL for R8 needs to include the “unless such actions would violate safety, equipment, regulatory or statutory requirement” clause.</p> <p>In R1, should “Operating Procedures, Processes, or Plans” be “Operating Procedures, Operating Processes, or Operating Plans” to comport with the definitions in the NERC Glossary of Terms. We believe “Operating” is implied on “Processes” and “Plans” but believe it is more appropriate to make the meaning explicit with this modification since we are dealing with formal definitions.</p>

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 7 Comment
NERC Standards Review Subcommittee	No	<p>R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, it inappropriately places the burden on the same RC to obtain the agreement of impacted RCs. No RC can be forced to agree. Rather R2 should remove the bullet to require agreement from the impacted RC and a new requirement should be written to require the impacted RC to acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given as the reason for not agreeing with the Operating Process, Procedure or Plan. This contributes to reliability by forcing the impacted RC to take action if the action is reasonable. There is an extra “or” in the R8 clause: “unless such actions would violate safety, equipment, or regulatory or statutory requirements”.</p> <p>IRO-014-2 R2 VSLs differentiate violations based on whether the plans, processes, and procedures were distributed or agreed to. How can another RC agree to them if it has not received them? Because it is unlikely that an RC will make notifications without exchanging reliability information or vice versa for IRO-014-2 R3, we suggest a more appropriate delineation for the VSLs would be based on the number of other impacted RCs that were not informed. IRO-014-2 R4 VSLs should be defined based upon the number of conference calls the RC does not participate in. R4 requires each RC to participate in “agreed upon conference calls”. Because the statement “conference calls” is plural, VSLs need to be set based on the aggregate of calls not participated in. Failure to assign VSLs in this way is equivalent to setting the requirement to “agreed upon conference call” and causes the VSLs to be in violation guideline 3 that the Commission established in their June 2008 Order on VSLs. Guideline 3 states that the VSL must be consistent with the requirement and cannot “redefine or undermine the requirement”. Clearly, these VSLs do. R5’s Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSLs since Severe uses the word any. Based on the SDT’s response to our comment from the last time, we believe instead of any they mean “no impacted”. Unfortunately, “any impacted” could be one or two or higher. If it is one, it matches the Moderate VSL. The VSL for R8 needs to include the “unless such actions would violate safety, equipment, regulatory or statutory requirement” clause.</p>
Independent Electricity System Operator	No	<p>R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, Subrequirements R2.1 places a burden to the initiating RC for actions over which it may not have any control, viz. agreeing to the procedures, process or plan by the receiving RCs that are required to take actions. We believe there should be requirements for: a. The initiating RC to seek agreements by the other RCs that are required to take actions; b. The receiving RCs to indicate agreement, or otherwise with a reason; and; c. The initiating RC to revise the procedures, process or plan. These requirements would place the needed responsibilities to the appropriate entities. If the SDT agrees with revising R2 as suggested, then other requirements that may be affected by this change may need to be revised accordingly. There is an extra “or” in the R8 clause: “unless such</p>

Organization	Yes or No	Question 7 Comment
		<p>actions would violate safety, equipment, or regulatory or statutory requirements”.</p> <p>IRO-014-2 R2 VSLs differentiate violations based on whether the plans, processes, and procedures were distributed or agreed to. If an intended RC never received the plans, processes and procedures, it would not be aware of the need to agree to them. Hence, if the plans, etc. were not distributed, then the initiating RC will be assigned a Moderate VSL but never any higher VSLs even if no agreements were received (since no other RCs had received the plans to begin with). We suggest the SDT to consider rearranging the VSLs and in accordance with any changes to R2 reflecting our suggested changes summarized under Q7. Because it is unlikely that an RC will make notifications without exchanging reliability information or vice versa for IRO-014-2 R3, we suggest a more appropriate delineation for the VSLs would be based on the number of other impacted RCs that were not informed.</p> <p>IRO-014-2 R4 VSLs should be defined based upon the number of conference calls the RC does not participate in. R4 requires each RC to participate in “agreed upon conference calls”. Because the statement “conference calls” is plural, VSLs need to be set based on the aggregate of calls not participated in. Failure to assign VSLs in this way is equivalent to setting the requirement to “agreed upon conference call” and causes the VSLs to be in violation guideline 3 that the Commission established in their June 2008 Order on VSLs. Guideline 3 states that the VSL must be consistent with the requirement and cannot “redefine or undermine the requirement”. Clearly, these VSLs do.</p> <p>The VSL for R8 needs to include the “unless such actions would violate safety, equipment, regulatory or statutory requirement” clause.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. The original requirement was designed to accomplish in one requirement what is proposed by the commenters as three procedural requirements. R2 is worded to focus on defining what a “compliant plan” is. In the current requirement a “proposed plan” is not the same as a “compliant plan”.</p> <p>The SDT viewed what the commenters are suggesting as follows:</p> <ul style="list-style-type: none"> <li>• The initiating RC would submit its “proposed plan” to the other RCs</li> <li>• The receiving RCs would provide the initiating RC with their responses indicating whether or not they agree with the proposed roles/actions offered by the initiating RC</li> <li>• If one or more RCs do not agree with the roles/actions, then the initiating RC would be required to offer an alternative proposal (and go back to the first bullet)</li> <li>• When all RCs acknowledge that the proposed roles/actions in the revised “proposed plan” are acceptable, then and only then would the “proposed plan” become a “compliant plan”</li> </ul> <p>A closer reading of the current R2 would show the the current R2 accomplish the exact same result but does so without interjecting the need for</p>		



Organization	Yes or No	Question 7 Comment
		<p>documenting the intervening processes. The SDT does not see the need to document why each proposal was or was not accepted; nor does the SDT see the need for document the negotiations that are involved in getting to “an agreed to plan”. For example the comments’ subrequirement to show the RC submitted its plan would require a paper trail for the request; followed by a paper trail for the responses, followed by more paperwork if the RCs are not in agreement. In the end, the only action that matters (in both the SDT version and in the commenters alternative version) is a plan that works, and a plan that if others are involved must have their concurrence that those others will participate.</p> <p>R2 does not impose a requirement to get agreements; what R2 does is to require that a “compliant plan” be developed. A proposed plan does not solve problems. That proposed plan is NOT compliant with R2 if it only assumes that other RC will effect the actions in the proposal; neither is it compliant if the proposed actions are not acceptable to the other RCs who are required to act. To be compliant the initiating RC must either have the concurrence (i.e. agreement) of the other RCs for their respective part(s) in the proposed plans OR the plan must not include those RCs.</p> <p>R2 says to be compliant the other RC must agree with the “proposed plan” before that “proposed plan” is acceptable as a “compliant plan”. Having a plan that requires someone else to do an action, but that other entity will not effect that action, will not resolve the problem at hand. Further having documentation that someone refuses to participate in the proposed plan does nothing to solve the problem at hand.</p> <p>IRO-014 VSLs: R2: The VSLs are differentiated as you suggest.</p> <p>R3: The RCSDT does not believe that is the correct delineation of the requirement which requires notification of each impacted RC. What if there is only one and there was no notification?</p> <p>R4: The RCSDT contends that the requirement specifies participation in all agreed upon calls. If the RC misses an agreed upon call, it has failed to meet the requirement.</p> <p>R5: The RCSDT disagrees. If there is only one impacted RC and no notification is made, it should be a Severe violation.</p> <p>R8: The phrase does not need to be in the VSL. If a plan was not implemented due to safety reasons, then the requirement was not violated and the VSL would not be considered.</p> <p>R1: We have revised the requirement per your suggestion to R1, R2 and R3.</p>
Electric Market Policy	No	<p>Agree with most. However, the language proposed for use in IRO-014-2 @ R5 and R6 needs clarity. There needs to be a way to determine who is required to do what depending upon whether the party is a) Reliability Coordinator who has the identified Adverse Reliability Impact) An impacted affected Reliability Coordinator. Suggest revising so that these read similar to R7 and R8.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. The RCSDT does not understand your comment. We believe that the requirements are clear as written as to what each entity must do.</p>		

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 7 Comment
Western Area Power Administration	No	Comments: In R1 & R2, the first sentence is redundant. The phrase which was added “For conditions or activities that impact other RC Areas...” should be removed.
<b>Response: The RCSDT thanks you for your comment.</b> The SDT agrees and has made the suggested revision.		
OC Standards Review Group	No	In R1.6, we suggest adding “BES” before “conditions” such that the sentence reads: “Authority to act to prevent and mitigate “BES” conditions.....”
<p><b>Response: The RCSDT thanks you for your comment.</b> The SDT disagrees. Adverse Reliability Impact is defined as follows:</p> <p><i>The impact of an event that results in frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or cascading outages that affects a widespread area of the Interconnection.</i></p> <p>If a condition will cause interconnection “cascading, instability, ...” the RC should be mandated to act whether or not the initiating condition is part of the BES.</p>		
Florida Municipal Power Agency and Some Members	No	In requirements R7 and R8, the term mitigation plan is used. Since mitigation plan has another specific meaning (e.g., a mitigation plan for non-compliance with a standard), FMPA suggests using a different term with the same meaning, e.g., ameliorative plan, alleviation plan, abatement plan, to help avoid confusion.
<b>Response: The RCSDT thanks you for your comment.</b> The SDT disagrees. Lower case “mitigation” is a proper English word		
NERC	No	NERC staff believes that the original language in IRO-016-1 was clearer than the proposed requirements R5 through R8. Additionally, we believe that this standard is already covered in the certification process. We recommend that this standard, with the exception of R4, be retired and the certification process be revisited to ensure that IRO-016-1 R1 is covered. Furthermore, operating guidelines should be developed to address the content of R5 through R8.
<p><b>Response: The RCSDT thanks you for your comment.</b> The RCSDT is not clear how requirements to make notifications, develop and implement mitigations plans belong in the certification process. We are also unclear what constitutes an operating guideline. Based on this, we will retain the requirements in IRO-014 as supported through the stakeholder process. Requirements R5 through R8 were brought into IRO-014 from IRO-016 as you state. These requirements were revised to eliminate compound requirements. The RCSDT feels that requirements are clear as written and stakeholder comments indicate consensus has been achieved.</p>		
Duke Energy	No	R1.6 - We believe that the word “system” should be added before the word “conditions” to provide additional

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 7 Comment
		clarity.
<b>Response: The RCSDT thanks you for your comment. We agree and have made the suggested edit.</b>		
US Bureau of Reclamation	No	We would suggest that the language should indicate the plans need to address “neighboring RC areas” to limit the scope of the plans for "other RC areas" and not try to cover the whole NERC footprint.
<b>Response: The RCSDT thanks you for your comment. The requirements deal with those RC that are seen to have an impact on a problem. To the extent that one RC expects another RC to be part of a solution, the requirement allows the initiating RC to “propose” a plan of actions and to seek help. If the other RC disagrees with the proposal, the latter RC would not give agreement.</b>		
Bonneville Power Administration	Yes	
Central Lincoln	Yes	
FirstEnergy	Yes	
Pepco Holdings, Inc	Yes	
PNGC Power (15 member utilities)	Yes	
PPL	Yes	
South Carolina Electric and Gas	Yes	
Southern Company Services	Yes	
Southwest Power Pool	Yes	
Western Electricity Coordinating Council	Yes	
Xcel Energy	Yes	

Organization	Yes or No	Question 7 Comment
ITC Holdings	Yes	None
American Electric Power	Yes	The use of “. . . act and/or issue . . .” may be more descriptive in Requirement 1 rather than “. . . act or issue . . .”
<b>Response: The RCSDT thanks you for your comment.</b>		
ERCOT ISO	No	<p>ERCOT ISO would like to add clarification to the Purpose statement and the following requirements (1-4) to alleviate potential interpretation issues. The remaining requirements in IRO-014 are adequately addressed with respect to “within the Interconnection” if the Adverse Reliability Impact term is modified as identified above in response to Question All the recommendations tie together.</p> <p><b>Purpose:</b> To ensure that each Reliability Coordinator’s operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas “<b>within its Interconnection</b>” and to preserve the reliability benefits of interconnected operations.</p> <p><b>R1.</b> For conditions or activities that impact other Reliability Coordinator Areas “<b>within its Interconnection</b>”, each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following:</p> <p><b>R2.</b> Each Reliability Coordinator’s Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators “<b>within its Interconnection</b>” to take action (e.g., make notifications, exchange information, or coordinate actions) shall be:</p> <p><b>R3.</b> For conditions or activities that impact other Reliability Coordinator Areas “<b>within its Interconnection</b>”, each Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information.</p> <p><b>R4.</b> Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly, and other communication forums with impacted Reliability Coordinators “<b>within its Interconnection</b>”.</p> <p>Additionally, ERCOT ISO recommends that the weekly minimum be eliminated and such meeting should be pursuant to an “agreed upon schedule” at the discretion of the Reliability Coordinators. The language notes “impacted” Reliability Coordinators. The “impacted” implies that it is relative to a discrete incident or time period, which is consistent with the purpose of the standard. Accordingly, it is unclear on the need for and</p>

Organization	Yes or No	Question 7 Comment
		<p>unbounded ongoing meeting obligation.</p> <p>ERCOT ISO also suggests changing the R4 VSL to allow lower VSL for missing an occasional meeting. The VSL can be elevated based on the number of missed calls or meetings. Severe would seem to be more appropriate if the entity refused to participate or calls were not initiated at all.</p> <p>Furthermore, with respect to R4, It is not clear what value this requirement adds generally. The requirement is related to “impacted” RCs. This implies that the meetings are relative to discrete incidents/time periods, which is consistent with the purpose of the standard. Accordingly, given the apparent temporary, incident specific nature of an “impacted” entity, it doesn’t make sense to impose an unbounded ongoing meeting obligation. Furthermore, the establishment of the general procedures governs the objective actions impacted RCs will take for all situations. If there is an incident where an RC is “impacted”, it will manage the situation by application of the established objective procedures – that is the intent of having those procedures in place under the standard. Accordingly, it is questionable whether the weekly meeting obligation is necessary or serves any purpose. At a minimum, the weekly meeting obligation should be eliminated and such meeting should be pursuant to an “agreed upon schedule” to give discretion to the RCs.</p> <p>Finally, with respect to R1 – 1.6, in order to provide certainty to the regulated community, ERCOT ISO does not support the change to the condition precedent for action under the requirement from actual to potential Adverse Reliability Impacts. Defining an obligation in terms of “potential” situations is vague and ambiguous. This should generally be avoided because it creates ambiguity and uncertainty for both the regulated entity and regulator.</p>
<p><b>Response: The RCSDT thanks you for your comment.</b></p> <p><b>R1-R3: The SDT disagrees. If an RC does not have any other impacted RCs, then no operating processes, procedures or plans would be necessary. This would mean the R1-R3 would not apply to that RC.</b></p> <p><b>R4 and VSL- The RCSDT has revised R4 to add the words “within the same Interconnection” to the end of R4. We have revised the VSL accordingly. The RCSDT contends that the requirement specifies participation in all agreed upon calls. If the RC misses an agreed upon call, it has failed to meet the requirement.</b></p> <p><b>R1.6 – This refers to studying various system conditions and developing operating processes, plans or procedures to address them. If an entity has run a study and determined that there is an impact on another RC, then a process/plan/procedure should be developed and agree to in order to address the issue.</b></p>		

7 Do you have any other comment, not expressed in questions above, for the RC SDT?

Summary Consideration: The RC SDT thanks all commenters for their review of these proposed revisions and has incorporated many of the comments in the next revision of these requirements. In general, the RC SDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with the applicable parts of the directives in FERC Order 693. The work of the RC SDT along with the OCPD SDT and the RTO SDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by commenters. Consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RC SDT have developed for COM-002. This will further the efforts of the OCPD SDT in achieving stakeholder consensus for their proposed requirements in COM-003. The intent of this DT is to preserve a method for RCs, BAs and TOPs to make the determination of “what actions are required” and clearly communicate the importance to the receiver at a heightened method to normal day-to-day operational communications. The trigger of “Reliability Directive” by the issuer highlights these actions as needed to maintain BES reliability and shall be carried out as directed (unless such actions would violate safety, equipment, regulatory or statutory requirement per the language of the requirement) and all parties to the conversation need to be very cognizant of the system conditions that are requiring actions. The DT has attempted to craft clear and specific language that support BES reliability and hopes that this work can support and enhance the development of the OCPD SDT. The DT has also attempted to eliminate redundancy and ambiguity while not creating any reliability gaps. Several comments were received on the RC’s ability to “act”. The RC must “act” (ie. do something, “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordination of cooperative actions or the issuance of “Reliability Directives”. “Act” does not imply solely the manipulation of BES elements.

Several comments on VSL language were received. We have attempted to clarify intent and have revised some in response to comments.

Several comments were received that reference a “performance based initiative” endorsed by the NERC BOT. The DT appreciates this new initiative, and to the extent possible, requirements proposed by this DT reflect that desire. [We have had no official instruction nor direction regarding this initiative in relation to this project.]

RC control of “analysis tools” is critical to maintaining the wide area view. Control by the RC over the tools is imperative and beyond administrative, since it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication are a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they

impact the BES. Failure of the RC to control outages of analysis tools was mentioned as a contributing factor in the 2003 blackout.

Overall, it is the intent of the DT to make the requirements flexible and adaptive to new technologies and methods as directed in order 693 and ensure that no matter how many forms of interpersonal communications are available. An entity can select a functional alternative to meet the intent of the requirement. The 60 minute timeframe appears reasonable based on industry comments. The term Interconnection is appropriate as it is.

Effective communications rely on an effective hierarchy. It is crucial for a host TOP or BA to have effective communications with GOs attached to their systems so that BES operations can be coordinated. Much like RCs must be able to communicate effectively with the systems within its footprint, effective communications allows BAs/TOPs to disseminate Interconnection information to DPs/GOPs that are impacted by system conditions outside of their operating visibility. The RCS DT has relied on the authority hierarchy (RC/ BA/ TOP / DP) to ensure accountability with the current performance type requirements, while not over-burdening the standards with prescriptive administrative-type requirements.

Organization	Question 8 Comment
American Transmission Company	
ISO New England Inc	
North Carolina Municipal Power Agency #1	
Pepco Holdings, Inc	
Puget Sound Energy	None additional.
South Carolina Electric and Gas	
US Bureau of Reclamation	
We Energies	

Organization	Question 8 Comment
Western Area Power Administration	
Western Electricity Coordinating Council	
CECD	<p>(1). The 60 minute timeframe should be lengthened if normal interpersonal communication paths are in service. Furthermore, the requirement to take corrective action or identify an alternative interpersonal communication method within 60 minutes should only apply if the registered entity only has a single alternative interpersonal communication method in place.</p> <p>(2). For COM-001 Requirement 4: The use of the term "Interconnection" seems inappropriate when describing communications between the DP/GOP and its BA/TOP and should be deleted. The NERC glossary of terms defines this as any one of the three major electric system networks in North America: Eastern, Western, and ERCOT. The requirement to be able to exchange operating information should be subject to the limitation as requested by the BA or TOP.</p>
<p><b>Response: The RCSDT thanks you for your comment. 1) It is the intent of the DT to make the requirement flexible and adaptive to new technologies and methods as directed in order 693 and ensure that no matter how many forms of interpersonal communications are available. An entity can select a functional alternative to meet the intent of the requirement. The timeframe has been revised to 2 hours. 2) We concur and have removed "Interconnection" from the requirement.</b></p>	
Hydro-Québec TransEnergie (HQT)	<p>(i) For IRO-001-2 R1, "act" should be removed. The RC can't act but can only issue Reliability Directives per the functional model.</p> <p>(ii) The NERC BOT recently approved pursuing the Results/Performance Based standards development activity. Based on this recent decision, the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not results or performance based, but rather administrative. If an operator used non-English, where it has not been agreed to or subject to law, to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3 in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not be able to meet other requirements and standards such as operating within IROL because they would not be able to assess the system appropriately.</p>
<p><b>Response: The RCSDT thanks you for your comments.</b></p> <p><b>a. The RC must "act" (ie. do something "to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts". This may include analysis, coordinate cooperative actions or issue "Reliability Directives".</b></p>	



Organization	Question 8 Comment
	<p>b. R6 is beyond administrative; it is intended to prevent planned reliability tool outages with the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication is a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES.</p>
<p>Midwest ISO Standards Collaborators</p>	<p>1) For IRO-001-2 R1, “act” should be removed. The RC can’t act but can only issue Reliability Directives per the functional model.</p> <p>2) IRO-001-2 R4 and R5 Severe VSLs need to have “any or” removed. The VSL should only apply for three or more and “any or” conflicts with this.COM-001-2 R2 Severe VSL conflicts with other VSLs. Specifically, the use of the word “any” in the Severe VSL is problematic. Notifying one entity at 65 minutes fits both the Lower VSL and Severe VSL as well. We suggest deleting the first portion of the Severe VSL that reads, “The responsible entity failed to notify any impacted entities of the failure of its normal Interpersonal Communications capabilities within 60 minutes.”</p> <p>3) The NERC BOT recently approved the pursuing the Results/Performance Based standards development activity. Based on this recent decision, we believe the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not result or performance based but rather administrative. If an operator used Portuguese to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3 in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not be able to meet a host of other requirements and standards such as operating within IROL because they would not be able to assess the system appropriately.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p> <p>1) The RC must “act” (ie. do something “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordinate cooperative actions or issue “Reliability Directives”.</p> <p>2) The VSL language is intended to accommodate scenarios where only one entity is impacted or several entities are impacted. “The Reliability Coordinator failed to notify any or more than three impacted Transmission Operators, Balancing Authorities...” and provide the same measurability level.</p> <p>3) R6 is beyond administrative; it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication is a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard</p>	

Organization	Question 8 Comment
<p><b>requirements due to ineffective communications before they impact the BES.</b></p>	
<p>Northeast Power Coordinating Council</p>	<p>(i) For IRO-001-2 R1, “act” should be removed. The RC can’t act but can only issue Reliability Directives as per the functional model.</p> <p>(ii) The NERC BOT recently approved pursuing the Results/Performance Based standards development activity. Based on this recent decision, the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 requirement for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not results or performance based, but rather administrative. If an operator used non-English to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3, in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not be able to meet other requirements and standards such as operating within an IROL because they would not be able to assess the system appropriately.</p>
<p><b>Response: The RCS DT thanks you for your comments.</b></p> <p><b>I) The RC must “act” (ie. do something “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordinate cooperative actions or issue “Reliability Directives”.</b></p> <p><b>II) R6 is beyond administrative; it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity. Effective communication is a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES.</b></p>	
<p>Independent Electricity System Operator</p>	<p>(i) For IRO-001-2 R1, “act” should be removed. The RC can’t act but can only issue Reliability Directives per the functional model.</p> <p>(ii) The NERC BOT recently approved pursuing the Results/Performance Based standards development activity. Based on this recent decision, the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not results or performance based, but rather administrative. If an operator used non-English to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3 in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not be able to meet other requirements and standards such as operating within IROL because they would not be able to assess the system appropriately.</p>

Organization	Question 8 Comment
	<p>(iii) COM-001-2 R2 Severe VSL conflicts with other VSLs. Specifically, the condition of failing to notify any impacted entities within 60 minutes means that no entities received a notification within 60 minutes. But how about they all received this in 65 minutes? Would this be the same condition as the Low VSL? And if they all received this in 75 minutes, the condition would be the same as the Moderate VSL. We suggest the SDT to review and revise these VSLs to eliminate the duplication/ambiguity.</p>
<p><b>Response: The RCSDT thanks you for your comments.</b></p> <ul style="list-style-type: none"> <li>I) The RC must “act” (ie. do something “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordinate cooperative actions or issue “Reliability Directives”.</li> <li>II) R6 is beyond administrative; it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity. Effective communication is a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES.</li> <li>III) The DT did not consider R1 and R2 to be parallel requirements, and consequently did not attempt to force parallelism between the VSLs for R1 and R2. The only failure that is severe in this context is the failure to test the Alternative Interpersonal Communications capability on at least a quarterly basis.</li> </ul>	
<p>IRC Standards Review Committee</p>	<p>(i) IRO-001-2 R4 and R5 Severe VSLs need to have “any or” removed. The VSL should only apply for three or more and “any or” conflicts with this.</p> <p>(ii) For IRO-001-2 R1, “act” should be removed. The RC can’t act but can only issue Reliability Directives per the functional model.</p> <p>(iii) COM-001-2 R2 Severe VSL conflicts with other VSLs. Specifically, the condition of failing to notify any impacted entities within 60 minutes means that no entities received a notification within 60 minutes. But how about they all received this in 65 minutes? Would this be the same condition as the Low VSL? And if they all received this in 75 minutes, the condition would be the same as the Moderate VSL. We suggest the SDT to review and revise these VSLs to eliminate the duplication/ambiguity.</p> <p>(iv) The NERC BOT recently approved the pursuing the Results/Performance Based standards development activity. Based on this recent decision, we believe the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not result or performance based but rather administrative. If an operator used Portuguese to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3 in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not</p>

Organization	Question 8 Comment
	<p>be able to meet a host of other requirements and standards such as operating within IROL because they would not be able to assess the system appropriately.</p> <p>(v) The VSLs for COM-002-3 R3 appear to have some redundancy. The Severe VSL and the second condition in the High VSL appear to be similar or the same.</p> <p>(vi) Measurement of compliance to COM-002-3 R1 could be challenging. As the VSL is written, it would appear the compliance auditor could judge if a Reliability Directive should have been issued. The VSL language that is problematic is “The responsible entity that required actions to be executed”. Please remove: “required actions to be executed as...”. Who determines that actions were required? One could argue that failure to identify a communication as a Reliability Directive means that actions weren’t required but it is doubtful the compliance authorities would take this approach. Thus, there would appear to be great judgment left to the compliance auditor in determining if a Reliability Directive should have been issued.</p> <p>(vii) IRO-014-2 R2 VSLs differentiate violations based on whether the plans, processes, and procedures were distributed or agreed to. If an intended RC never received the plans, processes and procedures, it would be aware of the need to agree to them. Hence, if the plans, etc. were not distributed, then the initiating RC will be assigned a Moderate VSL but never any higher VSLs even if no agreements were received (since no other RCs had received the plans to begin with). We suggest the SDT to consider rearranging the VSLs and in accordance with any changes to R2 reflecting our suggested changes summarized under Q7.</p> <p>(viii) Because it is unlikely that an RC will make notifications without exchanging reliability information or vice versa for IRO-014-2 R3, we suggest a more appropriate delineation for the VSLs would be based on the number of other impacted RCs that were not informed.</p> <p>(ix) IRO-014-2 R4 VSLs should be defined based upon the number of conference calls the RC does not participate in. R4 requires each RC to participate in “agreed upon conference calls”. Because the statement “conference calls” is plural, VSLs need to be set based on the aggregate of calls not participated in. Failure to assign VSLs in this way is equivalent to setting the requirement to “agreed upon conference call” and causes the VSLs to be in violation guideline 3 that the Commission established in their June 2008 Order on VSLs. Guideline 3 states that the VSL must be consistent with the requirement and cannot “redefine or undermine the requirement”. Clearly, these VSLs do.</p> <p>(x) IRO-014-2 R5’s Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSLs since Severe uses the word any. Based on the SDT’s response to our comment from the last time, we believe instead of any they mean “no impacted”. Unfortunately, “any impacted” could be one or two or higher. If it is one, it matches the Moderate VSL.</p> <p>(xi) The VSL for IRO-014-2 R8 needs to include the “unless such actions would violate safety, equipment, regulatory or statutory requirement” clause.</p>

Organization	Question 8 Comment
	<p><b>Response:</b> The RCS DT thanks you for your comments.</p> <p>I) The VSL language is intended to accommodate scenarios where only one entity is impacted or several entities are impacted. “The Reliability Coordinator failed to notify any or more than three impacted Transmission Operators, Balancing Authorities...” and provide the same measurability level.</p> <p>II) The RC must “act” (ie. do something “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordinate cooperative actions or issue “Reliability Directives”.</p> <p>III) The DT does not agree. The Severe VSL has “any impacted entities”, meaning that no entity was notified within 60 minutes. This is intentional. The Lower, Moderate and High VSLs address individual entities that may not have met the standard of 60 minutes.</p> <p>IV) R6 is beyond administrative, it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication are a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES.</p> <p>V) The VSLs were set to be flexible in measuring cases where an 1) acknowledgement is not made at all to a correctly repeated directive and 2) an acknowledgement is not made at all AND a directive repeated incorrectly was not corrected.</p> <p>VI) The intent of the DT is to allow the issuing entity to make the determination of “what actions are required” to clearly communicate the importance to the receiver. The word “required actions to be executed” are integral to the requirement and cannot be removed to meet the intent. In other words, the trigger of “Reliability Directive” by the issuer highlights these actions as needed to maintain BES reliability and should be carried out as directed (unless such actions would violate safety, equipment, regulatory or statutory requirement etc ) and all parties to the conversation need to be very cognizant of the system conditions that are requiring actions. The DT has attempted to craft clear and specific language that support BES reliability and cannot pre-judge the behaviors of compliance auditors.</p> <p>VII) The DT agrees and will make clarifying changes.</p> <p>VIII) The DT agrees and will make clarifying changes.</p> <p>IX) The DT feels this is a core RC responsibility and therefore treated this requirement as binary. RCs must be responsive to other RCs that need to discuss BES reliability. However, we agree to change “calls” to “call(s)” in R4, to read as follows:</p> <p><b>R4.</b> Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly (per Requirement 1, Part 1.7) with other Reliability Coordinators within the same Interconnection. [<i>Violation Risk Factor: Lower</i>][<i>Time Horizon: Real-time Operations</i>]</p> <p>X) The DT disagrees. “Failure to notify any” means that none were notified. If there is only a total of one impacted RC, then the VSL would be Severe.</p> <p>XI) If the action plan could not be implemented for such instances, then there would be no violation of the requirement and the VSL would not apply.</p>
OC Standards Review Group	“The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or

Organization	Question 8 Comment
	its officers.”
<b>Response: The RCSDT thanks you for your comments.</b>	
FirstEnergy	<p>1. We believe that this standard should be either handed to the OPCPSDT (Project 2007-02) or the OPCPSDT should hand over the COM-003-1 standard to this RCSDT (Project 2006-06); and then COM-002 and COM-003 should be merged. Per our comments in Draft 1 of COM-003-1 (OPCPSDT Project 2007-02) we believe that the Reliability Directive definition should be broadened to include communications associated with BES related information (similar to the proposed definition of Interoperability Communication from the OPCPSDT). The following are specifics: a. For better project coordination, since the plan of the OPCPSDT (2007-02) is to eventually incorporate the COM-002-3 requirements into the new COM-003-1 standard, we believe this should be done now by one SDT. b. The definition of Reliability Directive should be broadened to include any actions that affect the BES reliability. We suggest the following change to the term Reliability Directive: "A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where the recipient is directed to change the state or report the status of an Element or Facility of the Bulk Electric System." c. Per our suggestion to broaden the definition of Reliability Directive in "b" above, the proposed definition of Interoperability Communication proposed by the OPCPSDT can be eliminated. d. With respect to the proposed R2 and R3 of COM-002-3 and requirement R5 of COM-003-1 which all which essentially discuss three-part communication, could be combined and covered by COM-002-3. e. R1 of COM-003-1 that requires communication protocols procedures can be covered in COM-002-3.2.</p> <p>Implementation Plan - The proposed timeline for implementing these standards changes is the 1st day of the 1st quarter after applicable regulatory approvals. We believe that since there are numerous changes to and retirement of requirements, this will place a significant compliance burden on industry and warrants more time to adjust compliance evidence and tracking. Furthermore, standard COM-001-2 is adding the Distribution Provider and Generator Operator as applicable entities which will cause these entities to show compliance with a requirement they previously were not responsible for. Therefore, we believe that a minimum of two calendar quarters for implementing these changes is appropriate.</p>
<p><b>Response: The RC SDT thanks you for your comment. The RC SDT feels that the Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RC SDT along with the OPCP SDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. Consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RC SDT have developed for COM-002. This will further the efforts of the OCPC SDT in achieving stakeholder consensus for their proposed requirements in COM-003. The intent of the DT is to preserve a method for RCs, BAs and TOP to make the determination of “what actions are required” and clearly communicate the importance to the receiver above normal day-to-day operational communications. The trigger of “Reliability Directive” by the issuer highlights these actions as needed to maintain BES reliability and should be carried out as directed (unless such actions would violate safety, equipment, regulatory or statutory requirement per the language of the requirement) and all parties to the conversation need to be very cognizant of the system conditions that are requiring actions. The DT has attempted to craft clear and specific language that support BES reliability and hopes that this work can support and enhance the development of the OPCP SDT.</b></p>	

Organization	Question 8 Comment
Ameren	<p>1.In COM-001 R2, this “impacted entities’ language is unworkable. Some entities might be impacted because they get information from the RC, i.e indirectly from the entity with the loss. Team should address direct relationships somehow.2.In COM-001,R4, does the team consider the need for this for the AIC?3.The team should note that there is no requirement to even have AIC. Thus R1 would only apply if you have one.</p>
<p><b>Response: The RCSDT thanks you for your comment. The DT feels that impacted adds clarity to the requirement by limiting the obligation appropriately. Industry consensus appears to support that “impacted” is a reasonable clarification.</b></p>	
NERC	<p>As stated in the response to Question 1, the scope of COM-001-2 is unclear as to whether it applies to both verbal and data communication. We believe that it should.</p>
<p><b>Response: The RCSDT thanks you for your comment. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)</b></p>	
Central Lincoln	<p>COM-001 M3, M4, COM-002 M2, and IRO-001 M1, and M2 all require evidence of DPs and/or LSEs “which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation. ”While we appreciate the inclusion of “equivalent documentation”, we are unsure what might qualify and who determines what qualifies as equivalent. We still believe COM-001 should not apply to DPs and LSEs, since these entities do not own or operate BES assets. Please consider this stakeholder input as well. While CIP-001 M4 can show that documented communication proves capability for R4, an entity has no way of proving capability if such communications did not take place during the audit period. We are unsure if the SDT realizes that not all of the entities subject to these standards maintain 24/7 dispatch desks. Much effort will go into complying with standards dealing with afterhour’s directives that will never come, because the issuing entity will realize any action requested will not be timely enough and plan accordingly.</p>
<p><b>Response: The RCSDT thanks you for your comment. DP and LSE were included in this standard per FERC Order 693 Directive. “Equivalent” documentation is included to provide potential alternatives for entities to provide to prove compliance with the requirement. Compliance audit personnel will review all documentation to determine compliance with a requirement.</b></p>	
Exelon	<p>COM-001-2 R2. Please consider in place of “impacted entities”, substitute “all applicable entities”.</p>
<p><b>Response: The RCSDT thanks you for your comment. The proposed substitute language has the same net effect as the current language and</b></p>	

Organization	Question 8 Comment
<p>therefore no change was made.</p>	
<p>ITC Holdings</p>	<p>Comments: IRO-001-2 R4 has an errant comma after the first occurrence of the word “Impacts”. IRO-014-2 R8 should have the first occurrence of the word “or” removed. Also, a new R9 (and associated M9) should be added requiring the RC who cannot agree on the mitigation plan due to safety, equipment, regulatory, or statutory requirements to notify the RC experiencing the Adverse Reliability Impact of the reason for the inability to implement the mitigation plan.</p>
<p><b>Response: The RCSDT thanks you for your comment. The comma in IRO-001-2 R4 has been removed.</b></p> <p><b>The first “or” in IRO-014-2 R8 has been removed.</b></p> <p><b>The suggested R9/M9 are unnecessary. Any RC that claims that a mitigation plan would violate safety, equipment, regulatory or statutory requirements would have to document that as part of complying with R8.</b></p>	
<p>Northeast Utilities</p>	<p>For IRO-001-2, the VSL language for R1, R4, and R5 is not clear. Specifically, for the R1 VSL the text appears to be reversed between High and Severe; and for R4 and R5, please clarify what is meant by “any or more than three”.</p>
<p><b>Response: The RCSDT thanks you for your comment. The High VSL and Severe VSL language is not reversed. The failure to act to mitigate existing Adverse Reliability Impacts is more negatively-impactful to BES reliability than the failure to prevent future Adverse Reliability Impacts.</b></p> <p><b>“Any or more than three” means that if no TOPs or BAs were notified or, in the case of an RC having four or more TOPs and BAs in its area, more than 3 of them were not notified.</b></p>	
<p>Bonneville Power Administration</p>	<p>In most proposed NERC standards, it seems the tried and true method of writing a requirement is to list the entities required to implement the action, list the required action, and then list any exceptions to the required action. In proposed standard COM-001-2, Requirement R3, the SDT lists the exceptions before the rule. In proposed standard COM-001-2, Measure M1, when it is discussing quarterly testing, it uses the term, “alternative Interpersonal Communications.” The word “alternative” should be capitalized. (Please see our comment on question #2 regarding the overall use of the term ‘Alternative Interpersonal Communications.’) <b>we agree and made the change</b></p> <p>In proposed standard COM-001-2, Measure M1, after the word, “substitute,” the word “Alternative” should be added in order to use similar language in both Requirement R1 and in Measure M1. (Again, please see my comment on question #2 regarding the overall use of the term ‘Alternative Interpersonal Communications.’) <b>we agree and made the change</b></p> <p>In proposed standard COM-001-2, Measure M2, it uses the wording “normal communications capabilities.” If our comment on question #1 is acceptable in its entirety, and the SDT decides not to use the term, ‘Interpersonal Communication,’ then the wording of Measure M2 is also acceptable. However, if the SDT decides to continue with their use of that term, then this phrase should be replaced with “normal Interpersonal Communications capabilities” in order to use similar language in both</p>



Organization	Question 8 Comment
	<p>Requirement R2 and in Measure M2. <b>we agree and made the change</b></p> <p>In proposed standard COM-001-2, VSL for R2, the Lower VSL uses the word “failed” to describe notifying the impacted entities within the tight bounds of a time frame, in this case, “more than 60 minutes but less than or equal to 70 minutes”. According to the given wording, every entity that is fully compliant with this standard would have “failed” to notify the impacted entities within the narrow bounds of the Lower VSL’s time constraint! A similar comment could be made for the Moderate, High and Severe VSL descriptions also. The wording “failed to notify” needs to be taken out and replaced with “notified.” Related to this, in the Moderate VSL, the description of a responsible entity notifying at least one, but not all impacted entities within 60-minutes would tend to negate the Lower VSL. If the SDT were trying to force a responsible entity into making at least one phone call of notification to one of the impacted entities within 60-minutes, the Severe VSL’s description accomplishes this feat all by itself. However, if the SDT were insistent on all impacted entities being notified within 60-minutes or a Moderate VSL will result, then that action makes the Lower VSL rather useless. <b>VSLs are only applied when there is a violation. The time bounds are appropriate for a violation of the requirement</b></p> <p>In proposed standard COM-002-3, Measure M3, it uses the term “Directive” by itself. It seems appropriate for what is being discussed that the term “Reliability Directive” should have been used. <b>We added Reliability</b></p> <p>In proposed standard COM-002-3, VSL for R3, the High VSL describes the responsible entity failing to respond appropriately, either by acknowledging the recipient when they repeated the intent correctly or by failing to reissue when the recipient did not repeat the intent correctly. This would seem to take care of the options...either the recipient was correct or they were incorrect, but not both. However, the Severe VSL, by using the word “AND” connects the two thoughts and provides for the recipient to be both correct and incorrect at the same time. Therefore, the Severe VSL seems to contradict itself, while the spirit of the VSL seems to be handled quite nicely by the High VSL by itself. It is therefore suggested that the SDT consider replacing the Severe VSL with the High VSL. <b>The rcsdt believes that the VSLs are appropriate as written</b></p> <p>In proposed standard IRO-001-2, Measure M3, on the second to the last line, the measure repeats the wording “that it,” making it redundant. <b>We have made the edit</b></p> <p>In proposed standard IRO-001-2, Data Retention (Part D, Section 1.3), on the first bullet, the word “operator” (following “Generator”) should be capitalized. <b>We have made the edit</b></p> <p>In proposed standard IRO-001-2, High and Severe VSLs for Requirement R1, we don’t really see the utility of separating the parts of failing to prevent Adverse Reliability Impacts and failing to mitigate the magnitude or duration of such impacts. Maybe the SDT could give some examples, because we would be just as fine combining the two into one VSL and therefore simplifying the VSL part of the standard. <b>VSL drafting guidelines indicate that multiple VSLs should be written for a requirement when feasible. It is feasible for this requirement.</b></p> <p>In proposed standard IRO-001-2, Severe VSL for Requirement R2, the VSL should include wording to indicate that an</p>

Organization	Question 8 Comment
	<p>exception can be granted to the responsible entity failing to comply with the given Reliability Directive due to safety, equipment, or regulatory or statutory requirements. Otherwise, the responsible entity will be given a Severe VSL every time one of these exceptions comes up. <b>If an entity did not comply with a directive for a safety issue, then the entity did not violate the requirement. The VSL only applies when a requirement is violated.</b></p> <p>In proposed standard IRO-001-2, Severe VSL for Requirement R4, we are not entirely sure what the SDT was trying to say, but the spirit of the VSL would seem to be captured if the SDT removed the wording “any or” and left the VSL to say in part, “...failed to issue an alert to more than three...”In a related way, for the Severe VSL for Requirement R5, the spirit of the VSL would seem to be captured if the SDT removed the wording “any or” and left the VSL to say in part “...failed to notify more than three...” <b>The intent of the wording is to allow multiple VSLs for the requirement. The word “any” indicates that there were no notifications made when there were less than three notifications to be made.</b></p>
<p><b>Response: The RCSDT thanks you for your comment. See responses above.</b></p>	
<p>Florida Municipal Power Agency and Some Members</p>	<p>IRO-001-2, R5 refers to only transmission problems being mitigated and not to other types of issues that could result in a threat of an Adverse Reliability Impacts, such as a large supply / demand imbalance (capacity or energy Emergency). IRO-001-2, R6 FMPA does not quite understand the requirement, is the intent to allow Operating Personnel the authority to veto planned outages "in" its own analysis tools, rather than "to"?</p>
<p><b>Response: The RCSDT thanks you for your comment. We have removed the word “transmission” from the requirement.</b></p> <p><b>R5:</b> Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i></p> <p>Regarding IRO-001-2, R6, the planned outages mentioned are actual outages of the analysis tools themselves, not planned outages of transmission elements. No changes made.</p>	
<p>PPL</p>	<p>No additional comments.</p>
<p>Operating Personnel Communications Protocols SDT</p>	<p>No Comment</p>

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Question 8 Comment
PacifiCorp	No comment.
American Electric Power	Nothing additional at this time.
PNGC Power (15 member utilities)	<p>PNGC (15 members) would like to associate itself with Steve Alexanderson's (Central Lincoln PUD) comments re 2006-06:"COM-001 M3, M4, COM-002 M2, and IRO-001 M1, and M2 all require evidence of DPs and/or LSEs "which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation. "While we appreciate the inclusion of "equivalent documentation", we are unsure what might qualify and who determines what qualifies as equivalent. We still believe COM-001 should not apply to DPs and LSEs, since these entities do not own or operate BES assets. Please consider this stakeholder input as well. While CIP-001 M4 can show that documented communication proves capability for R4, an entity has no way of proving capability if such communications did not take place during the audit period. We are unsure if the SDT realizes that not all of the entities subject to these standards maintain 24/7 dispatch desks. Much effort will go into complying with standards dealing with afterhour's directives that will never come, because the issuing entity will realize any action requested will not be timely enough and plan accordingly."</p>
<p><b>Response: The RCSDT thanks you for your comment. The DT included DPs and LSEs per FERC Order 693.</b></p> <p><b>The DT believes your comment regarding "CIP-001 M4" is actually in reference to COM-001-2 M4". While the DT is concerned that any proposed requirements must be clear and reasonably simple for which to document compliance, in this instance, a simple test phone call at a regular interval would prove capability (assuming it were recorded.)</b></p>	
Manitoba Hydro	<p>R2 2.1 If these actions are required as real time action, "Agreed to" should be opened up to "Acknowledged by". "Agreed to" in this requirement would be acceptable when there is time for impacted RC to study the other RC plans to determine impact on their system. To further justify this suggestion, R3 says "make notifications . . . with impacted RC". This statement indicates no commitment to the notifications and therefore presumes "acknowledgement".R7. Move this requirement to R2 and label as R2.3. R2 is "Agreed to" and R7 is "Not Agreed to". R8 covers the action required when "Not agreed to"R8. The only suggested addition to this is "When an RC with the identified Adverse Reliability Impact has created and implemented a plan with other affected RC", there should be an R8.1 stating "No RC shall place a burden on other RC's" and or/and an R8.2 stating, that "Reliability will override economics". The addition of these two sub requirements would also enhance R7 by removing all other reasoning that an impacted RC may dwell on to "not agree to".</p>
<p><b>Response: The RCSDT thanks you for your comment. We assume that this comment is in reference to IRO-014-2. The RCSDT does not agree with your proposed revision. The intent of the requirements is to have the parties agree to the course of action required to maintain reliability.</b></p>	
Calpine Corporation	Regarding COM-001-2 R4. Many PURPA Qualifying Facilities and tolled Facilities communicate only with a scheduling

Organization	Question 8 Comment
	<p>coordinator or similar entity, not necessarily directly with the Transmission Operator and/or Host Balancing Authority. The standard should be rewritten to clarify that direct communications between these Generator Operators and their Transmission Operator and/or Host Balancing Authority is either not required or that communications through their established paths of communication meets the requirement.</p>
<p><b>Response: The RCSDT thanks you for your comments. Effective communications rely on an effective hierarchy. It is crucial for a host TOP or BA to have effective communications with GOs attached to their systems so that BES operations can be coordinated, much like RCs must be able to communicate effectively with the system within its footprint. PURPA qualifying facilities can impact BES reliability, and, as such, are included here.</b></p>	
<p>Duke Energy</p>	<p>Requirement R6 of IRO-001-2 contains the capitalized term “Operating Personnel”. This is not a NERC-defined term and should not be capitalized. As a general comment on new and revised NERC-defined terms, we believe that when such terms are introduced in a project with multiple standards, the terms should be included in the “Definitions of Terms Used in Standard” section of each standard. For example, in this project the term “Adverse Reliability Impact” is revised in IRO-001-2, but while it is also used in IRO-014-2, it no longer appears in the “Definitions of Terms Used in Standard” section of IRO-014-2.</p>
<p><b>Response: The RCSDT thanks you for your comment and has changed “Operating Personnel” to “System Operator”.</b></p>	
<p>Southwest Power Pool</p>	<p>SPP has also worked collaboratively with the IRC SRC on the comments submitted by that group on this standard and we fully support those. However, SPP found additional concerns at the last minute which could not be included in the SRC set due to the submittal deadline and has chosen to submit these separately. There are 10 other standards where the word “Directive” is used. Will the term Reliability Directive replace them, or will we get a different definition for Directive, or will both terms be the same?</p>
<p><b>The RC SDT believes that “directive” is lowercase in the other instances in NERC standards. The RTO SDT, OPCP SDT and RC SDT have attempted to move toward “Reliability Directive” in concert so as to remove the remaining ambiguity from NERC standards.</b></p> <p><b>The intent of the DT is to preserve a method for RCs, BAs and TOP to make the determination of “what actions are required” and clearly communicate the importance to the receiver above normal day-to-day operational communications. The trigger of “Reliability Directive” by the issuer highlights these actions as needed to maintain BES reliability and should be carried out as directed (unless such actions would violate safety, equipment, regulatory or statutory requirement per the language of the requirement) and all parties to the conversation need to be very cognizant of the system conditions that are requiring actions. The DT has attempted to craft clear and specific language that support BES reliability and hopes that this work can support and enhance the development of the OPCP SDT and subsequent expansion of the term “Reliability Directive”.</b></p>	
<p>E.ON U.S.</p>	<p>The definition of Reliability Directive should be incorporated into COM-003-1 with an associated single requirement that requires the use of Three-part Communication during the communication of a Reliability Directive.</p>

Organization	Question 8 Comment
<p><b>Response: The RCSDT thanks you for your comment. The DT has attempted to craft clear and specific language that support BES reliability and hopes that this work can support and enhance the development of the OPCSDT and subsequent expansion of the term “Reliability Directive”.COM-003 is outside the scope of the RCSDT project.</b></p>	
Public Service Enterprise Group Companies	The PSEG Companies are generally in agreement with the proposal.
<p><b>Response: The RCSDT thanks you for your comment.</b></p>	
Southern Company Services	These standards are more restrictive and prescriptive each time that a revision is issued for comments. It appears that the SDT does not believe that entities operating the Bulk Electric System cannot operate the system in a reliable manner using cooperation between parties.
<p><b>Response: The RCSDT thanks you for your comment. The DT feels that these standard requirements have been improved to benefit reliability and act as a “backstop” to prevent the breakdown of cooperation between parties and incent effective communications between operators of the BES.</b></p>	
NERC Standards Review Subcommittee	<ol style="list-style-type: none"> <li>1) This standard could be boiled down to one requirement and that is to maintain the continuous ability to communicate with other appropriate registered entities regardless of the need for a backup system.</li> <li>2) For IRO-001-2 R1, “act” should be removed. The RC can’t act but can only issue Reliability Directives per the functional model.</li> <li>3) IRO-001-2 R4 and R5 Severe VSLs need to have “any or” removed. The VSL should only apply for three or more and “any or” conflicts with this.COM-001-2 R2 Severe VSL conflicts with other VSLs. Specifically, the use of the word “any” in the Severe VSL is problematic. Notifying one entity at 65 minutes fits both the Lower VSL and Severe VSL as well. We suggest deleting the first portion of the Severe VSL that reads, “The responsible entity failed to notify any impacted entities of the failure of its normal Interpersonal Communications capabilities within 60 minutes.”</li> <li>4) COM-001-2 R2 needs to be coordinated with EOP-008-1 since EOP-008-1 R1.5 is requiring 2 hours. COM-001-2 R1 should be clarified to remove 60 minutes. Perhaps the specific time frame is too administrative and too dependent on the circumstances and doesn’t purport to directly impact reliability of the backup functionality. If a time frame is desired perhaps the registered entity which knows their backup functionality capabilities and their plan to actuate these capabilities could be the best entity to define a reasonable immediate time frame.</li> <li>5) The NERC BOT recently approved the pursuing the Results/Performance Based standards development activity. Based on this recent decision, we believe the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not result or performance based but</li> </ol>

Organization	Question 8 Comment
	<p>rather administrative. If an operator used Portuguese to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3 in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not be able to meet a host of other requirements and standards such as operating within IROL because they would not be able to assess the system appropriately.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p> <ol style="list-style-type: none"> <li>1. The DT has attempted to eliminate redundancy and ambiguity while not creating any reliability gaps. As written, the requirements are geared to incent folks to have effective communications in-place at all times while flexible enough to accommodate technology changes and process improvements by the industry.</li> <li>2. The RC must “act” (ie. do something “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordinate cooperative actions or issue “Reliability Directives”. “Act” does not imply solely the manipulation of BES elements.</li> <li>3. The VSL language is intended to accommodate scenarios where only one entity is impacted or several entities are impacted. “The Reliability Coordinator failed to notify any or more than three impacted Transmission Operators, Balancing Authorities...” and provide the same measurability level.</li> <li>4. The RCSDT notes that EOP-008-1 is a proposed standard that has not been approved for enforcement. Also, EOP-008-1 deals with an entire control center where COM-001 deals with Interpersonal Communications capability with another entity. We will retain the original 60 minute timeframe.</li> <li>5. R6 is beyond administrative, it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication are a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES.</li> </ol>	
<p>Xcel Energy</p>	<p>We would like to restate our belief that the Standard should explicitly state the requirement for RCs, TOPs and BAs to have both primary and alternate means of communication. To “imply” a required element within a Standard is inconsistent with the NERC Reliability Standards Development Procedure, which states “All mandatory requirements of a reliability standard shall be within an element of the standard.” We would suggest a requirement language that simply states “Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall maintain a means for both primary Interpersonal Communication as well as Alternative Interpersonal Communication used to communication real-time operating information.”</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. The RCSDT has crafted the latest versions (as supported by stakeholder comments) to support reliable communications by better describing how industry communicates and providing flexibility for the adoption of alternative communication media. The RCSDT also tried to minimize over-prescriptive requirements that result in no value to reliability and impose an</p>	

Organization	Question 8 Comment
administrative burden.	
Electric Market Policy	<p>We would like to thank, AND highly commend this SDT for their effort. This is the type of effort that every SDT should strive for. Elimination of requirements that are either redundant or unnecessary, and therefore distract entities, is every bit as important to the standards process as is the creation of new standards where reliability gaps are found. The proliferation of new and revised standards is becoming a concern for many in this industry and many of us feel the effort going into the review and compliance documentation is reducing the focus on monitoring and otherwise insuring that reliable operations can be maintained.</p>
<p><b>Response: The RCSDT thanks you for your comments and agrees reducing redundancy and ambiguity in the standards improves industry focus and therefore reliability of the BES.</b></p>	
ERCOT ISO	<p>ERCOT ISO offers the following additional comments:</p> <p><b><u>COM-001-2</u></b></p> <ol style="list-style-type: none"> <li>1) The SDT should consider coordinating their efforts with the OPCP drafting team efforts (COM-003) to ensure consistency across the standards.</li> <li>2) For R4 – ERCOT ISO recommends considering adding Load-Serving Entity to the applicability due to their role in capacity and energy emergencies.</li> <li>3) With respect to the Measures, “alternative” needs to be capitalized in M1. Also, if the intent is to include items such as regular phones or data links that are daily use items then Measures should reflect this.</li> <li>4) ERCOT ISO suggests the following change to the terms Adverse Reliability Impact and Emergency. We think these simple changes will tie all the terms together.</li> </ol>
<p><b>Response: The RC SDT thanks you for your comments.</b></p> <p>1) The RC SDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RC SDT along with the OPCP SDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RC SDT have developed for COM-002. This will further the efforts of the OCPC SDT in achieving stakeholder consensus for their proposed requirements in COM-003. 2) The RCSDT has relied on the authority hierarchy (RC/ BA/ TOP / DP) to ensure accountability with the current FM, while not over-prescribing requirements. The RC SDT notes that, per the Functional Model, a DP may “direct” an LSE to communicate <i>requests</i> for voluntary load curtailment and not reliability situations:</p> <p><b>Item 9 on page 47 of version 5 of the Functional Model: “Directs Load-Serving Entities to communicate requests for voluntary load curtailment.”</b></p>	

Organization	Question 8 Comment
	<p>The RCSDT will forward this comment to the FMWG for their consideration in revising the language.</p> <p>3) &amp; 4) Please see previous responses to your comments assuming those are the referenced comments.</p>



### Standard Development Roadmap

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

#### Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 3, 2010.

#### Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the third draft. The team is posting for a 30 day pre-ballot review.

#### Future Development Plan:

Anticipated Actions	Anticipated Date
1. Respond to comments on third posting	March 2010
2. Post Standards for pre-ballot period.	January 2011
3. Standards posted for initial and recirculation ballots.	February 2011
4. Standards sent to BOT for approval.	March 2011
5. Standards filed with regulatory authorities.	June 2011

### **Definitions of Terms Used in Standard**

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved.*

*When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

**Interpersonal Communication:** Any medium that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communications used for day-to-day operation.

**A. Introduction**

- 1. Title:** Communications
- 2. Number:** COM-001-2
- 3. Purpose:** To ensure that operating entities have adequate Interpersonal Communication capabilities for the exchange of Interconnection and operating information necessary to maintain reliability.
- 4. Applicability:**
  - 4.1.** Transmission Operators.
  - 4.2.** Balancing Authorities.
  - 4.3.** Reliability Coordinators.
  - 4.4.** Distribution Providers.
  - 4.5.** Generator Operators..
- 5. Effective Date:** The first day of the first calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption.

**B. Requirements**

- R1.** Each Reliability Coordinator shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]:
  - R1.1.** All Transmission Operators, Balancing Authorities and Interchange Coordinators within its Reliability Coordinator Area
  - R1.2.** Adjacent Reliability Coordinators within the same Interconnection.
- R2.** Each Reliability Coordinator shall designate an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]:
  - R2.1.** All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area
  - R2.2.** Adjacent Reliability Coordinators within the same Interconnection.
- R3.** Each Transmission Operator shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]:
  - R3.1.** Its Reliability Coordinator
  - R3.2.** Each Balancing Authority within its Transmission Operator Area.
  - R3.3.** Each Distribution Provider within its Transmission Operator Area.
  - R3.4.** Each Generator Operator within its Transmission Operator Area.

- R4.** Each Transmission Operator shall designate an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*):
  - R4.1.** Its Reliability Coordinator
  - R4.2.** Each Balancing Authority within its Transmission Operator Area.
- R5.** Each Balancing Authority shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*):
  - R5.1.** Its Reliability Coordinator
  - R5.2.** Each Transmission Operator that operates Facilities within its Balancing Authority Area
  - R5.3.** Each Distribution Provider within its Balancing Authority Area
  - R5.4.** Each Generator Operator that operates Facilities within its Balancing Authority Area
  - R5.5.** Each Interchange Coordinator within its Balancing Authority area as well as adjacent Interchange Coordinators.
- R6.** Each Balancing Authority shall designate an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*):
  - R6.1.** Its Reliability Coordinator
  - R6.2.** Each Transmission Operator that operates Facilities within its Balancing Authority Area)
- R7.** Each Distribution Provider shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*):
  - R7.1.** Its Transmission Operator
  - R7.2.** Its Balancing Authority.
- R8.** Each Generator Operator shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*):
  - R8.1.** Its Balancing Authority
  - R8.2.** Its Transmission Operator.
- R9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall, on at least a monthly basis, test its Alternative Interpersonal Communications capability. If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours. [*Violation Risk Factor: Medium*][*Time Horizon: Real-time Operations*]

**R10.** Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]*

~~**R11.** Unless dictated by law or otherwise agreed to, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load Serving Entity, Purchasing Selling Entity and Distribution Provider shall use English as the language for communications between functional entities. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*~~

**Comment [SC1]:** This requirement is being vetted by the OPCPSDT in COM-003. This requirement and measure will be removed from COM-001.

### C. Measures

- M1.** Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated and timestamped voice recordings or dated and timestamped transcripts of voice recordings, electronic communications, or equivalent, that it has Interpersonal Communications capability with all Transmission Operators, Balancing Authorities and Interchange Coordinators within its Reliability Coordinator Area and with adjacent Reliability Coordinators within the same Interconnection. (R1.)
- M2.** Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated and timestamped voice recordings or dated and timestamped transcripts of voice recordings, electronic communications, or equivalent, that it designated an Alternative Interpersonal Communications capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with adjacent Reliability Coordinators within the same Interconnection. (R2.)
- M3.** Each Transmission Operator shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated and timestamped voice recordings or dated and timestamped transcripts of voice recordings, electronic communications, or equivalent, that it has a Interpersonal Communications capability with its Reliability Coordinator, with each Balancing Authority and each Distribution Provider and each Generator Operator within its Transmission Operator Area. (R3.)
- M4.** Each Transmission Operator shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent, that it designated an Alternative Interpersonal Communications capability with its Reliability Coordinator, and with each Balancing Authority within its Transmission Operator Area. (R4.)

- M5.** Each Balancing Authority shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent, that it has Interpersonal Communications capability with its Reliability Coordinator, each Transmission Operator that operates Facilities within its Balancing Authority Area, and each Generator Operator that operates Facilities within its Balancing Authority Area and each Distribution Provider within its Balancing Authority Area, and each Interchange Coordinator within its Balancing Authority area as well as adjacent Interchange Coordinators. (R5)
- M6.** Each Balancing Authority shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent, that it designated an Alternative Interpersonal Communications capability with its Reliability Coordinator and each Transmission Operator that operates Facilities within its Balancing Authority Area. (R6)
- M7.** Each Distribution Provider shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent, that it has Interpersonal Communications capability with its Transmission Operator and its Balancing Authority. (R7)
- M8.** Each Generator Operator shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent, that it has Interpersonal Communications capability with its Balancing Authority and its Transmission Operator. (R8)
- M9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to dated test records, dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent, that it tested, at least on a monthly basis, its Alternative Interpersonal Communications capabilities designated in R2, R4 or R6. If the test was unsuccessful, the entity shall have and provide upon request evidence that it initiated action to repair or designated a replacement Alternative Interpersonal Communications within 2 hours. (R9.)
- M10.** Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent, it notified impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. (R10.)

## D. Compliance

### 1. Compliance Monitoring Process

#### 1.1. Compliance Enforcement Authority

Regional Entity

#### 1.2. Compliance Monitoring and Enforcement Processes

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

#### 1.3. Data Retention

The Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall keep the most recent twelve months of historical data (evidence) for Requirements R1, R2, R3, R4, R5, R6, R9 and R10, Measures M1, M2, M3, M4, M5, M6, M9 and M10 as applicable..

Each Distribution Provider shall keep the most recent twelve months of historical data (evidence) for Requirements R7 and R10, Measures M7 and M10.

Each Generator Operator shall keep the most recent twelve months of historical data (evidence) for Requirements R8 and R10, Measures M8 and M10.

If a Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider or Generator Operator is found non-compliant with a requirement, it shall keep information related to the noncompliance until the Compliance Enforcement Authority finds it compliant or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

#### 1.4. Additional Compliance Information

None

**2. Violation Severity Levels**

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	N/A	The Reliability Coordinator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 1.1 or 1.2.
R2	N/A	N/A	N/A	The Reliability Coordinator failed to designate Alternative Interpersonal Communications capability with one or more of the entities listed in Parts 2.1 or 2.2.
R3	N/A	N/A	N/A	The Transmission Operator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 3.1, 3.2, 3.3 or 3.4.
R4	N/A	N/A	N/A	The Transmission Operator failed to designate Alternative Interpersonal Communications capability with one or more of the entities listed in Parts 4.1 or 4.2.
R5	N/A	N/A	N/A	The Balancing Authority failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 5.1, 5.2, 5.3, 5.4 or 5.5.
R6	N/A	N/A	N/A	The Balancing Authority failed to designate Alternative Interpersonal Communications capability with one or more of the entities listed in Parts



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R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
				6.1 or 6.2.
R7	N/A	N/A	N/A	The Distribution Provider failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 7.1 or 7.2.
R8	N/A	N/A	N/A	The Generator Operator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 8.1 or 8.2.
R9	The responsible entity tested the Alternative Interpersonal Communications capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.	The responsible entity tested the Alternative Interpersonal Communications capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications within 12 hours.	The responsible entity tested the Alternative Interpersonal Communications capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications within 24 hours.	The responsible entity failed to test the Alternative Interpersonal Communications capability on at least a monthly basis. OR The responsible entity tested the Alternative Interpersonal Communications capability and identified a problem but didn't initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.
R10	The responsible entity failed to notify the impacted entities in more than 60 minutes but less than or equal to 70 minutes.	The responsible entity notified at least one, but not all, impacted entities of the failure of its normal Interpersonal Communications capabilities within 60 minutes. OR The responsible entity failed to notify the impacted entities in more than 70 minutes but less than or equal to 80	The responsible entity failed to notify the impacted entities in more than 80 minutes but less than or equal to 90 minutes.	The responsible entity failed to notify any impacted entities of the failure of its normal Interpersonal Communications capabilities. OR The responsible entity failed to notify the impacted entities in more than 90 minutes.

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R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
		minutes.		

**E. Regional Differences**

None identified.

**F. Associated Documents**

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
2	TBD	Revised per SAR for Project 2006-06, RC SDT	Revised

### Standard Development Roadmap

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

#### Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.

10. Third posting of revised standards on January 4, 2010 with comment period closed on February 3, 2010.

#### Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the ~~first~~third draft. The team is ~~seeking comments on the revised standards~~posting for a 30 day pre-ballot review.

#### Future Development Plan:

Anticipated Actions	Anticipated Date
1. Respond to comments on third posting	March 2010
2. Post Standards for pre-ballot period.	<del>April 2010</del> <u>January 2011</u>
3. Standards posted for initial and recirculation ballots.	<del>May 2010</del> <u>February 2011</u>
4. Standards sent to BOT for approval.	<del>July 2010</del> <u>March</u>

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	<u>2011</u>
5. Standards filed with regulatory authorities.	<del>September 2010</del> <u>June 2011</u>

### Definitions of Terms Used in Standard

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

**Interpersonal Communication:** Any ~~method~~medium~~the~~ that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any ~~method~~ Interpersonal Communication that is able to serve as a substitute for ~~and is redundant to normal Interpersonal Communication~~ and does not utilize the same infrastructure (medium) as ~~normal~~ Interpersonal Communications used for day-to-day operation.

**A. Introduction**

1. **Title:** Communications
2. **Number:** COM-001-2
3. **Purpose:** To ensure that operating entities have adequate Interpersonal Communication capabilities for the exchange of Interconnection and operating information necessary to maintain reliability.
4. **Applicability:**
  - 4.1. Transmission Operators.
  - 4.2. Balancing Authorities.
  - 4.3. Reliability Coordinators.
  - 4.4. Distribution Providers.
  - 4.5. Generator Operators.
  - ~~4.6. Transmission Service Providers.~~
  - ~~4.7. Load Serving Entities.~~
  - ~~4.8. Purchasing Selling Entities.~~
5. **Effective Date:** The first day of the first calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption.

**B. Requirements**

- ~~**R1.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. [Violation Risk Factor: High][Time Horizon: Real-time Operations]~~
- R1.** Each Reliability Coordinator shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [Violation Risk Factor: High][Time Horizon: Real-time Operations]:
- R1.1.** All Transmission Operators, Balancing Authorities and Interchange Coordinators within its Reliability Coordinator Area
- R1.2.** Adjacent Reliability Coordinators within the same Interconnection.
- R2.** Each Reliability Coordinator shall designate an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [Violation Risk Factor: High][Time Horizon: Real-time Operations]:
- R2.1.** All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area

- R2.2.** Adjacent Reliability Coordinators within the same Interconnection.
- R3.** Each Transmission Operator ~~and~~ shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [Violation Risk Factor: High][Time Horizon: Real-time Operations]:
- R3.1.** Its Reliability Coordinator
- R3.2.** Each Balancing Authority within its Transmission Operator Area.
- R3.3.** Each Distribution Provider within its Transmission Operator Area.
- R3.4.** Each Generator Operator within its Transmission Operator Area.
- R4.** Each Transmission Operator shall designate an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [Violation Risk Factor: High][Time Horizon: Real-time Operations]:
- R4.1.** Its Reliability Coordinator
- R4.2.** Each Balancing Authority within its Transmission Operator Area.
- R5.** Each Balancing Authority shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [Violation Risk Factor: High][Time Horizon: Real-time Operations]:
- R5.1.** Its Reliability Coordinator
- R5.2.** Each Transmission Operator that operates Facilities within its Balancing Authority Area
- R5.3.** Each Distribution Provider within its Balancing Authority Area
- R5.4.** Each Generator Operator that operates Facilities within its Balancing Authority Area
- R5.5.** Each Interchange Coordinator within its Balancing Authority area as well as adjacent Interchange Coordinators.
- R6.** Each Balancing Authority shall designate an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [Violation Risk Factor: High][Time Horizon: Real-time Operations]:
- R6.1.** Its Reliability Coordinator
- R6.2.** Each Transmission Operator that operates Facilities within its Balancing Authority Area)
- R7.** Each Distribution Provider shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [Violation Risk Factor: High][Time Horizon: Real-time Operations]
- R7.1.** Its Transmission Operator
- R7.2.** Its Balancing Authority.



**R8.** Each Generator Operator shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [Violation Risk Factor: High][Time Horizon: Real-time Operations]

**R8.1.** Its Balancing Authority

**R8.2.** Its Transmission Operator.

**R9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall, on at least a monthly basis, test its Alternative Interpersonal Communications capability. If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations]

**R2,R10.** Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall notify impacted entities within 60 minutes of the detection of a failure of its ~~normal~~ Interpersonal Communications capabilities that lasts 30 minutes or longer. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations]

**R3,R11.** Unless dictated by law or otherwise agreed to, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load Serving Entity, Purchasing-Selling Entity and Distribution Provider shall use English as the language for ~~all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected BES functional entities.~~ [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]

**R4.** Each Distribution Provider and Generator Operator shall have Interpersonal Communications capability with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. [Violation Risk Factor: High][Time Horizon: Real-time Operations]

**Comment [SC1]:** This requirement is being vetted by the OPCPSDT in COM-003. This requirement and measure will be removed from COM-001.

### C. Measures

**M1.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to dated test records, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that it identified and tested, on a quarterly basis, alternative Interpersonal Communications capabilities used for communicating real-time operating information. If the test was unsuccessful, the entity shall have and provide upon request evidence that it took action within 60 minutes to restore the identified alternative or identified a substitute Interpersonal Communications capability. (R1.)

**M1.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated and timestamped voice recordings or dated and timestamped transcripts of voice recordings, electronic communications, or equivalent, that it has Interpersonal Communications capability with all Transmission Operators,

- Balancing Authorities and Interchange Coordinators within its Reliability Coordinator Area and with adjacent Reliability Coordinators within the same Interconnection. (R1.)
- M2.** Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated and timestamped voice recordings or dated and timestamped transcripts of voice recordings, electronic communications, or equivalent, that it designated an Alternative Interpersonal Communications capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with adjacent Reliability Coordinators within the same Interconnection. (R2.)
- M3.** Each Transmission Operator shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated and timestamped voice recordings or dated and timestamped transcripts of voice recordings, electronic communications, or equivalent, that it has a Interpersonal Communications capability with its Reliability Coordinator, with each Balancing Authority and each Distribution Provider and each Generator Operator within its Transmission Operator Area. (R3.)
- M4.** Each Transmission Operator shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent, that it designated an Alternative Interpersonal Communications capability with its Reliability Coordinator, and with each Balancing Authority within its Transmission Operator Area. (R4.)
- M5.** Each Balancing Authority shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent, that it has Interpersonal Communications capability with its Reliability Coordinator, each Transmission Operator that operates Facilities within its Balancing Authority Area, and each Generator Operator that operates Facilities within its Balancing Authority Area and each Distribution Provider within its Balancing Authority Area, and each Interchange Coordinator within its Balancing Authority area as well as adjacent Interchange Coordinators. (R5)
- M6.** Each Balancing Authority shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent, that it designated an Alternative Interpersonal Communications capability with its Reliability Coordinator and each Transmission Operator that operates Facilities within its Balancing Authority Area. (R6)
- M7.** Each Distribution Provider shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and

installation documentation, dated test records, dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent, that it has Interpersonal Communications capability with its Transmission Operator and its Balancing Authority. (R7)

**M8.** Each Generator Operator shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent, that it has Interpersonal Communications capability with its Balancing Authority and its Transmission Operator. (R8)

**M9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to dated test records, dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent, that it tested, at least on a monthly basis, its Alternative Interpersonal Communications capabilities designated in R2, R4 or R6. If the test was unsuccessful, the entity shall have and provide upon request evidence that it initiated action to repair or designated a replacement Alternative Interpersonal Communications within 2 hours. (R9.)

**M2-M10.** Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent, it notified impacted entities within 60 minutes of the detection of a failure of its ~~normal~~ Interpersonal Communications capabilities that lasted 30 minutes or longer. (R2R10.)

~~**M3.** Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load Serving Entity, Purchasing Selling Entity, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that its personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected BES. If a language other than English is used, each party shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language or the law that requires the use of an alternate language. (R3.)~~

~~**M4.** Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.)~~

## D. Compliance

### 1. Compliance Monitoring Process

#### 1.1. Compliance Enforcement Authority

Regional Entity

#### 1.2. Compliance Monitoring and Enforcement Processes

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

#### 1.3. Data Retention

The Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

~~Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall keep the most recent three years of historical data (evidence) for Requirement R1, Measure M1.~~

Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall keep the most recent twelve months of historical data (evidence) for ~~Requirement R2, Measure M2,~~ Requirements R1, R2, R3, R4, R5, R6, R9 and R10, Measures M1, M2, M3, M4, M5, M6, M9 and M10 as applicable..

~~Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall keep evidence for Requirement R3, Measure M3 for the most recent 3twelve months- of historical data (evidence) for Requirements R7 and R10, Measures M7 and M10.~~

Each Generator Operator shall keep the most recent twelve months of historical data (evidence) for Requirements R8 and R10, Measures M8 and M10.

If a Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider or Generator Operator is found non-compliant with a requirement, it shall keep information related to the noncompliance until the Compliance Enforcement Authority finds it compliant- or for the time period specified above, whichever is longer.

~~Each Distribution Provider and Generator Operator shall keep the most recent three years of historical data (evidence) for Requirement R4, Measure M4.~~

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

**1.4. Additional Compliance Information**

None

**2. Violation Severity Levels**

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R4	<del>The responsible entity tested Alternative Interpersonal Communications capability but failed to take action within 60 minutes to restore the identified alternative OR Failed to identify a substitute Alternative Interpersonal Communications capability</del>	N/A	N/A	<del>The responsible entity failed to test its Alternative Interpersonal Communications capability on a quarterly basis.</del>
R1	N/A	N/A	N/A	<u>The Reliability Coordinator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 1.1 or 1.2.</u>
R2	N/A	N/A	N/A	<u>The Reliability Coordinator failed to designate Alternative Interpersonal Communications capability with one or more of the entities listed in Parts 2.1 or 2.2.</u>
R3	N/A	N/A	N/A	<u>The Transmission Operator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 3.1, 3.2, 3.3 or 3.4.</u>
R4	N/A	N/A	N/A	<u>The Transmission Operator failed to designate Alternative Interpersonal Communications capability with one or more of the entities listed in Parts 4.1 or 4.2.</u>

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
<u>R5</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Balancing Authority failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 5.1, 5.2, 5.3, 5.4 or 5.5.</u>
<u>R6</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Balancing Authority failed to designate Alternative Interpersonal Communications capability with one or more of the entities listed in Parts 6.1 or 6.2.</u>
<u>R7</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Distribution Provider failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 7.1 or 7.2.</u>
<u>R8</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Generator Operator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 8.1 or 8.2.</u>
<u>R9</u>	<u>The responsible entity tested the Alternative Interpersonal Communications capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.</u>	<u>The responsible entity tested the Alternative Interpersonal Communications capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications within 12 hours.</u>	<u>The responsible entity tested the Alternative Interpersonal Communications capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications within 24 hours.</u>	<u>The responsible entity failed to test the Alternative Interpersonal Communications capability on at least a monthly basis.</u>  <u>OR</u> <u>The responsible entity tested the Alternative Interpersonal Communications capability and identified a problem but didn't initiate action to repair or designate a replacement Alternative Interpersonal Communications within</u>

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
				<u>2 hours.</u>
<del>R2</del> <u>R10</u>	The responsible entity failed to notify the impacted entities in more than 60 minutes but less than or equal to 70 minutes.	The responsible entity notified at least one, but not all, impacted entities of the failure of its normal Interpersonal Communications capabilities within 60 minutes.  OR The responsible entity failed to notify the impacted entities in more than 70 minutes but less than or equal to 80 minutes.	The responsible entity failed to notify the impacted entities in more than 80 minutes but less than or equal to 90 minutes.	The responsible entity failed to notify any impacted entities of the failure of its normal Interpersonal Communications capabilities <del>within 60 minutes.</del>  OR The responsible entity failed to notify the impacted entities in more than 90 minutes.
<del>R3</del>	<del>N/A</del>	<del>N/A</del>	<del>N/A</del>	<del>The responsible entity failed to provide evidence of legal requirements or concurrence to use a language other than English for communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected BES when a language other than English was used.</del>
<del>R4</del>	<del>N/A</del>	<del>N/A</del>	<del>The responsible entity failed to have Interpersonal Communications capability with its Transmission Operator or Balancing Authority.</del>	<del>The responsible entity failed to have Interpersonal Communications capability with its Transmission Operator and Balancing Authority.</del>



**E. Regional Differences**

None identified.

**F. Associated Documents**

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
2	TBD	Revised per SAR for Project 2006-06, RC SDT	Revised

## Implementation Plan for COM-001-2

### Defined Terms in the NERC Glossary

The RC SDT proposes the following new definitions:

- **Interpersonal Communication:** Any medium that allows two or more individuals interact, consult, or exchange information.
- **Alternative Interpersonal Communication:** Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communications used for day-to-day operation.

### Prerequisite Approvals

- None

### Conforming Changes to Requirements in Already Approved Standards

- None

### Revision Summary

- The RC SDT revised the standard and is proposing retiring three requirements (R1, R5 and R6). Changes were made to eliminate redundancies between standards (existing and proposed), to align with the ERO Rules of Procedure and to address issues in FERC Order 693.

### Effective Dates

The first day of the first calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption. ~~To be determined.~~

## Implementation Plan for COM-001-2 Communications

### Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></p>	<p>R1. Each Reliability Coordinator shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information: [Violation Risk Factor: High][Time Horizon: Real-time Operations]:</p> <p>R1.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area</p> <p>R1.2. Adjacent Reliability Coordinators within the same interconnection.</p> <p>R2. Each Reliability Coordinator shall designate an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information: [Violation Risk Factor: High][Time Horizon: Real-time Operations]:</p> <p>R2.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area</p> <p>R2.2. Adjacent Reliability Coordinators within the same interconnection.</p> <p>R3. Each Transmission Operator shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information: [Violation Risk Factor: High][Time Horizon: Real-time Operations]:</p> <p>R3.1. Its Reliability Coordinator</p> <p>R3.2. Each Balancing Authority within its Transmission Operator Area.</p> <p>R3.3. Each Distribution Provider within its Transmission Operator Area.</p> <p>R3.4. Each Generator Operator within its Transmission Operator Area.</p> <p>R4. Each Transmission Operator shall designate an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information: [Violation Risk Factor: High][Time Horizon: Real-time Operations]:</p> <p>R4.1. Its Reliability Coordinator</p> <p>R4.2. Each Balancing Authority within its Transmission Operator Area.</p>
<p><b>Notes:</b> The requirements we made clearer as to which capabilities specific entities were required to have to reliability.</p>	



**Implementation Plan for COM-001-2 Communications**

<p><b>Already Approved Standard</b></p>	<p><b>Proposed Replacement Requirement(s)</b></p>
<p><b>COM-001-1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></p>	<p>R5. Each Balancing Authority shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i>:</p> <p>R5.1. Its Reliability Coordinator</p> <p>R5.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area</p> <p>R5.3. Each Generator Operator that operates Facilities within its Balancing Authority Area</p> <p>R5.4. Each Distribution Provider within its Balancing Authority Area</p> <p>R6. Each Balancing Authority shall designate an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i>:</p> <p>R6.1. Its Reliability Coordinator</p> <p>R6.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area)</p> <p>R7. Each Distribution Provider shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p>7.1 Its Transmission Operator</p> <p>7.2 Its Balancing Authority.</p> <p>R8. Each Generator Operator shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p>8.1 Its Balancing Authority</p> <p>8.2 Its Transmission Operator.</p>
<p>Notes: The requirements we made clearer as to which capabilities specific entities were required to have to reliability. R8 is created to address the FERC directive to “expands the applicability to include generator operators and distribution providers and includes Requirements for their telecommunications facilities”</p>	



**Implementation Plan for COM-001-2 Communications**

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b>  <b>R2.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall <b>manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.</b> <i>[Violation Risk Factor: Medium]</i></p>	<p><b>COM-001-2:</b>  <b>R9. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall, on at least a monthly basis, test its Alternative Interpersonal Communications capability. If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.</b> <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b></p>	

**Implementation Plan for COM-001-2 Communications**

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Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R3.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>COM-001-2</b></p> <p><b>R10.</b> Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>



## Implementation Plan for COM-001-2 Communications

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Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R4.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. <i>[Violation Risk Factor: Medium]</i></p>	<p>This requirement is being vetted by the OPCPSDT in COM-003. This requirement and measure will be removed from COM-001.</p>
<p><b>Notes:</b></p>	

**Implementation Plan for COM-001-2 Communications**

<p><b>Already Approved Standard</b></p>	<p><b>Proposed Replacement Requirement(s)</b></p>
<p><b>COM-001-1</b></p> <p><b>R5.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>EOP-008-0</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements:</p> <p><b>R1.1.</b> The contingency plan shall not rely on data or voice communication from the primary control facility to be viable.</p> <p><b>R1.2.</b> The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules.</p> <p><b>R1.3.</b> The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities.</p> <p><b>R1.4.</b> The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas.</p> <p><b>R1.5.</b> The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.</p> <p><b>R1.6.</b> The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans.</p> <p><b>R1.7.</b> The plan shall be reviewed and updated annually.</p> <p><b>R1.8.</b> Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.</p>
<p><b>Notes:</b> The RC SDT proposes retiring COM-001-1 R5 as it is redundant with EOP-008-0 Requirement R1.</p>	

## Implementation Plan for COM-001-2 Communications

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Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R6.</b> Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, "NERCNet Security Policy." <i>[Violation Risk Factor: Lower]</i></p>	<p><b>None - retire</b></p>
<p><b>Notes:</b> The RC SDT is recommending that R6 be retired. This is an ERO procedural issue and should not be in a reliability standard. It should be included in the ERO Rules of Procedure.</p>	

**Implementation Plan for COM-001-2 Communications**

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**Functions that Must Comply with the Requirements in the Standards**

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Purchasing Selling Entity	Transmission Operator	Transmission Service Provider	Load Serving Entity	Generator Operator	Distribution Provider
COM-001-2  Communi- cations	X	X	X	X	X	X	X	X

## Implementation Plan for COM-001-2

### Defined Terms in the NERC Glossary

The RC SDT proposes the following new definitions:

- Interpersonal Communication: Any medium that allows two or more individuals interact, consult, or exchange information.
- Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communications used for day-to-day operation.

### **Prerequisite Approvals**

- None

### **Conforming Changes to Requirements in Already Approved Standards**

- None

### **Revision Summary**

- The RC SDT revised the standard and is proposing retiring three requirements (R1, R5 and R6). Changes were made to eliminate redundancies between standards (existing and proposed), to align with the ERO Rules of Procedure and to address issues in FERC Order 693.

### **Effective Dates**

The first day of the first calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption. ~~To be determined.~~

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**Implementation Plan for COM-001-2**  
**Telecommunications Communications**

**Revisions or Retirements to Already Approved Standards**

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></p>	<p>R1. Each Reliability Coordinator shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information: [Violation Risk Factor: High][Time Horizon: Real-time Operations]:</p> <p>R1.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area</p> <p>R1.2. Adjacent Reliability Coordinators within the same interconnection.</p> <p>R2. Each Reliability Coordinator shall designate an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information: [Violation Risk Factor: High][Time Horizon: Real-time Operations]:</p> <p>R2.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area</p> <p>R2.2. Adjacent Reliability Coordinators within the same interconnection.</p> <p>R3. Each Transmission Operator shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information: [Violation Risk Factor: High][Time Horizon: Real-time Operations]:</p> <p>R3.1. Its Reliability Coordinator</p> <p>R3.2. Each Balancing Authority within its Transmission Operator Area.</p> <p>R3.3. Each Distribution Provider within its Transmission Operator Area.</p> <p>R3.4. Each Generator Operator within its Transmission Operator Area.</p> <p>R4. Each Transmission Operator shall designate an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information: [Violation Risk Factor: High][Time Horizon: Real-time Operations]:</p> <p>R4.1. Its Reliability Coordinator</p> <p>R4.2. Each Balancing Authority within its Transmission Operator Area.</p>
<p><b>Notes:</b> The requirements we made clearer as to which capabilities specific entities were required to have to reliability.</p>	



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Communications

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></p>	<p>R5. Each Balancing Authority shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information: [Violation Risk Factor: High][Time Horizon: Real-time Operations]:</p> <p>R5.1. Its Reliability Coordinator</p> <p>R5.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area</p> <p>R5.3. Each Generator Operator that operates Facilities within its Balancing Authority Area</p> <p>R5.4. Each Distribution Provider within its Balancing Authority Area</p> <p>R6. Each Balancing Authority shall designate an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information: [Violation Risk Factor: High][Time Horizon: Real-time Operations]:</p> <p>R6.1. Its Reliability Coordinator</p> <p>R6.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area)</p> <p>R7. Each Distribution Provider shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information: [Violation Risk Factor: High][Time Horizon: Real-time Operations]</p> <p>7.1 Its Transmission Operator</p> <p>7.2 Its Balancing Authority.</p> <p>R8. Each Generator Operator shall have Interpersonal Communications capability with the following entities to exchange Interconnection and operating information [Violation Risk Factor: High][Time Horizon: Real-time Operations]</p> <p>8.1 Its Balancing Authority</p> <p>8.2 Its Transmission Operator.</p>
<p>Notes: The requirements we made clearer as to which capabilities specific entities were required to have to reliability. R8 is created to address the FERC directive to “expands the applicability to include generator operators and distribution providers and includes Requirements for their telecommunications facilities”</p>	





Implementation Plan for COM-001-2  
[TelecommunicationsCommunications](#)

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b>  <b>R2.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall <a href="#">manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.</a> <i>[Violation Risk Factor: Medium]</i></p>	<p><b>COM-001-2:</b>  <b>R9.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall, on at least a monthly basis, test its <b>Alternative Interpersonal Communications capability.</b> If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement <b>Alternative Interpersonal Communications within 2 hours.</b> <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b></p>	

Implementation Plan for COM-001-2  
TelecommunicationsCommunications

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R3.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>COM-001-2</b></p> <p><b>R10.</b> Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>

Implementation Plan for COM-001-2  
[Telecommunications](#)[Communications](#)

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R4.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. <i>[Violation Risk Factor: Medium]</i></p>	<p>This requirement is being vetted by the OPCPSDT in COM-003. This requirement and measure will be removed from COM-001.</p>
<p><b>Notes:</b></p>	

Implementation Plan for COM-001-2  
Telecommunications  
Communications

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R5.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>EOP-008-0</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements:</p> <p><b>R1.1.</b> The contingency plan shall not rely on data or voice communication from the primary control facility to be viable.</p> <p><b>R1.2.</b> The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules.</p> <p><b>R1.3.</b> The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities.</p> <p><b>R1.4.</b> The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas.</p> <p><b>R1.5.</b> The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.</p> <p><b>R1.6.</b> The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans.</p> <p><b>R1.7.</b> The plan shall be reviewed and updated annually.</p> <p><b>R1.8.</b> Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.</p>
<p><b>Notes:</b> The RC SDT proposes retiring COM-001-1 R5 as it is redundant with EOP-008-0 Requirement R1.</p>	

Implementation Plan for COM-001-2  
[Telecommunications](#)[Communications](#)

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1</b></p> <p><b>R6.</b> Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, "NERCNet Security Policy." <i>[Violation Risk Factor: Lower]</i></p>	<p><b>None - retire</b></p>
<p><b>Notes:</b> The RC SDT is recommending that R6 be retired. This is an ERO procedural issue and should not be in a reliability standard. It should be included in the ERO Rules of Procedure.</p>	

Implementation Plan for COM-001-2  
[Telecommunications Communications](#)

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Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	<a href="#">Purchasing Selling Entity</a> Interest Authority	Transmission Operator	Transmission Service Provider Owner	<a href="#">Load Serving Entity</a> Generator Owner	Generator Operator	Distribution Provider
COM-001-2 <a href="#">Telecommunications</a>	X	X	X	X	X	X	X	X



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

## Standards Announcement

Ballot Window Open February 25 – March 7, 2011

Project 2006-06 – Reliability Coordination

Available Friday, February 25<sup>th</sup> at: <https://standards.nerc.net/CurrentBallots.aspx>

### **Initial Ballot Window Open February 25<sup>th</sup> through 8 p.m. on March 7, 2011**

An initial ballot for the following standards and associated implementation plans will be **open from 8:00 a.m. on Friday, February 25 through 8:00 p.m. on Monday, March 7, 2011.**

- COM-001-2 – Communications
- COM-002-3 – Communication and Coordination
- IRO-001-2 – Reliability Coordination – Responsibilities and Authorities
- IRO-002-2 – Reliability Coordination – Analysis Tools
- IRO-005-4 – Reliability Coordination – Current Day Operations
- IRO-014-2 – Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators
- IRO-015-1 – Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 – Coordination of Real-time Activities Between Reliability Coordinators

During the initial ballot window, members of the ballot pool associated with this project may log in and submit their votes from the following page: <https://standards.nerc.net/CurrentBallots.aspx>

### **Background**

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standards IRO-003-2.

For more information review the project Web page:

[http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)



## Next Steps

The comments submitted during the formal comment period and the ballot results will be posted.

## Standards Process

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact Monica Benson,  
Standards Process Administrator, at [monica.benson@nerc.net](mailto:monica.benson@nerc.net) or at 609.452.8060.*

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## Standards Announcement

### Ballot Pool Open January 25–February 25, 2011

### Formal Comment Period Extended to March 7, 2011

### Project 2006-06 – Reliability Coordination

Now available at: <https://standards.nerc.net/BallotPool.aspx>

#### **Ballot Pool Open through 8 a.m. on February 25, 2011**

A ballot pool is being formed during the next 30 days. The 45-day formal comment period is open from January 18 – March 7, 2011 with an initial ballot being conducted during the last 10 days of the comment period. Please review the Standards Under Development page for updated dates at:

[http://www.nerc.com/filez/standards/Reliability\\_Standards\\_Under\\_Development.html](http://www.nerc.com/filez/standards/Reliability_Standards_Under_Development.html)

Registered Ballot Body members may join the ballot pool to be eligible to vote in the upcoming ballot at the following page: <https://standards.nerc.net/BallotPool.aspx>

During the pre-ballot window, members of the ballot pool may communicate with one another by using their “ballot pool list server.” (Once the balloting begins, ballot pool members are prohibited from using the ballot pool list servers.) The list server for this ballot pool is: [bp-2006-06\\_RC\\_in@nerc.com](mailto:bp-2006-06_RC_in@nerc.com)

#### **Formal 45-day Comment Period Extended through 8 p.m. Eastern on Monday, March 7, 2011 and Additional Documents Posted**

Last week the Reliability Coordination drafting team posted its Consideration of Comments and revised drafts of the following standards to incorporate input from comments submitted during the January 4-February 18, 2010 comment period and comments provided by a Quality Review team:

- COM-001-2 – Communications
- COM-002-3 – Communication and Coordination
- IRO-001-2 – Reliability Coordination – Responsibilities and Authorities
- IRO-005-4 – Reliability Coordination – Current Day Operations
- IRO-014-2 – Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators

**Three additional standards were inadvertently omitted from last week’s posting and have now been posted:**

- IRO-002-2 – Reliability Coordination – Analysis Tools
- IRO-015-1 – Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 – Coordination of Real-time Activities Between Reliability Coordinators

The Standards Committee has authorized posting the standards and associated implementation plan for a 45-day comment period, with a parallel ballot during the last 10 days of the comment period. **To provide sufficient time for review of the newly posted standards, the comment period has been extended through 8 p.m. Eastern on Monday, March 7, 2011.**

## Instructions

Please use this [electronic form](#) to submit comments. For convenience, a Word version of the comment form has been posted on the project page.

## Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standards IRO-003-2.

## Next Steps

An initial ballot will be conducted during the last 10 days of the comment period. After the ballot, the drafting team will consider all comments (those submitted with a comment form and those submitted with a ballot) and determine whether further revisions to the standards and supporting documents are needed.

## Standards Process

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact Monica Benson,  
Standards Process Administrator, at [monica.benson@nerc.net](mailto:monica.benson@nerc.net) or at 609.452.8060.*

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## Standards Announcement

### Ballot Pool Open January 25–February 25, 2011

### Formal Comment Period Extended to March 7, 2011

### Project 2006-06 – Reliability Coordination

Now available at: <https://standards.nerc.net/BallotPool.aspx>

#### **Ballot Pool Open through 8 a.m. on February 25, 2011**

A ballot pool is being formed during the next 30 days. The 45-day formal comment period is open from January 18 – March 7, 2011 with an initial ballot being conducted during the last 10 days of the comment period. Please review the Standards Under Development page for updated dates at:

[http://www.nerc.com/filez/standards/Reliability\\_Standards\\_Under\\_Development.html](http://www.nerc.com/filez/standards/Reliability_Standards_Under_Development.html)

Registered Ballot Body members may join the ballot pool to be eligible to vote in the upcoming ballot at the following page: <https://standards.nerc.net/BallotPool.aspx>

During the pre-ballot window, members of the ballot pool may communicate with one another by using their “ballot pool list server.” (Once the balloting begins, ballot pool members are prohibited from using the ballot pool list servers.) The list server for this ballot pool is: [bp-2006-06\\_RC\\_in@nerc.com](mailto:bp-2006-06_RC_in@nerc.com)

#### **Formal 45-day Comment Period Extended through 8 p.m. Eastern on Monday, March 7, 2011 and Additional Documents Posted**

Last week the Reliability Coordination drafting team posted its Consideration of Comments and revised drafts of the following standards to incorporate input from comments submitted during the January 4-February 18, 2010 comment period and comments provided by a Quality Review team:

- COM-001-2 – Communications
- COM-002-3 – Communication and Coordination
- IRO-001-2 – Reliability Coordination – Responsibilities and Authorities
- IRO-005-4 – Reliability Coordination – Current Day Operations
- IRO-014-2 – Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators

**Three additional standards were inadvertently omitted from last week’s posting and have now been posted:**

- IRO-002-2 – Reliability Coordination – Analysis Tools
- IRO-015-1 – Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 – Coordination of Real-time Activities Between Reliability Coordinators

The Standards Committee has authorized posting the standards and associated implementation plan for a 45-day comment period, with a parallel ballot during the last 10 days of the comment period. **To provide sufficient time for review of the newly posted standards, the comment period has been extended through 8 p.m. Eastern on Monday, March 7, 2011.**

## Instructions

Please use this [electronic form](#) to submit comments. For convenience, a Word version of the comment form has been posted on the project page.

## Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standards IRO-003-2.

## Next Steps

An initial ballot will be conducted during the last 10 days of the comment period. After the ballot, the drafting team will consider all comments (those submitted with a comment form and those submitted with a ballot) and determine whether further revisions to the standards and supporting documents are needed.

## Standards Process

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

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NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

## Standards Announcement

### Formal Comment Period Open

### Project 2006-06 – Reliability Coordination

### January 18–March 4, 2011

**Now available at:** [http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)

The Reliability Coordination drafting team has posted its Consideration of Comments and revised drafts of the following standards to incorporate input from comments submitted during the January 4-February 18, 2010 comment period and comments provided by a Quality Review team:

- COM-001-2 – Communications
- COM-002-3 – Communication and Coordination
- IRO-001-2 – Reliability Coordination - Responsibilities and Authorities
- IRO-005-4 – Reliability Coordination – Current Day Operations
- IRO-014-2 – Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators

The Standards Committee has authorized posting the standards and associated implementation plan for a 45-day comment period, with a parallel ballot during the last 10 days of the comment period.

#### **Instructions**

Please use this [electronic form](#) to submit comments. For convenience, a Word version of the comment form has been posted on the project page.

#### **Background**

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standards IRO-003-2.

#### **Next Steps**

An initial ballot will be conducted during the last 10 days of the comment period. After the ballot, the drafting

team will consider all comments (those submitted with a comment form and those submitted with a ballot) and determine whether further revisions to the standards and supporting documents are needed.

### **Standards Process**

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

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NORTH AMERICAN ELECTRIC  
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## Standards Announcement

### Project 2006-06 – Reliability Coordination Initial Ballot Results

Now available at: <https://standards.nerc.net/Ballots.aspx>

An initial ballot of the following standards and their associated implementation plans ended on March 7, 2011:

- COM-001-2 – Communications
- COM-002-3 – Communication and Coordination
- IRO-001-2 – Reliability Coordination – Responsibilities and Authorities
- IRO-002-2 – Reliability Coordination – Analysis Tools
- IRO-005-4 – Reliability Coordination – Current Day Operations
- IRO-014-2 – Coordination Among Reliability Coordinators
- IRO-015-1 – Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 – Coordination of Real-time Activities Between Reliability Coordinators

Voting statistics are listed below, and the [Ballot Results](#) Web page provides a link to the detailed results:

Quorum: 87.10%

Approval: 49.54%

#### **Background:**

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standards IRO-003-2.

For more information review the project Web page:

[http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)



## Next Steps

The drafting team will consider all comments (those submitted with a comment form and those submitted with a ballot. Once the team has prepared its response to comments and made any changes to the standards and supporting documents, they will submit the revised documents for quality review prior to a successive ballot. Since a non-binding poll of VRFs and VSLs was not conducted concurrent with the initial ballot that concluded on March 7, 2011, a non-binding poll will be conducted in conjunction with the successive ballot.

## Ballot Criteria

Approval requires both (1) a quorum, which is established by at least 75% of the members of the ballot pool submitting either an affirmative vote, a negative vote, or an abstention, and (2) a two-thirds majority of the weighted segment votes cast must be affirmative; the number of votes cast is the sum of affirmative and negative votes, excluding abstentions and non-responses.

## Standards Process

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User Name

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Log in

Register

- Ballot Pools
- Current Ballots
- Ballot Results
- Registered Ballot Body
- Proxy Voters

[Home Page](#)

Ballot Results	
<b>Ballot Name:</b>	Project 2006-06: Reliability Coordination_in
<b>Ballot Period:</b>	2/25/2011 - 3/7/2011
<b>Ballot Type:</b>	Initial
<b>Total # Votes:</b>	297
<b>Total Ballot Pool:</b>	341
<b>Quorum:</b>	<b>87.10 % The Quorum has been reached</b>
<b>Weighted Segment Vote:</b>	49.54 %
<b>Ballot Results:</b>	<b>The standard will proceed to recirculation ballot.</b>

Summary of Ballot Results									
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Abstain # Votes	No Vote	
			# Votes	Fraction	# Votes	Fraction			
1 - Segment 1.		88	1	34	0.586	24	0.414	13	17
2 - Segment 2.		11	0.7	3	0.3	4	0.4	3	1
3 - Segment 3.		85	1	35	0.493	36	0.507	7	7
4 - Segment 4.		24	1	9	0.429	12	0.571	2	1
5 - Segment 5.		69	1	33	0.611	21	0.389	8	7
6 - Segment 6.		44	1	17	0.5	17	0.5	5	5
7 - Segment 7.		0	0	0	0	0	0	0	0
8 - Segment 8.		8	0.3	1	0.1	2	0.2	2	3
9 - Segment 9.		4	0.1	1	0.1	0	0	1	2
10 - Segment 10.		8	0.6	2	0.2	4	0.4	1	1
<b>Totals</b>		<b>341</b>	<b>6.7</b>	<b>135</b>	<b>3.319</b>	<b>120</b>	<b>3.381</b>	<b>42</b>	<b>44</b>

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Allegheny Power	Rodney Phillips	Affirmative	
1	Ameren Services	Kirit S. Shah	Negative	<a href="#">View</a>
1	American Electric Power	Paul B. Johnson		
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert D Smith	Affirmative	
1	Avista Corp.	Scott Kinney		
1	Baltimore Gas & Electric Company	Gregory S Miller	Affirmative	<a href="#">View</a>
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	

1	Beaches Energy Services	Joseph S. Stonecipher	Negative	<a href="#">View</a>
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Central Maine Power Company	Kevin L. Howes	Abstain	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G. Choi	Affirmative	
1	City of Vero Beach	Randall McCamish	Negative	<a href="#">View</a>
1	City Water, Light & Power of Springfield	Shaun Anders	Negative	<a href="#">View</a>
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel		
1	Colorado Springs Utilities	Paul Morland	Abstain	
1	Consolidated Edison Co. of New York	Christopher L. de Graffenried	Abstain	<a href="#">View</a>
1	Dayton Power & Light Co.	Hertzel Shamash	Affirmative	
1	Dominion Virginia Power	Michael S. Crowley	Abstain	
1	Duke Energy Carolina	Douglas E. Hils		
1	East Kentucky Power Coop.	George S. Carruba	Negative	<a href="#">View</a>
1	Empire District Electric Co.	Ralph Frederick Meyer	Affirmative	
1	Entergy Corporation	George R. Bartlett		
1	FirstEnergy Energy Delivery	Robert Martinko	Affirmative	<a href="#">View</a>
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative	
1	Great River Energy	Gordon Pietsch	Negative	<a href="#">View</a>
1	Hoosier Energy Rural Electric Cooperative, Inc.	Robert Solomon	Affirmative	
1	Hydro One Networks, Inc.	Ajay Garg	Affirmative	
1	Hydro-Quebec TransEnergie	Bernard Pelletier		
1	Idaho Power Company	Ronald D. Schellberg	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Negative	<a href="#">View</a>
1	Kansas City Power & Light Co.	Michael Gammon		
1	Keys Energy Services	Stan T. Rzad	Negative	
1	Lake Worth Utilities	Walt Gill	Negative	
1	Lakeland Electric	Larry E. Watt	Affirmative	
1	Lee County Electric Cooperative	John W. Delucca	Abstain	
1	Long Island Power Authority	Robert Ganley	Negative	
1	Manitoba Hydro	Joe D. Petaski	Negative	<a href="#">View</a>
1	MEAG Power	Danny Dees	Abstain	
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	
1	Minnkota Power Coop. Inc.	Richard Burt	Negative	<a href="#">View</a>
1	National Grid	Saurabh Saksena		
1	Nebraska Public Power District	Richard L. Koch	Abstain	
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Abstain	
1	New York Power Authority	Arnold J. Schuff		
1	Northeast Utilities	David H. Boguslawski	Affirmative	
1	Northern Indiana Public Service Co.	Kevin M. Largura	Negative	
1	NorthWestern Energy	John Canavan	Abstain	
1	Oklahoma Gas and Electric Co.	Marvin E. VanBebber	Abstain	
1	Omaha Public Power District	Douglas G. Peterchuck	Affirmative	
1	Oncor Electric Delivery	Michael T. Quinn	Abstain	
1	Orlando Utilities Commission	Brad Chase		
1	Otter Tail Power Company	Daryl Hanson		
1	PacifiCorp	Colt Norrish	Affirmative	
1	PECO Energy	Ronald Schloendorn	Negative	
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	Frank F. Afranji	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PowerSouth Energy Cooperative	Larry D. Avery	Negative	
1	PPL Electric Utilities Corp.	Brenda L. Truhe	Negative	<a href="#">View</a>
1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Negative	<a href="#">View</a>
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Abstain	
1	Puget Sound Energy, Inc.	Catherine Koch		
1	Rochester Gas and Electric Corp.	John C. Allen	Abstain	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L. Blackwell	Affirmative	
1	SCE&G	Henry Delk, Jr.		
1	Seattle City Light	Pawel Krupa	Affirmative	

1	Sierra Pacific Power Co.	Rich Salgo	Affirmative	
1	South Texas Electric Cooperative	Richard McLeon	Affirmative	
1	Southern California Edison Co.	Dana Cabbell		
1	Southern Company Services, Inc.	Robert A Schaffeld	Affirmative	<a href="#">View</a>
1	Southern Illinois Power Coop.	William G. Hutchison	Negative	
1	Southwest Transmission Cooperative, Inc.	James L. Jones	Affirmative	
1	Southwestern Power Administration	Gary W Cox	Affirmative	
1	Sunflower Electric Power Corporation	Noman Lee Williams		
1	Tampa Electric Co.	Beth Young	Negative	
1	Tennessee Valley Authority	Larry Akens	Negative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		
1	United Illuminating Co.	Jonathan Appelbaum	Negative	<a href="#">View</a>
1	Westar Energy	Allen Klassen	Negative	<a href="#">View</a>
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Western Farmers Electric Coop.	Forrest Brock	Negative	<a href="#">View</a>
1	Xcel Energy, Inc.	Gregory L Pieper	Negative	
2	Alberta Electric System Operator	Mark B Thompson	Affirmative	
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
2	California ISO	Gregory Van Pelt	Abstain	<a href="#">View</a>
2	Electric Reliability Council of Texas, Inc.	Chuck B Manning	Negative	<a href="#">View</a>
2	Independent Electricity System Operator	Kim Warren	Negative	<a href="#">View</a>
2	ISO New England, Inc.	Kathleen Goodman	Negative	<a href="#">View</a>
2	Midwest ISO, Inc.	Jason L Marshall	Negative	<a href="#">View</a>
2	New Brunswick System Operator	Alden Briggs	Abstain	
2	New York Independent System Operator	Gregory Campoli	Abstain	<a href="#">View</a>
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool	Charles H Yeung		
3	Alabama Power Company	Richard J. Mandes	Affirmative	<a href="#">View</a>
3	Allegheny Power	Bob Reeping		
3	Anaheim Public Utilities Dept.	Kelly Nguyen	Abstain	
3	APS	Steven Norris	Affirmative	
3	Atlantic City Electric Company	James V. Petrella	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blachly-Lane Electric Co-op	Bud Tracy	Negative	<a href="#">View</a>
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Negative	<a href="#">View</a>
3	Central Lincoln PUD	Steve Alexanderson	Negative	<a href="#">View</a>
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila	Negative	
3	City of Farmington	Linda R. Jacobson	Abstain	
3	City of Garland	Ronnie C Hoeinghaus	Affirmative	
3	City of Green Cove Springs	Gregg R Griffin	Negative	<a href="#">View</a>
3	City of Leesburg	Phil Janik		
3	City of Redding	Bill Hughes	Affirmative	
3	Clearwater Power Co.	Dave Hagen	Negative	<a href="#">View</a>
3	Cleco Corporation	Michelle A Corley		
3	ComEd	Bruce Krawczyk	Negative	<a href="#">View</a>
3	Consolidated Edison Co. of New York	Peter T Yost	Abstain	
3	Constellation Energy	Carolyn Ingersoll	Affirmative	
3	Consumers Energy	David A. Lapinski	Abstain	
3	Consumers Power Inc.	Roman Gillen	Negative	<a href="#">View</a>
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Negative	<a href="#">View</a>
3	Cowlitz County PUD	Russell A Noble	Negative	<a href="#">View</a>
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Dominion Resources Services	Michael F Gildea	Abstain	
3	Douglas Electric Cooperative	Dave Sabala	Negative	<a href="#">View</a>
3	Duke Energy Carolina	Henry Ernst-Jr	Negative	<a href="#">View</a>
3	East Kentucky Power Coop.	Sally Witt	Negative	<a href="#">View</a>
3	Entergy	Joel T Plessinger	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Negative	<a href="#">View</a>
3	FirstEnergy Solutions	Kevin Querry	Affirmative	<a href="#">View</a>
3	Georgia Power Company	Anthony L Wilson	Affirmative	<a href="#">View</a>
3	Georgia System Operations Corporation	R Scott S. Barfield-McGinnis	Affirmative	

3	Great River Energy	Sam Kokkinen	Negative	
3	Hydro One Networks, Inc.	David L. Kiguel	Affirmative	
3	Idaho Power Company	Shaun Jensen	Negative	<a href="#">View</a>
3	JEA	Garry Baker	Affirmative	
3	Kansas City Power & Light Co.	Charles Locke	Negative	<a href="#">View</a>
3	Kissimmee Utility Authority	Gregory David Woessner	Negative	
3	Lakeland Electric	Mace Hunter	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Negative	<a href="#">View</a>
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Negative	<a href="#">View</a>
3	Lincoln Electric System	Bruce Merrill	Negative	<a href="#">View</a>
3	Los Angeles Department of Water & Power	Daniel D. Kurowski	Affirmative	
3	Lost River Electric Cooperative	Richard Reynolds	Negative	<a href="#">View</a>
3	Louisville Gas and Electric Co.	Charles A. Freibert	Negative	<a href="#">View</a>
3	Manitoba Hydro	Greg C. Parent	Negative	<a href="#">View</a>
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Mississippi Power	Don Horsley	Affirmative	<a href="#">View</a>
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S. Bos	Negative	<a href="#">View</a>
3	Nebraska Public Power District	Tony Eddleman	Negative	<a href="#">View</a>
3	New York Power Authority	Marilyn Brown	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	<a href="#">View</a>
3	Northern Indiana Public Service Co.	William SeDoris	Negative	
3	Northern Lights Inc.	Jon Shelby	Negative	<a href="#">View</a>
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Negative	<a href="#">View</a>
3	Orange and Rockland Utilities, Inc.	David Burke	Abstain	
3	Orlando Utilities Commission	Ballard Keith Mutters	Abstain	
3	PacifiCorp	John Apperson	Affirmative	
3	Platte River Power Authority	Terry L. Baker	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Negative	<a href="#">View</a>
3	Public Utility District No. 2 of Grant County	Greg Lange	Affirmative	
3	Raft River Rural Electric Cooperative	Heber Carpenter	Negative	<a href="#">View</a>
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salmon River Electric Cooperative	Ken Dizes	Negative	<a href="#">View</a>
3	Salt River Project	John T. Underhill	Affirmative	
3	San Diego Gas & Electric	Scott Peterson		
3	Santee Cooper	Zack Dusenbury	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R. Frauen		
3	Southern California Edison Co.	David Schiada	Affirmative	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L. Donahey	Negative	<a href="#">View</a>
3	Tennessee Valley Authority	Ian S. Grant	Negative	
3	Umatilla Electric Cooperative	Steve Eldrige	Negative	<a href="#">View</a>
3	West Oregon Electric Cooperative, Inc.	Marc Farmer	Negative	
3	Wisconsin Electric Power Marketing	James R. Keller	Affirmative	
3	Wisconsin Public Service Corp.	Gregory J. Le Grave		
3	Xcel Energy, Inc.	Michael Ibold	Affirmative	<a href="#">View</a>
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Negative	<a href="#">View</a>
4	American Municipal Power - Ohio	Kevin Koloini	Negative	
4	Blue Ridge Power Agency	Duane S. Dahlquist	Abstain	
4	Central Lincoln PUD	Shamus J. Gamache	Negative	<a href="#">View</a>
4	City of Clewiston	Kevin McCarthy	Negative	
4	City of New Smyrna Beach Utilities Commission	Timothy Beyrle	Negative	
4	City Utilities of Springfield, Missouri	John Allen	Negative	<a href="#">View</a>
4	Consumers Energy	David Frank Ronk	Abstain	
4	Cowlitz County PUD	Rick Syring	Negative	<a href="#">View</a>
4	Florida Municipal Power Agency	Frank Gaffney	Negative	<a href="#">View</a>
4	Fort Pierce Utilities Authority	Thomas W. Richards	Negative	<a href="#">View</a>
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Negative	<a href="#">View</a>
4	Madison Gas and Electric Co.	Joseph G. DePoorter	Negative	<a href="#">View</a>
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	<a href="#">View</a>
4	Pacific Northwest Generating Cooperative	Aleka K. Scott	Negative	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish	John D. Martinsen	Affirmative	

	County			
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace		
4	Tacoma Public Utilities	Keith Morissette	Affirmative	
4	Tallahassee Electric	Allan Morales	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Affirmative	<a href="#">View</a>
5	AEP Service Corp.	Brock Ondayko	Negative	<a href="#">View</a>
5	AES Corporation	Leo Bernier	Affirmative	
5	Amerenue	Sam Dwyer	Negative	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Avista Corp.	Edward F. Groce	Abstain	
5	BC Hydro and Power Authority	Clement Ma	Affirmative	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	City of Grand Island	Jeff Mead	Negative	
5	City of Redding	Paul A Cummings	Affirmative	
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick	Affirmative	
5	City of Tallahassee	Alan Gale	Abstain	
5	Cleco Power	Stephanie Huffman		
5	Cogentrix Energy, Inc.	Mike D Hirst	Abstain	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Abstain	
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Affirmative	
5	Consumers Energy	James B Lewis	Affirmative	
5	Cowlitz County PUD	Bob Essex	Negative	<a href="#">View</a>
5	CPS Energy	Robert B Stevens		
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Abstain	
5	Duke Energy	Dale Q Goodwine	Negative	
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	Electric Power Supply Association	John R Cashin	Affirmative	<a href="#">View</a>
5	Entergy Corporation	Stanley M Jaskot	Affirmative	
5	Exelon Nuclear	Michael Korchynsky	Negative	
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative	<a href="#">View</a>
5	FirstEnergy Solutions	Kenneth Dresner		
5	Florida Municipal Power Agency	David Schumann		
5	Great River Energy	Preston L Walsh	Negative	
5	Green Country Energy	Greg Froehling		
5	Indeck Energy Services, Inc.	Rex A Roehl	Negative	
5	Kansas City Power & Light Co.	Scott Heidtbrink	Negative	<a href="#">View</a>
5	Kissimmee Utility Authority	Mike Blough	Negative	
5	Lakeland Electric	Jim M Howard	Negative	<a href="#">View</a>
5	Liberty Electric Power LLC	Daniel Duff	Affirmative	
5	Lincoln Electric System	Dennis Florom	Negative	<a href="#">View</a>
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative	
5	Luminant Generation Company LLC	Mike Laney	Affirmative	
5	Manitoba Hydro	S N Fernando	Negative	<a href="#">View</a>
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider	Affirmative	
5	Muscatine Power & Water	Mike Avesing	Negative	<a href="#">View</a>
5	Nebraska Public Power District	Don Schmit	Negative	<a href="#">View</a>
5	New York Power Authority	Gerald Mannarino	Affirmative	
5	Occidental Chemical	Michelle DAntuono	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard Kinias		
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Pete Ungerman	Affirmative	
5	Portland General Electric Co.	Gary L Tingley	Affirmative	
5	PPL Generation LLC	Annette M Bannon	Negative	<a href="#">View</a>
5	Public Service Enterprise Group Incorporated	Dominick Grasso	Negative	<a href="#">View</a>
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative	<a href="#">View</a>
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative	
5	Salt River Project	Glen Reeves	Affirmative	
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	

5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins		
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Negative	
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Negative	
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	US Power Generating Company	Bohdan M Dackow	Affirmative	
5	Wisconsin Electric Power Co.	Linda Horn	Affirmative	
5	Wisconsin Public Service Corp.	Leonard Rentmeester	Abstain	
6	AEP Marketing	Edward P. Cox	Negative	<a href="#">View</a>
6	Ameren Energy Marketing Co.	Jennifer Richardson	Negative	<a href="#">View</a>
6	Arizona Public Service Co.	Justin Thompson	Affirmative	
6	Black Hills Power	andrew heinle	Abstain	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Abstain	
6	Cleco Power LLC	Robert Hirschak		
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Abstain	
6	Constellation Energy Commodities Group	Brenda Powell	Affirmative	
6	Dominion Resources, Inc.	Louis S. Slade	Abstain	
6	Duke Energy Carolina	Walter Yeager	Negative	
6	Entergy Services, Inc.	Terri F Benoit	Affirmative	
6	Exelon Power Team	Pulin Shah	Negative	
6	FirstEnergy Solutions	Mark S Travaglianti	Affirmative	<a href="#">View</a>
6	Florida Municipal Power Agency	Richard L. Montgomery		
6	Florida Municipal Power Pool	Thomas E Washburn	Negative	<a href="#">View</a>
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative	<a href="#">View</a>
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	<a href="#">View</a>
6	Lakeland Electric	Paul Shipps	Negative	<a href="#">View</a>
6	Lincoln Electric System	Eric Ruskamp		
6	Manitoba Hydro	Daniel Prowse	Negative	<a href="#">View</a>
6	MidAmerican Energy Co.	Dennis Kimm	Affirmative	
6	Muscatine Power & Water	Brandy D Olson	Negative	<a href="#">View</a>
6	New York Power Authority	William Palazzo	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Negative	
6	Omaha Public Power District	David Ried	Affirmative	
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	PPL EnergyPlus LLC	Mark A Heimbach	Negative	<a href="#">View</a>
6	Progress Energy	John T Sturgeon	Negative	<a href="#">View</a>
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Negative	<a href="#">View</a>
6	Sacramento Municipal Utility District	Claire Warshaw	Affirmative	
6	Salt River Project	Steven J Hulet	Abstain	
6	Santee Cooper	Suzanne Ritter	Affirmative	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak		
6	Shell Energy North America (US), L.P.	Paul Benjamin Kerr	Affirmative	<a href="#">View</a>
6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Negative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Negative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons	Negative	
8		James A Maenner	Negative	<a href="#">View</a>
8		Roger C Zaklukiewicz	Affirmative	
8		Edward C Stein		
8	JDRJC Associates	Jim D. Cyrulewski		
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Negative	<a href="#">View</a>
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon	Abstain	
8	Volkman Consulting, Inc.	Terry Volkman	Abstain	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald E. Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J. Barney		



9	Oregon Public Utility Commission	Jerome Murray	<a href="#">Abstain</a>	
9	Snohomish County PUD No. 1	William Moojen		
10	Florida Reliability Coordinating Council	Linda Campbell	<a href="#">Abstain</a>	
10	Midwest Reliability Organization	James D Burley	<a href="#">Negative</a>	
10	New York State Reliability Council	Alan Adamson	<a href="#">Affirmative</a>	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	<a href="#">Affirmative</a>	
10	ReliabilityFirst Corporation	Anthony E Jablonski	<a href="#">Negative</a>	<a href="#">View</a>
10	SERC Reliability Corporation	Carter B. Edge	<a href="#">Negative</a>	<a href="#">View</a>
10	Texas Reliability Entity	Larry D. Grimm	<a href="#">Negative</a>	
10	Western Electricity Coordinating Council	Louise McCarren		

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**Individual or group. (41 Responses)**  
**Name (22 Responses)**  
**Organization (22 Responses)**  
**Group Name (19 Responses)**  
**Lead Contact (19 Responses)**  
**Question 1 (38 Responses)**  
**Question 1 Comments (41 Responses)**  
**Question 2 (32 Responses)**  
**Question 2 Comments (41 Responses)**  
**Question 3 (28 Responses)**  
**Question 3 Comments (41 Responses)**  
**Question 4 (27 Responses)**  
**Question 4 Comments (41 Responses)**  
**Question 5 (27 Responses)**  
**Question 5 Comments (41 Responses)**  
**Question 6 (0 Responses)**  
**Question 6 Comments (41 Responses)**

-
Group
Northeast Power Coordinating Council
Guy Zito
No
<p>It was expressed in the last posting that the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the wording of the definition. The word being defined shouldn't be in the definition. However, incorporating "allows two or more individuals to ..." is an option that may solve this problem. The next posting should clarify this. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. The sub-requirements should be modified into bulleted lists. Consider striking "to exchange Interconnection and operating information" in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications "to interact, consult, or exchange information" in the definition. Consider striking "to exchange Interconnection and operating information" in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes "to interact, consult, or exchange information" in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, affected neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different from the associated Interpersonal Communications requirements R3 and R5 respectively. These should be duplicate. The sub-requirement list for R4 should match R3, and the sub-requirement list for R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. The sub-requirements should be bulleted lists. For R5, why are neighboring Balancing Authorities not included? Additionally, R5 should only read Contact with Interchange Coordinator within the same Interconnection. They need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is "shall have" while in R2, R4, and R6, the requirement is "shall designate". Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, the same wording should be used. R2.2 and R1.2 should not be limited to Reliability Coordinators in the same Interconnection only. Modify "within the same Interconnection" to "within the same Interconnection, and, as appropriate, between asynchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)" since reliability coordination may be required among the RCs on both sides of an Interconnection boundary. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications with. FERC specified their general preference for graduated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost a duplicate of the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.</p>
No
If the requirement were going to remain. but the Project 2007-03 Real-Time Operations SDT proposed to retire that

requirement during their last posting. There needs to be better coordination with that SDT.
No
The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES are covered under a Reliability Coordinator. In R2, should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.
Yes
No
R1 states “When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.” The word “notify” should be stuck.
The SDT did not address all concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving as the Transmission Operator or Balancing Authority. It should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, standards should be made clear that the Reliability Directive is directed to another company. In place of requiring an operator, in real-time, to state “this is a Reliability Directive,” there should be an allowance for an entity to develop procedures indicating, in advance, their expectations for three-part communications to their sub-operating entities. Therefore, we suggest modifying R1 to be “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]” Also, the definition of Emergency as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation that indicates requirements are being move to this standard. Delete the text box. Strike IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. Requirement R2 in IRO-001 contains the words “which could include issuing Reliability Directives”, but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. These words should be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary.
Individual
Greg Froehling
Green Country Energy, Green Country Operating Services
No
COM-001 General question/comment. The reference to infrastructure should be removed and just keep the word “medium”. Here's why What communication medium (infrastructure) does not use satellite at some point unless entities are within a close geographical proximity? How likely is it to have 2 different mediums? • Local phone and fax hard-wire likely. • Long distance phone and fax – satellite • Cell phone – satellite • Internet – satellite • Radio – antenna The reason for mentioning this is, if all we have is satellite then the reference to infrastructure should be removed and just keep the word “medium”.
No Comment

No Comment
No Comment
No Comment
IRO-001-2 as proposed does not include the PSE in the applicability, nor does it require the PSE to respond to a directive. However, COM-002 requires them to repeat the directive back... If the directive is that important to repeat back should they not have to act upon the directive? I think the PSE should be included in IRO-001-2 this standard as they represent and direct generation facility deployment in many cases. Including the PSE in COM-001 may be a good idea too, just for the situations listed above.
Individual
Steve Alexanderson
Central Lincoln
No
See Q 6 below.
The stated purpose of COM-002 is: "To ensure emergency communications between operating personnel are effective." As written, the standard fails to meet this purpose because the three requirements only deal with communications at the entity level. There is no requirement for the directing entity to even try to reach operating personnel at the receiving entity. The directing entity may follow all the requirements of this standard by following R1 and R3 with the receiving entity's receptionist, answering service, janitor, night watchman, etc. The receiving entity only needs to meet R2, parroting the directive. Again this could be accomplished by anyone with no assurance the directive reaches the operating personnel who can implement it. When we stated a similar objection during the last comment period, The SDT's answer suggested this was a PER staffing issue, but none of the PER requirements even apply to DP/LSE directive recipients. We suggest the entity issuing the directive should be required to make an attempt to get it to those who are competent to understand and implement the directive. This is not a staffing, training, or credentials issue; it is a performance issue that falls squarely within the stated purpose of this standard. COM-001 R10 presents a paradoxical situation to an entity attempting to comply. Consider an interpersonal communication capability failure that lasts longer than 60 minutes past initial detection. At or before 60 minutes, the affected entity is expected to notify impacted entities. If it has no interpersonal communication capability, how shall it make this notification? And if the entity does manage to make such a notification, it has thereby proven that it does have interpersonal communication capability making such notification unnecessary. We again ask the SDT to consider that not all the entities in the applicability sections of COM-001 and 002 have 24/7 dispatch centers. These are typically smaller entities that were required to register because they exceed 25 MW or were asked in the past to voluntarily provide UFLS. They do not and do not need to continuously communicate with TOPs, BAs, RCs, etc; and a "reliability directive" is a theoretical thing that has never happened during the memories of thirty year employees. The directive issuing entities simply realize the limitations around the receiving entities and work around them. The financial burden on these small entities and their customers to go to 24/7 dispatch will not have a corresponding reliability benefit. And while the two COM standards do not explicitly state that entities must maintain 24/7 dispatch, when all the requirements and definitions and time horizons are taken together 24/7 continuous competent communication is implied. During the last comment period, the SDT suggested this was a registration issue beyond their control. We submit instead that this is a standard applicability question that the SDT does have control over, since it is right there in Section A.4 of the two COM standards. While we appreciate that the SDT is responding to FERC order 693 to include DPs, we note that FERC also stated: Paragraph 487: "We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process." Paragraph 6: "A Reliability Standard may take into account the size of the entity that must comply and the costs of implementation" Paragraph 141: "...the Commission clarifies that it did not intend to ... impose new organizational structures..." Paragraph 31: "We emphasize that we are not, at this time, mandating a particular outcome by way of these directives, but we do expect the ERO to respond with an equivalent alternative and adequate support that fully explains how the alternative produces a result that is as effective as or more effective than the Commission's example or directive. We ask the SDT to exclude DPs, LSEs, and PSEs that do not have 24/7 dispatch centers from the applicability of these two standards in order to meet FERC order 693.
Group
Competitive Suppliers
Jack Cashin

<p>EPSA is the trade association for competitive suppliers including both generators and marketers that represent over 700 entities in the NERC compliance registry. As such, the EPSA membership includes members registered as Purchasing Selling Entities (PSE) in each NERC region. Moreover, many of EPSA's members are also registered as LSEs in several regions. In general, EPSA supports the progress made in revising COM-001, COM-002 and IRO-001 in Project 2006-06, particularly the improvements made to the definition of Reliability Directive. However, EPSA also has concerns with some proposed changes to the applicability sections of the revised standards. In addition, EPSA requests that the implementation plans be changed so that they are consistent with the standard. Regarding applicability, EPSA agrees that COM-001 should continue to not apply to Purchasing Selling Entity (PSE) and Load Serving Entity (LSE) functions. However, the implementation plan for COM-001-2 still includes a reference that PSEs and LSEs must comply (page 11 of the implementation plan). Additionally, EPSA supports the removal of LSEs and PSEs from IRO-001-2. Much like the situation with COM-001-2, the implementation plan for IRO-001-2 still includes a reference that LSEs and PSEs must comply (page 11 of the implementation plan). In both the implementation plans for COM-001-2 and IRO-001-2 these references should be removed. For reasons similar to those underlying why COM-001-2 and IRO-001-2 do not apply to PSEs and LSEs, EPSA opposes the addition of PSEs to the COM-002-3 applicability. The purpose of the emergency communications in these standards is "To ensure emergency communications between operating personnel are effective." The removal would recognize that PSEs and LSEs do not play an active role in reliability coordination under this standard since they have no authority, nor ability to assume or perform responsibilities associated with reliability coordination. When a RC, TOP, or BA needs to address an Emergency they do not contact, consult, or direct a PSE to take action to address the Emergency. Reliability is neither improved nor degraded by having these Standards applicable to PSEs or LSEs; therefore, COM-001, COM-002 and IRO-001 need not be applicable to PSEs or LSEs. Thanks to the drafting team members for their effort on revising the Project 2006-06 standards.</p>
Individual
Mace Hunter
Lakeland Electric
Yes
COM-002-3 R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message can be confirmed by the originator. (Replace 'has been' with 'can be' and add 'by the originator' to better fit into the sequence with R3.)
Group
Exelon
John Bee
No
1. COM-001-2, 4.4 - Distribution Providers and 4.5, Generation Operators should be highlighted and communicated as a substantive change since entities may not be aware that they are being added to the applicability section of the standard. 2. COM-001-2, R10 - should have the following underlined clarifying text added, shall notify impacted entities within 60 minutes of the detection of a failure "of all primary and alternative " Interpersonal Communications capabilities that lasts 30 minutes or longer. Exelon believes that the intent of R10 is for complete loss of communication ability and should not be applied to facilities that have multiple backups. 3. COM-001-2, M1 thru 9 – Suggest that network diagrams and / or communications schematics be added as suggested evidence. 4. COM-001-2, VSL for R9 – Regarding failure to test the Alternative Interpersonal Communication, the Severity Level does not align with the potential impact to the BES. The Severity Level for simply missing a test should be revised to a High VSL.
Yes
No comment - only applicable to RC
Comments: No comment – only applicable to RC
Comments: No comment - only applicable to RC
1. COM-002-2, R2 – Remove the word "recapitulate", feel that "restate or rephrase" is adequate. The word "recapitulate" is not commonly used and is somewhat obscure. 2. COM-002-2, R3 – Suggest using the words "repeat back" rather than "state or respond that" to more clearly identify the expectation with more commonly used language. 3. IRO-001-2, R3 – While we appreciate that the SDT has defined the term "directive" as a much needed definition, IRC-001-2 R.3 now introduces a new term "direction". what is a "direction" and how does it differ from "directive"? If a new

term is going to be introduced it needs to be defined, if the intent was to use the word "directive" then "direction" should be replaced with "directive." 4. IRO-001-2, R4 – Again the term "as directed" is confusing, recommend that the text be changed to align with the term directive, "unable to perform the directive per Requirement R3."

Individual

Joe Petaski

Manitoba Hydro

Yes

Yes

Yes

Yes

Yes

-The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. -Clarification required on the VSL for R9 - there appears to be no difference in the description of the Lower VSL and second part of the Severe VSL following "or". - Clarification required - The existing version of COM-001 M1 indicates that maintenance records for communication facilities may be required but the proposed revision makes no mention of maintenance records. So evidence of maintenance is no longer required?

Group

PNGC Power member owners

Ron Sporseen

No

Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.

Empty table rows for additional comments.

Individual
Brian J Murphy
NextEra Energy, Inc.
No
As drafted, COM-001 is not clear or complete. At this stage in the evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. Thus, NextEra Energy Inc. (NextEra) has numerous recommended corrections to provide clarity and completeness to COM-001. For example, the requirement to designate an Alternative Interpersonal Communication capability is not clear. Does the designator solely designate for the designator's knowledge or does the designator need to inform the entity on the other end of the connection. In R2, for instance, the Reliability Coordinator must designate, but it is also not clear whether the Reliability Coordinator must inform the Balancing Authorities or Transmission Operators. It is further unclear whether the designation must be documented, or if any informing of the Balancing Authorities or Transmission Operators must be documented. Thus, it is recommended that the drafters decide what was intended regarding the designation and clearly state the requirements. In R9 it states that ". . . on at least a monthly basis." There are two issues to consider here. If the sentence stays, grammatically it should read ". . . on, at least, a monthly basis. . ." However, from a compliance and technical perspective, the term "at least" has no significance and should be deleted. The requirement is to test on a monthly basis – the phrase "at least" only introduces ambiguity and implies that the party should consider every two or three weeks. If the drafting team believes a best practice is less than a month, there are other NERC educational tools to explain a best practice. In R10, it states ". . . shall notify the impacted entity . . ." It would be clearer to state: ". . . shall notify the impacted Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider or Generator Operator . . ."
No
As stated in response to number 1, Reliability Standards are to be clear and complete. If a Transmission Operator is not responsible for a delay caused by a Reliability Coordinator, the Standard should specifically state that the Transmission Operator does not need to wait for an assessment or approval of a Reliability Coordinator to take actions pursuant to TOP-001-1 R3. Since the Reliability Coordinator is atop the reliability higherachy, such a statement provides clarity and completeness to understanding a Transmission Operators rights. Thus, TOP-001-1 R3 should be revised to lead with: "Without any obligation to first seek and obtain an assessment or approval from its Reliability Coordinator, each Transmission Operator . . ."
At this stage in evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. COM-002, IRO-001, IRO-002 and IRO-014 do not meet this threshold. Thus, NextEra has numerous recommended corrections to provide clarity and completeness to these Reliability Standards. COM-002 R1 The addition of defined terms for Reliability Directive and Emergency is a very good approach that helps provides clarity. Hence, it is also be appropriate to make the language in the requirement as clear as possible, and not add other implied or unexplained notions. Also, at times, in those regions with markets, it is not always clear whether a requirement to curtail for reliability reasons is being issued pursuant to market rules or from the Reliability Coordinator or Transmission Operator under the Reliability Standards. Therefore, it is also appropriate that the Reliability Coordinator, Transmission Operator, Balancing Authority be required to identify themselves; and if they fail to identify themselves or fail to use the term Reliability Directive, the registered entity receiving the flawed issuance should not be consider in violation of a Reliability Standard for failing to act. Accordingly, R1 would be clearer and have the same intent, if it stated as follows: "A Reliability Coordinator, Transmission Operator or Balancing Authority have the authority to issue an oral or written Reliability Directive as authorized in [list the specific Reliability Standard requirements such as IRO-001 R8 and TOP-001 R3]. The issuance of an oral of written Reliability Directive, by a Reliability Coordinator, Transmission Operator or Balancing Authority shall: (1) use the term 'Reliability Directive;' and (2) identify the issuer of the Reliability Directive as a Reliability Coordinator, Transmission Operator or Balancing Authority. If a Reliability Coordinator, Transmission Operator or Balancing Authority issues an oral or writtern directive without using the term "Reliability Directive" or failing to indentify itself as a Reliability Coordinator, Transmission Operator or Balancing Authority, the registered entity receiving the directive cannot be considered in violation for its failure to act." IRO-001 The definition of Adverse Reliability Impacts uses the term "instability." It is important that this term be technically defined in the same way "Cascading" is defined, otherwise the new requirement is not adding clarity; rather, it is maintaining the ambiguous term "instability" that will likely lead to confusion and debate. R1 Similar to the comments set forth with respect to COM-001 (question #1), the term "at least" should be deleted from R1 – it serves no useful purpose from a technical or compliance perspective; instead, it will add unnecessary ambiguity to the requirement. R2, as drafted, states: "Each Reliability Coordinator shall take actions or direct actions, which could include issuing oral or written Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. " This long sentence has several significant grammatical errors that result in the reader not being able to discern the meaning of the requirement. It also

unnecessarily adds verbiage that detracts from its primary focus. It is, therefore, recommended that R2 be revised as follows: "Each Reliability Coordinator shall take all necessary actions to prevent identified Emergencies or Adverse Reliability Impacts. These Reliability Coordinator actions shall include, to the extent necessary, the issuing of oral or written Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers located within its Reliability Coordinator Area. " R3, as drafted, is confusing and inconsistent with R2, and, thus, R3 should be revised to read as follows: "Upon receipt of a Reliability Directive issued pursuant to R2, a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall comply with the Reliability Directive, unless compliance would violate safety, equipment, regulatory or statutory requirements. In the event that a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider determines that compliance with a Reliability Directive would violate safety, equipment, regulatory or statutory requirements, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall, within 10 minutes after the determination, inform the Reliability Coordinator of its inability to comply." IRO-002 R1 and R2, as written, are confusing. It is recommended that R1 and R2 be combined to read as follows: "Pursuant to a written procedure to mitigate the impact of a Reliability Coordinator's analysis tool outage, a Reliability Coordinator's System Operator shall also have the authority to approve, deny or cancel a planned outage for its analysis tool." IRO-014 It is unclear why the terms Operating Procedure, Operating Process or Operating Plan needs to be plural, as currently written in the Standard. Hence, it is recommended that these terms be made singular, otherwise a violation may be inferred for not having more than one Procedure, Process or Plan. 1.1 Insert the word "applicable" before "Reliability Coordinator." 2.1, as written, is confusing. Recommend that 2.1 read as follows: "Review and update, if an update is necessary, on an annual basis. Annual basis means the review shall be within one month plus or minus that date of the last review." R3 This requirement uses a very vague term "reliability-related information," which, also, does not track the language used in R1 -- "information." It is recommended that R1 and R3 use the same terms and read " . . . information, as defined by the Reliability Coordinator, . . ." R4 As stated above, "at least" does not add value, and, therefore, should be deleted. R5, as written, is confusing. The recommended fix is to delete "all other" and replace with "impacted".

Group
PacifiCorp
Sandra Shaffer
Yes
Yes
Yes
Yes
Yes

Individual
Jonathan Appelbaum
United Illuminating Company
No

COM-001-2 does not specify the amount of time a DP has to reestablish the Interpersonal Communication Capability after the capability fails before it is assessed non-compliance for not having the communication. Is an entity non-compliant the minute the communication capability is unavailable If so, then to be compliant a tertiary (or secondary capability for DP) must be installed by the entity. Something similar was discussed with EOP-008 R3: "To avoid requiring a tertiary facility, a backup facility is not required during: • Planned outages of the primary or backup facilities of two weeks or less • Unplanned outages of the primary or backup facilities" UI suggests the drafting team incorporate something similar. The VSL for R7 is severe only and states: "The Distribution Provider failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 7.1 or 7.2." I believe there should be a time component to the VSL and the VSL staged. For example, failure to have communication established for less than 60 minutes would be Lower, anything over 1 hour severe Also needed is a phrase to state when the violation begins. Does the violation begin when the loss of Communication Capability is detected or when it occurred? In other words, does the violation start when the operator attempts to use the phone and it is not functional, or did it occur when the phone line functionality failed but was not yet detected because no attempt to use the phone was made. So the VSL for R7 would follow a format of: "The Distribution Provider failed to have Interpersonal Communication Capability with one or more entities listed in Parts 7.1 or 7.2 for a continual 60 minutes period as measured from the time the ICC failure was detected". An alternative remedy is to alter the language of R7 to allow for unplanned outage. NERC does not have a Reliability Requirement for a DP to staff a control room 24/7. COM-0001 can be interpreted to imply that a DP needs to be staffed 24/7 to facilitate interpersonal communications. If NERC wants to extend the requirement for a 24/7 staffed

operating position at the DP then the appropriate method is thru a SAR to PER-002. COM-001 R7 should have a sub-requirement added recognizing that DP's are not required to staff 24/7 and many do not staff overnight. UI suggests adding R7.3: DP's will notify their TOP and/or BA when it is not staffing an operating desk. R7: Should address the instance if the DP is not required to have communication with the BA, because the BA communicates thru the TOP.

Yes

Yes

Yes

Yes

Comments: 1. COM-002 R2 seems awkwardly worded. R2. Each [Entity] that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed. " R2 as it is written says the repeat is confirming the accuracy of the message itself. I think it is agreed that the repeat back in R2 is to allow the issuer of the Directive to confirm that the message was received accurately understood by the recipient. I suggest: R2. Each [Entity] that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to allow the Issuer to confirm that the directive recipient accurately understands the Directive" 2. The VSL for R2 is severe and states "The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message was confirmed." The purpose of the R2 repeat-back is to allow the Issuer verify the message was accurately received. This VSL penalizes the responsible entity for not accurately receiving the message. The VSL should penalize the refusal of the registered entity to repeat back the message not for receiving the message incorrectly. Suggested rewording: "The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message can be evaluated by the entity issuing the Reliability Directive" 3. United Illuminating does agree with the definition of Reliability Directive and Emergency.

Group

Bonneville Power Administration

Denise Koehn

Yes

Yes

Yes

Yes

Yes

Group

PPL

Brenda Truhe

Yes

Yes

Yes

Yes

Yes

We are providing the following comments for the Standards Drafting Team to consider. 1) Consider changing R1 to 'Each RC shall have the capability for Interpersonal Communications with the following entities to exchange



Interconnection and operating information...’ for clarity as Interpersonal Communications and capability are both nouns. 2) We feel changing the applicability of the standard is important to the accuracy of the standard. The purpose of COM-002 is ‘To ensure emergency communications between operating personnel are effective’. Since operating personnel are covered by the applicability of RC, BA, TOP and GOP, we suggest the applicability to TSP, LSE, and PSE be removed from COM-002-3. 3) Additionally, we would like to bring to the attention of the Standards Drafting Team, that the implementation plan for COM-001-2 and IRO-001-2 still includes TSP, LSE, and PSE although the revised standard does not include these entities in the Applicability Section. For COM-001-2 refer to the implementation plan, page 1. For IRO-001-2 refer to the implementation plan for new R2, new R3, new R4 and the chart on the last page. Thank you for your consideration in addressing these comments.

Individual  
Paul Kerr  
Shell Energy North America (US), L.P.

The introduction of the definition of “Reliability Directive” and its connection to the definition of “Emergency” within this Project brings much needed clarity for the sector and will promote consistency between Regional Entities and within the audits of Registered Entities. Shell Energy supports the removal of Purchasing Selling Entities as a function to which IRO-001 applies. This removal recognizes that PSEs do not play a role in reliability coordination under this standard since they have no authorities and no abilities to assume or perform responsibilities associated with reliability coordination. This conclusion is reinforced by the adoption of the defined term “Reliability Directive”. Where a RC, TOP, or BA needs to address an Emergency they do not contact, consult, or direct a PSE to take action that would address the Emergency. Rather, where the PSE is a user of the grid to perform or execute transactions, it is subject to the actions of these other entities that have the authority to stop, curtail, or alter the submitted transactions of the PSE in a way that aids in resolving the problem. With the fitting adoption of “Reliability Directive” into COM-002 as well, Shell Energy does not believe it is necessary or appropriate for the applicability of this standard to include Purchasing Selling Entities, as is contained in the current draft proposal. This standard does not apply to PSEs today, however, during the progression of Project 2006-06 this applicability was added to an early draft version that preceded the discussions and clarification that comes from the definition of a Reliability Directive in the standard. Shell Energy does not support the inclusion of PSEs in the current draft version of COM-002, and feels that it should be removed. The purpose of this standard is, “To ensure Emergency communications between operating personnel are effective” and relates directly to the capabilities and authorities established for the RC, TOP, or BA that requires actions to be taken by a recipient of a Reliability Directive. As noted previously, PSEs are acted upon by the entities with the necessary authority, and are not in a role that would initiate or fulfil the required actions. As additional matters related to the clarification and cleanup of the standards in this project, the implementation plans for both IRO-001 and COM-001 erroneously contain references to PSEs in the sections “Functions that Must Comply with the Requirements”. These references need to be removed.

Individual  
Thad Ness  
American Electric Power  
No  
The applicability of COM-001 and COM-002 appear to be at odds with each other. The requirements may need to be re-written so that they are in sync.  
Yes  
No

This is out of scope with the standard, as it is currently addressed through the NERC certification process that the NERC reliability coordinators are subject to.

The language used in COM-002-3 R2 including “with enough details that the accuracy of the message has been confirmed” is subjective and ambiguous. IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling.

Group

PSEG
Patricia Hervocho
No
Com-001-2 implementation plan lists that this is applicable to PSE's and LSE's however, PSE's and LSE's were removed from the actual standard. The implementation plan should be revised.
IRO Com-002-3 standard continues to include PSE. PSE's do not play an active role and have no authority or ability to perform reliability coordination. PSE's should be removed from the standard. -001-2 references PSE's in the implementation for R2, R3, R4 and "Functions that must comply with the requirements in this standard" table. PSE's were removed from the standard and should be removed from the implementation plan.
Group
Dominion
Louis Slade
No
The monthly testing requirement for Alternative Interpersonal Communications is overly burdensome without any evidence to support that it is necessary to insure reliability. We believe that an entity will take necessary steps to insure the Alternative Interpersonal Communications is functioning properly, especially if it experiences problems with its Interpersonal Communications, it. We can support quarterly testing as we believe it strikes a reasonable balance.
Yes
We do not agree with the addition of weekly conference calls as required in R4. We believe that RCs should schedule calls as needed but do not agree that a weekly scheduled call improves reliability.
Individual
David Thorne
Pepco Holdings Inc
Yes
Yes
Yes
Yes
Yes
Group
SERC OC Standards Review Group
Jim Case
No
Each sub-requirement should not have an "R" in front of the number in order to be consistent with NERC's August 10, 2009 filing at FERC on this subject. Requirement R3 and R4 should include adjacent TOPs as a sub-requirement. Requirements R5 and R6 should include adjacent BAs as a sub-requirement. "to exchange Interconnection and operating information" should be deleted from requirements R1 through R8 as it is redundant with the definition of Interpersonal Communications The last page of the Implementation Plan includes LSEs, PSE, and TSPs as being responsible entities under this standard, yet the standard does not include them. Please correct the implementation plan.
No
Top-001-1, Requirement R3, which is what the SDT appears to be using as its justification for not adding a requirement here is proposed to be deleted by the RTO-SDT on Project 2007-03.

No
We think you are attempting to create a requirement similar to BAL-005, R1. That language copied here is clear and concise - All generation, transmission, and load operating within an Interconnection must be included within the metered boundaries of a Balancing Authority Area.
Yes
Yes
Please remove the yellow box on page 1 indicating this standard will be retired.
Reliability Directives may be issued by blast calls from Reliability Coordinators. It is inefficient and may be a hindrance to reliability to require 3-part communications in these instances. There are several organizations registered as BAs, RCs and TOPs. It is not uncommon for those entities to be distributed across multiple desks in the same control room without regard to how an entity is registered. Thus, a single System Operator may perform functions that are categorized under two or more of those functional entities. The drafting team should clarify that under no circumstances should that System Operator be required to issue a Reliability Directive to himself. This is a corporate governance issue. In IRO-014, R1, delete sub-requirement 1.7. The requirement for weekly conference calls related to operating procedures is duplicative to R4 and could be burdensome while adding very little value under certain circumstances. In IRO-014, R4, delete the phrase "(per Requirement 1, Part 1.7)" as a conforming change. In IRO-014, Requirements R6-R8 allow at least the theoretical possibility that an RC may determine an Adverse Reliability Impact in another RC's area that the other RC neither can see nor believes that any action should be taken. R7 puts the burden on the first RC to develop a plan that it cannot implement because it has no agreement with the BAs and TOPs in the other RC area. As such, this requirement is unenforceable. Please review all the implementation plans to be sure the applicable entities match those in the standards. "The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
Individual
Andrew Pusztai
American Transmission Company
Yes
ATC agrees with the understanding that the line of demarcation is up to the point where ATC owns the equipment.
Yes
Yes
Yes
Yes
None
Group
Arizona Public Service Company
Janet Smith
Yes
Yes
Yes
Yes
Group
LG&E and KU Energy
Brent Ingebrigtson

<p>1) LG&amp;E/KU suggests that the definitions and related Reliability Standards be edited to provide a clearer understanding of what is required. When used in the requirements of COM-001, the proposed definitions for Interpersonal Communication and Alternative Interpersonal Communication read improperly (i.e., a “medium capability”). This may cause confusion as to what is required by the Applicable entities. Any further use of these terms may cause greater confusion. Suggested Alternative: Interpersonal Communication: Any instance where two or more individuals interact, consult, or exchange information. The definition of “Alternative Interpersonal Communication” would not have to be changed since it is dependent upon the definition of “Interpersonal Communication.” The change of the definitions of Interpersonal Communication and Alternative Interpersonal Communication shifts their focus to the communication itself—the event. This makes the Requirements themselves much clearer since the Requirements focus on the need that entities have the capabilities—the medium. It appears the SDT’s intent is to ensure that the event takes place by requiring that the medium for those events are in place. This is much clearer if there is a distinction between the two (the event and the medium) than if they have similar definitions (a medium and a “medium capability”). 2) LG&amp;E/KU question the consistency of the Applicability sections as they pertain to the TSP, LSE and PSE functions between COM-001 and COM-002. The deletion of the TSP, LSE and PSE from COM-001 is supported, but if these entities are not required to establish Interpersonal Communication (or Alternative Interpersonal Communication) capability with reliability entities (RC, BA, TOP), should they still be required to follow the reliability directive process of COM-002? If the probability of issuing a Reliability Directive to a TSP, LSE or PSE is so low that Interpersonal Communications capabilities with reliability entities is not justified under COM-001, why are the TSP, LSE and PSE still held to the 3 way communication requirements of COM-002? Suggest the Applicability of COM-002 to TSP, LSE and PSE and associated requirements be deleted.</p>
Group
IRC Standards Review Committee
Albert DiCaprio
No
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No

It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. We believe there needs to be better coordination with that SDT.
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The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator. In R2, should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.
Yes
Yes
R1 states “When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.” The word “notify” should be stuck.
The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. We believe that, in place of requiring an operator, in real-time, to state “this is a Reliability Directive,” there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Therefore, we suggest modifying R1 to be “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]” Also, we believe that the definition of Emergency, as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. In the definition of Reliability Directive, we suggest changing “to address an Emergency” to “to address a reliability constraint or a declared Emergency”. Further, Requirement R2 in IRO-001 contains the words “which could include issuing Reliability Directives” but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest that these words be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary.
Individual
Kathleen Goodman
ISO New England
No
We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you can't refer to the word you are defining in order to define it. However, it is possible “allows two or more individuals to ...” may solve this problem. Clarity should be sought in the next posting, if possible. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. We request the sub-requirements be modified into bulleted lists. Consider striking “to exchange Interconnection and operating information” in R1. R3. R5. R7. and R8. It is redundant to

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Yes

Yes

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Individual

Steve Myers

ERCOT ISO

No

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Individual

Steve Rueckert

WECC

Yes

Yes

Yes

Yes

Yes

Suggested minor revision to the definition of Reliability Directive as follows (change in caps) A communication, IDENTIFIED AS A RELIABILITY DIRECTIVE, initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency. Clearly identifying a



communication as a Reliability Directive provides immediate information to the recipient as the the nature of the communications.
Individual
Bill Keagle
BGE
Yes
BGE has no additional comments.
Yes
BGE has no additional comments.
Yes
BGE has no additional comments.
Yes
BGE has no additional comments.
Yes
BGE has no additional comments.
BGE has no additional comments.
Group
MRO's NERC Standards Review Subcommittee
Carol Gerou
No
A. R5.5 states a BA shall have Interpersonal Communications with each Interchange Coordinator within its BA area and adjacent Interchange Coordinators. NERC Registry Criteria (v5) uses the term "Interchange Authority" not Interchange Coordinator, please clarify. B. Upon review of the NERC Compliance Registry, there are only 56 BA's that are also registered as an IA but 138 total BA's within the registry. R5.5 is not clearly written because many BA's do not have an IA within their BA area. Though a BA will use an IA to schedule interchange, a possible rewrite of R5.5 may be "Each Interchange Authority that the BA actively uses to arrange Interchange". C. R10 states that the RC, TOP, BA, DP and GOP shall notify "impacted entities" within 60 minutes... Please clarify if the SDT means the entities within the applicability section or is this to be determined by the entity. A possible rewrite may be; "Each RC shall notify TOP's, BA's, and IA's within its RC area along with adjacent RC's within the same Interconnection". This break down would need to be required for each affected entity and would provide clarity to the industry. D. We do not agree with a DP and GOP need to be held to the same level of compliance as a RC, BA or TOP. FERC Order 693 (paragraph 487) directed the DP and GOP to be included in this standard by stating;" We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process". A DP and GOP may not be staffed 24 hours a day like a BA or TOP and the SDT did not take this into consideration. E. We understand that the DP and GOP need a means of communicating with their BA and TOP (R7 and R8) but would this not be the same Interpersonal Communications capability that as stated in R3 and R5 for the TOP and BA? Example: If the BA uses a phone line as their Interpersonal Communication medium to contact the DP wouldn't the DP also use the same medium to communicate with their BA? Yes, there could be different mediums but 99% of the time it will be the same medium. F. R10 could mean that if there is a logging system that detects an Interpersonal Communication failure, then all applicable entities will need to monitor that monitoring device. Since this requirement applies to all applicable entities, and Interpersonal Communication mediums will most likely be the same, there will always be two entities found non compliant if the 60 minute threshold is passed.
No
A. Agree that a receiving entity should not be held accountable until such time that they are required to take such action. B. It might if the requirement were going to remain but the Project 2007-03 ("Real-Time Operations SDT") proposed to retire that requirement during their last posting. This needs to be coordinated with that SDT.
No
A. R1, As written it is unclear what level of certification this will entail? Presently written within the NERC Reliability Standards, responsibility is given to RC's to manage the reliability of their areas. Recommend deleting this requirement. The ERO has pushed back in other Standards to having a responsibility for any NERC Requirements, since they are not a user, owner, or operator of the BES (see EOP-004-2). If this does move forward and an RC is certified by the ERO and then the RC is found non-compliant by a Regional Entity, for an associated certified item, will the ERO be held responsible, too? If the SDT selects to keep R1, there are some issues with how the requirement is written. The requirement places emphasis on regions and regional boundaries when no emphasis should be placed there. There are multiple Reliability Coordinators the span multiple regions. The language "to continuously assess transmission reliability" should be changed to "to continuously assess Bulk Electric System reliability" to reflect on what the standards are enforceable. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator. B. In R2, should "of" be "to". Reliability Directives are issued to TOPs, BA, etc. C. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.

Yes
Yes
<p>A. COM-002-3, R2 As stated in FERC Order 693, section 512, it is essential that RCs, BA's and TOP's have communications with DPs. R2 also applies to TSPs, LSEs and PSEs. There is no directive for this and it is going to be almost impossible to communicate with a DP since DPs are usually not operated 24 hours per day as like a RC, TOP, or BA. Many DPs have answering services that will relay a message once they receive it and then pass it along to someone. An answering company could repeat the directive word for word but this will not add to any reliability level. The SDT should reconsider the applicability section of this Standard to only apply to a RC, TOP and BA for the issuance of a Reliability Directive. BA's should have the responsibility to have an Interpersonal Communication medium with DPs in their BA area per COM-001-2. B. IRO-002-2, R1, Recommend that "System Operators" be replaced with "system operators" since NERC has defined System Operator to be an individual at a control center (BA, TOP, GOP, or RC). The lower cased system operator will only point to the RC system operator that will have this R1 authority. C. The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. D. We also are concerned about the need to conduct three-part communications for a Reliability Directive issued through a blast call. Under these circumstances, the need for immediate action of multiple parties may require a blast call and there may not be time for all parties to complete three-part communications before initiating actions. Thus, we believe blast calls should be treated separately and that should be made clear. E. COM-002-3 R2 needs to be rewritten as it is too verbose. The point is for the recipient of the original message to get the issuer to confirm that the message was understood. We suggest rewording R2 to "Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive." Once the receiver has completed this requirement, the ball is in the issuer's court per Requirement R3. No additional words are necessary in the requirement. F. Per COM-002-3 R1, who decides that actions need to be issued as a Reliability Directive? Shouldn't it be the responsible entity? Thus, can we assume that if the responsible entity does not identify a communication as a Reliability Directive that it is not a Reliability Directive per the requirement? After all, why would an entity require actions but not issue a Reliability Directive. Following this logic, the VSL for R1 would never apply. Would a compliance auditor second guess if an action required a Reliability Directive? G. Because the Project 2007-03 ("Real-Time Operations SDT") proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. H. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. I. Please strike part IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. J. IRO-014-2 R4 is overly broad and would require Reliability Coordinators that will not impact one another to participate on conference calls with one another without any reliability benefit. The issue is created by the addition of the clause "within the same Interconnection" to the requirement. ISO-NE, FRCC, Midwest ISO, and SPP are all in the same Interconnection. It is hard to fathom there being reliability benefit to SPP and ISO-NE conversing weekly or Midwest ISO and FRCC conversing weekly. We suggest limiting the requirement to adjacent Reliability Coordinators. K. For IRO-014-2 R5, we suggest replacing "other" with "impacted" to limit the notification of Adverse Reliability Impacts to only those Reliability Coordinators that need to know. Because the definition of Adverse Reliability Impact includes "Bulk Electric System instability or Cascading", it is possible that the cascading of 138 kV lines serving a load pocket or generator outlet stability issues could require a Reliability Coordinator to notify all other Reliability Coordinators regardless of impact. This would include Reliability Coordinators outside of the Interconnection with the problem. It would also include Reliability Coordinators that are not impacted. For instance, an issue in New England that would not pose a threat outside the northeast would require ISO-NE to notify SPP and FRCC and Reliability Coordinators in the Western Interconnection. There is no reliability benefit to this notification. L. IRO-014-2 R6-R8 are problematic and need to be refined to make clear that the Reliability Coordinators shall operate to the most conservative limit. It should not require a Reliability Coordinator that disagrees with an action plan to implement the action plan. The Reliability Coordinator will</p>

be disagreeing with the action plan for a reliability reasons. Assuming they are correct, the requirement to implement said action plan will actually put the Interconnection at greater risk. These requirements inappropriately attempt to codify the debate and analysis that occurs between and within Reliability Coordinators when there are differing results in reliability analysis. This is part of the problem with having a Wide Area view that results in Reliability Coordinators having a view into other Reliability Coordinator Area. Their results and conclusions may be different. There should be a hierarchical structure for whose results should be used. It should be the Reliability Coordinator with primary responsibility unless the other Reliability Coordinator has evidence to demonstrate that the Reliability Coordinator with primary responsibility is incorrect. What this should do is, to trigger both to review their models and data to assess the problem. None of this needs to be codified in the standards though. M. In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a declared Emergency". This would help limit second guessing for a situation where a System Operator took action because he truly believed he was in an Emergency but after the fact analysis demonstrates there really was not an Emergency. N. The drafting team should expand its rationale for deleting IRO-002-1 R3. Currently, TOP-005 R1 is referenced. The project 2007-03 ("Real-Time Operations SDT") proposed to retire TOP-005-2 R1 in its most recent posting. O. We disagree with deleting IRO-002-1 R5 and R7 which establishes tools and monitoring capabilities. There should be basic tool requirements established for Reliability Coordinators. The project 2009-02 ("Real-time Reliability Monitoring and Analysis Capabilities") will be addressing these issues in more detail. Thus, it does not make sense to delete these requirements until that drafting team completes its task.

Group

FirstEnergy

Sam Ciccone

No

It is not clear from the definition of Interpersonal Communications if certain communications "mediums" such as email, instant messaging, etc. are included. Furthermore, the Measures for these requirements all include "electronic communications" as acceptable evidence. If the drafting team does not intend these mediums be included, then it should be clarified in the definition. We suggest the following wording of the definition: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. This interaction consists of verbal, spoken words exchanged in Real-time.

Yes

Yes

Yes

Yes

FirstEnergy offers the following additional comments: 1. The effective dates of the standards indicate an effective date of the first day of the first calendar quarter following regulatory approval. The changes to these standards will require changes to existing compliance evidence, as well as the creation of compliance evidence for some entities such as the Generator Operator which is a new applicable entity in COM-001. Therefore, to give entities ample time to get their compliance evidence in place, we suggest the effective state "the first day of the second quarter after regulatory approval". 2. With regard to the requirements for Alternative Interpersonal Communications, we question why the Generator Operator or Distribution Provider is not required to have backup communication. It would be difficult for a Reliability Coordinator, for instance, to contact a Generator Operator whose primary communications have been disabled if that entity does not have a backup. We suggest that the drafting team consider adding the GOP and DP as applicable entities requiring alternative communications.

Group

Midwest ISO Standards Collaborators

Jason Marshall

No

We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The drafting team responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you can't refer the word you are defining to define it. However, it is possible "allows two or more individuals to ..." may solve this problem. What are the drafting team's thoughts on this issue? This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. Consider striking "to exchange Interconnection and operating information" in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications "to interact, consult, or exchange information" in the definition. Consider striking "to exchange Interconnection and operating information" in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes "to interact, consult, or exchange information" in its definition. For R2. why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals

with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for than for the associated Interpersonal Communications requirements R3 and R5 respectively. They should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. For R5, why are neighboring Balancing Authorities not included? They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is "shall have" while in R2, R4, and R6, the requirement is "shall designate". Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. Should R2.2 and R1.2 be limited to Reliability Coordinators in the same Interconnection only? The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.

No

It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. This needs to be coordinated with that SDT.

No

In general, we are not opposed to the concept of the ERO certifying the Reliability Coordinators; however, there are some issues with how the requirement is written. The requirement places emphasis on regions and regional boundaries when no emphasis should be placed there. There are multiple Reliability Coordinators that span multiple regions. The language "to continuously assess transmission reliability" should be changed to "to continuously assess Bulk Electric System reliability" to reflect on what the standards are enforceable. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator Area. In R2, should "of" be "to". Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.

Yes

Yes

The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. We also are concerned about the need to conduct three-part communications for a Reliability Directive issued through a blast call. Under these circumstances, the need for immediate action of multiple parties may require a blast call and there may not be time for all parties to complete three-part communications before initiating actions. Thus, we believe blast calls should be treated separately and that should be made clear. COM-002-3 R2 needs to be rewritten as it is too verbose. The point is for the recipient of the original message to get the issuer to confirm that the message was understood. We suggest rewording R2 to "Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive." Once the receiver has completed this requirement, the ball is in the issuer's court per Requirement R3. No additional words are necessary in the requirement. Per COM-002-3 R1, who decides that actions need to be issued as a Reliability Directive? Shouldn't it be the responsible entity? Thus, can we assume that if the responsible entity does not identify a communication as a Reliability Directive that it is not a Reliability Directive per the requirement? After all, why would an entity require actions but not issue a Reliability Directive. Following this logic, the VSL for R1 would never apply. Would a compliance auditor second guess if an action required a Reliability Directive? Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a

text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. Please strike part IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. IRO-014-2 R4 is overly broad and would require Reliability Coordinators that will not impact one another to participate on conference calls with one another without any reliability benefit. The issue is created by the addition of the clause "within the same Interconnection" to the requirement. ISO-NE, FRCC, Midwest ISO, and SPP are all in the same Interconnection. It is hard to fathom there being reliability benefit to SPP and ISO-NE conversing weekly or Midwest ISO and FRCC conversing weekly. We suggest limiting the requirement to adjacent Reliability Coordinators. For IRO-014-2 R5, we suggest replacing "other" with "impacted" to limit the notification of Adverse Reliability Impacts to only those Reliability Coordinators that need to know. Because the definition of Adverse Reliability Impact includes "Bulk Electric System instability or Cascading", it is possible that the cascading of 138 kV lines serving a load pocket or generator outlet stability issues could require a Reliability Coordinator to notify all other Reliability Coordinators regardless of impact. This would include Reliability Coordinators outside of the Interconnection with the problem. It would also include Reliability Coordinators that are not impacted. For instance, an issue in New England that would not pose a threat outside the northeast would require ISO-NE to notify SPP and FRCC and Reliability Coordinators in the Western Interconnection. There is no reliability benefit to this notification. IRO-014-2 R6-R8 are problematic and need to be refined to make clear that the Reliability Coordinators shall operate to the most conservative limit. It should not require a Reliability Coordinator that disagrees with an action plan to implement the action plan. The Reliability Coordinator will be disagreeing with the action plan for reliability reasons. Assuming they are correct, the requirement to implement said action plan will actually put the Interconnection at greater risk. These requirements inappropriately attempt to codify the debate and analysis that occurs between and within Reliability Coordinators when there are differing results in reliability analysis. This is part of the problem with having a Wide Area view that results in Reliability Coordinators having a view into other Reliability Coordinator Areas. Their results and conclusions may be different. There should be a hierarchical structure for whose results should be used. It should be the Reliability Coordinator with primary responsibility unless the other Reliability Coordinator has evidence to demonstrate that the Reliability Coordinator with primary responsibility is incorrect. What this should do is to trigger both to review their models and data to assess the problem. None of this needs to be codified in the standards though. In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a declared Emergency". This would help limit second guessing for a situation where a System Operator took action because he truly believed he was an Emergency but after the fact analysis demonstrates there really was not an Emergency. The drafting team should expand its rationale for deleting IRO-002-1 R3. Currently, TOP-005 R1 is referenced. The Real-Time Operations drafting team proposed to retire TOP-005-2 R1 in its most recent posting. We disagree with deleting IRO-002-1 R5 and R7 which establish tools and monitoring capabilities. There should be basic tools requirements established for Reliability Coordinators. Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities will be addressing these issues in more detail. Thus, it does not make sense to delete these requirements until that drafting team completes its task.

Individual

Brenda Powell

Constellation Energy Commodities Group

Yes

Yes

Yes

Yes

Yes

Group

Southern Company

Cindy Martin

No

Comments: Standard COM-001-2 R10. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer. Comment: It is not clear whether the notification requirements identified in R10 apply to failure of ALL available Interpersonal Communications

or ANY Interpersonal Communications. We suggest that the existence of functioning Alternative Interpersonal Communications precludes the requirement for notification of impacted entities. D. Compliance 1. Compliance Monitoring Process 1.3 Data Retention Each Generator Operator shall keep the most recent twelve months of historical data (evidence) for Requirements R8 and R10, Measures M8 and M10. Comment: The data retention requirements specified for the Generator Operator in Para. 1.3 (above) are not consistent with the 3-year audit interval for the GOP. Question: When audited on this Standard is the expectation that the GOP will have 12 months of evidence or 36 months of evidence? Standard COM-002-3 R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed. Comment: The term "Reliability Directive" is currently not defined in the NERC Glossary of Terms. However, in the Implementation Plan for COM-002-3 the RC SDT proposes a definition for Reliability Directive. It is implied in the standard that the Reliability Directive is issued as a voice command which precludes the use of our preferred method of Interpersonal Communication. However, this is not definitively stated in either the standard or the proposed definition. I think this needs to be made clearer if the Reliability Directive must be issued as a voice command. D. Compliance 1. Compliance Monitoring Process 1.3 Data Retention The Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall retain evidence of Requirement 2, Measure 2 for the most recent 3 months. Comment: The data retention requirements specified for the Generator Operator in Para. 1.3 (above) are not consistent with the 3-year audit interval for the GOP/PSE. Question: When audited on this Standard is the expectation that the GOP and PSE will have 3 months of evidence or 36 months of evidence?

No

Comments: I see no connection between XCEL's comment on COM-001-1. The requirements of COM-001-1 require the RCs, TOPs, and BAs to have a primary interpersonal communications method and to designate an alternative. I believe that if the requirements for the entity to have both primary and alternative methods of interpersonal communications this objection could be cleared. For example, R2 Each Reliability Coordinator shall designate have an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information

No

Comments: This would allow NERC to designate one entity to be the Reliability Coordinator for an entire interconnection or the entire continent. This would reduce the Regional Reliability Organizations to compliance entities.

Yes

Yes

Comments: It appears that the requirements for entities designated in the IRO standards to have tools to access and/or monitor the system have been moved to pending standards that are not enforceable. It seems that if the newest revisions of the IRO standards are not implemented as a group there will be either missing requirements or duplicate requirements in the IRO standards.

Individual

Greg Rowland

Duke Energy

No

- We question how far the definition of Alternative Interpersonal Communication goes in requiring separate infrastructure from Interpersonal Communication. For example, wireless communications sometime utilize fiber optic networks.
- We question why the requirements state that entities must "have" Interpersonal Communications capability, but must "designate" Alternative Interpersonal Communications capability?
- R1.2 and R2.2 – Why is this limited to the same interconnection?
- R3 – need to add neighboring TOPs.
- R5 – need to add adjacent BAs.
- Interchange Coordinator – Add IC to the Applicability Section, and add a requirement that the IC have Interpersonal Communication capability with its BA and adjacent BAs.
- Requirements to "designate" Alternative Interpersonal Communication should carry a "Medium" VRF instead of "High", because they are a backup capability. The word "designate" carries the connotation that these are documentation requirements.
- R9 requires a monthly test of Alternative Interpersonal Communications capability. This was quarterly in the last draft. We question how these requirements for "Alternative Interpersonal Communications" capability are related to requirements for "backup functionality" in EOP-008-1, which requires an annual test of backup functionality. Clarity on the relationship between "Interpersonal Communications", "Alternative Interpersonal Communications", "primary control center functionality" and "backup control center functionality" would be appreciated.
- R11 – is this requirement being moved to COM-003?
- Data Retention – Is data retention really going to be just 12 months? Most auditors seem to be asking for everything since the last audit.

No

Requirements of TOP-001-1 are being revised under Project 2007-03, which may not continue to adequately address Xcel's concern.

No
How is NERC going to certify the RCs? Also, we believe the word "all" should be inserted after the word "among", so that it's clear that all generation, transmission and load must be included.
Yes
Yes
<p>• COM-002-3 contains the proposed definition "Reliability Directive". We continue to believe Requirement R1 should be deleted and that this definition should contain the phrase "identified as a Reliability Directive to the recipient". Otherwise, compliance controversies will arise when auditors second-guess the RC, TOP or BA's judgment regarding whether or not an abnormal system condition met the definition of "Emergency", and warranted a "Reliability Directive" with 3-part communication. A conforming change will need to be made to R2, since it refers to R1. This change in the definition of "Reliability Directive" is also needed because this term is used in other standards such as IRO-001-2, and without repeating a similar requirement to COM-002-3 requirement R1 in IRO-001-2, there is potential for confusion. • We disagree with the VSL for COM-002-3. This is clearly a requirement with two possible compliance failures: Failure to acknowledge a correct repeat-back, and failure to resolve an incorrect repeat-back. These failures have dramatically different consequences, which the drafting team should recognize via a graduated VSL. We think that the failure to acknowledge should either be "Lower" or "Medium". • Requirement R2 of IRO-001-2 is unclear and should be reworded as follows: "Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area) to either prevent identified events that could result in an Adverse Reliability Impact, or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts." • Various changes have been made to the defined term "Adverse Reliability Impact" as this project has progressed. We believe the latest change should not be made, and the Phrase "uncontrolled separation" should be reinserted in the definition, because that phrase is part of the Epect 2005 legislation definition of "reliable operation". Here is the text from the legislation: "The term 'reliable operation' means operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements."</p>
Group
SPP Standards Development
Robert Rhodes
No
We would suggest that the applicability of COM-001-2 be expanded to that listed in COM-002-3. How can the directives to be issued in COM-002 be delivered and confirmed without having Interpersonal Communications capability? All of the functional entities listed in R1.1 should also be listed in R2.1. Similarly the sub-requirements of R3 should also be applied to R4. The same holds true for R5 and R6. If the SDT intends to exclude data communications from Interpersonal Communications and Alternative Interpersonal Communications, we suggest the SDT be more specific in the definition to specifically exclude data communications in the definition. It is not readily apparent that these terms do not apply to data communications and without a clarification, confusion exists.
Yes
In fact, we believe that R1, R2 and R5 more specifically put that requirement on the TOP. The TOP doesn't have to wait for the RC and any directive that may be associated with R3 prior to taking action to mitigate an emergency condition.
No
Is this more of a registry question than a standards issue? While we agree that there needs to be a requirement somewhere that establishes the need for Reliability Coordinators, isn't there also a similar need for other functional entities such as Transmission Operators, Balancing Authorities, etc? Should these be captured in standards or in the certification/registration process?
Yes
Yes
IRO-001-2, R2 implies that the RC could interrupt the normal chain of command from the TOP and/or BA to their respective GOPs, ICs and DPs thereby circumventing the coordinating process that currently exists. In fact, these entities may not even know their RCs nor be able to identify them and as such any directive from the RC may not be implemented in a timely manner. We would like to see a qualifier on this requirement that does not remove the normal coordination role from the TOP with his DP, etc. We would suggest that "with enough details that the accuracy of the message has been confirmed" be deleted from COM-002-3, R2. We would suggest the use of the term "instruction" and its derivatives rather than 'direct' in IRO-001-2. R2. R3 and R4. Delete 'issue an alert to' in IRO-005-4. R1. There are

yellow boxes in IRO-005-4, redline versions, which indicate that this standard is being retired, but it isn't because two requirements from IRO-001 are being returned to this standard.

Individual

CJ Ingersoll

CECD

No

Based on the drafting teams response that the definition of Interpersonal"clarifies the exclusion of media dedicated to Telemetry or other data exchange,the term Interpersonal Communication should be replaced with verbal communication capabilities. The term Alternative Interpersonal Communication should be replaced with alternative verbal communication capability that is able to serve as a substitute for and does not utilize the same infrastructure (medium) as verbal communications capabilities used for day-to-day operations.

Yes

Yes

Yes

1. COM-002 R2 states that "the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed." Recommend a change to "the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the desired outcome of the message is clear". 2. IRO-001 R2 states "Each Reliability Coordinator shall take actions or direct actions which could include issuing Reliability Directives of Transmission Operators, ...." Recommend a change to "Each Reliability Coordinator shall take actions or direct actions which could include issuing Reliability Directives [See COM-002] to Transmission Operators, ..." 3. IRO-001 R4 states entities "shall inform its Reliability Coordinator upon recognition of its inability to perform as directed per Requirement R3." Recommend a change to, entities "shall inform its Reliability Coordinator upon recognition of its inability to perform as directed."

Individual

Rex A Roehl

Indeck Energy Services

No

Yes

No

Yes

Yes

Individual

Shaun Anders

City of Springfield, IL - City Water Light and Power (CWLP)

No

The definition of "Interpersonal Communications" is overly broad and does not address the functional needs of reliability coordination. The definition should be limited to systems utilized for essential reliability functions. While the Purpose statement in the standard does address this intent, the explicit inclusion in the definition removes all ambiguity. Further, the definition of "Alternative Interpersonal Communications" without corresponding explicit definition of Primary Interpersonal Communications may lead to confusion and unnecessary duplication of efforts in testing and maintenance.

No

TOP-001 is in the process of being substantially modified by Project 2007-03. These changes may conflict with the matter addressed by Xcel's comment. Thus, Xcel's concern should be addressed independently but in the context of the TOP-001-2 revisions proposed by Project 2007-03.

Yes



CWLP generally concurs with and supports comments previously submitted by the SERC Operating Committee where those comments are not in conflict with the specific comments above.
Individual
RoLynda Shumpert
South Carolina Electric and Gas
No
Each sub-requirement should not have an "R" in front of the number in order to be consistent with NERC's August 10, 2009 filing at FERC on this subject. Requirement R3 and R4 should include adjacent TOPs as a sub-requirement. Requirements R5 and R6 should include adjacent BAs as a sub-requirement. "to exchange Interconnection and operating information" should be deleted from requirements R1 through R8 as it is redundant with the definition of Interpersonal Communications. The last page of the Implementation Plan includes LSEs, PSE, and TSPs as being responsible entities under this standard, yet the standard does not include them. Please correct the implementation plan.
No
Top-001-1, Requirement R3, which is what the SDT appears to be using as its justification for not adding a requirement here is proposed to be deleted by the RTO-SDT on Project 2007-03.
No
We think you are attempting to create a requirement similar to BAL-005, R1. That language copied here is clear and concise - All generation, transmission, and load operating within an Interconnection must be included within the metered boundaries of a Balancing Authority Area.
Yes
Yes
Reliability Directives may be issued by blast calls from Reliability Coordinators. It is inefficient and may be a hindrance to reliability to require 3-part communications in these instances. There are several organizations registered as BAs, RCs and TOPs. It is not uncommon for those entities to be distributed across multiple desks in the same control room without regard to how an entity is registered. Thus, a single System Operator may perform functions that are categorized under two or more of those functional entities. The drafting team should clarify that under no circumstances should that System Operator be required to issue a Reliability Directive to himself. This is a corporate governance issue. In IRO-014, R1, delete sub-requirement 1.7. The requirement for weekly conference calls related to operating procedures is duplicative to R4 and could be burdensome while adding very little value under certain circumstances. In IRO-014, R4, delete the phrase "(per Requirement 1, Part 1.7)" as a conforming change. In IRO-014, Requirements R6-R8 allow at least the theoretical possibility that an RC may determine an Adverse Reliability Impact in another RC's area that the other RC neither can see nor believes that any action should be taken. R7 puts the burden on the first RC to develop a plan that it cannot implement because it has no agreement with the BAs and TOPs in the other RC area. As such, this requirement is unenforceable. Please review all the implementation plans to be sure the applicable entities match those in the standards.
Individual
Dan Rochester
Independent Electricity System Operator
No
(1) NERC filed with FERC on August 10, 2009 indicating that it would discontinue the use of sub-requirements in standards. All draft standards posted since have the format of Part Numbers within each main Requirement. Please revise the standards in this project accordingly. (2) Having defined the terms Interpersonal Communication and Alternative Interpersonal Communication, the phrase "to exchange Interconnection and operating information" in a number of requirements is redundant and can be removed. Further, for R1, we suggest removing the phrase "within the same Interconnection since there RCs between two Interconnections still need to communication with each other for reliability coordination (e.g. curtailment of interchange transactions crossing Interconnection boundary, as stipulated in IRO-006). (3) R2: Suggest to add Purchasing-Selling Entity and Interchange Authority (INT-004 and INT-005 have requirements for communication between the RC and the PSE and IA), and remove the phrase "within the same Interconnection since there RCs between two Interconnections still need to communication with each other for reliability coordination (e.g. curtailment of interchange transactions crossing Interconnection boundary, as stipulated in IRO-006). (4) R3: Suggest to add adjacent Transmission Operator and Purchasing-Selling Entity (the latter needed for meeting INT-004 requirements). (5) The list of entities in R4 and R6 is different from those in R3 and R5. They should be the same for having Alternative Interpersonal Communication capability. (6) R5: Suggest to add adjacent Balancing Authority as adjoining BAs need to communication with each to check schedules and other balancing information. (7)

There are a number of parts in Requirements R1 to R8 each of which must be complied with. However, the VSLs for R1 to R8 are binary which do not provide any distinction in partial failure of each of these requirements. We suggest the SDT to apply the VSL guideline and re-establish the various levels of violation severity for these requirements.

No

TOP-001 is being revised and some of the requirements that fulfill this need may have been removed. We suggest the SDT check with the latest draft version of TOP-001 and coordinate with the Real-time Operation SDT to ensure there are not gaps.

No

1. R2: The word "of" before Transmission Operators should be "to". 2. The VSL for R1 should be revised to replace Regional Entities with ERO.

Yes

Yes

1. IRO-001: Reliability Directive: We do not agree with the proposed definition since it addresses Emergencies only. There are situations where a Reliability Directive is issued such that the directed action must be taken by the receiving entity to address a reliability constraint or any condition on the BES which if left unattended could, in the judgment of the issuing entity, lead to an Emergency. These conditions themselves do not constitute an Emergency which is defined as "Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System." There could be no abnormal condition but the actions must nevertheless be taken promptly to prevent the bulk electric system from entering into an abnormal condition. We therefore suggest the term Reliability Directive be revised to: Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address a reliability constraint or an Emergency. 2. IRO-001, Requirement R2: This requirement contains the words "which could include issuing Reliability Directives" which is not referenced anywhere else in the standard. We do not think this inclusion is necessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest to remove these words. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of "which could include issuing Reliability Directives" in IRO-001 is unnecessary. We suggest replacing "identified events" with "anticipated events". This requirement also lists Interchange Coordinators as one of the recipients of Reliability Directives which is not consistent with the implementation plan. 3. IRO-014: R4 as written creates unnecessary requirements for an RC to participate in conference calls for issues that may not affect the RC itself. We suggest to reinstate the original word "impacted" as opposed to "other", and remove the words "within the same Interconnection" since such calls and coordination may be required for RCs on both side of the Interconnection boundary. Same change suggested for R5, i.e. replace "other" with "impacted". 4. If an entity provides Interpersonal Communication for day-to-day communication using two different media, e.g. radio and telephone, the proposed definition of Alternative Interpersonal Communication suggests that it would not be possible for one medium to be used as the Alternative Interpersonal Communication for the other since the two media are both used every day. 5. COM-001-2 R10 suggests that the responsible entity must wait for at least 30 minutes before notifying other entities of the failure of its Interpersonal Communication capability. We recommend changing "that lasts 30 minutes" to "that lasts or is expected to last 30 minutes". This allows responsible entities to start notifying other entities earlier. 6. In IRO-005-4 R1: Delete "notify".

Individual

Alice Ireland

Xcel Energy

No

We feel that either the definitions, or the requirements, should make it clear whether data is included.

No

We are concerned that the drafting team may not have understood Xcel Energy's comments and FERC's directive in Order 693. FERC had asked that NERC consider Xcel Energy's suggestion. This consideration does not necessarily equate to the development of additional requirements, however that may be the solution. We recognize that R1 and R2 of TOP-001-1 give the TOP authority to take immediate actions necessary to alleviate operating emergencies. We were concerned with the potential situation where the RC's directive (R3 of IRO-001-2) may conflict with actions the TOP has ALREADY taken. In this situation, we do not feel the TOP should be held at fault for the actions it took prior to the RC's directive. (R3 of IRO-001-2 is currently in effect under TOP-001-1 R3.) Additionally, R1 and R2 of TOP-001-1 have been removed from the latest draft of version 2. So, if TOP-001-2 and IRO-001-2 are approved as drafted, it would appear that all rights and protections of the TOP to take immediate actions will be removed and our initial issue, as detailed in Order 693, still exists.

Group
Kansas City Power & Light
Michael Gammon
No
These requirements require TOP's, BA's, and GOP's to establish alternative means of "interpersonal" communications with other BA's, GOP's, and BA's respectively without regard to the reliability impact each TOP, BA or GOP has on the interconnection. Why would it be necessary for a TOP with one 161kv transmission line or a BA with 100 MW of total load, or one GOP with a 30MW unit to realize additional costs when the facilities they operate have little reliability impact? In addition, most RC's have established satellite telephone systems as back-up communication with TOP's. RC's may have to establish additional communication systems with BA's as these requirements impose to avoid Standards of Conduct issues. R9 – considering the reliability of communication systems, a 2 hour response to a problem with the alternative means of communication is over sensitive. Allowing for sometime in an operating shift would be more in line, such as 8 hours.
Yes
Yes
Yes
Yes
There are more requirements that are being removed in the IRO standards than are currently proposed. It would be helpful if the SDT would consider a mapping of each requirement that is being eliminated and whether the requirement is duplicated elsewhere, moved elsewhere and where, or is deemed not needed would be helpful in judging if the changes are appropriate. Without this mapping it is difficult to fully support all the proposed changes to all these Standards.

**Consideration of Comments on Initial Ballot — Reliability Coordination (Project 2006-06)**  
**Date of Initial Ballot: February 25 – March 7, 2011**

If you feel that the drafting team overlooked your comments, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 609-452-8060 or at [herb.schrayshuen@nerc.net](mailto:herb.schrayshuen@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

**Summary Consideration:**

The RCSDT thanks all stakeholders for their comments. Many stakeholders provided comments suggesting revisions to the standards. Many of these suggestions were incorporated into the standards. As a result of the revisions, the RCSDT is moving COM-001-2, COM-002-3 and IRO-001-2 to a successive ballot. The RCSDT made a few clarifying edits to the remaining standards based on stakeholder comments. Therefore, IRO-002-3, IRO-005-4 and IRO-014-2 are being moved to recirculation ballot. Because of this approach, the SDT will be proposing an interim change to IRO-001: the elimination of Requirement R7, as it is duplicative of one of the requirements in IRO-014-2.

For the COM-001 standard, several commenters had suggestions for improvements to the requirement language and applicability. The RCSDT believes the standard correctly and adequately requires each applicable entity that would have capability to receive Interconnection and operating information to have Interpersonal Communications and Alternative Interpersonal Communications to be used when the Interpersonal Communication is not available. The RCSDT has addressed the applicability of the standards and implementation plans by aligning COM-001-2, and COM-002-3 to include the same entities and by removing LSE, PSE and TSP from the COM standards.

Many comments were concerned about both the medium (e.g. cellular, satellite, etc.) and media (e.g. voice, email, etc.) used for Interpersonal Communications. The current language avoids being prescriptive and allows each entity to determine what is suitable. Interpersonal Communication and Alternative Interpersonal Communication is between the applicable entities which may include multiple locations (e.g. a primary and back-up control center).

The RCSDT added the following Requirement Parts at the suggestion of stakeholders:

- 3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection
- 4.3 Adjacent Transmission Operators synchronously connected within the same Interconnection
- 5.6 Adjacent Balancing Authorities
- 6.3 Adjacent Balancing Authorities

The RCSDT agrees with the many industry comments and removed the phrase "to exchange Interconnection and operating information" in requirements R1 through R8. This removal clarifies that the intent of this capability is NOT for the exchange of data.

A few commenters also expressed concerns about the frequency of testing Alternative Interpersonal Communications capability. The RCSDT believes that the proposed testing frequency is supported by the majority of stakeholders and is not overly burdensome.

<sup>1</sup> The appeals process is in the Reliability Standards Development Procedure: [http://www.nerc.com/files/RSDP\\_V6\\_1\\_12Mar07.pdf](http://www.nerc.com/files/RSDP_V6_1_12Mar07.pdf).

Several commenters suggested that VSLs should be written based on the percent of entities rather than by an occurrence of a violation. VSLs must be written on a violation occurrence basis in accordance with FERC guidelines. The requirements specify which entities must be included in communications capabilities. If a single entity is missing, this is a violation of the requirement. According to VSL guidelines, if missing any part of the requirement could have the same reliability outcome as missing the entire requirement, the requirement is binary and the VSL must be severe.

A new requirement was added to COM-001 for clarity regarding responsibilities of the Distribution Provider and the Generator Operator when either entity experiences a failure of its Interpersonal Communication capability:

R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with its Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations]

This requirement requires collaboration between entities to restore a failed communications capability.

The RCSDT asked stakeholders if they believed that the requirements of TOP-001-1 obviate the need to develop additional requirements to address Xcel's comment as directed in FERC Order 693. The original justification that the RCSDT posited for not adding a requirement to directly address Xcel Energy's comments in paragraph 516 and FERC's related recommendation in paragraph 523 was that TOP-001-1 R3 was considered to address this concern. Since that time, the RTO SDT has proposed to retire TOP-001-1 R3. However, NERC has since retired IRO-004-1 R3 and R5 along with IRO-005-3 R5. Because these are retired, there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency. Therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirements," the TOP may respond to the RC that it cannot comply.

Stakeholders were asked if they agree with the revision to IRO-001, R1 for certifying Reliability Coordinators. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.

A significant revision to IRO-001-2 was made by removing the Interchange Coordinator from the standard. The RCSDT made this revision because the Balancing Function is responsible for implementing interchange (see NERC Reliability Functional Model, version 5, page 32, item 7) and to operate the Balancing Authority Area to maintain load-interchange-generation balance (item 3). The RCSDT asked stakeholders if they agree with moving two requirements from IRO-001 back to IRO-002 relating to Analysis Tool outages. All stakeholders that responded agreed and there were no comments received.

The RCSDT asked stakeholders if they agree with moving two requirements from IRO-001 back to IRO-005 relating to Reliability Coordinator notifications. Several commenters noted a typographical error in R1 which was corrected to read:

When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify ~~issue an alert to~~ all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]"

One commenter also asked that an errant yellow text box be removed from Page 1, which was also done.

The RCSDT received a number of comments regarding the applicability of COM-001, and COM-002. The RCSDT agrees with these comments and has removed PSE and LSE from the COM-001-2 implementation plan. The RCSDT also addressed minor issues involving typos, formatting and style.

The RCSDT received comments suggesting clarification of COM-002-3. The RCSDT intends the communication of Reliability Directives to be person-to-person and in such a manner that the Reliability Directive is understood and not necessarily repeated verbatim. COM-002-3 is not intended to be prescriptive on how the Reliability Directive is issued. Spoken or written communications are valid methods (i.e. using the telephone, radio, electronic texting, email, etc.). The purpose of COM-002-3 is to ensure emergency communications between operating personnel are effective. There is no proxy requirement for 24/7 operating personnel regarding small entities. Only “capability” as provided for in COM-001-2 is applicable. The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols would be addressed in the COM-003 standard being developed in Project 2007-02.

Some commenters suggested revisions to IRO-014, requirement R8 to conform to similar requirements R6 and R7. The RCSDT made the suggested revision by re-ordering R8:

R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

IRO-014-2, requirement R4 is applicable to those Reliability Coordinators engaged in activities related to requirement R1 and part 1.7. It is unlikely that Reliability Coordinators geographically and electrically distant from one another will have mutually agreed upon operating procedures (per requirement R1), and therefore requirement R4 would not be applicable. The RCSDT believes IRO-014-2, requirement R4 (which requires weekly communication) provides reasonable contact and flexibility – and this requirement is in effect today.

The RCSDT coordinated the use of the NERC Glossary term “Adverse Reliability Impact” with the Real-Time Operations team and continues the practice of informing all RCs of Adverse Reliability Impacts in requirement R5.

The RCSDT has revised IRO-014-2, requirements R6-R8 to clarify that when one RC identified a problem and presents an action plan for another RC, the second RC is obligated to implement the action plan. The RCSDT will forward the concern about RC's identifying themselves and the receiver to establish authority to the Project 2007-02, Operating Personnel Communications Protocols SDT. The Project 2007-02 team is developing a standard that includes requirements for use of specific communications protocols.

Voter	Entity	Segment	Vote	Comment
Edward P. Cox	AEP Marketing	6	Negative	<p>1) The applicability of COM-001 and COM-002 appear to be at odds with each other. The requirements may need to be re-written so that they are in sync.</p> <p><b>Response:</b> The RCSDT has revised the applicability of COM-001 and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP.</p> <p>2) The revision to IRO-001, R1 is out of scope with the standard, as it is currently addressed through the NERC certification process that the NERC reliability coordinators are subject to.</p>

Voter	Entity	Segment	Vote	Comment
				<p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p> <p>3) The language used in COM-002-3 R2 including “with enough details that the accuracy of the message has been confirmed” is subjective and ambiguous.</p> <p><b>Response:</b> The RCSDT agrees with the intent of your comment and has modified COM-002-3, R2 as:</p> <p style="padding-left: 40px;">R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive.</p> <p>4) IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling.</p> <p><b>Response:</b> IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives, “. This is the “direction in accordance with Requirement R2” stated in R3 and the “direction in accordance with Requirement R3” stated in R4.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>				

Voter	Entity	Segment	Vote	Comment
Brock Ondayko	AEP Service Corp.	5	Negative	<p>1) The applicability of COM-001 and COM-002 appear to be at odds with each other. The requirements may need to be re-written so that they are in sync.</p> <p><b>Response:</b> The RCSDT has revised the applicability of COM-001, and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP.</p> <p>2) The revision to IRO-001, R1 is out of scope with the standard, as it is currently addressed through the NERC certification process that the NERC reliability coordinators are subject to.</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p> <p>3) The language used in COM-002-3 R2 including “with enough details that the accuracy of the message has been confirmed” is subjective and ambiguous.</p> <p><b>Response:</b> The RCSDT agrees with the intent of your comment and has modified COM-002-2, R2 as:</p> <p style="padding-left: 40px;">R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive.</p> <p>4) IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling.</p> <p><b>Response:</b> IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which</p>



Voter	Entity	Segment	Vote	Comment
				states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives.” This is the “direction in accordance with Requirement R2” stated in R3 and the “direction in accordance with Requirement R3” stated in R4.
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>				
Richard J. Mandes	Alabama Power Company	3	Affirmative	Please see comments
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see response to posting comments for the SERC OC Standards Review Group; the RCSDT did not specifically find comments from Alabama Power Company and believes comments were included within this group.</p>				
Kenneth Goldsmith	Alliant Energy Corp. Services, Inc.	4	Negative	<p>While most of the changes recommended in the standards are acceptable to us, we do not believe multiple standards should be included in one ballot. You might ask for comments as a group, but each standard should be balloted separately.</p> <p><b>Response:</b> The SDT has discussed this recommendation and has changed the way that these standards are being posting for ballot. Thank you for your suggestion.</p> <p>COM-001 R10 needs to be clarified that the "impacted entities" are within the same interconnection/area. It is not necessary to contact all entities as could be interpreted by the standard as currently written. We believe there may be differing levels of communication requirements, especially as it relates to smaller entities registered as DP's or LSE's that are not staffed 24 hours per day. We agree there is some responsibility of everyone to have some level of communications, the question is to what level.</p> <p><b>Response:</b> R10 specifies only “impacted entities.” That phrase is used to limit the scope of the requirement. If an entity has a failure of its Interpersonal Communications capability with only one entity, then <i>that</i> entity is the “impacted entity” and they should be notified of the failure.</p>

Voter	Entity	Segment	Vote	Comment
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>				
Jennifer Richardson	Ameren Energy Marketing Co.	6	Negative	<p>Comment COM-001: (1) R2 is written with the onus on the Recipient to get repeat an accurate message. The Measure and VSL appear to attach to the Recipient to make a bad message into an accurate one.</p> <p><b>Response:</b> The SDT assumes you intended to comment regarding COM-002-3 R2, as that is where the issuance, dialogue, and confirmation process is described, not COM-001. The SDT believes that it is the issuing entity which is required to decide whether the message has been received to its satisfaction. However, the SDT further believes the recipient of the original communications must be responsible for responding and participating in dialogue with the issuing entity. Without that, the issuing entity cannot decide whether the message has been received and understood.</p> <p>(2) R2 is too verbose.</p> <p><b>Response:</b> Based on specific suggestions from other stakeholders, the team deleted the following phrase from R2:</p> <p style="padding-left: 40px;">with enough details that the accuracy of the message has been confirmed</p> <p>The team revised the associated VSL to:</p> <p style="padding-left: 40px;">The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive. <del>with enough details that the accuracy of the message was confirmed.</del></p> <p>(3) We don't think Operations should rely on email, for instance, as an Interpersonal Communication capability. We should be explicit to exclude these kinds of medium. The medium must be near instantaneous like voice, cell, and satellite.</p> <p><b>Response:</b> COM-002 does not preclude text or other forms of communication for issuing Reliability Directives.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>				

Voter	Entity	Segment	Vote	Comment
Kirit S. Shah	Ameren Services	1	Negative	<p>Comment COM-001: (1) R2 is written with the onus on the Recipient to get repeat an accurate message. The Measure and VSL appear to attach to the Recipient to make a bad message into an accurate one.</p> <p><b>Response:</b> The SDT assumes you intended to comment regarding COM-002-3 R2, as that is where the issuance, dialogue, and confirmation process is described, not COM-001. The SDT believes that it is the issuing entity which is required to decide whether the message has been received to its satisfaction. However, the SDT further believes the recipient of the original communications must be responsible for responding and participating in dialogue with the issuing entity. Without that, the issuing entity cannot decide whether the message has been received and understood.</p> <p>(2) R2 is too verbose.</p> <p><b>Response:</b> COM-002-3 R2: Based on specific suggestions from other stakeholders, the team deleted the following phrase from R2:</p> <p style="padding-left: 40px;">with enough details that the accuracy of the message has been confirmed</p> <p>The team revised the associated VSL to:</p> <p style="padding-left: 40px;">The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive. <del>with enough details that the accuracy of the message was confirmed.</del></p> <p>(3) We don't think Operations should rely on email, for instance, as an Interpersonal Communication capability. We should be explicit to exclude these kinds of medium. The medium must be near instantaneous like voice, cell, and satellite.</p> <p><b>Response:</b> COM-002 does not preclude text or other forms of communication for issuing Reliability Directives.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>				
Gregory S Miller	Baltimore Gas & Electric Company	1	Affirmative	BGE is supportive of all 5 questions in the Comment Form.

Voter	Entity	Segment	Vote	Comment
<b>Response:</b> The RCSDT thanks you for your support.				
Joseph S. Stonecipher	Beaches Energy Services	1	Negative	<p>From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding.</p> <p>I suggest changing COM-002-3 R2 to read:</p> <p>Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive.</p> <p>The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to ensure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team.</p> <p><b>Response:</b> The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to identify a feasible measure for "understanding". A recipient can judge whether the response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded.</p> <p>For IRO-001-2, I don't see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards?</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p> <p>IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at</p>

Voter	Entity	Segment	Vote	Comment
				<p>least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's?</p> <p><b>Response:</b> This requirement continues the current practice of informing all RCs of Adverse Reliability Impacts (ARIs). Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RCs. This is intended to make all RCs aware of ARIs and support situational awareness.</p> <p>More minor comments / suggestions for improvement: IRO-002 R2 can be improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified"</p> <p><b>Response:</b> The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT did indeed consider using the word "anticipated" rather than identified. However, the SDT believes that a decision cannot be made regarding whether to anticipate an event unless it is first identified through some method of assessment. Contingency analysis certainly can be one valid form useful in assessment. Since anything identified by such an assessment must be considered, the SDT believes the requirement should apply to what is identified, rather than the subjective decision of whether to expect or anticipate that which has been identified</p> <p>IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them.</p> <p><b>Response:</b> The SDT agrees, and has revised the requirements per your suggestion.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment.</p>				
Bud Tracy	Blachly-Lane Electric Co-op	3	Negative	<p>Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a</p>

Voter	Entity	Segment	Vote	Comment
				<p>small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window."</p> <p>Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.</p>

**Response:** The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are effective." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a method of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this

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return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Gregory Van Pelt	California ISO	2	Abstain	The California ISO will be submitting comments Jointly as part of the ISO/RTO Council Standards Review Committee
<b>Response:</b> Thank you; please see responses to the comments submitted on the posting by the ISO/RTO Council Standards Review Committee.				
Dave Markham	Central Electric Cooperative, Inc. (Redmond, Oregon)	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities

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<p><b>Response:</b> The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.</p>				
Steve Alexanderson	Central Lincoln PUD	3	Negative	<p>The stated purpose of COM-002 is: "To ensure emergency communications between operating personnel are effective." As written, the standard fails to meet this purpose because the three requirements only deal with communications at the entity level. There is no requirement for the directing entity to even try to reach operating personnel at the receiving entity. The directing entity may follow all the requirements of this standard by following R1 and R3 with the receiving entity's receptionist, answering service, janitor, night watchman, etc. The receiving entity only needs to meet R2, parroting the directive. Again this could be accomplished by anyone with no assurance the directive reaches the operating personnel who can implement it. When we stated a similar objection during the last comment period, The SDT's answer suggested this was a PER staffing issue, but none of the PER requirements even apply to DP/LSE directive recipients. We suggest the entity issuing the directive should be required to make an attempt to get it to those who are competent to understand and implement the directive. This is not a staffing, training, or credentials issue; it is a performance issue that falls squarely within the stated purpose of this standard. COM-001 R10 presents a paradoxical situation to an entity attempting to comply. Consider an interpersonal communication capability</p>



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				<p>failure that lasts longer than 60 minutes past initial detection. At or before 60 minutes, the affected entity is expected to notify impacted entities. If it has no interpersonal communication capability, how shall it make this notification? And if the entity does manage to make such a notification, it has thereby proven that it does have interpersonal communication capability making such notification unnecessary. We again ask the SDT to consider that not all the entities in the applicability sections of COM-001 and 002 have 24/7 dispatch centers. These are typically smaller entities that were required to register because they exceed 25 MW or were asked in the past to voluntarily provide UFLS. They do not and do not need to continuously communicate with TOPs, BAs, RCs, etc; and a “reliability directive” is a theoretical thing that has never happened during the memories of thirty year employees. The directive issuing entities simply realize the limitations around the receiving entities and work around them. The financial burden on these small entities and their customers to go to 24/7 dispatch will not have a corresponding reliability benefit. And while the two COM standards do not explicitly state that entities must maintain 24/7 dispatch, when all the requirements and definitions and time horizons are taken together 24/7 continuous competent communication is implied. During the last comment period, the SDT suggested this was a registration issue beyond their control. We submit instead that this is a standard applicability question that the SDT does have control over, since it is right there in Section A.4 of the two COM standards. While we appreciate that the SDT is responding to FERC order 693 to include DPs, we note that FERC also stated: Paragraph 487: “We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process.” Paragraph 6: “A Reliability Standard may take into account the size of the entity that must comply and the costs of implementation” Paragraph 141: “...the Commission clarifies that it did not intend to ... impose new organizational structures...” Paragraph 31: “We emphasize that we are not, at this time, mandating a particular outcome by way of these directives, but we do expect the ERO to respond with an equivalent alternative and adequate support that fully explains how the alternative produces a result that is as effective as or more effective that the Commission’s example or directive. We ask the SDT to exclude DPs, LSEs, and PSEs that do not have 24/7 dispatch centers from the applicability of these two standards in order to meet FERC order 693.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, “to ensure emergency communications between operating personnel are <u>effective</u>.” It’s not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a method of</p>				

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Shamus J Gamache	Central Lincoln PUD	4	Negative	<p>The stated purpose of COM-002 is: "To ensure emergency communications between operating personnel are effective." As written, the standard fails to meet this purpose because the three requirements only deal with communications at the entity level. There is no requirement for the directing entity to even try to reach operating personnel at the receiving entity. The directing entity may follow all the requirements of this standard by following R1 and R3 with the receiving entity's receptionist, answering service, janitor, night watchman, etc. The receiving entity only needs to meet R2, parroting the directive. Again this could be accomplished by anyone with no assurance the directive reaches the operating personnel who can implement it. When we stated a similar objection during the last comment period, The SDT's answer suggested this was a PER staffing issue, but none of the PER requirements even apply to DP/LSE directive recipients. We suggest the entity issuing the directive should be required to make an attempt to get it to those who are competent to understand and implement the directive. This is not a staffing, training, or credentials issue; it is a performance issue that falls squarely within the stated purpose of this standard. COM-001 R10 presents a paradoxical situation to an entity attempting to comply. Consider an interpersonal communication capability failure that lasts longer than 60 minutes past initial detection. At or before 60 minutes, the affected entity is expected to notify impacted entities. If it has no interpersonal communication capability, how shall it make this notification? And if the entity does manage to make such a notification, it has thereby proven that it does have interpersonal communication capability making such notification unnecessary. We again ask the SDT to consider that not all the entities in the applicability sections of COM-001 and 002 have 24/7 dispatch centers. These are typically smaller entities that were required to register because they exceed 25 MW or were asked in the past to voluntarily provide UFLS. They do not and do not need to continuously communicate with TOPs, BAs, RCs, etc; and a "reliability directive" is a theoretical thing that has never happened during the memories of thirty year employees. The directive issuing entities simply realize the limitations around the receiving entities and work around them. The financial burden on these small entities and their customers to go to 24/7 dispatch will not have a corresponding reliability benefit. And while the two COM standards do not explicitly state that entities must maintain 24/7 dispatch, when all the requirements and definitions and time horizons are taken together 24/7 continuous competent communication is</p>

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Gregg R Griffin	City of Green Cove Springs	3	Negative	<p>From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. FMPA suggests changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive.. The term "accuracy" can be interpreted as requiring the recipient to second-guess</p>

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				<p>the Reliability Directive of the RC to enure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team.</p> <p><b>Response:</b> The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to identify a feasible measure for "understanding". A recipient can judge whether the response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded.</p> <p>For IRO-001-2, FMPA does not see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards?</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p> <p>IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's?</p> <p><b>Response:</b> This requirement continues the current practice of informing all RCs of Adverse Reliability Impacts (ARIs). Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is intended to make all RCs aware of ARIs and support situational awareness.</p> <p>More minor comments / suggestions for improvement: IRO-002 R2 can be improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified"</p> <p><b>Response:</b> The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT did indeed consider using the word "anticipated" rather than identified. However, the SDT believes that a decision cannot be made regarding whether to anticipate an event unless it is first identified through some method of assessment. Contingency analysis certainly can be one valid form useful in assessment. Since anything identified by such an assessment must be considered, the SDT believes the requirement should apply to what is</p>

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				<p>identified, rather than the subjective decision of whether to expect or anticipate that which has been identified.</p> <p>IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them.</p> <p><b>Response:</b> The SDT agrees and have revised the requirements per your suggestion.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment.</p>				

Randall McCamish	City of Vero Beach	1	Negative	<p>From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. The City of Vero Beach (COVB) suggests changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive. The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to enure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team.</p> <p><b>Response:</b> The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to identify a feasible measure for "understanding". A recipient can judge whether the response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded.</p> <p>For IRO-001-2, COVB does not see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards?</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p> <p>IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's?</p> <p><b>Response:</b> This requirement continues the current practice of informing all RCs of Adverse Reliability Impacts (ARIs). Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is</p>
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<p><b>Response:</b> The RCSDT thanks you for your comment.</p>				
John Allen	City Utilities of Springfield, Missouri	4	Negative	See comments from the SPP Standards Development group.
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see response to those comments.</p>				
Shaun Anders	City Water, Light & Power of Springfield	1	Negative	The definition of "Interpersonal Communications" is overly broad and does not address the functional needs of reliability coordination. The definition should be limited to systems utilized for essential reliability functions. While the Purpose statement in the standard does address this intent, the explicit inclusion in the definition removes all ambiguity. Further, the definition of "Alternative Interpersonal Communications" without corresponding explicit definition of Primary Interpersonal Communications may lead to confusion and unnecessary duplication of efforts in

				testing and maintenance.
<p><b>Response:</b> The RCSDT thanks you for your comment. The certification of an entity as a functional entity by the ERO through its certification process will not take place unless the entity has the needed communications capabilities. If the entity cannot perform, it will not be registered. Once an entity is certified as a functional entity, then that entity must comply with all requirements applicable to that functional entity. These standard revisions establish clear requirements for alternative interpersonal communications capability which may or may not be part of the entity certification process. Taken together, the certification process and the Reliability Standards clearly establish the requirements for both normal interpersonal communications capability and alternative interpersonal communications capability.</p> <p>The RCSDT has revised the applicability of COM-001, and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP.</p>				
Dave Hagen	Clearwater Power Co.	3	Negative	<p>Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities</p>



				that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
<p><b>Response:</b> The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.</p>				
Bruce Krawczyk	ComEd	3	Negative	Exelon is voting negative based on our previously submitted comments.
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see the response to those comments.</p>				
Christopher L de Graffenried	Consolidated Edison Co. of New York	1	Abstain	<p>o COM-002 assumes, but does not require, voice logs. This needs to be fixed. Otherwise the documentation could just be a paper log 'check box' entry which says "Yes, we used 3-part." This is not adequate, verifiable documentation for entity audits.</p> <p><b>Response:</b> The standards establish "what" is required, not "how" to do it. The Measures identify methods which are examples of evidence that may be provided to demonstrate compliance, but requirements cannot be established in the measures. Further, valid requirements should not be established that preclude improvements that may arise through technological innovations or other equally effective alternatives. The state of the art at present would seem to indicate that the most prevalent evidence would likely come from a form of voice recordings or transcripts.</p>

				<p>o COM-002 only requires the entity maintain this documentation 3 months. This short retention time period expires long before most auditors check on the entity. So, why bother? This also needs to be fixed or clarified.</p> <p><b>Response:</b> The retention time was established using the NERC Data Retention Guidelines and to recognize that vast amount of data which would have to be retained to present evidence. In addition, any event under investigation has likely been accompanied by a requirement to “freeze” data retention and keep all relevant information and date for a specified timeframe surrounding the event.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment.</p>				
Roman Gillen	Consumers Power Inc.	3	Negative	<p>Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be</p>

				<p>achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.</p>
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Roger Meader	Coos-Curry Electric Cooperative, Inc	3	Negative	<p>Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers</p>
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Russell A Noble	Cowlitz County PUD	3	Negative	<p>COM-001 presents problems for smaller entities that do not have any other option for communications other than the failed communication line. The SDT should consider exempting such entities, requiring them to contact others to inform of their failed one and only communication option is a catch-22.</p> <p>COM-002 does not adequately provide for effective communication with smaller entities that do not have 24-7 control/dispatch functions. The directing entity issuing Reliability Directives must contact competent personnel. The SDT's reference to</p>

				<p>the PER requirements falls very short in addressing this problem as the DPs and LSEs are not even applicable to the suggested standards. Again, the SDT should consider certain exemptions for such entities. Please note that FERC itself noted that “a Reliability Standard may take into account the size of the entity that must comply and the costs of implementation...”...the Commission clarifies that it did not intend to ... impose new organizational structures...” and also “[w]e expect the communication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process.” Although the STD did not include all applicable entities to have backup communications, it failed to see the limitations of such entities without backup communications impeding their ability to comply with other requirements.</p>
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Rick Syring	Cowlitz County PUD	4	Negative	<p>COM-001 presents problems for smaller entities that do not have any other option for communications other than the failed communication line. The SDT should consider exempting such entities, requiring them to contact others to inform of their failed one and only communication option is a catch-22.</p> <p>COM-002 does not adequately provide for effective communication with smaller entities that do not have 24-7 control/dispatch functions. The directing entity issuing Reliability Directives must contact competent personnel. The SDT’s reference to the PER requirements falls very short in addressing this problem as the DPs and LSEs are not even applicable to the suggested standards. Again, the SDT should consider certain exemptions for such entities. Please note that FERC itself noted that “a Reliability Standard may take into account the size of the entity that must comply and the costs of implementation...”...the Commission clarifies that it did not intend to ... impose new organizational structures...” and also “[w]e expect the communication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process.” Although the STD did not include all applicable entities to have backup communications, it failed to see the limitations of such entities without backup communications impeding their ability to comply with other requirements.</p>

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Bob Essex	Cowlitz County PUD	5	Negative	COM-001 presents problems for smaller entities that do not have any other option for communications other than the failed communication line. The SDT should consider exempting such entities, requiring them to contact others to inform of their failed one and only communication option is a catch-22. COM-002 does not adequately provide for effective communication with smaller entities that do not have 24-7 control/dispatch functions. The directing entity issuing Reliability Directives must contact competent personnel. The SDT’s reference to the PER requirements falls very short in addressing this problem as the DPs and LSEs are not even applicable to the suggested standards. Again, the SDT should consider certain exemptions for such entities. Please note that FERC itself noted that “a Reliability Standard may take into account the size of the entity that must comply and the costs of implementation...” “...the Commission clarifies that it did not intend to ... impose new organizational structures...” and also “[w]e expect the communication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process.” Although the STD did not include all applicable entities to have backup communications, it failed to see the limitations of such entities without backup communications impeding their ability to comply with other requirements.
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Dave Sabala	Douglas Electric Cooperative	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability
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Henry Ernst-Jr	Duke Energy Carolina	3	Negative	<p>o We question how far the definition of Alternative Interpersonal Communication goes in requiring separate infrastructure from Interpersonal Communication. For example, wireless communications sometime utilize fiber optic networks.</p> <p><b>Response:</b> The definition requires the use of different infrastructure (medium) than the Interpersonal Communication used for day to day operations. The RCSDT does not believe it is appropriate to be prescriptive with respect to the specific medium employed. This is intended to apply to assets and access to media that is under your control. For example, the way cell phone signals are routed are not under your control.</p> <p>o We question why the requirements state that entities must “have” Interpersonal Communications capability, but must “designate” Alternative Interpersonal Communications capability?</p> <p><b>Response:</b> Many entities have multiple Alternative Interpersonal Communication capabilities. Large entities may have a second land line, cell phone, satellite phone, etc. The purpose of “designating” the Alternative is so that other entities know which one is in use and is a reliable means of communications. Allowing them to designate which one they want to employ allows for flexibility in which one they use for AIC.</p> <p>o R1.2 and R2.2 - Why is this limited to the same interconnection?</p> <p><b>Response:</b> The phrase “within the same interconnection” is added for the case of ERCOT which has only DC tie lines with the Eastern Interconnection and has minimal interchange.</p> <p>o R3 - need to add neighboring TOPs.</p> <p><b>Response:</b> Agreed. The standard has been modified as suggested.</p> <p>o R5 - need to add adjacent BAs.</p> <p><b>Response:</b> Agreed. The standard has been modified as suggested.</p> <p>o Interchange Coordinator - Add IC to the Applicability Section, and add a requirement that the IC have Interpersonal Communication capability with its BA and adjacent BAs.</p> <p><b>Response:</b> We eliminated the Interchange Coordinator from COM-001-2 based</p>
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				<p>on stakeholder feedback.</p> <p>o Requirements to “designate” Alternative Interpersonal Communication should carry a “Medium” VRF instead of “High”, because they are a backup capability. The word “designate” carries the connotation that these are documentation requirements.</p> <p><b>Response:</b> While the requirement is phrased to focus on the documentation, the reliability objective is that the entity has an alternative communication capability with those functional entities most critical to its real-time operations.</p> <p>o R9 requires a monthly test of Alternative Interpersonal Communications capability. This was quarterly in the last draft. We question how these requirements for “Alternative Interpersonal Communications” capability are related to requirements for “backup functionality” in EOP-008-1, which requires an annual test of backup functionality. Clarity on the relationship between “Interpersonal Communications”, “Alternative Interpersonal Communications”, “primary control center functionality” and “backup control center functionality” would be appreciated.</p> <p><b>Response:</b> Interpersonal Communication and Alternative Interpersonal Communication are not related to EOP-008. The provision to test may be performed through day to day use of the capability.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>				
George S. Carruba	East Kentucky Power Coop.	1	Negative	As currently written, IRO-014 could be interpreted that if a RC identifies an adverse reliability impact in another RC and the other RC does not agree with the findings, the RC who identified the adverse reliability impact would be responsible for creating a mitigation plan to address the issue. This may not be possible if the identifying RC does not have agreements in place with the TOPs/BAs in the other RC area.
<p><b>Response:</b> The RCSDT thanks you for your comment. IRO-014-2 requirement R6, requires all RCs to operate as if the problem exists even when they disagree with the RC that identified the problem. Even if there is a disagreement between RCs, R8 still requires that all RCs comply with the action plan developed by the RC that identified the adverse reliability impact unless compliance with the action plan would violate safety, equipment, regulatory or statutory requirements. As envisioned, the TOPs and BAs would receive operating instructions from their own RC, not from the RC in another Reliability Coordinator Area.</p>				
Sally Witt	East Kentucky Power Coop.	3	Negative	As currently written it could be interpreted that if an RC identifies an Adverse reliability Impact in another RC Area and they do not agree with the findings, the

				RC who identified the adverse reliability Impact would be responsible for creating a mitigation plan to address the issue. This may not be feasible if the identifying RC does not have agreements in place with TOPs/BAs in the other RC Area.
<p><b>Response:</b> The RCSDT thanks you for your comment. IRO-014-2 requirement R6, requires all RCs to operate as if the problem exists even when they disagree with the RC that identified the problem. Even if there is a disagreement between RCs, R8 still requires that all RCs comply with the action plan developed by the RC that identified the adverse reliability impact unless compliance with the action plan would violate safety, equipment, regulatory or statutory requirements. As envisioned, the TOPs and BAs would receive operating instructions from their own RC, not from the RC in another Reliability Coordinator Area.</p>				
John R Cashin	Electric Power Supply Association	5	Affirmative	I will be submitting comments in the regular form tomorrow.
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see response to those comments.</p>				
Chuck B Manning	Electric Reliability Council of Texas, Inc.	2	Negative	We agree with the comments submitted by the IRC SRC and we have submitted those same comments.
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see response to those comments.</p>				
Martin Kaufman	ExxonMobil Research and Engineering	5	Negative	The Measurement 2 of COM-002-3 has the potential to create numerous violations without any reliability impact to the Bulk Electric System. Specifically, for those facilities without voice recording equipment, the requirement to record in an operator log that the BA/GOP/TOP/TSP repeated the intent of a directive back to the RC provides no benefit to the reliability of the BES and adds a situation where an entity can be found non-compliant by an RE with zero impact to the reliability of the BES. In response to a directive from an RC, it's important for the reliability of the BES for a facility to identify an instruction as a directive, resolve whether the facility can comply with the directive, and inform the RC when it could not comply with the directive. Documentation requirements should reflect these three items.
<p><b>Response:</b> The RCSDT thanks you for your comment. Based on comments from other stakeholders, the SDT has removed the TSP, LSE and PSE from responsibility for any of the requirements in COM-002. As envisioned, in an emergency the RC would issue most Reliability Directives to its BAs and TOPs, and there may be times when the RC bypasses its TOPs and BAs and issues a Reliability Directive to its DPs</p>				

and GOPS. The RC would not, however, issue a Reliability Directive to TSPs, LSEs, or PSEs.

Note that M2 only requires that the recipient document that it repeated the reliability directive. Collectively, the three measures do what you have proposed – they require that the applicable entities document that the three parts of the communication took place – original issuance; accurate repeat; confirmation. Operating logs are offered as one form of acceptable evidence – but other types of evidence could also be used to demonstrate compliance.

Bryan Case	Fall River Rural Electric Cooperative	3	Negative	<p>Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of</p>
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Robert Martinko	FirstEnergy Energy Delivery	1	Affirmative	FirstEnergy supports the proposed standards and would appreciate consideration of our comments submitted through the formal comment period.
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see response to those comments.</p>				
Kevin Query	FirstEnergy Solutions	3	Affirmative	FirstEnergy supports the proposed standards and would appreciate consideration of our comments submitted through the formal comment period.
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see response to those comments.</p>				
Mark S Travaglianti	FirstEnergy Solutions	6	Affirmative	FirstEnergy supports the proposed standards and would appreciate consideration of our comments submitted through the formal comment period.
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see response to those comments.</p>				
Frank Gaffney	Florida Municipal	4	Negative	From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part

	Power Agency		<p>communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. FMPA suggests changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive. The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to ensure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We assume that was not the intent of the drafting team.</p> <p><b>Response:</b> The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to identify a feasible measure for "understanding". A recipient can judge whether the response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded.</p> <p>For IRO-001-2, FMPA does not see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards?</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p> <p>IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's?</p> <p><b>Response:</b> This requirement continues the current practice of informing all RCs of Adverse Reliability Impacts (ARIs). Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is intended to make all RCs aware of ARIs and support situational awareness.</p> <p>More minor comments / suggestions for improvement: IRO-002 R2 can be</p>
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				<p>improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified"</p> <p><b>Response:</b> The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT did indeed consider using the word "anticipated" rather than identified. However, the SDT believes that a decision cannot be made regarding whether to anticipate an event unless it is first identified through some method of assessment. Contingency analysis certainly can be one valid form useful in assessment. Since anything identified by such an assessment must be considered, the SDT believes the requirement should apply to what is identified, rather than the subjective decision of whether to expect or anticipate that which has been identified.</p> <p>IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them.</p> <p><b>Response:</b> The SDT agrees and have revised the requirements per your suggestion.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment.</p>				
Thomas E Washburn	Florida Municipal Power Pool	6	Negative	<p>From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. FMPA suggests changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive.. The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to ensure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team.</p> <p><b>Response:</b> The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to identify a feasible measure for "understanding". A recipient can judge whether the</p>

			<p>response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded.</p> <p>For IRO-001-2, do not see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards?</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p> <p>IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's?</p> <p><b>Response:</b> IRO-014-2 R5: This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is intended to make all RCs aware of ARIs and support situational awareness.</p> <p>More minor comments / suggestions for improvement: IRO-002 R2 can be improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified"</p> <p><b>Response:</b> The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT did indeed consider using the word "anticipated" rather than identified. However, the SDT believes that a decision cannot be made regarding whether to anticipate an event unless it is first identified through some method of assessment. Contingency analysis certainly can be one valid form useful in assessment. Since anything identified by such an assessment must be considered, the SDT believes the requirement should apply to what is identified, rather than the subjective decision of whether to expect or anticipate that which has been identified.</p> <p>IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them.</p> <p><b>Response:</b> The SDT agrees, and has revised the requirements per your</p>
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				suggestion.
<b>Response:</b> The RCSDT thanks you for your comment.				
Silvia P. Mitchell	Florida Power & Light Co.	6	Negative	<p>8) Question 1</p> <p>1. Do you agree with COM-001 requirements for Interpersonal Communications capability and Alternative Interpersonal Communications capability (R1-R8)? If not, please explain in the comment area below. No</p> <p>9) Question 1 Comments: As drafted, COM-001 is not clear or complete. At this stage in the evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. Thus, NextEra Energy Inc. (NextEra) has numerous recommended corrections to provide clarity and completeness to COM-001. For example, the requirement to designate an Alternative Interpersonal Communication capability is not clear. Does the designator solely designate for the designator's knowledge or does the designator need to inform the entity on the other end of the connection.</p> <p>In R2, for instance, the Reliability Coordinator must designate, but it is also not clear whether the Reliability Coordinator must inform the Balancing Authorities or Transmission Operators. It is further unclear whether the designation must be documented, or if any informing of the Balancing Authorities or Transmission Operators must be documented. Thus, it is recommended that the drafters decide what was intended regarding the designation and clearly state the requirements.</p> <p>In R9 it states that “. . . on at least a monthly basis.” There are two issues to consider here. If the sentence stays, grammatically it should read “. . . on, at least, a monthly basis. . .” However, from a compliance and technical perspective, the term “at least” has no significance and should be deleted. The requirement is to test on a monthly basis - the phrase “at least” only introduces ambiguity and implies that the party should consider every two or three weeks. If the drafting team believes a best practice is less than a month, there are other NERC educational tools to explain a best practice.</p> <p>In R10, it states “. . . shall notify the impacted entity . . .” It would be clearer to state: “. . . shall notify the impacted Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider or Generator Operator . . .” Page 6</p>



			<p><b>Response:</b> The Requirement R2 is for the RC to designate an AIC and inform the other entity (BA, TOP, etc.) as to what that AIC is. The Measure M2 provides examples of the types of evidence which may be used to prove compliance with the requirement.</p> <p>The RCSDT believes that stakeholders are satisfied with the wording of the requirements of this standard. The phrase “at least” was included to relay the intent – that the monthly requirement is a minimum, and some entities may wish to perform this more frequently. It does not add any compliance obligation to perform this activity more frequently than specified.</p> <p>For R10, the RCSDT believes that the existing language is sufficiently clear.</p> <p>10) Question 2 2. The RCSDT believes that the requirements of TOP-001-1 obviate the need to develop additional requirements to address Xcel’s comment. Do you agree? If not, please explain in the comment area below. No</p> <p>11) Question 2 Comments: As stated in response to number 1, Reliability Standards are to be clear and complete. If a Transmission Operator is not responsible for a delay caused by a Reliability Coordinator, the Standard should specifically state that the Transmission Operator does not need to wait for an assessment or approval of a Reliability Coordinator to take actions pursuant to TOP-001-1 R3. Since the Reliability Coordinator is atop the reliability higherachy, such a statement provides clarity and completeness to understanding a Transmission Operators rights. Thus, TOP-001-1 R3 should be revised to lead with: “Without any obligation to first seek and obtain an assessment or approval from its Reliability Coordinator, each Transmission Operator . . . .” Page 10</p> <p><b>Response:</b> The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirements”, the TOP may respond to the RC that it cannot comply.</p> <p>12) Question 6 Comments: At this stage in evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. COM-002, IRO-001, IRO-002 and IRO-014 do not meet this threshold. Thus, NextEra has numerous recommended corrections to provide clarity and completeness to these Reliability</p>
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			<p>Standards. COM-002 R1 The addition of defined terms for Reliability Directive and Emergency is a very good approach that helps provides clarity. Hence, it is also be appropriate to make the language in the requirement as clear as possible, and not add other implied or unexplained notions. Also, at times, in those regions with markets, it is not always clear whether a requirement to curtail for reliability reasons is being issued pursuant to market rules or from the Reliability Coordinator or Transmission Operator under the Reliability Standards. Therefore, it is also appropriate that the Reliability Coordinator, Transmission Operator, Balancing Authority be required to identify themselves;, and if they fail to identify themselves or fail to use the term Reliability Directive, the registered entity receiving the flawed issuance should not be consider in violation of a Reliability Standard for failing to act. Accordingly, R1 would be clearer and have the same intent, if it stated as follows: “A Reliability Coordinator, Transmission Operator or Balancing Authority have the authority to issue an oral or written Reliability Directive as authorized in [list the specific Reliability Standard requirements such as IRO-001 R8 and TOP-001 R3]. The issuance of an oral of written Reliability Directive, by a Reliability Coordinator, Transmission Operator or Balancing Authority shall: (1) use the term ‘Reliability Directive;’ and (2) identify the issuer of the Reliability Directive as a Reliability Coordinator, Transmission Operator or Balancing Authority. If a Reliability Coordinator, Transmission Operator or Balancing Authority issues an oral or writtern directive without using the term “Reliability Directive” or failing to indentify itself as a Reliability Coordinator, Transmission Operator or Balancing Authority, the registered entity receiving the directive cannot be considered in violation for its failure to act.”</p> <p><b>Response:</b> There is a new standard under development (COM-003) that is addressing a broader range of communications protocols, and has proposed a requirement for the Reliability Coordinator to announce his/her title when issuing alerts and other types of announcements.</p> <p>IRO-001 The definition of Adverse Reliability Impacts uses the term “instability.” It is important that this term be technically defined in the same way “Cascading” is defined, otherwise the new requirement is not adding clarity; rather, it is maintaining the ambiguous term “instability” that will likely lead to confusion and debate.</p> <p><b>Response:</b> The term, ‘instability’ is already used in many reliability standards.</p> <p>R1 Similar to the comments set forth with respect to COM-001 (question #1), the term “at least” should be deleted from R1 - it serves no useful purpose from a technical or compliance perspective; instead, it will add unnecessary ambiguity to the requirement.</p> <p><b>Response:</b> The phrase, “at least” was included to relay the intent – that the monthly requirement is a minimum, and some entities may wish to perform this</p>
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				<p>more frequently. It does not add any compliance obligation to perform this activity more frequently than specified.</p> <p>R2, as drafted, states: “Each Reliability Coordinator shall take actions or direct actions, which could include issuing oral or written Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. “ This long sentence has several significant grammatical errors that result in the reader not being able to discern the meaning of the requirement. It also unnecessarily adds verbiage that detracts from its primary focus. It is, therefore, recommended that R2 be revised as follows: “Each Reliability Coordinator shall take all necessary actions to prevent identified Emergencies or Adverse Reliability Impacts. These Reliability Coordinator actions shall include, to the extent necessary, the issuing of oral or written Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers located within its Reliability Coordinator Area. “</p> <p><b>Response:</b> The SDT has considered the alternative language proposed and finds that the— the phrase, ‘all necessary action’ is ambiguous. Who would decide that ‘all necessary action’ had been taken?</p> <p>R3, as drafted, is confusing and inconsistent with R2, and, thus, R3 should be revised to read as follows: “Upon receipt of a Reliability Directive issued pursuant to R2, a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall comply with the Reliability Directive, unless compliance would violate safety, equipment, regulatory or statutory requirements. In the event that a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider determines that compliance with a Reliability Directive would violate safety, equipment, regulatory or statutory requirements, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall, within 10 minutes after the determination, inform the Reliability Coordinator of its inability to comply.”</p> <p><b>Response:</b> The team adopted the intent of part of this suggestion by replacing the word, ‘per’ with, ‘in accordance with’. The team elected not to add a time constraint because the proposed time constraint implies that it would be acceptable to delay up to 10 minutes before notifying the RC – and in some instances this time delay</p>
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				<p>could result in and adverse impact to reliability.</p> <p>IRO-002R1 and R2, as written, are confusing. It is recommended that R1 and R2 be combined to read as follows: “Pursuant to a written procedure to mitigate the impact of a Reliability Coordinator’s analysis tool outage, a Reliability Coordinator’s System Operator shall also have the authority to approve, deny or cancel a planned outage for its analysis tool.”</p> <p><b>Response:</b> The drafting team believes that the language in the proposed standard is clear as written. No reason has been provided for merging the two requirements, and the benefit of merging the requirements is not clear.</p> <p>IRO-014 It is unclear why the terms Operating Procedure, Operating Process or Operating Plan needs to be plural, as currently written in the Standard. Hence, it is recommended that these terms be made singular, otherwise a violation may be inferred for not having more than one Procedure, Process or Plan.</p> <p><b>Response:</b> The range of activities that must be addressed by the documents is expected to require more than one document, thus the use of the plural versions of these terms.</p> <p>Insert the word “applicable” before “Reliability Coordinator.”</p> <p><b>Response:</b> The benefit of adding the word ‘applicable’ is not clear.</p> <p>2.1, as written, is confusing. Recommend that 2.1 read as follows:”Review and update, if an update is necessary, on an annual basis. Annual basis means the review shall be within one month plus or minus that date of the last review.”</p> <p><b>Response:</b> The 15 month interval was recommended by the compliance program as the outer bound to recommend in standards that use the term, “annual” or “annually.”</p> <p>There is a compliance bulletin on this issue.</p> <p>R3 This requirement uses a very vague term “reliability-related information,” which, also, does not track the language used in R1 -- “information.” It is recommended that R1 and R3 use the same terms and read “ . . . information, as defined by the Reliability Coordinator, . . . “</p> <p><b>Response:</b> Requirement R1 is not open-ended – it identifies information needed for Interconnection reliability. R3 points to the information identified by complying with R1. The intent was to limit the scope to areas needed for reliability. RCs may want other information for reasons not related to reliability, and that information is outside the scope of this standard.</p> <p>R4 As stated above, “at least” does not add value, and, therefore, should be</p>
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				<p>deleted.</p> <p><b>Response:</b> The phrase, “at least” was included to relay the intent – that the monthly requirement is a minimum, and some entities may wish to perform this more frequently. It does not add any compliance obligation to perform this activity more frequently than specified.</p> <p>R5, as written, is confusing. The recommended fix is to delete “all other” and replace with “impacted”.</p> <p><b>Response:</b> The SDT did intend that all other RCs be notified. This requirement continues the current practice of informing all RCs of Adverse Reliability Impacts (ARIs). Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC’s. This is intended to make all RCs aware of ARIs and support situational awareness.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>				
Thomas W. Richards	Fort Pierce Utilities Authority	4	Negative	<p>From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. FPUA suggests changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive.. The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to enure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team.</p> <p><b>Response:</b> The RCSDT revised the requirement as follows to remove the “accuracy’ language:</p> <p><b>R2. Each Balancing Authority, Transmission Operator, Generator</b></p>

				<p>Operator, and Distribution Provider that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive.</p> <p>For IRO-001-2, FPUA does not see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards?</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p> <p>IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's?</p> <p><b>Response:</b> This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is intended to make all RCs aware of ARIs and support situational awareness.</p> <p>More minor comments / suggestions for improvement: IRO-002 R2 can be improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified"</p> <p>IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them.</p> <p><b>Response:</b> The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT has revised the requirements per your suggestion.</p>
<p><b>Response:</b> Thank you for your comments. Please see responses above.</p>				
Anthony L Wilson	Georgia Power Company	3	Affirmative	Please see comments
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see response to posting comments for the SERC OC Standards Review Group; the RCSDT did not specifically find comments from Georgia Power Company and believes comments were included within this group.</p>				

Gordon Pietsch	Great River Energy	1	Negative	<p>Reliability Directive: It is our opinion the definition as currently written is too subjective and may cause a compliance auditor to question the grounds under which one of applicable entities declared the directive. We believe that revising the definition to state “to address a declared emergency...” will remove the subjectivity.</p> <p>Requirements for using three-part communication: It is our opinion that the standard needs language that clearly states that during a Blast Call three-part communication is not required. Blast Calls are used when information needs to be disseminated quickly to a large number of entities. Strictly enforcing the use of three-part communication under these circumstances has the potential to be more harmful to reliability than helpful.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment.</p> <p>Reliability Directive: The RCSDT believes the proposed standard requirement addresses your requested revision. “R1...<u>shall identify the action as a Reliability Directive...</u>” is addressing a declared emergency.</p> <p>R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority <u>shall identify the action as a Reliability Directive</u> to the recipient.</p> <p>As a reference, we have included the existing definition of Emergency:</p> <p>Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.</p> <p>The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols would be addressed in the COM-003 standard being developed in Project 2007-02.</p>				
Shaun Jensen	Idaho Power Company	3	Negative	<p>It appears there is much concern with the wording, particularly in R2, as well as parties having issues with intermingled definitions. It is recommended to reword this, and ensure the VSL accurately reflects a direct definition that all entities all clear and certain on.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. The RCSDT is not sure of which standard requirement is being referenced.</p>				
Bob C. Thomas	Illinois Municipal Electric Agency	4	Negative	<p>IMEA appreciates the SDT's efforts to date. We are basing our negative vote on ballot pool communications that have addressed points that need further refinement before the proposed revisions to these reliability standards are affirmed. IMEA supports, in particular, comments submitted by the Midwest ISO and the SERC OC</p>

				Standards Review Group.
<p><b>Response:</b> The RCSDT thanks you for your comments. Please see responses to Midwest ISO and SERC OC Standards Review Group.</p>				
Kim Warren	Independent Electricity System Operator	2	Negative	<p>While we support the general direction of these standards development actions, we do have a number of concerns which cumulatively lead us to advocate a NEGATIVE vote. These include:</p> <p>(1) The phrase “within the same Interconnection” in COM-001-2 R1, limits the coordination activities to RCs, TOPs and BAs that can be detrimental to reliability. We recommend removing this phrase.</p> <p><b>Response:</b> The RCSDT does not agree that the phrase “within the same interconnection” limits coordination between entities. The purpose of the phrase is to place a bound on which adjacent entity an RC must have Interpersonal Communication (e.g., an EI RC does not need communication with WI RCs). The phrase “within the same interconnection” is added for the case of ERCOT which has only DC tie lines with the Eastern Interconnection and has minimal interchange.</p> <p>(2) We believe the Interchange Coordinator and Purchasing-Selling Entity also need to have adequate communication capabilities with other entities but they are not included in the applicability section of COM-001-2.</p> <p><b>Response:</b> We disagree that the IC and PSE need to be an applicable entity. To maintain reliability does not require communication with these entities. The applicability of COM-001, COM-002 and IRO-001 were revised to include the same reliability entities: RC, TOP, BA, DP and GOP. LSE, PSE and TSP were removed from the applicability of these standards per stakeholder suggestion.</p> <p>(3) The proposed definition of Reliability Directive addresses Emergency condition only. There are situations where a Reliability Directive is issued such that the directed action must be taken by the receiving entity to address a reliability constraint, which by itself does not constitute an Emergency. We suggest the term Reliability Directive be revised to: “A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address a reliability constraint or an Emergency.”</p> <p><b>Response:</b> The RCSDT believes that your comment concerns “directives” or “instructions” for normal operational activities rather than a Reliability Directive. There is no requirement preventing an entity from issuing either directives or</p>



				<p>instructions for the situations you mention. The intent of creating a Reliability Directive definition is to ensure that communications is tightened during Emergencies (per blackout report). When an RC issues a Reliability Directive, the RC has made a deliberate decision to formally end collaboration and require specific action(s). In addition, the Operating Personnel Communication Protocols SDT is addressing your concern about instances that are not considered an emergency. As envisioned, communications protocols requiring additional applications for use of three-part communications would be addressed in the COM-003 standard being developed in Project 2007-02.</p> <p>(4) Requirement R9 of COM-001-2 needs to be clarified. As written the requirement seems open ended once action to repair of a failed Alternative Interpersonal Communication is initiated within 2 hours but not completed within that time. It is not clear whether there is an expectation on the responsible entity to designate a replacement Alternative Interpersonal Communication if repairs cannot be completed within that period.</p> <p><b>Response:</b> The requirement is saying that if the test fails you must initiate action for repair or designate a replacement alternative within two hours. There is no requirement for a tertiary capability nor is there a requirement for a repair deadline.</p> <p>We have also submitted additional comments in response to the request for comments.</p> <p><b>Response:</b> Please see responses to other comments</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>				
Michael Moltane	International Transmission Company Holdings Corp	1	Negative	<p>ITC votes negative for the reasons detailed in the MISO-submitted comment form related to this Project (ITC signed onto the MISO comments). While this standard revision moves in the right direction, we believe at least one additional iteration will be needed to correct the concerns indicated in the comment form.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments. Please see responses to Midwest ISO.</p>				
Kathleen Goodman	ISO New England, Inc.	2	Negative	<p>Although ISO-NE believes these Standard represent a great improvement, we are voting against because we believe they would be improved by the comments that we have offered. We would gladly modify our vote in the Affirmative if our comments are considered in the next ballot.</p>

<b>Response:</b> The RCSDT thanks you for your comment. Please see response to those comments.				
Charles Locke	Kansas City Power & Light Co.	3	Negative	These requirements impose alternative means of communication on TOP's, BA's and GOP's regardless of the impact the entity may have on maintaining interconnection reliability. In addition, there are many IRO requirements that are proposed to be eliminated that do not appear to be considered in other places.
<b>Response:</b> The RCSDT thanks you for your comments. We cannot delineate entity impact on reliability and respond only regarding entity registration with NERC.				
Scott Heidtbrink	Kansas City Power & Light Co.	5	Negative	These requirements impose alternative means of communication on TOP's, BA's and GOP's regardless of the impact the entity may have on maintaining interconnection reliability. In addition, there are many IRO requirements that are proposed to be eliminated that do not appear to be considered in other places.
<b>Response:</b> The RCSDT thanks you for your comments. We cannot delineate entity impact on reliability and respond only regarding entity registration with NERC.				
Jessica L Klinghoffer	Kansas City Power & Light Co.	6	Negative	These requirements impose alternative means of communication on TOP's, BA's and GOP's regardless of the impact the entity may have on maintaining interconnection reliability. In addition, there are many IRO requirements that are proposed to be eliminated that do not appear to be considered in other places.
<b>Response:</b> The RCSDT thanks you for your comments. We cannot delineate entity impact on reliability and respond only regarding entity registration with NERC.				
Jim M Howard	Lakeland Electric	5	Negative	<p>From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. Why was this added? - "Accuracy" is not the correct term here. Suggest changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive.</p> <p><b>Response:</b> The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to</p>

				<p>identify a feasible measure for “understanding”. A recipient can judge whether the response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded.</p> <p>The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to ensure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team.</p> <p><b>Response:</b> Several commenters expressed concern about the use of the word, ‘accuracy’ and the team revised the requirement to remove this word.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment.</p>				
Paul Shipps	Lakeland Electric	6	Negative	<p>The phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. The term "accuracy" is a term to be used in R3, the third part of the 3-part communication, so that the issuer of the directive ensures the accuracy of the recipients understanding.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. The RCSDT has removed that phrase from the requirement as it was difficult to measure and many stakeholders had concerns with the language.</p>				
Rick Crinklaw	Lane Electric Cooperative, Inc.	3	Negative	<p>Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the</p>

				<p>language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.</p>				
Michael Henry	Lincoln Electric Cooperative, Inc.	3	Negative	<p>Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-</p>

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return call would not be timely enough, then the issuer would determine a different mitigation plan.

Bruce Merrill	Lincoln Electric System	3	Negative	For NERC Reliability Standard COM-001-2, LES believes that interpersonal communication is the act of communicating and that the requirements specify normal and redundant facilities for Interpersonal Communication. As such, LES recommends the definition for “Interpersonal Communication” be changed to “Any act where two or more individuals communicate, interact, consult or exchange information, including listening or reading”. Additionally, for NERC Reliability Standard IRO-001-2, LES recommends replacing the word “certify” in R1 and M1 with “assign”. As currently written it is unclear what the certification of the Reliability Coordinator will entail and how it will be established by the ERO.
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**Response:** The RCSDT thanks you for your comment. We specifically included “medium” to distinguish a source or vehicle of communication instead of a “personal” reference.

NERC has an established certification procedure for all registered entities and “certify” is in line with NERC’s process.

Dennis Florum	Lincoln Electric System	5	Negative	For NERC Reliability Standard COM-001-2, LES believes that interpersonal communication is the act of communicating and that the requirements specify normal and redundant facilities for Interpersonal Communication. As such, LES recommends the definition for “Interpersonal Communication” be changed to “Any act where two or more individuals communicate, interact, consult or exchange information, including listening or reading”. Additionally, for NERC Reliability Standard IRO-001-2, LES recommends replacing the word “certify” in R1 and M1 with “assign”. As currently written it is unclear what the certification of the Reliability Coordinator will entail and how it will be established by the ERO.
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NERC has an established certification procedure for all registered entities and “certify” is in line with NERC’s process.

Richard Reynolds	Lost River Electric Cooperative	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the
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				<p>event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.</p>
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**Response:** The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are effective." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a method of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.

Charles A. Freibert	Louisville Gas and Electric Co.	3	Negative	Refer to the comment form.
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see response to posting comments for LGE/KE; the RCSDT did not specifically find comments from Louisville Gas and Electric Co.</p>				
Joseph G. DePoorter	Madison Gas and Electric Co.	4	Negative	MGE is voting negative for several reasons. Please see the MRO NSRS comments for a full description. Plus, whenever there are multiple Standards within a Project, registered entities will be forced to vote negative when there is at least one negative aspect.
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see response to MRO NSRS comments. The NERC SC approved the SAR and the RCSDT only drafts requirements within the scope of the SAR. The RCSDT will move to a successive ballot with each standard balloted separately.</p>				
Joe D Petaski	Manitoba Hydro	1	Negative	The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. For additional comments, please see Manitoba Hydro's comments provided during formal comment period.
<p><b>Response:</b> The RCSDT thanks you for your comment. However, the comment submitted is incomplete and does not reference specific standard(s) or requirement(s). The data retention periods for the set of standards proposed is consistent with the guidelines provided in the NERC Drafting team Guidelines. Note that with recent changes to the Rules of Procedure, entities must be prepared to demonstrate that they were compliant for the full time period since the last audit.</p>				
Greg C. Parent	Manitoba Hydro	3	Negative	The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. For additional comments, please see Manitoba Hydro's comments provided during formal comment period.
<p><b>Response:</b> The RCSDT thanks you for your comment. However, the comment submitted is incomplete and does not reference specific standard(s) or requirement(s). The data retention periods for the set of standards proposed is consistent with the guidelines provided in the NERC Drafting team Guidelines. Note that with recent changes to the Rules of Procedure, entities must be prepared to demonstrate that they were compliant for the full time period since the last audit.</p>				
S N Fernando	Manitoba Hydro	5	Negative	The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. For additional comments, please see Manitoba Hydro's



				comments provided during formal comment period.
<p><b>Response:</b> The RCSDT thanks you for your comment. However, the comment submitted is incomplete and does not reference specific standard(s) or requirement(s). The data retention periods for the set of standards proposed is consistent with the guidelines provided in the NERC Drafting team Guidelines. Note that with recent changes to the Rules of Procedure, entities must be prepared to demonstrate that they were compliant for the full time period since the last audit.</p>				
Daniel Prowse	Manitoba Hydro	6	Negative	The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. For additional comments, please see Manitoba Hydro's comments provided during formal comment period.
<p><b>Response:</b> The RCSDT thanks you for your comment. However, the comment submitted is incomplete and does not reference specific standard(s) or requirement(s). The data retention periods for the set of standards proposed is consistent with the guidelines provided in the NERC Drafting team Guidelines. Note that with recent changes to the Rules of Procedure, entities must be prepared to demonstrate that they were compliant for the full time period since the last audit.</p>				
Jason L Marshall	Midwest ISO, Inc.	2	Negative	<p>We thank the drafting team for their efforts on this project to improve the reliability coordination standards. The quality of the standards continues to improve over previous postings. While the drafting team is definitely moving the standards in the right direction, we believe we have not reached the point of diminishing returns and that there are several issues that the drafting team still needs to address.</p> <p>1 This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities.</p> <p><b>Response:</b> The sub-requirements are an old format. The standard was updated to the new template, and sub-requirements are now Parts.</p> <p>2 In general, we are not opposed to the concept of the ERO certifying the Reliability Coordinators; however, there are some issues with how the requirement IRO-001-2 R1 is written. The requirement places emphasis on regions and regional boundaries when no emphasis should be placed there. There are multiple Reliability Coordinators that span multiple regions. The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect on what the standards are enforceable. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES are covered under a Reliability Coordinator Area.</p>

				<p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p> <p>3 The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company.</p> <p><b>Response:</b> COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true:</p> <p>“The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”.</p> <p>The use of operator logs to memorialize and provide evidence of compliance is applicable to those Reliability Directives issued and received within the same control room or operations center. The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability</p>
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			<p>Directive was correctly received.</p> <p>4 We also are concerned about the need to conduct three-part communications for a Reliability Directive issued through a blast call. Under these circumstances, the need for immediate action of multiple parties may require a blast call and there may not be time for all parties to complete three-part communications before initiating actions. Thus, we believe blast calls should be treated separately and that should be made clear.</p> <p><b>Response:</b> The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols requiring for issuing alerts will be addressed in the COM-003 standard being developed in Project 2007-02.</p> <p>5 COM-002-3 R2 needs to be rewritten as it is too verbose. The point is for the recipient of the original message to get the issuer to confirm that the message was understood. We suggest rewording R2 to “Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive.” Once the receiver has completed this requirement, the ball is in the issuer’s court per Requirement R3. No additional words are necessary in the requirement.</p> <p><b>Response:</b> The RCSDT agrees and has revised the requirement as you suggest.</p> <p>6 Please strike part IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update.</p> <p><b>Response:</b> The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators. These activities are listed as Parts. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. The relation of IRO-14-2 PART 1.7 to R4 is that PART 1.7 requires</p>
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			<p>having a conference call, R4 requires participation by all impacted Reliability Coordinators. As such, neither replaces the other.</p> <p>7 IRO-014-2 R4 is overly broad and would require Reliability Coordinators that will not impact one another to participate on conference calls with one another without any reliability benefit. The issue is created by the addition of the clause “within the same Interconnection” to the requirement. ISO-NE, FRCC, Midwest ISO, and SPP are all in the same Interconnection. It is hard to fathom there being reliability benefit to SPP and ISO-NE conversing weekly or Midwest ISO and FRCC conversing weekly. We suggest limiting the requirement to adjacent Reliability Coordinators.</p> <p><b>Response:</b> IRO-14-2 R4 is applicable to those Reliability Coordinators engaged in activities related to R1 and subsequently PART 1.7. It is unlikely that Reliability Coordinators whom are geographically and electrically distant will have mutually agreed upon operating procedures; therefore requirement R4 would not apply.</p> <p>8 For IRO-014-2 R5, we suggest replacing “other” with “impacted” to limit the notification of Adverse Reliability Impacts to only those Reliability Coordinators that need to know. Because the definition of Adverse Reliability Impact includes “Bulk Electric System instability or Cascading”, it is possible that the cascading of 138 kV lines serving a load pocket or generator outlet stability issues could require a Reliability Coordinator to notify all other Reliability Coordinators regardless of impact. This would include Reliability Coordinators outside of the Interconnection with the problem. It would also include Reliability Coordinators that are not impacted. For instance, an issue in New England that would not pose a threat outside the northeast would require ISO-NE to notify SPP and FRCC and Reliability Coordinators in the Western Interconnection. There is no reliability benefit to this notification.</p> <p><b>Response:</b> This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC’s. This is intended to make all RCs aware of ARIs and support situational awareness.</p> <p>9 IRO-014-2 R6-R8 are problematic and need to be refined to make clear that the Reliability Coordinators shall operate to the most conservative limit. It should not require a Reliability Coordinator that disagrees with an action plan to implement the action plan. The Reliability Coordinator will be disagreeing with the action plan for reliability reasons. Assuming they are correct, the requirement to implement said action plan will actually put the Interconnection at greater risk. These requirements inappropriately attempt to codify the debate and analysis that occurs between and within Reliability Coordinators when there are differing results in reliability analysis. This is part of the problem with having a Wide Area view that results in Reliability Coordinators having a view into other Reliability Coordinator Areas. Their results</p>
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			<p>and conclusions may be different. There should be a hierarchical structure for whose results should be used. It should be the Reliability Coordinator with primary responsibility unless the other Reliability Coordinator has evidence to demonstrate that the Reliability Coordinator with primary responsibility is incorrect. What this should do is to trigger both to review their models and data to assess the problem. None of this needs to be codified in the standards though.</p> <p><b>Response:</b> Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone's model or processes or procedures. The RC's are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent.</p> <p style="padding-left: 40px;">IRO-014-2, Revised R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements.</p> <p>10 In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a declared Emergency". This would help limit second guessing for a situation where a System Operator took action because he truly believed he was in an Emergency but after the fact analysis demonstrates there really was not an Emergency.</p> <p><b>Response:</b> The RCS DT believes that modifying Reliability Directive by including "declared Emergency" would add an unnecessary step in mitigation of the Emergency.</p> <p>11 We disagree with deleting IRO-002-1 R5 and R7 which establish tools and monitoring capabilities. There should be basic tools requirements established for Reliability Coordinators. Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities will be addressing these issues in more detail. Thus, it does not make sense to delete these requirements until that dra</p> <p><b>Response:</b> Each RC has been certified to continue operations as an RC or been certified prior to beginning operations as an RC. The minimum set of tools and capabilities for an RC are "checked off" during the certification process. The</p>
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				reliability objective of R5 and R7 is to perform analyses to ensure reliability of the BES by specifying capability rather than mandating specific tools. The analysis provisions of R5 and R7 are covered under IRO-008-1, Requirements R1 (perform Operational Planning Analysis) and R2 (perform Real-time Analysis). It is anticipated that Project 2009-02 team will address this issue more fully.
<b>Response:</b> The RCSDT thanks you for your comments.				
Richard Burt	Minnkota Power Coop. Inc.	1	Negative	Minnkota is in agreement with the comments submitted by the MRO NSRS.
<b>Response:</b> The RCSDT thanks you for your comment. Please see MRO NSRS response to comments.				
Don Horsley	Mississippi Power	3	Affirmative	Please see comments
<b>Response:</b> The RCSDT thanks you for your comment. Please see response to those comments.				
John S Bos	Muscatine Power & Water	3	Negative	<p>1 In the COM-001 requirements, MP&amp;W does not agree that a Distribution Provider and a Generator Operator need to be held to the same level of responsibility as a Reliability Coordinator, Balancing Authority, or Transmission Operator. In FERC Order 693 (paragraph 487), FERC directed the Distribution Provider and Generator Operator to be incorporated in this standard by stating:” We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process.” A Distribution Provider and Generator Operator may not be staffed 24 hours a day like a Balancing Authority or Transmission Operator; nevertheless, the Standards Drafting Team did not consider this.</p> <p><b>Response:</b> There is no requirement that requires identical communications systems. The requirement is to have “a” communication capability. Regarding 24/7 support, the requirement is to have communications capability. The type of media used is not specified. For a small DP, an on-call system could suffice. The RCSDT also recognizes the FERC directive and has not included GOPs and DPs in the requirements for Alternative Interpersonal Communications capability.</p> <p>2 MP&amp;W does not agree with the revision of IRO-001 with the statement included</p>

				<p>for certifying Reliability Coordinators. As written, it is ambiguous as far as what level of certification this would involve.</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p> <p>3 MP&amp;W disagrees with COM-002-3 R2. As stated in FERC Order 693 (paragraph 512) it is essential that Reliability Coordinators, Balancing Authorities, and Transmission Operators have communications with Distribution Providers. Requirement 2 also applies to Transmission Service Providers, Load-Serving Entities and Purchasing and Selling Entities. As stated above, it is going to be unattainable to communicate with a Distribution Provider since most Distribution Providers are usually not operated 24 hours per day like Reliability Coordinators, Balancing Authorities, and Transmission Operators. Many Distribution Providers have answering services that will relay a message once they receive it and then pass it along to someone. An answering service could repeat the directive back, word for word, but this would not add any level of reliability. The Standards Drafting Team should reconsider the applicability section of this Standard to apply to only Reliability Coordinators, Balancing Authorities, and Transmission Operators for the issuance of a Reliability Directive.</p> <p><b>Response:</b> There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments. Please see responses above.</p>				
Mike Avesing	Muscatine Power & Water	5	Negative	In the COM-001 requirements, MP&W does not agree that a Distribution Provider and a Generator Operator need to be held to the same level of responsibility as a Reliability Coordinator, Balancing Authority, or Transmission Operator. In FERC

			<p>Order 693 (paragraph 487), FERC directed the Distribution Provider and Generator Operator to be incorporated in this standard by stating:” We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process.” A Distribution Provider and Generator Operator may not be staffed 24 hours a day like a Balancing Authority or Transmission Operator; nevertheless, the Standards Drafting Team did not consider this.</p> <p><b>Response:</b> There is no requirement that requires identical communications systems. The requirement is to have “a” communication capability. Regarding 24/7 support, the requirement is to have communications capability. The type of media used is not specified. For a small DP, an on-call system could suffice. The RCSDT also recognizes the FERC directive and has not included GOPs and DP in the requirements for Alternative Interpersonal Communications capability.</p> <p>MP&amp;W does not agree with the revision of IRO-001 with the statement included for certifying Reliability Coordinators. As written, it is ambiguous as far as what level of certification this would involve.</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p> <p>MP&amp;W disagrees with COM-002-3 R2. As stated in FERC Order 693 (paragraph 512) it is essential that Reliability Coordinators, Balancing Authorities, and Transmission Operators have communications with Distribution Providers. Requirement 2 also applies to Transmission Service Providers, Load-Serving Entities and Purchasing and Selling Entities. As stated above, it is going to be unattainable to communicate with a Distribution Provider since most Distribution Providers are usually not operated 24 hours per day like Reliability Coordinators, Balancing Authorities, and Transmission Operators. Many Distribution Providers have answering services that will relay a message once they receive it and then pass it along to someone. An answering service could repeat the directive back, word for word, but this would not add any level of reliability. The Standards Drafting Team should reconsider the applicability section of this Standard to apply to only Reliability Coordinators, Balancing Authorities, and Transmission Operators for the issuance of a Reliability Directive.</p> <p><b>Response:</b> The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is</p>
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				<p>designed not to impose needless communications requirements. The purpose of COM-002 is, “to ensure emergency communications between operating personnel are <u>effective</u>.” It’s not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment.</p>				
Brandy D Olson	Muscatine Power & Water	6	Negative	<p>In the COM-001 requirements, MP&amp;W does not agree that a Distribution Provider and a Generator Operator need to be held to the same level of responsibility as a Reliability Coordinator, Balancing Authority, or Transmission Operator. In FERC Order 693 (paragraph 487), FERC directed the Distribution Provider and Generator Operator to be incorporated in this standard by stating:” We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process.” A Distribution Provider and Generator Operator may not be staffed 24 hours a day like a Balancing Authority or Transmission Operator; nevertheless, the Standards Drafting Team did not consider this.</p> <p><b>Response:</b> There is no requirement that requires identical communications systems. The requirement is to have “a” communication capability. Regarding 24/7 support, the requirement is to have communications capability. The type of media used is not specified. For a DP an on-call system could suffice. The RCSDT also recognizes the FERC directive and has not included GOPs and DP in the requirements for Alternative Interpersonal Communications capability.</p> <p>MP&amp;W does not agree with the revision of IRO-001 with the statement included for certifying Reliability Coordinators. As written, it is ambiguous as far as what level of certification this would involve.</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p>

				<p>MP&amp;W disagrees with COM-002-3 R2. As stated in FERC Order 693 (paragraph 512) it is essential that Reliability Coordinators, Balancing Authorities, and Transmission Operators have communications with Distribution Providers. Requirement 2 also applies to Transmission Service Providers, Load-Serving Entities and Purchasing and Selling Entities. As stated above, it is going to be unattainable to communicate with a Distribution Provider since most Distribution Providers are usually not operated 24 hours per day like Reliability Coordinators, Balancing Authorities, and Transmission Operators. Many Distribution Providers have answering services that will relay a message once they receive it and then pass it along to someone. An answering service could repeat the directive back, word for word, but this would not add any level of reliability. The Standards Drafting Team should reconsider the applicability section of this Standard to apply to only Reliability Coordinators, Balancing Authorities, and Transmission Operators for the issuance of a Reliability Directive.</p> <p><b>Response:</b> The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are effective." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment.</p>				
Tony Eddleman	Nebraska Public Power District	3	Negative	<p>COM-001-2:</p> <p>A) We would need clarification as to what the process would be for Interpersonal communication and alternate Interpersonal communications and voice recording if the (1) TO and the BA are the same person, (2) if the TO and the BA are sitting across the desk from each other, or (3) if the TO, BA, and Distribution provider are all in the same company or same room.</p> <p>B) In the definition of Interpersonal Communications if data is included (?), what</p>

			<p>evidence of compliance is expected?</p> <p>C) R 1.2 and R2.2 Reliability Coordinators communication shouldn't be limited to the same interconnection. They need communications concerned with schedules across DC ties.</p> <p>D) For R3, neighboring Transmission Operators should be included.</p> <p>E) For R5, neighboring Balancing Authorities should be included.</p> <p><b>Response:</b> A) The IC and AIC requirements apply to the functional entity. If a company has all of the functions performed in the same room, they would verbally communicate with each other in person (with sound waves being the medium).</p> <p>B) Data is not included in the definition of Interpersonal Communications but is covered in approved IRO-010-1 and proposed TOP-003-2.</p> <p>C) BAs handle Interchange Schedules. The RC has Interpersonal Communications with its BAs. DC ties usually have contractually designated operators who handle operating concerns.</p> <p>D) The SDT agrees, and has revised the requirement to include 'adjacent' TOPs synchronously connected within the same Interconnection.</p> <p>E) The SDT agrees and has revised the requirement to include 'adjacent' BAs</p> <p>COM-002-3 (R1):</p> <p>A) Since an entity can be registered for multiple functions (functions noted in R1), this could lead to the requirement for entities to issue directives to themselves or co-workers in the same room.</p> <p>B) How would a 3-part communication work when a "blast" call is used to provide directives to several entities?</p> <p><b>Response:</b> A) COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate.</p>
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				<p>The RCSDT believes the following response to draft 3 comments still holds true:</p> <p>“The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”.</p> <p>COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities.</p> <p>B) The RCSDT agrees that the use of Blast Call’s to issue Reliability Directives, in mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols requiring for issuing alerts will be addressed in the COM-003 standard being developed in Project 2007-02.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment.</p>				
Don Schmit	Nebraska Public Power District	5	Negative	<p>COM-001-2:</p> <p>A) We would need clarification as to what the process would be for Interpersonal communication and alternate Interpersonal communications and voice recording if the TO and the BA are the same person, if the TO and the BA are sitting across the desk from each other, or if the TO, BA, and Distribution provider are all in the same company or same room.</p> <p>B) If the Interpersonal Communication definition includes data (?) then what evidence needs to provided?</p> <p>C) R1.2 and R2.2, Reliability Coordinators communication shouldn’t be limited to the same interconnection. They also need communications concerned with schedules across DC ties.</p> <p>D) For R3, neighboring Transmission Operators should be included.</p> <p>E)For R5, neighboring Balancing Authorities should be included.</p> <p><b>Response:</b> A) The IC and AIC requirements apply to the functional entity. If a</p>

			<p>company has all of the functions performed by the same person or people in the same room, they would verbally communicate with each other in person. (sound waves – medium)</p> <p>B) Data is not included in the definition of Interpersonal Communications but is covered in approved IRO-010-1 and proposed TOP-003-2.</p> <p>C) BAs handle Interchange Schedules. The RC has Interpersonal Communications with its BAs. DC ties usually have contractually designated operators who handle operating concerns.</p> <p>D) The SDT agrees, and has revised the requirement to include ‘adjacent’ TOPs synchronously connected within the same Interconnection.</p> <p>E) The SDT agrees and has revised the requirement to include ‘adjacent’ BAs</p> <p>COM-002-3(R1):</p> <p>A) Concern regarding entities registered with multiple functions. Could lead to requirement for entities to give directives to themselves or to co-workers in the same room.</p> <p>B) How would 3-part communications be handled during 'blast' calls?</p> <p><b>Response:</b> A) COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true:</p> <p style="padding-left: 40px;">“The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”.</p> <p>Com-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities.</p> <p>B) The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in</p>
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				<p>mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols requiring for issuing alerts will be addressed in the COM-003 standard being developed in Project 2007-02.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment.</p>				
Gregory Campoli	New York Independent System Operator	2	Abstain	<p>The NYISO agrees that these revised standards are an improvement from the current version. However we believe that the comments submitted by the IRC and NPCC are required to make them acceptable as the new set of standards. We will have an opportunity to revise our vote on the second ballot based on the consideration given to the comments submitted.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. See IRC and NPCC comments.</p>				
Michael Schiavone	Niagara Mohawk (National Grid Company)	3	Affirmative	<p>IRO-001 R1 The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be.</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p> <p>IRO-001 R2 Should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc.</p> <p><b>Response:</b> The requirement was rewritten for clarity as follows:</p> <p>R2. Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives) by Transmission Operators, Balancing Authorities, Generator Operators, and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts.</p> <p>IRO-001 R2 Contains the words “which could include issuing Reliability Directives”, but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the</p>

				<p>magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. These words should be removed. Note that COM-002 will stipulate the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary.</p> <p><b>Response:</b> R2 requires the Reliability Coordinator to act. These actions could include Reliability Directives in the case of an Emergency. However, issuing Reliability Directives might not always be necessary, as the Reliability Coordinator may be acting proactively well in advance of an emergency. R2 promotes this proactive approach, but reserves the use of Reliability Directives for circumstances that require its use. During the vetting of the prior version of this requirement, some stakeholders expressed concern that the word, “action,” if not clarified, could lead some people to believe that the Reliability Coordinator must be the entity to perform the actual operation.</p> <p>COM-002 In place of requiring an operator, in real-time, to state “this is a Reliability Directive,” there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Modify R1 to be “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]”</p> <p><b>Response:</b> Your proposed edit does not meet the reliability intent of the requirement. The RCSDT believes that it is important to state that the Reliability Directive is being issued to convey that action by the recipient is required. An RC could issue a Reliability Directive to implement an agreed upon procedure whereby the three part communication would not list each step of the procedure individually, but would include implementation of the entire procedure. As envisioned, communications protocols such as the procedure you’ve proposed will be addressed in the COM-003 standard being developed in Project 2007-02.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>				
Jon Shelby	Northern Lights Inc.	3	Negative	<p>Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability</p>

				<p>directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.</p>
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**Response:** The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are effective." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a method of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical



that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.

Douglas Hohlbaugh	Ohio Edison Company	4	Affirmative	FirstEnergy supports the proposed standards and would appreciate consideration of our comments submitted through the formal comment period.
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**Response:** The RCSDT thanks you for your comment. Your comments have been considered, Please see the Consideration of Comments document for FirstEnergy.

Ray Ellis	Okanogan County Electric Cooperative, Inc.	3	Negative	<p>Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication</p>
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<p><b>Response:</b> The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.</p>				
Margaret Ryan	Pacific Northwest Generating Cooperative	8	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due

				<p>to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.</p>				
Brenda L Truhe	PPL Electric Utilities Corp.	1	Negative	Comments were submitted as part of a group via the comment form. Thank you for your work on the standard.
<p><b>Response:</b> The RCSDT thanks you for your comment. Your other comments have been considered. Please see the Consideration of Comments document.</p>				
Mark A Heimbach	PPL EnergyPlus LLC	6	Negative	<p>Comments: We thank the Standards Drafting Team for the improvements made in the revisions to COM-001 and COM-002. The revision appropriately clarifies the standard. We are providing the following comments for the Standards Drafting Team to consider.</p> <p>1) Consider changing R1 to 'Each RC shall have the capability for Interpersonal Communications with the following entities to exchange Interconnection and</p>

				<p>operating information...' for clarity as Interpersonal Communications and capability are both nouns.</p> <p><b>Response:</b> Thank you for your suggestion to modify the sentence structure into a noun phrase. However the RCSDT believes the current form is unambiguous.</p> <p>2) We feel changing the applicability of the standard is important to the accuracy of the standard. The purpose of COM-002 is 'To ensure emergency communications between operating personnel are effective'. Since operating personnel are covered by the applicability of RC, BA, TOP and GOP, we suggest the applicability to TSP, LSE, and PSE be removed from COM-002-3.</p> <p><b>Response:</b> The SDT agrees. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only.</p> <p>3) Additionally, we would like to bring to the attention of the Standards Drafting Team, that the implementation plan for COM-001-2 and IRO-001-2 still includes TSP, LSE, and PSE although the revised standard does not include these entities in the Applicability Section. For COM-001-2 refer to the implementation plan, page 11. For IRO-001-2 refer to the implementation plan for new R2, new R3, new R4 and the chart on the last page. Thank you for your consideration in addressing these comments.</p> <p><b>Response:</b> The RCSDT has revised the implementation plans appropriately to address your comment.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments. .</p>				
Annette M Bannon	PPL Generation LLC	5	Negative	<p>We thank the Standards Drafting Team for the improvements made in the revisions to COM-001 and COM-002. The revision appropriately clarifies the standard. We are providing the following comments for the Standards Drafting Team to consider.</p> <p>1) Consider changing R1 to 'Each RC shall have the capability for Interpersonal Communications with the following entities to exchange Interconnection and operating information...' for clarity as Interpersonal Communications and capability are both nouns.</p> <p><b>Response:</b> Thank you for your suggestion to modify the sentence structure into a noun phrase. However the RCSDT believes the current form is unambiguous.</p> <p>2) We feel changing the applicability of the standard is important to the accuracy of the standard. The purpose of COM-002 is 'To ensure emergency communications</p>

				<p>between operating personnel are effective'. Since operating personnel are covered by the applicability of RC, BA, TOP and GOP, we suggest the applicability to TSP, LSE, and PSE be removed from COM-002-3.</p> <p><b>Response:</b> We agree. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only.</p> <p>3) Additionally, we would like to bring to the attention of the Standards Drafting Team, that the implementation plan for COM-001-2 and IRO-001-2 still includes TSP, LSE, and PSE although the revised standard does not include these entities in the Applicability Section. For COM-001-2 refer to the implementation plan, page 11. For IRO-001-2 refer to the implementation plan for new R2, new R3, new R4 and the chart on the last page. Thank you for your consideration in addressing these comments.</p> <p><b>Response:</b> The RCSDT has revised the implementation plans appropriately to address your comment.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>				
John T Sturgeon	Progress Energy	6	Negative	<p>COM-001-2 R10 states that "Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that last 30 minutes or longer". The standard states that the RC, TOP, BA shall designate an Alternative Interpersonal Communication capability but does not require the same of the DP and GOP. Compliance by the DP and GOP with R10 would be jeopardized while still being compliant with the rest of the standard by having only the Interpersonal Communications capability.</p> <p><b>Response:</b> The DP or GOP has access to additional Interpersonal Communications, in all likelihood, to make notifications for failure. There is not a requirement for an alternative, but it is likely that someone could use a cell phone to make the notification. The RCSDT is proposing to add Part 7.3 and 8.3 to the requirements as follows:</p> <p>7.3 Each Distribution Provider that experiences a failure of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority to determine a mutually agreeable time to restore its Interpersonal Communication capability.</p> <p>8.3 Each Generator Operator that experiences a failure of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority to determine a mutually</p>

				<p>agreeable time to restore its Interpersonal Communication capability.</p> <p>The phrase “within” used in R3-R6 does not take into account that there are electrically adjacent BAs/TOPs who are not “within” each other’s area.</p> <p><b>Response:</b> The requirements are dealing with entities within the Area or entities that operate Facilities located within the Area. We have also added the following to R3:</p> <p style="padding-left: 40px;">Adjacent Transmission Operators synchronously connected within the same Interconnection.</p> <p>The SDT also added, ‘adjacent Balancing Authorities’ to Requirements R4, R5 and R6.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment.</p>				
Peter Dolan	PSEG Energy Resources & Trade LLC	6	Negative	<p>Com-001-2 implementation plan lists that this is applicable to PSE’s and LSE’s however, PSE’s and LSE’s were removed from the actual standard. The implementation plan should be revised. Com-002-3 standard continues to include PSE. PSE’s do not play an active role in operating the BES and have no authority or ability to perform reliability coordination related tasks as may be directed by a RC. PSE’s should be removed from the standard.</p> <p>IRO-001-2 references PSE’s in the implementation for R2, R3, R4 and “Functions that must comply with the requirements in this standard” table. PSE’s were removed from the standard and should be removed from the implementation plan.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only.</p> <p>The RCSDT has revised the implementation plans appropriately to address your comment.</p>				
Kenneth D. Brown	Public Service Electric and Gas Co.	1	Negative	<p>Com-001-2 implementation plan lists that this is applicable to PSE’s and LSE’s however, PSE’s and LSE’s were removed from the actual standard. The implementation plan should be revised. Com-002-3 standard continues to include PSE. PSE’s do not play an active role in operating the BES and have no authority or ability to perform reliability coordination related tasks as may be directed by a</p>

				<p>RC. PSE's should be removed from the standard.</p> <p>IRO-001-2 references PSE's in the implementation for R2, R3, R4 and "Functions that must comply with the requirements in this standard" table. PSE's were removed from the standard and should be removed from the implementation plan.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only.</p> <p>The RCSDT has revised the implementation plans appropriately to address your comment.</p>				
Jeffrey Mueller	Public Service Electric and Gas Co.	3	Negative	<p>PSEG opposes this standard for the following reasons: Com-001-2 implementation plan lists that this is applicable to PSE's and LSE's however, PSE's and LSE's were removed from the actual standard. The implementation plan should be revised. Com-002-3 standard continues to include PSE. PSE's do not play an active role in operating the BES and have no authority or ability to perform reliability coordination related tasks as may be directed by a RC. PSE's should be removed from the standard.</p> <p>IRO-001-2 references PSE's in the implementation for R2, R3, R4 and "Functions that must comply with the requirements in this standard" table. PSE's were removed from the standard and should be removed from the implementation plan.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only.</p> <p>The RCSDT has revised the implementation plans appropriately to address your comment.</p>				
Dominick Grasso	Public Service Enterprise Group Incorporated	5	Negative	<p>COM-001-2 implementation plan lists that this is applicable to PSE's and LSE's however, PSE's and LSE's were removed from the actual standard. The implementation plan should be revised. COM-002-3 standard continues to include PSE. PSE's do not play an active role in operating the BES and have no authority or ability to perform reliability coordination related tasks as may be directed by a RC. PSE's should be removed from the standard.</p> <p>IRO-001-2 references PSE's in the implementation for R2, R3, R4 and "Functions that must comply with the requirements in this standard" table. PSE's were removed from the standard and should be removed from the implementation plan.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only.</p>				

The RCSDT has revised the implementation plans appropriately to address your comment.

Steven Grega	Public Utility District No. 1 of Lewis County	5	Negative	These changes do not recognize that many small utilities do not have 24-hour dispatch, do not have SCADA systems or do not man generation plants 24-hours a day. Specific exception should be written into the standards to provide relief for small GO, GOP, LSE and DP. The standard changes need to address notifications if personnel are only available on a on-call basis.
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**Response:** The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are effective." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a method of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.

Heber Carpenter	Raft River Rural Electric Cooperative	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due
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				<p>to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.</p>				
Anthony E Jablonski	ReliabilityFirst Corporation	10	Negative	<p>1. General comments a. The standards should be balloted individually rather than balloted as a group. <b>Response:</b> The SDT agrees, and will be balloting the standards individually.</p> <p>2. COM-001-2 a. The "R" should be removed from all sub requirements (they should be referenced as parts) <b>A Response:</b> The SDT agrees. This has been corrected.</p> <p>3. IRO-005-4 a. Fix typo in R1. Insert the word "and" between the words "notify issue" b. <b>Response:</b> This typo has been addressed through other edits</p> <p>4. IRO-001-2 a. The Electric Reliability Organization (ERO) listed in the Applicability</p>

				<p>section and R1 is neither a user, owner nor operator of the BES and such should not be subject to Reliability Standards.</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>				
Ken Dizes	Salmon River Electric Cooperative	3	Negative	<p>Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of</p>

				<p>Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.</p>				

Carter B. Edge	SERC Reliability Corporation	10	Negative	<p>If the following issues are addressed in the standards revisions I should be able to cast an affirmative vote:</p> <p>COM-001-2</p> <ul style="list-style-type: none"> <li>o Each sub-requirement should not have an “R” in front of the number in order to be consistent with NERC’s August 10, 2009 filing at FERC on this subject. <b>Response:</b> The SDT agrees. This has been corrected.</li> <li>o Requirement R3 and R4 should include adjacent TOPs as a sub-requirement. <b>Response:</b> The SDT agrees. The SDT modified R3 and R4 to add adjacent TOPs</li> <li>o Requirements R5 and R6 should include adjacent BAs as a sub-requirement. <b>Response:</b> The SDT added adjacent Balancing Authorities to Requirements R4, R5 and R6.</li> <li>o “to exchange Interconnection and operating information” should be deleted from requirements R1 through R8 as it is redundant with the definition of Interpersonal Communications <b>Response:</b> The SDT agrees. The SDT adopted this suggestion and deleted this phrase.</li> <li>o The last page of the Implementation Plan includes LSEs, PSE, and TSPs as being responsible entities under this standard, yet the standard does not include them. Please correct the implementation plan. <b>Response:</b> The implementation plan was corrected as proposed.</li> </ul> <p>TOP-001-1,</p> <ul style="list-style-type: none"> <li>o Requirement R3, which is what the SDT appears to be using as its justification for not adding a requirement here is proposed to be deleted by the RTO-SDT on Project 2007-03. <b>IRO-001-2 R2-R4 deal with complying with directives or instruction and is the justification for retiring TOP-001, R3.</b></li> </ul> <p>IRO-001-2</p> <ul style="list-style-type: none"> <li>o I’m unclear on the language of R1. I think you are attempting to create a</li> </ul>
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			<p>requirement similar to BAL-005, R1 where all generation, transmission, and load operating within an Interconnection must be included within the metered boundaries of a Balancing Authority Area. If that is the case, suggested language could be "All Balancing Areas and Transmission Operators must be under the authority of a Reliability Coordinator certified by the ERO to continuously assess transmission reliability and coordinate emergency operations within each region and across the regional boundaries"</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p> <p>o Please remove the yellow box on page 1 indicating this standard will be retired.</p> <p><b>Response:</b> The SDT agrees, and has made the change.</p> <p>Additional comments:</p> <p>o Reliability Directives may be issued by blast calls from Reliability Coordinators. It is inefficient and may be a hindrance to reliability to require 3-part communications in these instances.</p> <p><b>Response:</b> The RCSDT agrees that the use of Blast Call's to issue Reliability Directives, in mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols such as the procedure you've proposed will be addressed in the COM-003 standard being developed in Project 2007-02.</p> <p>o There are several organizations registered as BAs, RCs and TOPs. It is not uncommon for those entities to be distributed across multiple desks in the same control room without regard to how an entity is registered. Thus, a single System Operator may perform functions that are categorized under two or more of those functional entities. The drafting team should clarify that under no circumstances should that System Operator be required to issue a Reliability Directive to himself. This is a corporate governance issue.</p> <p><b>Response:</b> COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue</p>
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			<p>Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true:</p> <p style="padding-left: 40px;">“The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance.”</p> <p>The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities.</p> <p>o In IRO-014, R1, delete sub-requirement 1.7. The requirement for weekly conference calls related to operating procedures is duplicative to R4 and could be burdensome while adding very little value under certain circumstances.</p> <p>R1, Part 1.7 indicates that the Operating Plan, process or Procedure is to include how the entity will accomplish these calls. R4 requires the entity to actually perform them.</p> <p><b>Response:</b> The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators. These activities are listed as Parts. Part 1.7 is requires you to have a procedure relating to weekly conference calls while R4 requires participation in weekly calls. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes.</p> <p>o In IRO-014, R4, delete the phrase “(per Requirement 1, Part 1.7)” as a conforming change.</p> <p><b>Response:</b> The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators, these activities are listed as sub requirements. Part 1.7 is requires you to have a procedure relating to weekly</p>
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				<p>conference calls while R4 requires participation in weekly calls. Further the RCSdT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes.</p> <p>o I believe that the intent of IRO-014, Requirements R6-R8 is to require conservative operation by all affected Reliability Coordinators if any Reliability Coordinator detects an Adverse Reliability Impact. It could be read to allow at least the theoretical possibility that an RC may determine an Adverse Reliability Impact in another RC's area that the other RC neither can see nor believes that any action should be taken. R7 puts the burden on the first RC to develop a plan that it cannot implement because it has no agreement with the BAs and TOPs in the other RC area and thus could be ineffective. Alternately, it could be read that the identifying RC must take action in its own area to mitigate the Adverse Reliability Impact identified in another area much like the "general prudential rule" in the Coast Guard's Rules of the Road where regardless of what the rules state if action can be taken to avoid a collision at sea, that action must be taken. Please clarify.</p> <p><b>Response:</b> Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone's model or processes or procedures. The RC's are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent.</p> <p>IRO-014-2, Revised R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact , each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements.</p> <p>o Please review all the implementation plans to be sure the applicable entities match those in the standards.</p> <p><b>Response:</b> The Implementation Plans have been modified to address this concern.</p>
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**Response:** The RCSDT thanks you for your comment. Please see responses above.

Paul Benjamin Kerr	Shell Energy North America (US), L.P.	6	Affirmative	<p>The introduction of the definition of “Reliability Directive” and its connection to the definition of “Emergency” within this Project brings much needed clarity for the sector and will promote consistency between Regional Entities and within the audits of Registered Entities. Shell Energy supports the removal of Purchasing Selling Entities as a function to which IRO-001 applies. This removal recognizes that PSEs do not play a role in reliability coordination under this standard since they have no authorities and no abilities to assume or perform responsibilities associated with reliability coordination. This conclusion is reinforced by the adoption of the defined term “Reliability Directive”. Where a RC, TOP, or BA needs to address an Emergency they do not contact, consult, or direct a PSE to take action that would address the Emergency. Rather, where the PSE is a user of the grid to perform or execute transactions, it is subject to the actions of these other entities that have the authority to stop, curtail, or alter the submitted transactions of the PSE in a way that aids in resolving the problem. With the fitting adoption of “Reliability Directive” into COM-002 as well, Shell Energy does not believe it is necessary or appropriate for the applicability of this standard to include Purchasing Selling Entities, as is contained in the current draft proposal. This standard does not apply to PSEs today, however, during the progression of Project 2006-06 this applicability was added to an early draft version that preceded the discussions and clarification that comes from the definition of a Reliability Directive in the standard. Shell Energy does not support the inclusion of PSEs in the current draft version of COM-002, and feels that it should be removed. The purpose of this standard is, “To ensure Emergency communications between operating personnel are effective” and relates directly to the capabilities and authorities established for the RC, TOP, or BA that requires actions to be taken by a recipient of a Reliability Directive. As noted previously, PSEs are acted upon by the entities with the necessary authority, and are not in a role that would initiate or fulfil the required actions. As additional matters related to the clarification and cleanup of the standards in this project, the implementation plans for both IRO-001 and COM-001 erroneously contain references to PSEs in the sections “Functions that Must Comply with the Requirements”. These references need to be removed.</p>
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**Response:** The RCSDT thanks you for your comment. The applicability of COM-001, and COM-002 were revised to be consistent and only include the RC, TOP, BA, DP and GOP. The Implementation Plans have been corrected.

Robert A Schaffeld	Southern Company	1	Affirmative	Please see comments
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	Services, Inc.			
<b>Response:</b> The RCSDT thanks you for your comment. Please see response to those comments.				
Ronald L Donahey	Tampa Electric Co.	3	Negative	Our only disagreement is with the use of the term "Reliability" in defining a directive.
<b>Response:</b> The RCSDT thanks you for your comment. The term "Reliability Directive" was chosen to specifically delineate between other types of directives, such as market directives. It is imperative that reliability standards relate to reliability concerns.				
Steve Eldrige	Umatilla Electric Cooperative	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities

				that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
<p><b>Response:</b> The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.</p>				
Jonathan Appelbaum	United Illuminating Co.	1	Negative	<p>See UI Comment form, In General:</p> <p>1. COM-001-2 does not specify the amount of time a DP has to reestablish the Interpersonal Communication Capability after the capability fails before it is assessed non-compliance for not having the communication.</p> <p><b>Response:</b> The DP or GOP has access to additional Interpersonal Communications, in all likelihood, to make notifications for failure. There is not a requirement for an alternative, but it is highly unlikely that someone couldn't use their cell phone to make the notification. The RCSDT is proposing to add Part 7.3 and 8.3 to the requirements as follows:</p> <p>7.3 Each Distribution Provider that experiences a failure of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority to determine a mutually agreeable time to restore its Interpersonal Communication capability.</p> <p>8.3 Each Generator Operator that experiences a failure of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority to determine a mutually agreeable time to restore its Interpersonal Communication capability.</p>

				<p>2. VSL for R7 should have a time component</p> <p><b>Response:</b> The VSL represents a single violation of the requirement. For this requirement, the DP must have Interpersonal Communication with its TOP and BA. The VSL was revised to remove “or more” to conform to the requirement. Because the Requirement does not have a time component, the SDT cannot add a time component to the VSL – this would violate one of the FERC Guidelines for setting VSLs.</p> <p>3. R7 should address the instance if the DP is not required to have communication with the BA, because the BA communicates thru the TOP.</p> <p><b>Response:</b> The RCSDT believes that Interpersonal Communication between the DP and its BA and the TOP is required for reliability.</p> <p>4. COM-002 R2 seems awkwardly worded. R2 as it is written says the repeat is confirming the accuracy of the message itself. I think it is agreed that the repeat back in R2 is to allow the issuer of the Directive to confirm that the message was received accurately understood by the recipient.</p> <p><b>Response:</b> The RCSDT has revised the requirement and has removed “with enough details that the accuracy of the message was confirmed” from the requirement.</p> <p>5. The VSL for Com-002 R2 is severe and states "The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message was confirmed." The purpose of the R2 repeat-back is to allow the Issuer verify the message was accurately received. This VSL penalizes the responsible entity for not accurately receiving the message. The VSL should penalize the refusal of the registered entity to repeat back the message not for receiving the message incorrectly.</p> <p><b>Response:</b> The RCSDT agrees and has removed “with enough details that the accuracy of the message was confirmed” from the VSL.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>				
Allen Klassen	Westar Energy	1	Negative	The new definition of Alternative Interpersonal Communication in COM-001 appears to rule out the use of redundant systems that happen to be used daily, which might be done to ensure that they function when needed.

**Response:** The RCSDT thanks you for your comment. The intent of Alternative Interpersonal Communication (AIC) is to make sure there is an alternative in case the Interpersonal Communication fails. If you have two, you may designate one as the AIC regardless of how often you use it.

Forrest Brock	Western Farmers Electric Coop.	1	Negative	<p>COM-001 - Definition of Interpersonal Communication needs more clarification. For example, would this include data exchanged via ICCP? Examples of what constitutes "Interconnection and operating information" would help as much "information" can be interpreted as fitting into this - or not.</p> <p><b>Response:</b> Interpersonal Communication does not include data exchange.</p> <p>Severe VSL for R9 - second part after the "OR" is a virtual repetition of the wording in the Lower VSL for R9.</p> <p><b>Response:</b> The Severe VSL was revised to remove "within 2 hours". It now reads:</p> <p style="padding-left: 40px;">"The responsible entity tested the Alternative Interpersonal Communications capability and identified a problem but didn't initiate action to repair or designate a replacement Alternative Interpersonal Communications."</p> <p>COM-003 - R3 contains a typographical or grammar error. "...Reliability Directive as per Requirement R2 IS correct..." not AS correct...</p> <p><b>Response:</b> Assuming you meant COM-002-3, the SDT agrees and has made the correction.</p>
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**Response:** The RCSDT thanks you for your comment. Please see responses above.

Anthony Jankowski	Wisconsin Energy Corp.	4	Affirmative	Please correct the clean version of IRO-005 R1 to match the red-line.
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**Response:** The RCSDT thanks you for your comment. We have made the corrections.

Michael Ibold	Xcel Energy, Inc.	3	Affirmative	While we appreciate the drafting team's efforts to clarify the multiple effective dates, we feel it is still daunting and complex, which leaves too much room for miscalculation. We recommend that NERC and/or the drafting team publish what the actual effective dates are, as soon as FERC (and again when the other regulatory authorities) have approved it. This could either be done in the effective
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				date section of the standard itself, or as a stand-alone reference document posted along with the standard on NERC's website.
<b>Response:</b> The RCSDT thanks you for your comment. We will pass your comment on the NERC Standards Process Manager for consideration.				
James A Maenner		8	Negative	In comments (Reliability Coordination - Project 2006-06) Midwest ISO raised a number of issues that need to be addressed prior to passage of these standards.
<b>Response:</b> The RCSDT thanks you for your comment. Please see responses to comments made by MISO on the initial ballot as well as the regular comment form.				

END OF REPORT

## Consideration of Comments on Reliability Coordination — Project 2006-06

The Reliability Coordination Drafting Team thanks all commenters who submitted comments on the proposed revisions to COM-001-2, IRO-001-2, IRO-002-2 and IRO-005-4. These standards were posted for a 30-day public comment period from February 25, 2011 through March 7, 2011. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 41 sets of comments, including comments from more than 168 different people from approximately 112 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

[http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 609-452-8060 or at [herb.schrayshuen@nerc.net](mailto:herb.schrayshuen@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

### Summary Consideration:

The RCSDT thanks all stakeholders for their comments. Many stakeholders provided comments suggesting revisions to the standards. Many of these suggestions were incorporated into the standards. As a result of the revisions, the RCSDT is moving COM-001-2, COM-002-3 and IRO-001-2 to a successive ballot. The RCSDT made a few clarifying edits to the remaining standards based on stakeholder comments. Therefore, IRO-002-3, IRO-005-4 and IRO-014-2 are being moved to recirculation ballot. Because of this approach, the SDT will be proposing an interim change to IRO-001: the elimination of Requirement R7, as it is duplicative of one of the requirements in IRO-014-2.

For the COM-001 standard, several commenters had suggestions for improvements to the requirement language and applicability. The RCSDT believes the standard correctly and adequately requires each applicable entity that would have capability to receive Interconnection and operating information to have Interpersonal Communications and Alternative Interpersonal Communications to be used when the Interpersonal Communication is not available. The RCSDT has addressed the applicability of the standards and implementation plans by aligning COM-001-2, and COM-002-3 to include the same entities and by removing LSE, PSE and TSP from the COM standards.

Many comments were concerned about both the medium (e.g. cellular, satellite, etc.) and media (e.g. voice, email, etc.) used for Interpersonal Communications. The current language avoids being prescriptive and allows each entity to determine what is suitable. Interpersonal Communication and Alternative Interpersonal Communication is between the applicable entities which may include multiple locations (e.g. a primary and back-up control center).

The RCSDT added the following Requirement Parts at the suggestion of stakeholders:

- 3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection
- 4.3 Adjacent Transmission Operators synchronously connected within the same Interconnection
- 5.6 Adjacent Balancing Authorities
- 6.3 Adjacent Balancing Authorities

The RCSDT agrees with the many industry comments and removed the phrase "to exchange Interconnection and operating information" in requirements R1 through R8. This removal clarifies that the intent of this capability is NOT for the exchange of data.

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<sup>1</sup> The appeals process is in the Reliability Standards Development Procedures:  
<http://www.nerc.com/standards/newstandardsprocess.html>.

A few commenters also expressed concerns about the frequency of testing Alternative Interpersonal Communications capability. The RCSDT believes that the proposed testing frequency is supported by the majority of stakeholders and is not overly burdensome.

Several commenters suggested that VSLs should be written based on the percent of entities rather than by an occurrence of a violation. VSLs must be written on a violation occurrence basis in accordance with FERC guidelines. The requirements specify which entities must be included in communications capabilities. If a single entity is missing, this is a violation of the requirement. According to VSL guidelines, if missing any part of the requirement could have the same reliability outcome as missing the entire requirement, the requirement is binary and the VSL must be severe.

A new requirement was added to COM-001 for clarity regarding responsibilities of the Distribution Provider and the Generator Operator when either entity experiences a failure of its Interpersonal Communication capability:

R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with its Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]*

This requirement requires collaboration between entities to restore a failed communications capability.

The RCSDT asked stakeholders if they believed that the requirements of TOP-001-1 obviate the need to develop additional requirements to address Xcel's comment as directed in FERC Order 693. The original justification that the RCSDT posited for not adding a requirement to directly address Xcel Energy's comments in paragraph 516 and FERC's related recommendation in paragraph 523 was that TOP-001-1 R3 was considered to address this concern. Since that time, the RTO SDT has proposed to retire TOP-001-1 R3. However, NERC has since retired IRO-004-1 R3 and R5 along with IRO-005-3 R5. Because these are retired, there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency. Therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirements," the TOP may respond to the RC that it cannot comply.

Stakeholders were asked if they agree with the revision to IRO-001, R1 for certifying Reliability Coordinators. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.

A significant revision to IRO-001-2 was made by removing the Interchange Coordinator from the standard. The RCSDT made this revision because the Balancing Function is responsible for implementing interchange (see NERC Reliability Functional Model, version 5, page 32, item 7) and to operate the Balancing Authority Area to maintain load-interchange-generation balance (item 3).

The RCSDT asked stakeholders if they agree with moving two requirements from IRO-001 back to IRO-002 relating to Analysis Tool outages. All stakeholders that responded agreed and there were no comments received.

The RCSDT asked stakeholders if they agree with moving two requirements from IRO-001 back to IRO-005 relating to Reliability Coordinator notifications. Several commenters noted a typographical error in R1 which was corrected to read:

When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify ~~issue an alert to~~ all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

One commenter also asked that an errant yellow text box be removed from Page 1, which was also done.

The RCSDT received a number of comments regarding the applicability of COM-001, and COM-002. The RCSDT agrees with these comments and has removed PSE and LSE from the COM-001-2 implementation plan. The RCSDT also addressed minor issues involving typos, formatting and style.

The RCSDT received comments suggesting clarification of COM-002-3. The RCSDT intends the communication of Reliability Directives to be person-to-person and in such a manner that the Reliability Directive is understood and not necessarily repeated verbatim. COM-002-3 is not intended to be prescriptive on how the Reliability Directive is issued. Spoken or written communications are valid methods (i.e. using the telephone, radio, electronic texting, email, etc.). The purpose of COM-002-3 is to ensure emergency communications between operating personnel are effective. There is no proxy requirement for 24/7 operating personnel regarding small entities. Only “capability” as provided for in COM-001-2 is applicable. The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols would be addressed in the COM-003 standard being developed in Project 2007-02.

Some commenters suggested revisions to IRO-014, requirement R8 to conform to similar requirements R6 and R7. The RCSDT made the suggested revision by re-ordering R8:

R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

IRO-014-2, requirement R4 is applicable to those Reliability Coordinators engaged in activities related to requirement R1 and part 1.7. It is unlikely that Reliability Coordinators geographically and electrically distant from one another will have mutually agreed upon operating procedures (per requirement R1), and therefore requirement R4 would not be applicable. The RCSDT believes IRO-014-2, requirement R4 (which requires weekly communication) provides reasonable contact and flexibility – and this requirement is in effect today.

The RCSDT coordinated the use of the NERC Glossary term “Adverse Reliability Impact” with the Real-Time Operations team and continues the practice of informing all RCs of Adverse Reliability Impacts in requirement R5.

The RCSDT has revised IRO-014-2, requirements R6-R8 to clarify that when one RC identified a problem and presents an action plan for another RC, the second RC is obligated to implement the action plan. The RCSDT will forward the concern about RC's identifying themselves and the receiver to establish authority to the Project 2007-02, Operating Personnel Communications Protocols SDT. The Project 2007-02 team is developing a standard that includes requirements for use of specific communications protocols.



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**Consideration of Comments on Reliability Coordination — Project 2006-06**

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Guy Zito	Northeast Power Coordinating Council										X
Additional Member		Additional Organization	Region	Segment Selection									
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10									
2.	Gregory Campoli	New York Independent System Operator	NPCC	2									
3.	Kurtis Chong	Independent Electricity System Operator	NPCC	2									
4.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1									
5.	Bohdan M. Dackow	US Power Generating Company (USPG)	NPCC	NA									
6.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1									
7.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10									
8.	Dean Ellis	Dynegy Generation	NPCC	5									
9.	Brian Evans-Mongeon	Utility Services	NPCC	8									
10.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5									
11.	Brian L. Gooder	Ontario Power Generation Incorporated	NPCC	5									
12.	Kathleen Goodman	ISO - New England	NPCC	2									
13.	Chantel Haswell	FPL Group, Inc.	NPCC	5									
14.	David Kiguel	Hydro One Networks Inc.	NPCC	1									
15.	Michale R. Lombardi	Northeast Utilities	NPCC	1									

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
16.	Rnady MacDonald	New Brunswick System Operator	NPCC 2										
17.	Bruce Metruck	New York Power Authority	NPCC 6										
18.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC 10										
19.	Robert Pellegrini	The United Illuminating Company	NPCC 1										
20.	Si Truc Phan	Hydro-Quebec TransEnergie	NPCC 1										
21.	Saurabh Saksena	National Grid	NPCC 1										
22.	Michael Schiavone	National Grid	NPCC 1										
23.	Peter Yost	Consolidated Edison co. of New York, Inc.	NPCC 3										
24.	Ben Wu	Orange and Rockland Utilities	NPCC 1										
2.	Group	Ron Sporseen	PNGC Power member owners	X		X					X		
	<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region Segment Selection</b>										
1.	Bud Tracy	Blachly-Lane Electric Cooperative	WECC 3										
2.	Dave Markham	Central Electric Cooperative	WECC 3										
3.	Dave Hagen	Clearwater Power	WECC 3										
4.	Roman Gillen	Consumer's Power Inc.	WECC 1, 3										
5.	Roger Meader	Coos-Curry Electric Cooperative	WECC 3										
6.	Dave Sabala	Douglas Electric Cooperative	WECC 8										
7.	Bryan Case	Fall River Electric Cooperative	WECC 3										
8.	Rick Crinklaw	Lane Electric Cooperative	WECC 3										
9.	Michael Henry	Lincoln Electric Cooperative	WECC 3										
10.	Richard Reynolds	Lost River Electric Cooperative	WECC 8										
11.	Jon Shelby	Northern Lights	WECC 3										
12.	Ray Ellis	Okanogan Electric Cooperative	WECC 8										
13.	PNGC Power	Rick Paschall	WECC 8										
14.	Heber Carpenter	Raft River Electric Cooperative	WECC 3										
15.	Ken Dizes	Salmon River Electric Cooperative	WECC 1, 3										
16.	Steve Eldrige	Umatilla Electric Cooperative	WECC 1, 3										
17.	Marc Farmer	West Oregon Electric Cooperative	WECC 8										

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
3.	Group	Denise Koehn	Bonneville Power Administration	X		X		X	X				
<b>Additional Member</b>		<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>									
1.	Paul Blake	BPA, Transmission Control Center PSC	WECC	1									
2.	Tedd Snodgrass	BPA, Transmission Dispatch	WECC	1									
4.	Group	Brenda Truhe	PPL	X									
<b>Additional Member</b>		<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>									
1.	Annette Bannon	PPL Generation	RFC	5									
2.	Annette Bannon	PPL Generation	WECC	5									
3.	Mark Heimbach	PPL EnergyPlus	MRO	6									
4.	Mark Heimbach	PPL EnergyPlus	NPCC	6									
5.	Mark Heimbach	PPL EnergyPlus	RFC	6									
6.	Mark Heimbach	PPL EnergyPlus	SERC	6									
7.	Mark Heimbach	PPL EnergyPlus	SPP	6									
8.	Mark Heimbach	PPL EnergyPlus	WECC	6									
5.	Group	Patricia Hervochon	PSEG	X		X		X	X				
<b>Additional Member</b>		<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>									
1.	Kenneth Brown	PSE&G	RFC	1									
2.	Jeffrey Mueller	PSE&G	RFC	3									
3.	Kenneth Petroff	PSEG Nuclear	RFC	5									
4.	Peter Dolan	PSEG ER&T	RFC	6									
6.	Group	Louis Slade	Dominion	X		X		X	X				
<b>Additional Member</b>		<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>									
1.	Mike Garton		MRO										
2.	Connie Lowe		SERC										
3.	Michael Gildea		ERCOT										

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
7.	Group	Jim Case	SERC OC Standards Review Group	X		X							
<b>Additional Member Additional Organization Region Segment Selection</b>													
1.	Rene' Free	Santee Cooper	SERC	1, 3, 5, 9									
2.	Glenn Stephens	Santee Cooper	SERC	1, 3, 5, 9									
3.	Gerry Beckerle	Ameren	SERC	1, 3									
4.	Tim Hattaway	PowerSouth	SERC	1, 3, 5, 9									
5.	Mike Hardy	Southern	SERC	1, 3, 5									
6.	Joel Wise	TVA	SERC	1, 3, 5, 9									
7.	Jake Miller	Dynegy	SERC	5									
8.	Eugene Warnecke	Ameren	SERC	1, 3									
9.	Andy Burch	EEI	SERC	1, 5									
10.	Gene Delk	SCE&G	SERC	1, 3, 5									
11.	Robert Thomasson	BREC	SERC	1, 3, 5, 9									
e1 2.	Brad Young	LGE/KU	SERC	1, 3, 5									
13.	Marc Butts	Southern	SERC	1, 3, 5									
14.	Larry Rodriguez	Entegra Power	SERC	5									
15.	Alvis Lanton	SIPC	SERC	1, 3, 5									
16.	Randall Haynes	Alcoa	SERC	1, 5									
17.	Connie Lowe	Dominion VP	SERC	1, 3									
18.	Melinda Montgomery	Entergy	SERC	1, 3									
19.	Mike Oatts	Southern	SERC	1, 3, 5									
20.	Jason Marshall	MISO	SERC	2									
21.	John Troha	SERC	SERC	10									
8.	Group	Albert DiCaprio	IRC Standards Review Committee		X								
<b>Additional Member Additional Organization Region Segment Selection</b>													
1.	Patrick Brown	PJM	RFC	2									
2.	Matt Goldberg	ISO-NE	NPCC	2									

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter		Organization		Registered Ballot Body Segment									
						1	2	3	4	5	6	7	8	9	10
3.	Dan Rochester	IESO	NPCC	2											
4.	Steve Myers	ERCOT	ERCOT	2											
5.	Mark Thompson	AESO	WECC	2											
6.	Greg Van Pelt	CAISO	WECC	2											
7.	Charles Yeung	SPP	SPP	2											
8.	Terry Bilke	MISO	RFC	2											
9.	Greg Campoli	NYISO	NPCC	2											
10.	Kathleen Goodman	ISO-NE	NPCC	2											
11.	Ben Li	IESO	NPCC	2											
12.	Jason Marshall	MISO	RFC	2											
13.	Don Weaver	NBSO	NPCC	2											
9.	Group	Carol Gerou	MRO's NERC Standards Review Subcommittee												X
	<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>											
1.	Mahmood Safi	Omaha Public Utility District	MRO	1, 3, 5, 6											
2.	Chuck Lawrence	American Transmission Company	MRO	1											
3.	Tom Webb	Wisconsin Public Service Corporation	MRO	3, 4, 5, 6											
4.	Jason Marshall	Midwest ISO Inc.	MRO	2											
5.	Jodi Jenson	Western Area Power Administration	MRO	1, 6											
6.	Ken Goldsmith	Alliant Energy	MRO	4											
7.	Alice Ireland	Xcel Energy	MRO	1, 3, 5, 6											
8.	Dave Rudolph	Basin Electric Power Cooperative	MRO	1, 3, 5, 6											
9.	Eric Ruskamp	Lincoln Electric System	MRO	1, 3, 5, 6											
10.	Joseph Knight	Great River Energy	MRO	1, 3, 5, 6											
11.	Joe DePoorter	Madison Gas & Electric	MRO	3, 4, 5, 6											
12.	Scott Nickels	Rochester Public Utilities	MRO	4											
13.	Terry Harbour	MidAmerican Energy Company	MRO	1, 3, 5, 6											
14.	Richard Burt	Minnkota Power Cooperative, Inc.	MRO	1, 3, 5, 6											

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
10.	Group	Sam Ciccone	FirstEnergy	X		X	X	X	X				
<b>Additional Member Additional Organization Region Segment Selection</b>													
1.	Dave Folk	FE	RFC	1, 3, 4, 5, 6									
2.	Doug Hohlbaugh	FE	RFC	1, 3, 4, 5, 6									
3.	Brian Orians	FE	RFC	5									
4.	John Reed	FE	RFC	1									
5.	Andy Hunter	FE	RFC	1									
6.	Bil Duge	FE	RFC	5									
11.	Group	Jason Marshall	Midwest ISO Standards Collaborators		X								
<b>Additional Member Additional Organization Region Segment Selection</b>													
1.	Robert Thomasson	Big Rivers Electric Cooperative	SERC	1, 3									
2.	Joe O'Brien	NIPSCO	RFC	1, 3, 5, 6									
3.	Bob Thomas	Illinois Municipal Electric Agency	RFC	4									
4.	Kirit Shah	Ameren	SERC	1									
5.	Joe Knight	Great River Energy	MRO	1, 3, 5, 6									
6.	Mike Moltane	ITC Holdings	MRO	1									
12.	Group	Robert Rhodes	SPP Standards Development	X	X	X	X	X					
<b>Additional Member Additional Organization Region Segment Selection</b>													
1.	Fred Meyer	Empire District Electric	SPP	1									
2.	Gregory McAuley	Oklahoma Gas & Electric	SPP	1, 3, 5									
3.	John Allen	City Utilities of Springfield, MO	SPP	1, 4									
4.	Kyle McMenamin	Xcel Energy	SPP	1, 3, 5									
5.	Michelle Corley	Cleco	SPP	1, 3, 5									
6.	Rick Brenneman	Xcel Energy	SPP	1, 3, 5									
7.	Sean Simpson	Board of Public Utilities of Kansas City, KS	SPP	1, 3, 5									
8.	Forrest Brock	Western Farmers Electric Cooperative	SPP	1, 3, 5									

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment										
				1	2	3	4	5	6	7	8	9	10	
9.		Jim Usleldinger	Kansas City Power & Light	SPP	1, 3, 5									
13.	Group	Michael Gammon	Kansas City Power & Light		X		X		X	X				
		<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>									
1.		Jennifer Flandermeyer	Kansas City Power & Light	SPP	1, 3, 5, 6									
14.	Individual	Jack Cashin	Competitive Suppliers						X					
15.	Individual	John Bee	Exelon		X		X		X	X				
16.	Individual	Sandra Shaffer	PacifiCorp		X		X		X	X				
17.	Individual	Janet Smith	Arizona Public Service Company		X		X		X	X				
18.	Individual	Brent Ingebrigtsen	LG&E and KU Energy				X							
19.	Individual	Cindy Martin	Southern Company		X		X							
20.	Individual	Greg Froehling	Green Country Energy, Green Country Operating Services						X					
21.	Individual	Steve Alexanderson	Central Lincoln				X	X						
22.	Individual	Mace Hunter	Lakeland Electric		X		X		X					
23.	Individual	Joe Petaski	Manitoba Hydro		X		X		X	X				
24.	Individual	Brian J Murphy	NextEra Energy, Inc.		X		X		X	X				
25.	Individual	Jonathan Appelbaum	United Illuminating Company		X									



Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
26.	Individual	Paul Kerr	Shell Energy North America (US), L.P.						X				
27.	Individual	Thad Ness	American Electric Power	X		X		X	X				
28.	Individual	David Thorne	Pepco Holdings Inc	X		X							
29.	Individual	Andrew Puztai	American Transmission Company	X									
30.	Individual	Kathleen Goodman	ISO New England		X								
31.	Individual	Steve Myers	ERCOT ISO		X								
32.	Individual	Steve Rueckert	WECC										X
33.	Individual	Bill Keagle	BGE	X									
34.	Individual	Brenda Powell	Constellation Energy Commodities Group						X				
35.	Individual	Greg Rowland	Duke Energy	X		X		X					
36.	Individual	CJ Ingersoll	CECD			X							
37.	Individual	Rex A Roehl	Indeck Energy Services					X					
38.	Individual	Shaun Anders	City of Springfield, IL - City Water Light and Power (CWLP)	X		X		X					
39.	Individual	RoLynda Shumpert	South Carolina Electric and Gas	X		X		X	X				
40.	Individual	Dan Rochester	Independent Electricity System Operator		X								

**Consideration of Comments on Reliability Coordination — Project 2006-06**

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Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
41.	Individual	Alice Ireland	Xcel Energy	X		X		X	X				

**1. Do you agree with COM-001 requirements for Interpersonal Communications capability and Alternative Interpersonal Communications capability (R1-R8)? If not, please explain in the comment area below.**

**Summary Consideration:**

For the COM-001 standard, several commenters had suggestions for improvements to the requirement language and applicability. The RCSDT believes the standard correctly and adequately requires each applicable entity that would have capability to receive Interconnection and operating information to have Interpersonal Communications and Alternative Interpersonal Communications to be used when the Interpersonal Communication is not available. The RCSDT has addressed the applicability of the standards and implementation plans by aligning COM-001-2, and COM-002-3 to include the same entities and by removing LSE, PSE and TSP from the COM standards.

Many comments were concerned about both the medium (e.g. cellular, satellite, etc.) and media (e.g. voice, email, etc.) used for Interpersonal Communications. The current language avoids being prescriptive and allows each entity to determine what is suitable. Interpersonal Communication and Alternative Interpersonal Communication is between the applicable entities which may include multiple locations (e.g. a primary and back-up control center).

The RCSDT added the following Requirement Parts at the suggestion of stakeholders:

3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection

4.3 Adjacent Transmission Operators synchronously connected within the same Interconnection

5.6 Adjacent Balancing Authorities

6.3 Adjacent Balancing Authorities

The RCSDT agrees with the many industry comments and removed the phrase "to exchange Interconnection and operating information" in requirements R1 through R8. This removal clarifies that the intent of this capability is NOT for the exchange of data.

A few commenters also expressed concerns about the frequency of testing Alternative Interpersonal Communications capability. The RCSDT believes that the proposed testing frequency is supported by the majority of stakeholders and is not overly burdensome.

Several commenters suggested that VSLs should be written based on the percent of entities rather than by an occurrence of a violation. VSLs must be written on a violation occurrence basis in accordance with FERC guidelines. The requirements specify which entities must be included in communications capabilities. If a single entity is missing, this is a violation of the requirement. According to VSL guidelines, if missing any part of the requirement could have the same reliability outcome as missing the entire requirement, the requirement is binary and the VSL must be severe.

A new requirement was added for clarity regarding responsibilities of the Distribution Provider and the Generator Operator when either entity experiences a failure of its Interpersonal Communication capability:

R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with its Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [*Violation Risk Factor: Medium*][*Time Horizon: Real-time Operations*]

This requirement requires collaboration between entities to restore a failed communications capability.

Organization	Yes or No	Question 1 Comment
ERCOT ISO	No	<p>We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you cannot refer to the word you are defining in order to define it. However, it is possible “allows two or more individuals to ...” may solve this problem. Clarity should be sought in the next posting, if possible. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. We request the sub-requirements be modified into bulleted lists. Consider striking “to exchange Interconnection and operating information” in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications “to interact, consult, or exchange information” in the definition. Consider striking “to exchange Interconnection and operating information” in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes “to interact, consult, or exchange information” in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, affected neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for than for the associated Interpersonal Communications requirements R3 and R5 respectively. We believe these should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. Again, we would suggest replacing sub-requirements with bulleted lists. For R5, why are neighboring Balancing Authorities not included? Additionally R5 should only read Contact with Interchange Coordinator within same Interconnection. They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. We do not believe R2.2 and R1.2 should be limited to Reliability Coordinators in the same Interconnection only. We suggest modifying “within the same Interconnection” to “within the same Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)” since reliability coordination may be required among the RCs on both sides of an Interconnection boundary. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal</p>

Organization	Yes or No	Question 1 Comment
		<p>Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost a duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.</p>
ISO New England	No	<p>We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you cannot refer to the word you are defining in order to define it. However, it is possible “allows two or more individuals to ...” may solve this problem. Clarity should be sought in the next posting, if possible. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. We request the sub-requirements be modified into bulleted lists. Consider striking “to exchange Interconnection and operating information” in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications “to interact, consult, or exchange information” in the definition. Consider striking “to exchange Interconnection and operating information” in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes “to interact, consult, or exchange information” in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, affected neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for than for the associated Interpersonal Communications requirements R3 and R5 respectively. We believe these should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. Again, we would suggest replacing sub-requirements with bulleted lists. For R5, why are neighboring Balancing Authorities not included? Additionally R5 should only read Contact with Interchange Coordinator within same Interconnection. They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. We do not believe R2.2 and R1.2 should be limited to Reliability Coordinators in the same Interconnection only. We suggest modifying “within the same Interconnection” to “within the same Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)” since reliability</p>

Organization	Yes or No	Question 1 Comment
		<p>coordination may be required among the RCs on both sides of an Interconnection boundary. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost a duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.</p>
<p>IRC Standards Review Committee</p>	<p>No</p>	<p>We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you cannot refer to the word you are defining in order to define it. However, it is possible “allows two or more individuals to ...” may solve this problem. Clarity should be sought in the next posting, if possible. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. We request the sub-requirements be modified into bulleted lists. Consider striking “to exchange Interconnection and operating information” in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications “to interact, consult, or exchange information” in the definition. Consider striking “to exchange Interconnection and operating information” in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes “to interact, consult, or exchange information” in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, affected neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for than for the associated Interpersonal Communications requirements R3 and R5 respectively. We believe these should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. Again, we would suggest replacing sub-requirements with bulleted lists. For R5, why are neighboring Balancing Authorities not included? Additionally R5 should only read Contact with Interchange Coordinator within same Interconnection. They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. We do not believe R2.2 and R1.2 should be limited to Reliability Coordinators in the same Interconnection only. We suggest modifying “within the same Interconnection” to “within the same</p>

Organization	Yes or No	Question 1 Comment
		<p>Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)” since reliability coordination may be required among the RCs on both sides of an Interconnection boundary. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost a duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.</p>
<p>Midwest ISO Standards Collaborators</p>	<p>No</p>	<p>We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The drafting team responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you cannot refer the word you are defining to define it. However, it is possible “allows two or more individuals to ...” may solve this problem. What are the drafting team’s thoughts on this issue? This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. Consider striking “to exchange Interconnection and operating information” in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications “to interact, consult, or exchange information” in the definition. Consider striking “to exchange Interconnection and operating information” in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes “to interact, consult, or exchange information” in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for than for the associated Interpersonal Communications requirements R3 and R5 respectively. They should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. For R5, why are neighboring Balancing Authorities not included? They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. Should R2.2 and R1.2 be limited to Reliability Coordinators in the same Interconnection only? The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or</p>

Organization	Yes or No	Question 1 Comment
		<p>Alternative Interpersonal Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.</p>
<p>Northeast Power Coordinating Council</p>	<p>No</p>	<p>It was expressed in the last posting that the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the wording of the definition. The word being defined shouldn't be in the definition. However, incorporating "allows two or more individuals to ..." is an option that may solve this problem. The next posting should clarify this.</p> <p><b>Response:</b> The RCSDT has clarified in previous responses to comments that the requirements of COM-001 do not apply to data. The current proposed definition of Interpersonal Communications includes the phrase "allows two or more individuals to...". In an effort to make this more clear, the RCSDT has revised Requirements R1-R8 to remove the phrase "to exchange Interconnection and operating information" as you and others have suggested. This will provide the needed clarity for stakeholders that COM-001 does not include "data exchange."</p> <p>This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. The sub-requirements should be modified into bulleted lists.</p> <p><b>Response:</b> The information filing did not propose to eliminate the use of numbered items altogether, but proposed changing the manner in which they were numbered. Bulleted lists are used to indicate sets of options; numbered lists are used when each of the listed items are required.</p> <p>Consider striking "to exchange Interconnection and operating information" in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications "to interact, consult, or exchange information" in the definition.</p> <p><b>Response:</b> The RCSDT agrees and we have removed the phrase "to exchange Interconnection and operating information" from R1-R8. This helps clarify the intent that the capability is NOT for data exchange as data is covered under the provisions of the recently approved IRO-010-1a.</p> <p>Consider striking "to exchange Interconnection and operating information" in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes "to interact, consult, or exchange information" in its definition.</p> <p><b>Response:</b> The RCSDT agrees and we have removed the phrase "to exchange Interconnection and</p>



Organization	Yes or No	Question 1 Comment
		<p>operating information from R1-R8. This helps clarify the intent that the capability is NOT for data exchange as data is covered under the provisions of the recently approved IRO-010-1a.</p> <p>For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications.</p> <p><b>Response:</b> R1 is dealing with the “normal” communications. R2 deals with the default reliability needs. The normal communications include Interchange Coordinators because they are part of the administration of Interchange. The SDT predicated R2 on being in an unusual situation in which only the basic reliability functions were needed. In such times, the Interchange Function is seen as sacrificial because the BA itself could operate reliably (not necessarily efficiently) by simply dealing with it is adjacent BAs and “scheduling” interchange on a BA to BA basis (as opposed to a PSE to PSE basis). The Interchange Coordinator is only needed to ensure all of the commercial arrangements are validated by all parties. In stressed conditions those checkouts can be by-passed and dealt with after-the-fact. That <u>does not mean</u> that when an entity goes to backup is expected to bypass the Interchange Coordinator. The requirement R2 merely focused on the worst case situation.</p> <p>This requirement is not meant to define the alternate backup system; it is merely mandating the lowest mandatory requirements on the backup system. For example during the Y2K operations backup systems included satellite phones which did not cover all entities involved in normal operations. The SDT wrote the requirements to assure that such an event would not cause all RCs, BAs and TOPs to be non-compliant.</p> <p>For R3, affected neighboring Transmission Operators should be included.</p> <p><b>Response:</b> The SDT has included the following Part 3.5 of Requirement R3:</p> <p style="padding-left: 40px;">3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection</p> <p>For R4 and R6, the sub-requirement list is different from the associated Interpersonal Communications requirements R3 and R5 respectively. These should be duplicate. The sub-requirement list for R4 should match R3, and the sub-requirement list for R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications.</p> <p><b>Response:</b> The SDT has included the following Part 4.3 of Requirement R4:</p> <p style="padding-left: 40px;">4.3 Adjacent Transmission Operators synchronously connected within the same Interconnection</p> <p>The SDT has included the following Part 6.3 of Requirement R6:</p> <p style="padding-left: 40px;">6.3 Adjacent Balancing Authorities</p>

Organization	Yes or No	Question 1 Comment
		<p>The RCSDT asserts the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Not requiring DP and GOP entities to have Alternative Interpersonal Communication capability meets FERC’s intention as stated here: “We (FERC) clarify that the NOPR did not propose to require redundancy on generator operators’ or distribution providers’ telecommunication facilities...” (Order 693, RM06-16-000, Paragraph 487).</p> <p>The sub-requirements should be bulleted lists.</p> <p><b>Response:</b> Bulleted lists are used to indicate sets of options; numbered lists are used when each of the listed items are required.</p> <p>For R5, why are neighboring Balancing Authorities not included?</p> <p><b>Response:</b> The SDT has included the following Part 5.6 of Requirement R5:</p> <p style="padding-left: 40px;">5.6 Adjacent Balancing Authorities</p> <p>Note that this is a defined term in the glossary: “A Balancing Authority Area that is interconnected (to) another Balancing Authority Area either directly or via a multi-party agreement or transmission tariff.”</p> <p>Additionally, R5 should only read Contact with Interchange Coordinator within the same Interconnection. They need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE.</p> <p><b>Response:</b> The RCSDT has removed the Interchange Coordinator from the standard (R1 and R5) as the BA is responsible for the reliability implications of Interchange. The reliability relationship lies between BA’s.</p> <p>Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, the same wording should be used.</p> <p><b>Response:</b> The SDT inserted the different terminology because there may be more than one type backup system, Some entities have land lines; cell phones; satellite phones; voice over internet; and/or teleconferencing. The language is intended to provide flexibility to allow entities to have one or more types of backup while designating one for Alternative Interpersonal Communications.</p> <p>R2.2 and R1.2 should not be limited to Reliability Coordinators in the same Interconnection only. Modify “within the same Interconnection” to “within the same Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)” since reliability coordination may be required among the RCs on both sides of an Interconnection boundary.</p>

Organization	Yes or No	Question 1 Comment
		<p><b>Response:</b> The requirement proposed by NPCC is predicated on “as appropriate.” Such subjective phrases cannot be used in a standard. The issue of asynchronous entities is not germane to the requirement but the requirement does not preclude additional coordination to meet the specifics of ERCOT, HQ and WECC. A regional variance may be an option for you to consider.</p> <p>The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications with. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs.</p> <p><b>Response:</b> Each entity listed in Requirements R1-R8 is required to meet the contents with respect to each other entity listed in the requirement. Failure to have the capability with a single entity is a single violation of the requirement. For example, if an RC has 5 BA’s within it Area and fails to have Interpersonal Communications with two of them, then the RC has violated the requirement twice. The VSLs are written to address each violation of the Requirement. We have removed the words “or more” from the VSLs.</p> <p>The second half of the Severe VSL for R9 is almost a duplicate of the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.</p> <p><b>Response:</b> The R9 Severe VSL was revised to remove “within 2 hours”. It now reads:</p> <p style="padding-left: 40px;">“The responsible entity tested the Alternative Interpersonal Communications capability and identified a problem but didn’t initiate action to repair or designate a replacement Alternative Interpersonal Communications.”</p>
<p><b>Response:</b> The RCS DT thanks you for your comment. Please see responses embedded above.</p>		
PNGC Power member owners	No	<p>Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications</p>

Organization	Yes or No	Question 1 Comment
		<p>requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window."Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication."We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. There is no requirement for 24/7 support, the requirement is to have communications capability. The type of system (i.e. On-Call) is not prescribed in the standard and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is "To ensure emergency communications between operating personnel are <u>effective</u>." It is not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication, in many cases this may be via a receptionist, or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.</p>		
PPL	Yes	
PSEG	No	Com-001-2 implementation plan lists that this is applicable to PSE's and LSE's however, PSE's and LSE's were removed from the actual standard. The implementation plan should be revised.
<p><b>Response:</b> The RCSDT thanks you for your comment. We have revised as you suggested.</p>		
Dominion	No	The monthly testing requirement for Alternative Interpersonal Communications is overly burdensome without any evidence to support that it is necessary to insure reliability. We believe that an entity will take necessary

Organization	Yes or No	Question 1 Comment
		<p>steps to insure the Alternative Interpersonal Communications is functioning properly, especially if it experiences problems with its Interpersonal Communications, it. We can support quarterly testing as we believe it strikes a reasonable balance.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. The drafting team has not received a large number of comments that suggest that the frequency of the testing is burdensome and believes that the testing could occur in the normal course of daily activities. Therefore, the SDT believes the frequency of testing will not be burdensome.</p>		
<p>South Carolina Electric and Gas</p>	<p>No</p>	<p>Each sub-requirement should not have an “R” in front of the number in order to be consistent with NERC’s August 10, 2009 filing at FERC on this subject. Requirement R3 and R4 should include adjacent TOPs as a sub-requirement. Requirements R5 and R6 should include adjacent BAs as a sub-requirement. ”to exchange Interconnection and operating information” should be deleted from requirements R1 through R8 as it is redundant with the definition of Interpersonal Communications. The last page of the Implementation Plan includes LSEs, PSE, and TSPs as being responsible entities under this standard, yet the standard does not include them. Please correct the implementation plan.</p>
<p>SERC OC Standards Review Group</p>	<p>No</p>	<p>Each sub-requirement should not have an “R” in front of the number in order to be consistent with NERC’s August 10, 2009 filing at FERC on this subject.</p> <p><b>Response:</b> The RCSDT agrees and this change has been made.</p> <p>Requirement R3 and R4 should include adjacent TOPs as a sub-requirement.</p> <p><b>Response:</b> The SDT has included the following Part 3.5 of Requirement R3 and 4.3 of R4:                      Adjacent Transmission Operators synchronously connected within the same Interconnection</p> <p>Requirements R5 and R6 should include adjacent BAs as a sub-requirement.</p> <p><b>Response:</b> The SDT has included the following Part 5.6 of Requirement R5 and Part 6.3 of R6:                      Adjacent Balancing Authorities</p> <p>Note that this is a defined term in the glossary: “A Balancing Authority Area that is interconnected to another Balancing Authority Area either directly or via a multi-party agreement or transmission tariff.”</p> <p>”to exchange Interconnection and operating information” should be deleted from requirements R1 through R8 as it is redundant with the definition of Interpersonal Communications.</p> <p><b>Response:</b> The RCSDT agrees and we have removed the phrase “to exchange Interconnection and operating information from R1-R8.</p>

Organization	Yes or No	Question 1 Comment
		<p>The last page of the Implementation Plan includes LSEs, PSE, and TSPs as being responsible entities under this standard, yet the standard does not include them. Please correct the implementation plan.</p> <p><b>Response:</b> The RCSDT agrees and we have made the revision.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>		
<p>MRO's NERC Standards Review Subcommittee</p>	<p>No</p>	<p>A. R5.5 states a BA shall have Interpersonal Communications with each Interchange Coordinator within its BA area and adjacent Interchange Coordinators. NERC Registry Criteria (v5) uses the term “Interchange Authority” not Interchange Coordinator, please clarify.</p> <p><b>Response:</b> The RCSDT has removed the Interchange Coordinator from the standard based on stakeholder feedback.</p> <p>B. Upon review of the NERC Compliance Registry, there are only 56 BA’s that are also registered as an IA but 138 total BA’s within the registry. R5.5 is not clearly written because many BA’s do not have an IA within their BA area. Though a BA will use an IA to schedule interchange, a possible rewrite of R5.5 may be “Each Interchange Authority that the BA actively uses to arrange Interchange”.</p> <p><b>Response:</b> The RCSDT has removed the Interchange Coordinator from the standard based on stakeholder feedback.</p> <p>C. R10 states that the RC, TOP, BA, DP and GOP shall notify “impacted entities” within 60 minutes... Please clarify if the SDT means the entities within the applicability section or is this to be determined by the entity. A possible rewrite may be; “Each RC shall notify TOP’s, BA’s, and IA’s within its RC area along with adjacent RC’s within the same Interconnection”. This break down would need to be required for each affected entity and would provide clarity to the industry.</p> <p><b>Response:</b> R10 specifies only “impacted entities”. That phrase is used to limit the scope of the requirement. If an entity has a failure of its Interpersonal Communications capability with only one entity, then <i>that</i> entity is the “impacted entity” and they should be notified of the failure.</p> <p>D. We do not agree with a DP and GOP need to be held to the same level of compliance as a RC, BA or TOP. FERC Order 693 (paragraph 487) directed the DP and GOP to be included in this standard by stating:” We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process”. A DP and GOP may not be staffed 24 hours a day like a BA or TOP and the SDT did not take this into consideration.</p> <p><b>Response:</b> There is no requirement that requires identical communications systems. The requirement is to have “a” communication capability. The RCSDT asserts the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Not requiring DP</p>

Organization	Yes or No	Question 1 Comment
		<p>and GOP entities to have Alternative Interpersonal Communication capability meets FERC's intention as stated here: "We (FERC) clarify that the NOPR did not propose to require redundancy on generator operators' or distribution providers' telecommunication facilities..." (Order 693, RM06-16-000, Paragraph 487). A new requirement was also added concerning the failure of a DP or GOP Interpersonal Communications capability:</p> <p style="text-align: center;">R11 Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with its Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p> <p>E. We understand that the DP and GOP need a means of communicating with their BA and TOP (R7 and R8) but would this not be the same Interpersonal Communications capability that as stated in R3 and R5 for the TOP and BA? Example: If the BA uses a phone line as their Interpersonal Communication medium to contact the DP wouldn't the DP also use the same medium to communicate with their BA? Yes, there could be different mediums but 99% of the time it will be the same medium.</p> <p><b>Response:</b> The RCSDT agrees with your assumption; however a reciprocal requirement is necessary. Without R7 and R8, there would be no requirement for the DP or GOP.</p> <p>F. R10 could mean that if there is a logging system that detects an Interpersonal Communication failure, then all applicable entities will need to monitor that monitoring device. Since this requirement applies to all applicable entities, and Interpersonal Communication mediums will most likely be the same, there will always be two entities found non compliant if the 60 minute threshold is passed.</p> <p><b>Response:</b> There is no requirement to monitor or log Interpersonal Communications capability, only to test. R10 requires the entity to notify the impacted entities upon a failed test or the detection of a failure.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>		
FirstEnergy	No	<p>It is not clear from the definition of Interpersonal Communications if certain communications "mediums" such as email, instant messaging, etc. are included.</p> <p><b>Response:</b> The requirements are for communications between two or more persons. Mediums are not listed to avoid being prescriptive in the requirement. The measures provide examples of mediums.</p> <p>Furthermore, the Measures for these requirements all include "electronic communications" as acceptable evidence. If the drafting team does not intend these mediums be included, then it should be clarified in the</p>

Organization	Yes or No	Question 1 Comment
		<p>definition. We suggest the following wording of the definition: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. This interaction consists of verbal, spoken words exchanged in Real-time.</p> <p><b>Response:</b> The use of verbal communication only is not the intent of the requirement. Written communication is also an acceptable form of Interpersonal Communication.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>		
SPP Standards Development	No	<p>We would suggest that the applicability of COM-001-2 be expanded to that listed in COM-002-3. How can the directives to be issued in COM-002 be delivered and confirmed without having Interpersonal Communications capability?</p> <p><b>Response:</b> The RCSDT has revised the applicability of COM-001 and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP.</p> <p>All of the functional entities listed in R1.1 should also be listed in R2.1. Similarly the sub-requirements of R3 should also be applied to R4. The same holds true for R5 and R6.</p> <p><b>Response:</b> The requirements for Alternative Interpersonal Communications are different than for Interpersonal Communications. There is not necessarily a reliability need to have redundant capability with each and every entity such as DP and GOP.</p> <p>If the SDT intends to exclude data communications from Interpersonal Communications and Alternative Interpersonal Communications, we suggest the SDT be more specific in the definition to specifically exclude data communications in the definition. It is not readily apparent that these terms do not apply to data communications and without a clarification, confusion exists.</p> <p>Consider</p> <p><b>Response:</b> The RCSDT agrees and have removed the phrase “to exchange Interconnection and operating information from R1-R8. This helps clarify the intent that the capability is NOT for data exchange, as data is covered under the provisions of the recently approved IRO-010-1a.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>		
Kansas City Power & Light	No	<p>These requirements require TOP’s, BA’s, and GOP’s to establish alternative means of “interpersonal” communications with other BA’s, GOP’s, and BA’s respectively without regard to the reliability impact each TOP, BA or GOP has on the interconnection. Why would it be necessary for a TOP with one 161kv transmission line or a BA with 100 MW of total load, or one GOP with a 30MW unit to realize additional costs</p>



Organization	Yes or No	Question 1 Comment
		<p>when the facilities they operate have little reliability impact?</p> <p><b>Response:</b> The RCSDT believes that any NERC Registered Entity capable of issuing or receiving a directive is an applicable party to COM-001.</p> <p>In addition, most RC's have established satellite telephone systems as back-up communication with TOP's. RC's may have to establish additional communication systems with BA's as these requirements impose to avoid Standards of Conduct issues.</p> <p><b>Response:</b> It is unclear how this scenario would present Standards of Conduct issues for communication between reliability entities. The requirements pertain to reliability functions, not commercial functions or the way in which entities are structured internally.</p> <p>R9 - considering the reliability of communication systems, a 2 hour response to a problem with the alternative means of communication is over sensitive. Allowing for sometime in an operating shift would be more in line, such as 8 hours.</p> <p><b>Response:</b> The requirement is to initiate action within 2 hours, not complete it. The two hour time reference aligns with the timing shown in EOP-008 for back-up facilities.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>		
Competitive Suppliers		
Exelon	No	<p>1. COM-001-2, 4.4 - Distribution Providers and 4.5, Generation Operators should be highlighted and communicated as a substantive change since entities may not be aware that they are being added to the applicability section of the standard.</p> <p><b>Response:</b> These revisions were done based on FERC Order 693 directives. They have been widely distributed in redline form. NERC will ensure that the change in applicability is highlighted in the announcement of the next posting.</p> <p>2. COM-001-2, R10 - should have the following underlined clarifying text added, shall notify impacted entities within 60 minutes of the detection of a failure “of all primary and alternative “ Interpersonal Communications capabilities that lasts 30 minutes or longer. Exelon believes that the intent of R10 is for complete loss of communication ability and should not be applied to facilities that have multiple backups.</p> <p><b>Response:</b> The RCSDT developed R10 based on R3 of COM-001-1. The intent is to ensure that entities know not to use the primary and to use the alternative.</p> <p>3. COM-001-2, M1 thru 9 - Suggest that network diagrams and / or communications schematics be added as</p>

Organization	Yes or No	Question 1 Comment
		<p>suggested evidence.</p> <p><b>Response:</b> The measure only provides examples of the types of evidence that may be used for compliance and the list is not all inclusive. The term "...evidence that could include, but is not limited to..." addresses your suggestion.</p> <p>4. COM-001-2, VSL for R9 - Regarding failure to test the Alternative Interpersonal Communication, the Severity Level does not align with the potential impact to the BES. The Severity Level for simply missing a test should be revised to a High VSL.</p> <p><b>Response:</b> The VSL does not relate to risk to the BES (this is covered in the Violation Risk Factor). The VSL only indicates how badly an entity missed the mark with respect to the requirement. A Severe VSL is appropriate.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>		
PacifiCorp	Yes	
Arizona Public Service Company	Yes	
Southern Company	No	<p>Comments: Standard COM-001-2R10. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer. Comment: It is not clear whether the notification requirements identified in R10 apply to failure of ALL available Interpersonal Communications or ANY Interpersonal Communications. We suggest that the existence of functioning Alternative Interpersonal Communications precludes the requirement for notification of impacted entities.</p> <p><b>Response:</b> The intent of R10 is to ensure that entities know not to use the primary and to use the alternative. Notification is required for the failure of the primary capability.</p> <p>D. Compliance 1. Compliance Monitoring Process 1.3 Data Retention Each Generator Operator shall keep the most recent twelve months of historical data (evidence) for Requirements R8 and R10, Measures M8 and M10. Comment: The data retention requirements specified for the Generator Operator in Para. 1.3 (above) are not consistent with the 3-year audit interval for the GOP. Question: When audited on this Standard is the expectation that the GOP will have 12 months of evidence or 36 months of evidence?</p> <p><b>Response:</b> The Data Retention section of the standard conforms to the NERC guidelines. The RCSDT has also added the following to the data retention section:</p>

Organization	Yes or No	Question 1 Comment
		<p>The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.</p> <p>Standard COM-002-3R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed. Comment: The term “Reliability Directive” is currently not defined in the NERC Glossary of Terms. However, in the Implementation Plan for COM-002-3 the RC SDT proposes a definition for Reliability Directive. It is implied in the standard that the Reliability Directive is issued as a voice command which precludes the use of our preferred method of Interpersonal Communication. However, this is not definitively stated in either the standard or the proposed definition. I think this needs to be made clearer if the Reliability Directive must be issued as a voice command.</p> <p><b>Response:</b> The RCSDT disagrees with your assumption that the requirement implies that a Reliability Directive must be issued verbally. In a previous version of the draft standard, the RCSDT had included “verbal” issuance of directives. This was removed to allow the use of other than voice capability to issue a Reliability Directive.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>		
Green Country Energy, Green Country Operating Services	No	<p>COM-001 General question/comment. The reference to infrastructure should be removed and just keep the word “medium”. Here's why: What communication medium (infrastructure) does not use satellite at some point unless entities are within a close geographical proximity? How likely is it to have 2 different mediums? o Local phone and fax hard-wire likely. o Long distance phone and fax - satellite o Cell phone - satellite o Internet - satellite o Radio - antenna The reason for mentioning this is, if all we have is satellite then the reference to infrastructure should be removed and just keep the word “medium”.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. The RCSDT believes that the language of the definition is clearer with the existing verbiage.</p>		
Central Lincoln	No	See Q 6 below.
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses to Q6.</p>		

Organization	Yes or No	Question 1 Comment
Lakeland Electric	Yes	
Manitoba Hydro	Yes	
NextEra Energy, Inc.	No	<p>As drafted, COM-001 is not clear or complete. At this stage in the evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. Thus, NextEra Energy Inc. (NextEra) has numerous recommended corrections to provide clarity and completeness to COM-001. For example, the requirement to designate an Alternative Interpersonal Communication capability is not clear. Does the designator solely designate for the designator’s knowledge or does the designator need to inform the entity on the other end of the connection. In R2, for instance, the Reliability Coordinator must designate, but it is also not clear whether the Reliability Coordinator must inform the Balancing Authorities or Transmission Operators. It is further unclear whether the designation must be documented, or if any informing of the Balancing Authorities or Transmission Operators must be documented. Thus, it is recommended that the drafters decide what was intended regarding the designation and clearly state the requirements.</p> <p><b>Response:</b> The Requirement R2 is for the RC to designate an Alternative Interpersonal Communication and inform the other entity (BA, TOP, etc.) as to what that Alternative Interpersonal Communication is. The Measure M2 provides examples of the types of evidence which may be used to prove compliance with the requirement.</p> <p>In R9 it states that “. . . on at least a monthly basis.” There are two issues to consider here. If the sentence stays, grammatically it should read “. . . on, at least, a monthly basis. . . However, from a compliance and technical perspective, the term “at least” has no significance and should be deleted. The requirement is to test on a monthly basis - the phrase “at least” only introduces ambiguity and implies that the party should consider every two or three weeks. If the drafting team believes a best practice is less than a month, there are other NERC educational tools to explain a best practice.</p> <p><b>Response:</b> The RCSDT used this term to allow more frequent testing to be performed.</p> <p>In R10, it states “. . . shall notify the impacted entity . . .” It would be clearer to state: “. . . shall notify the impacted Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider or Generator Operator . . .”</p> <p><b>Response:</b> The RCSDT believes your suggestion adds unnecessary verbiage to the requirement and does not provide additional clarity.</p>

Organization	Yes or No	Question 1 Comment
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>		
<p>United Illuminating Company</p>	<p>No</p>	<p>COM-001-2 does not specify the amount of time a DP has to reestablish the Interpersonal Communication Capability after the capability fails before it is assessed non-compliance for not having the communication. Is an entity non-compliant the minute the communication capability is unavailable? If so, then to be compliant a tertiary (or secondary capability for DP) must be installed by the entity. Something similar was discussed with EOP-008 R3: "To avoid requiring a tertiary facility, a backup facility is not required during: o Planned outages of the primary or backup facilities of two weeks or less o Unplanned outages of the primary or backup facilities". UI suggests the drafting team incorporate something similar.</p> <p><b>Response:</b> The RCSDT is proposing a new requirement to address your concerns for the DP. We have included the GOP as well:</p> <p style="padding-left: 40px;">R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p> <p>The VSL for R7 is severe only and states: "The Distribution Provider failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 7.1 or 7.2". I believe there should be a time component to the VSL and the VSL staged. For example, failure to have communication established for less than 60 minutes would be Lower, anything over 1 hour severe. Also needed is a phrase to state when the violation begins. Does the violation begin when the loss of Communication Capability is detected or when it occurred? In other words, does the violation start when the operator attempts to use the phone and it is not functional, or did it occur when the phone line functionality failed but was not yet detected because no attempt to use the phone was made. So the VSL for R7 would follow a format of: "The Distribution Provider failed to have Interpersonal Communication Capability with one or more entities listed in Parts 7.1 or 7.2 for a continual 60 minutes period as measured from the time the ICC failure was detected". An alternative remedy is to alter the language of R7 to allow for unplanned outage.</p> <p><b>Response:</b> The VSL represents a single violation of the requirement. For this requirement, the DP must have Interpersonal Communication with its TOP and BA. The VSL was revised to remove "or more" to conform to the requirement.</p> <p>NERC does not have a Reliability Requirement for a DP to staff a control room 24/7. COM-0001 can be interpreted to imply that a DP needs to be staffed 24/7 to facilitate interpersonal communications. If NERC wants to extend the requirement for a 24/7 staffed operating position at the DP then the appropriate method is</p>

Organization	Yes or No	Question 1 Comment
		<p>thru a SAR to PER-002.</p> <p><b>Response:</b> COM-001 is not intended to imply a 24/7 requirement.</p> <p>COM-001 R7 should have a sub-requirement added recognizing that DP's are not required to staff 24/7 and many do not staff overnight. UI suggests adding R7.3: DP's will notify their TOP and/or BA when it is not staffing an operating desk.</p> <p><b>Response:</b> While the SDT does not disagree this would be good practice, other methods of addressing this situation (e.g., having an answering service, an on –call staff, or something similar) would be valid as well. The SDT does not believe it would be appropriate to limit this to only one method.</p> <p>R7: Should address the instance if the DP is not required to have communication with the BA, because the BA communicates thru the TOP.</p> <p><b>Response:</b> The intent of the standard is that the DP will have communication with their BA. Ti is not prescriptive as to how that communication will be implemented.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>		
American Electric Power	No	The applicability of COM-001 and COM-002 appear to be at odds with each other. The requirements may need to be re-written so that they are in sync.
<p><b>Response:</b> The RCSDT thanks you for your comment. The RCSDT has made revisions to COM-001 and COM-002 such that the applicability is compatible.</p>		
Pepco Holdings Inc	Yes	
American Transmission Company	Yes	ATC agrees with the understanding that the line of demarcation is up to the point where ATC owns the equipment.
<p><b>Response:</b> The RCSDT thanks you for your comment.</p>		
WECC	Yes	
BGE	Yes	BGE has no additional comments.
Constellation Energy Commodities Group	Yes	

Organization	Yes or No	Question 1 Comment
Duke Energy	No	<p>o We question how far the definition of Alternative Interpersonal Communication goes in requiring separate infrastructure from Interpersonal Communication. For example, wireless communications sometime utilize fiber optic networks.</p> <p><b>Response:</b> The definition requires the use of different infrastructure (medium) than the Interpersonal Communication used for day to day ops. The RCSDT cannot be prescriptive regarding the specific medium to be employed. This is intended to apply to assets and access to media that is within the control of the entity responsible for complying with the Requirement. For example, the way cell phone signals are routed is not within your control.</p> <p>o We question why the requirements state that entities must “have” Interpersonal Communications capability, but must “designate” Alternative Interpersonal Communications capability?</p> <p><b>Response:</b> Many entities have multiple Alternative Interpersonal Communication capabilities. Allowing them to designate which one they want to employ allows for flexibility in which one they use for AIC.</p> <p>o R1.2 and R2.2 - Why is this limited to the same interconnection?</p> <p><b>Response:</b> The phrase “within the same interconnection” is added for the case of ERCOT, which has only DC tie lines with the Eastern Interconnection and has minimal interchange.</p> <p>o R3 - need to add neighboring TOPs.</p> <p><b>Response:</b> Agreed.</p> <p>o R5 - need to add adjacent BAs.</p> <p><b>Response:</b> Agreed.</p> <p>o Interchange Coordinator - Add IC to the Applicability Section, and add a requirement that the IC have Interpersonal Communication capability with its BA and adjacent BAs.</p> <p><b>Response:</b> The RCSDT has eliminated the Interchange Coordinator from COM-001-2 based on other stakeholder comments..</p> <p>o Requirements to “designate” Alternative Interpersonal Communication should carry a “Medium” VRF instead of “High”, because they are a backup capability. The word “designate” carries the connotation that these are documentation requirements.</p> <p><b>Response:</b> The requirement to designate is for the entity to have an Alternative Interpersonal Communications capability and to designate what that is. In many cases, an entity will have multiple</p>

Organization	Yes or No	Question 1 Comment
		<p>alternatives and neighboring entities need to know how to contact them in case of a failure of the primary. If an entity does not designate its AIC, in an emergency it may not be able to issue or comply with directions or instructions which could directly contribute to BES instability, separation, or cascading failure.” The VRF should remain as high.</p> <p>o R9 requires a monthly test of Alternative Interpersonal Communications capability. This was quarterly in the last draft. We question how these requirements for “Alternative Interpersonal Communications” capability are related to requirements for “backup functionality” in EOP-008-1, which requires an annual test of backup functionality. Clarity on the relationship between “Interpersonal Communications”, “Alternative Interpersonal Communications”, “primary control center functionality” and “backup control center functionality” would be appreciated.</p> <p><b>Response:</b> Interpersonal Communication and Alternative Interpersonal Communication should be in both the primary and back up control center. IC and AIC are between entities as well. These capabilities are in the primary and back up control centers. The requirement applies to the primary control center. EOP-008 applies to the back up control center. An entity may test its AIC in the normal course of daily activities.</p> <p>o R11 - is this requirement being moved to COM-003?</p> <p><b>Response:</b> The OPCP SDT is vetting this requirement and it will be in COM-003.</p> <p>o Data Retention - Is data retention really going to be just 12 months? Most auditors seem to be asking for everything since the last audit.</p> <p><b>Response:</b> The Data Retention section of the standard conforms to the NERC guidelines. The RCSDT has also added the following to the data retention section:</p> <p style="padding-left: 40px;">The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.</p>		
CECD	No	<p>Based on the drafting teams response that the definition of Interpersonal" clarifies the exclusion of media dedicated to Telemetry or other data exchange, the term Interpersonal Communication should be replaced with verbal communication capabilities. The term Alternative Interpersonal Communication should be replaced with alternative verbal communication capability that is able to serve as a substitute for and does not</p>



Organization	Yes or No	Question 1 Comment
		utilize the same infrastructure (medium) as verbal communications capabilities used for day-to-day operations.
<p><b>Response:</b> The RCSDT thanks you for your comment. The RCSDT wrote the definitions to include verbal as well as written communication, and the Measures provide examples of person to person communications.</p>		
Indeck Energy Services	No	
City of Springfield, IL - City Water Light and Power (CWLP)	No	<p>The definition of “Interpersonal Communications” is overly broad and does not address the functional needs of reliability coordination. The definition should be limited to systems utilized for essential reliability functions. While the Purpose statement in the standard does address this intent, the explicit inclusion in the definition removes all ambiguity. Further, the definition of “Alternative Interpersonal Communications” without corresponding explicit definition of Primary Interpersonal Communications may lead to confusion and unnecessary duplication of efforts in testing and maintenance.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. The overall mission of reliability standards is for entities to address essential reliability functions.</p>		
Independent Electricity System Operator	No	<p>(1) NERC filed with FERC on August 10, 2009 indicating that it would discontinue the use of sub-requirements in standards. All draft standards posted since have the format of Part Numbers within each main Requirement. Please revise the standards in this project accordingly.</p> <p><b>Response:</b> The RCSDT agrees and this revision will be made.</p> <p>(2) Having defined the terms Interpersonal Communication and Alternative Interpersonal Communication, the phrase “to exchange Interconnection and operating information” in a number of requirements is redundant and can be removed. Further, for R1, we suggest removing the phrase “within the same Interconnection since there RCs between two Interconnections still need to communication with each other for reliability coordination (e.g. curtailment of interchange transactions crossing Interconnection boundary, as stipulated in IRO-006).</p> <p><b>Response:</b> The RCSDT agrees and have removed the phrase “to exchange Interconnection and operating information” from R1-R8. This helps clarify the intent that the capability is NOT for data exchange, as data is covered under the provisions of the recently approved IRO-010-1a.</p> <p>The phrase “within the same interconnection” is added for the case of ERCOT which has only DC tie lines with the Eastern Interconnection and has minimal interchange.</p> <p>(3) R2: Suggest to add Purchasing-Selling Entity and Interchange Authority (INT-004 and INT-005 have requirements for communication between the RC and the PSE and IA), and remove the phrase “within the</p>

Organization	Yes or No	Question 1 Comment
		<p>same Interconnection since there RCs between two Interconnections still need to communication with each other for reliability coordination (e.g. curtailment of interchange transactions crossing Interconnection boundary, as stipulated in IRO-006).</p> <p><b>Response:</b> The applicability of COM-001 and COM-002 were revised to include the same reliability entities: RC, TOP, BA, DP and GOP. LSE, PSE and TSP were removed from the applicability of these standards per stakeholder suggestion.</p> <p>The phrase “within the same interconnection” is added for the case of ERCOT which has only DC tie lines with the Eastern Interconnection and has minimal interchange.</p> <p>(4) R3: Suggest to add adjacent Transmission Operator and Purchasing-Selling Entity (the latter needed for meeting INT-004 requirements).</p> <p><b>Response:</b> The SDT has included the following Part 3.5 of Requirement R3:</p> <p style="padding-left: 40px;">3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection</p> <p>The applicability of COM-001 and COM-002 were revised to include the same reliability entities: RC, TOP, BA, DP and GOP. LSE, PSE and TSP were removed from the applicability of these standards per stakeholder suggestion.</p> <p>(5) The list of entities in R4 and R6 is different from those in R3 and R5. They should be the same for having Alternative Interpersonal Communication capability.</p> <p><b>Response:</b> The RCSDT asserts the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Additionally requiring DP and GOP entities to have Alternative Interpersonal Communication capability only imposes more cost on smaller DP and GOP entities that have little or no risk impact to the bulk electric system.</p> <p>(6) R5: Suggest to add adjacent Balancing Authority as adjoining BAs need to communication with each to check schedules and other balancing information.</p> <p><b>Response:</b> The SDT has included the following Part 5.6 of Requirement R5:</p> <p style="padding-left: 40px;">5.6 Adjacent Balancing Authorities</p> <p>Note that this is a defined term in the glossary: “A Balancing Authority Area that is interconnected (to) another Balancing Authority Area either directly or via a multi-party agreement or transmission tariff.”</p> <p>(7) There are a number of parts in Requirements R1 to R8 each of which must be complied with. However, the VSLs for R1 to R8 are binary which do not provide any distinction in partial failure of each of these requirements. We suggest the SDT to apply the VSL guideline and re-establish the various levels of violation</p>

Organization	Yes or No	Question 1 Comment
		severity for these requirements. <b>Response:</b> Each entity listed in Requirements R1-R8 is required to meet the contents with respect to each other entity listed in the requirement. Failure to have the capability with a single entity is a single violation of the requirement. For example, if an RC has 5 BA's within it Area and fails to have Interpersonal Communications with two of them, then the RC has violated the requirement twice. The VSLs are written to address each violation of the Requirement. We have removed the words "or more" from the VSLs.
<b>Response:</b> The RCSDT thanks you for your comment. Please see responses above.		
Bonneville Power Administration	Yes	
Xcel Energy	No	We feel that either the definitions, or the requirements, should make it clear whether data is included.
<b>Response:</b> The RCSDT thanks you for your comment. The SDT has made modifications to attempt to make this as clear as possible.		

2. The RCSDT believes that the requirements of TOP-001-1 obviate the need to develop additional requirements to address Xcel’s comment. Do you agree? If not, please explain in the comment area below.

**Summary Consideration:**

The original justification that the RCSDT posited for not adding a requirement to directly address Xcel Energy’s comments in paragraph 516 and FERC’s related recommendation in paragraph 523 was that TOP-001-1 R3 was considered to address this concern. Since that time, the RTO SDT has proposed to retire TOP-001-1 R3. However, FERC has since retired IRO-004-1 R3 and R5 along with IRO-005-3 R5. Because these are retired, there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirements,” the TOP may respond to the RC that it cannot comply.

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	If the requirement were going to remain, but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. There needs to be better coordination with that SDT.
<p><b>Response:</b> The RCSDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirement,” the TOP may respond to the RC that it cannot comply.</p>		
Bonneville Power Administration	Yes	
PPL	Yes	
Dominion	Yes	
SERC OC Standards Review Group	No	Top-001-1, Requirement R3, which is what the SDT appears to be using as its justification for not adding a requirement here is proposed to be deleted by the RTO-SDT on Project 2007-03.
<p><b>Response:</b> The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirement,” the TOP may respond to the RC that it cannot comply.</p>		

**Consideration of Comments on Reliability Coordination — Project 2006-06**

Organization	Yes or No	Question 2 Comment
IRC Standards Review Committee	No	It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. We believe there needs to be better coordination with that SDT.
<p><b>Response:</b> The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirement,” the TOP may respond to the RC that it cannot comply.</p>		
MRO's NERC Standards Review Subcommittee	No	<p>A. Agree that a receiving entity should not be held accountable until such time that they are required to take such action.</p> <p>B. It might if the requirement were going to remain but the Project 2007-03 (“Real-Time Operations SDT”) proposed to retire that requirement during their last posting. This needs to be coordinated with that SDT.</p>
<p><b>Response:</b> The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirement,” the TOP may respond to the RC that it cannot comply.</p>		
FirstEnergy	Yes	
Midwest ISO Standards Collaborators	No	It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. This needs to be coordinated with that SDT.
<p><b>Response:</b> The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirement,” the TOP may respond to the RC that it cannot comply.</p>		
SPP Standards Development	Yes	In fact, we believe that R1, R2 and R5 more specifically put that requirement on the TOP. The TOP doesn't have to wait for the RC and any directive that may be associated with R3 prior to taking action to mitigate an emergency condition.
<p><b>Response:</b> The SDT thanks you for your comment.</p>		

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 2 Comment
Kansas City Power & Light	Yes	
Exelon	Yes	
PacifiCorp	Yes	
Arizona Public Service Company	Yes	
Southern Company	No	<p>Comments: I see no connection between XCEL's comment on COM-001-1. The requirements of COM-001-1 require the RCs, TOPs, and BAs to have a primary interpersonal communications method and to designate an alternative. I believe that if the requirements for the entity to have both primary and alternative methods of interpersonal communications this objection could be cleared. For example, R2 Each Reliability Coordinator shall designate have an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information</p>
<p><b>Response:</b> Thank you for your comment. We agree that there is no connection between Xcel's concern and COM-001-1.</p>		
Green Country Energy, Green Country Operating Services		No Comment
Manitoba Hydro	Yes	
NextEra Energy, Inc.	No	<p>As stated in response to number 1, Reliability Standards are to be clear and complete. If a Transmission Operator is not responsible for a delay caused by a Reliability Coordinator, the Standard should specifically state that the Transmission Operator does not need to wait for an assessment or approval of a Reliability Coordinator to take actions pursuant to TOP-001-1 R3. Since the Reliability Coordinator is atop the reliability hierarchy, such a statement provides clarity and completeness to understanding a Transmission Operators rights. Thus, TOP-001-1 R3 should be revised to lead with: "Without any obligation to first seek and obtain an assessment or approval from its Reliability Coordinator, each Transmission Operator . . . ."</p>
<p><b>Response:</b> The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.</p>		

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 2 Comment
United Illuminating Company	Yes	
American Electric Power	Yes	
Pepco Holdings Inc	Yes	
American Transmission Company	Yes	
ISO New England	No	It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. We believe there needs to be better coordination with that SDT.
<p><b>Response:</b> The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirement,” the TOP may respond to the RC that it cannot comply.</p>		
ERCOT ISO	No	It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. We believe there needs to be better coordination with that SDT.
<p><b>Response:</b> The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirement,” the TOP may respond to the RC that it cannot comply.</p>		
WECC	Yes	
BGE	Yes	BGE has no additional comments.
<p><b>Response:</b> Thank you for your comment.</p>		
Constellation Energy Commodities Group	Yes	

**Consideration of Comments on Reliability Coordination — Project 2006-06**

Organization	Yes or No	Question 2 Comment
Duke Energy	No	Requirements of TOP-001-1 are being revised under Project 2007-03, which may not continue to adequately address Xcel's concern.
<p><b>Response:</b> The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.</p>		
Indeck Energy Services	Yes	
City of Springfield, IL - City Water Light and Power (CWLP)	No	TOP-001 is in the process of being substantially modified by Project 2007-03. These changes may conflict with the matter addressed by Xcel's comment. Thus, Xcel's concern should be addressed independently but in the context of the TOP-001-2 revisions proposed by Project 2007-03.
<p><b>Response:</b> The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.</p>		
South Carolina Electric and Gas	No	Top-001-1, Requirement R3, which is what the SDT appears to be using as its justification for not adding a requirement here is proposed to be deleted by the RTO-SDT on Project 2007-03.
<p><b>Response:</b> The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.</p>		
Independent Electricity System Operator	No	TOP-001 is being revised and some of the requirements that fulfill this need may have been removed. We suggest the SDT check with the latest draft version of TOP-001 and coordinate with the Real-time Operation SDT to ensure there are not gaps.
<p><b>Response:</b> The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.</p>		



Organization	Yes or No	Question 2 Comment
Xcel Energy	No	<p>We are concerned that the drafting team may not have understood Xcel Energy’s comments and FERC’s directive in Order 693. FERC had asked that NERC consider Xcel Energy’s suggestion. This consideration does not necessarily equate to the development of additional requirements, however that may be the solution. We recognize that R1 and R2 of TOP-001-1 give the TOP authority to take immediate actions necessary to alleviate operating emergencies. We were concerned with the potential situation where the RC’s directive (R3 of IRO-001-2) may conflict with actions the TOP has ALREADY taken. In this situation, we do not feel the TOP should be held at fault for the actions it took prior to the RC’s directive. (R3 of IRO-001-2 is currently in effect under TOP-001-1 R3.) Additionally, R1 and R2 of TOP-001-1 have been removed from the latest draft of version 2. So, if TOP-001-2 and IRO-001-2 are approved as drafted, it would appear that all rights and protections of the TOP to take immediate actions will be removed and our initial issue, as detailed in Order 693, still exists.</p>
<p><b>Response:</b> The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirement,” the TOP may respond to the RC that it cannot comply.</p> <p>The SDT appreciates this clarification by Xcel Energy. At any time in the future, Reliability Directives may be received that, based on the best available information at the time, change or reverse operating actions taken in the past, even the immediate past. The TOP is not held at fault for past actions that it took to protect the BES by any current or proposed NERC requirements. As written in TOP-001-2 R1, R3 and R4 as proposed by the RTO SDT, the TOP is not prevented from acting or telling the RC that for specific safety, equipment, regulatory or statutory reasons, it cannot comply.</p>		

3. Do you agree with the revision to IRO-001, R1 for certifying Reliability Coordinators? If not, please explain in the comment area below.

**Summary Consideration:** Stakeholders were asked if they agree with the revision to IRO-001, R1 for certifying Reliability Coordinators. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.

Organization	Yes or No	Question 3 Comment
ERCOT ISO	No	<p>The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be.</p> <p>The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator.</p> <p>In R2, should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc.</p> <p>The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.</p>
ISO New England	No	<p>The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be.</p> <p>The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator.</p> <p>In R2, should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc.</p> <p>The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.</p>
IRC Standards Review Committee	No	<p>The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be.</p> <p>The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator.</p> <p>In R2, should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc.</p> <p>The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.</p>

Organization	Yes or No	Question 3 Comment
Northeast Power Coordinating Council	No	<p>The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be.</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p> <p>The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES are covered under a Reliability Coordinator.</p> <p><b>Response:</b> R1 has been removed from the standard based on stakeholder comments.</p> <p>In R2, should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc.</p> <p><b>Response:</b> The requirement was rewritten for clarity as follows:</p> <p style="padding-left: 40px;">R2. Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives) by Transmission Operators, Balancing Authorities, Generator Operators, and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts.</p> <p>The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.</p> <p><b>Response:</b> R1 has been removed from the standard based on stakeholder comments.</p>
<b>Response:</b> The RCSDT thanks you for your comment.		
Bonneville Power Administration	Yes	
PPL	Yes	
SERC OC Standards Review Group	No	<p>We think you are attempting to create a requirement similar to BAL-005, R1. That language copied here is clear and concise - All generation, transmission, and load operating within an Interconnection must be included within the metered boundaries of a Balancing Authority Area.</p>
<b>Response:</b> The RCSDT thanks you for your comment. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.		
MRO's NERC Standards Review	No	<p>A. R1, As written it is unclear what level of certification this will entail? Presently written within the NERC Reliability Standards, responsibility is given to RC's to manage the reliability of their areas. Recommend</p>

Organization	Yes or No	Question 3 Comment
Subcommittee		<p>deleting this requirement. The ERO has pushed back in other Standards to having a responsibility for any NERC Requirements, since they are not a user, owner, or operator of the BES (see EOP-004-2).</p> <p><b>Response:</b> Many commenters also suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p> <p>If this does move forward and an RC is certified by the ERO and then the RC is found non-compliant by a Regional Entity, for an associated certified item, will the ERO be held responsible, too?</p> <p><b>Response:</b> The RCSDT has removed R1 from IRO-001-2.</p> <p>If the SDT selects to keep R1, there are some issues with how the requirement is written. The requirement places emphasis on regions and regional boundaries when no emphasis should be placed there. There are multiple Reliability Coordinators the span multiple regions.</p> <p><b>Response:</b> The RCSDT has removed R1 from IRO-001-2.</p> <p>The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect on what the standards are enforceable.</p> <p>The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator.</p> <p>B. In R2, should “of” be “to”. Reliability Directives are issued to TOPs, BA, etc.</p> <p>C. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.</p> <p><b>Response:</b> Please see the response to the comments from NPCC above on these same topics..</p>
<b>Response:</b> The RCSDT thanks you for your comment.		
FirstEnergy	Yes	
Midwest ISO Standards Collaborators	No	<p>In general, we are not opposed to the concept of the ERO certifying the Reliability Coordinators; however, there are some issues with how the requirement is written.</p> <p><b>Response:</b> Thank you.</p> <p>The requirement places emphasis on regions and regional boundaries when no emphasis should be placed</p>

Organization	Yes or No	Question 3 Comment
		<p>there. There are multiple Reliability Coordinators that span multiple regions.</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p> <p>The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect on what the standards are enforceable.</p> <p>The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator Area.</p> <p>In R2, should “of” be “to”. Reliability Directives are issued to TOPs, BA, etc.</p> <p>The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.</p> <p><b>Response:</b> Please see the response to the comments from NPCC above on these same topics..</p>
<p><b>Response:</b> The RCSDT thanks you for your comment.</p>		
SPP Standards Development	No	<p>Is this more of a registry question than a standards issue? While we agree that there needs to be a requirement somewhere that establishes the need for Reliability Coordinators, isn't there also a similar need for other functional entities such as Transmission Operators, Balancing Authorities, etc? Should these be captured in standards or in the certification/registration process?</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p>		
Kansas City Power & Light	Yes	
Exelon		No comment - only applicable to RC
PacifiCorp	Yes	
Southern Company	No	<p>Comments: This would allow NERC to designate one entity to be the Reliability Coordinator for an entire interconnection or the entire continent. This would reduce the Regional Reliability Organizations to</p>

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Organization	Yes or No	Question 3 Comment
		compliance entities.
<p><b>Response:</b> The RCSDT thanks you for your comment. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p>		
Green Country Energy, Green Country Operating Services		No Comment
Manitoba Hydro	Yes	
United Illuminating Company	Yes	
American Electric Power	No	This is out of scope with the standard, as it is currently addressed through the NERC certification process that the NERC reliability coordinators are subject to.
<p><b>Response:</b> The RCSDT thanks you for your comment. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p>		
Pepco Holdings Inc	Yes	
American Transmission Company	Yes	
WECC	Yes	
BGE	Yes	BGE has no additional comments.
Constellation Energy Commodities Group	Yes	
Duke Energy	No	<p>How is NERC going to certify the RCs?</p> <p><b>Response:</b> R1 is a revision of an existing requirement in IRO-001-1.1. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. The NERC Rules of Procedure define the certification process and the level of certification.</p>

Organization	Yes or No	Question 3 Comment
		<p>Also, we believe the word “all” should be inserted after the word “among”, so that it is clear that all generation, transmission and load must be included.</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment.</p>		
CECD	Yes	
Indeck Energy Services	No	
City of Springfield, IL - City Water Light and Power (CWLP)	Yes	
South Carolina Electric and Gas	No	<p>We think you are attempting to create a requirement similar to BAL-005, R1. That language copied here is clear and concise - All generation, transmission, and load operating within an Interconnection must be included within the metered boundaries of a Balancing Authority Area.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p>		
Independent Electricity System Operator	No	<p>1. R2: The word “of” before Transmission Operators should be “to”.</p> <p><b>Response:</b> The requirement was rewritten for clarity as follows:</p> <p>R2. Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives) by Transmission Operators, Balancing Authorities, Generator Operators, and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts.</p> <p>2. The VSL for R1 should be revised to replace Regional Entities with ERO.</p> <p><b>Response:</b> Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment.</p>		

4.



Do you agree with moving two requirements from IRO-001 back to IRO-002 relating to Analysis Tool outages? If not, please explain in the comment area below.

**Summary Consideration:** There were no comments on this question. The SDT thanks you for your consideration of and agreement with this position.

Organization	Yes or No	Question 4 Comment
Northeast Power Coordinating Council	Yes	
Bonneville Power Administration	Yes	
PPL	Yes	
SERC OC Standards Review Group	Yes	
IRC Standards Review Committee	Yes	
MRO's NERC Standards Review Subcommittee	Yes	
FirstEnergy	Yes	
Midwest ISO Standards Collaborators	Yes	
SPP Standards Development	Yes	
Kansas City Power & Light	Yes	
Exelon		Comments: No comment - only applicable to RC
PacifiCorp	Yes	

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Organization	Yes or No	Question 4 Comment
Arizona Public Service Company	Yes	
Southern Company	Yes	
Green Country Energy, Green Country Operating Services		No Comment
Manitoba Hydro	Yes	
United Illuminating Company	Yes	
Pepco Holdings Inc	Yes	
American Transmission Company	Yes	
ISO New England	Yes	
ERCOT ISO	Yes	
WECC	Yes	
BGE	Yes	BGE has no additional comments.
Constellation Energy Commodities Group	Yes	
Duke Energy	Yes	
CECD	Yes	
Indeck Energy Services	Yes	
South Carolina Electric and Gas	Yes	

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<b>Organization</b>	<b>Yes or No</b>	<b>Question 4 Comment</b>
Independent Electricity System Operator	Yes	

5. Do you agree with moving two requirements from IRO-001 back to IRO-005 relating to Reliability Coordinator notifications? If not, please explain in the comment area below.

**Summary Consideration:** Commenters noted a typographical error in R1 which was corrected to read

R1. When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify ~~issue an alert~~ to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

One commenter also asked that an errant yellow text box be removed from Page 1, which was also done.

Organization	Yes or No	Question 5 Comment
Northeast Power Coordinating Council	No	R1 states “When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.” The word “notify” should be struck.
<b>Response:</b> The SDT thanks you for your comment and will correct this typographical error to remove the words “issue an alert.”		
Bonneville Power Administration	Yes	
PPL	Yes	
SERC OC Standards Review Group	Yes	Please remove the yellow box on page 1 indicating this standard will be retired.
<b>Response:</b> The SDT thanks you for your comment and will remove the yellow box on page 1.		
IRC Standards Review Committee	Yes	R1 states “When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.” The word “notify” should be struck.
<b>Response:</b> The SDT thanks you for your comment and will correct this typographical error to remove the words “issue an alert.”		

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 5 Comment
MRO's NERC Standards Review Subcommittee	Yes	
FirstEnergy	Yes	
Midwest ISO Standards Collaborators	Yes	
SPP Standards Development	Yes	
Kansas City Power & Light	Yes	
Exelon		Comments: No comment - only applicable to RC
PacifiCorp	Yes	
Arizona Public Service Company	Yes	
Southern Company	Yes	
Green Country Energy, Green Country Operating Services		No Comment
Manitoba Hydro	Yes	
United Illuminating Company	Yes	
Pepco Holdings Inc	Yes	
American Transmission Company	Yes	
ISO New England	Yes	R1 states "When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing

Organization	Yes or No	Question 5 Comment
		Authorities in its Reliability Coordinator Area.” The word “notify” should be struck.
<b>Response:</b> The SDT thanks you for your comment and will correct this typographical error to remove the words “issue an alert.”		
ERCOT ISO	Yes	R1 states “When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.” The word “notify” should be struck.
<b>Response:</b> The SDT thanks you for your comment and will correct this typographical error to remove the words “issue an alert.”		
WECC	Yes	
BGE	Yes	BGE has no additional comments.
Constellation Energy Commodities Group	Yes	
Duke Energy	Yes	
CECD	Yes	
Indeck Energy Services	Yes	
South Carolina Electric and Gas	Yes	
Independent Electricity System Operator	Yes	

6. Do you have any other comment, not expressed in questions above, for the RC SDT?

**Summary Consideration:**

The RCSDT received comments suggesting clarification of COM-002-3. The RCSDT intends the communication of Reliability Directives to be person-to-person and in such a manner that the Reliability Directive is understood and not necessarily repeated verbatim. COM-002-3 is not intended to be prescriptive on how the Reliability Directive is issued. Spoken or written communications are valid methods (i.e. using the telephone, radio, electronic texting, email, etc.). The purpose of COM-002-3 is to ensure emergency communications between operating personnel are effective. There is no proxy requirement for 24/7 operating personnel regarding small entities. Only “capability” as provided for in COM-001-2 is applicable. The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols would be addressed in the COM-003 standard being developed in Project 2007-02.

Some commenters suggested revisions to IRO-014, requirement R8 to conform to similar requirements R6 and R7. The RCSDT made the suggested revision by re-ordering R8:

R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

IRO-014-2, requirement R4 is applicable to those Reliability Coordinators engaged in activities related to requirement R1 and part 1.7, it is unlikely that Reliability Coordinators geographically and electrically distant from one another will have mutually agreed upon operating procedures (per requirement R1), and therefore requirement R4 would not be applicable. The RCSDT believes IRO-014-2, requirement R4 which requires weekly communication provides reasonable contact and flexibility – and this requirement is in effect today. The RCSDT coordinated the use of the NERC Glossary term “Adverse Reliability Impact” with the Real-Time Operations team and continues the practice of informing all RCs of Adverse Reliability Impacts in requirement R5. The RCSDT has revised IRO-014-2, requirements R6-R8 to clarify that when one RC identified a problem and presents an action plan for another RC, the second RC is obligated to implement the action plan. The RCSDT will forward the concern about RC's identifying themselves and the receiver to establish authority to the Project 2007-02, Operating Personnel Communications Protocols SDT. The Project 2007-02 team is developing a standard that includes requirements for use of specific communications protocols.

Organization	Yes or No	Question 6 Comment
Northeast Power Coordinating		The SDT did not address all concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be

Organization	Yes or No	Question 6 Comment
Council		<p>confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving as the Transmission Operator or Balancing Authority. It should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, standards should be made clear that the Reliability Directive is directed to another company. In place of requiring an operator, in real-time, to state “this is a Reliability Directive,” there should be an allowance for an entity to develop procedures indicating, in advance, their expectations for three-part communications to their sub-operating entities.</p> <p>Therefore, we suggest modifying R1 to be</p> <p>“When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]”</p> <p><b>Response:</b> COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true:</p> <p style="padding-left: 40px;">“The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”.</p> <p>The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be</p>



Organization	Yes or No	Question 6 Comment
		<p>required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities.</p> <p>Also, the definition of Emergency as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team.</p> <p><b>Response:</b> With respect to the suggestion of modifying the definition of Emergency. The RCSDT believes that the term Emergency relates to the actual state of the system, including local and wide area, while an Adverse Reliability Impact is the impact resulting from an event resulting in instability or cascading that affects a widespread area of an Interconnection. There could be an Emergency that is local, or that threatens equipment but which does not necessarily result in cascading or instability; it is in this regard that the RCSDT believes that the definition of Emergency should not be dependent upon or pertain only to Adverse Reliability Impact events. The RCSDT coordinated the use of Adverse Reliability Impacts with the Real-Time Operations team.</p> <p>There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation that indicates requirements are being move to this standard. Delete the text box.</p> <p><b>Response:</b> We have deleted the text box.</p> <p>Strike IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update.</p> <p><b>Response:</b> The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators. These activities are listed as sub requirements. R1.7 requires you to have a procedure relating to weekly conference calls while R4 requires participation in weekly calls. Further, the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes.</p> <p>With respect to the relation of IRO-14-2 R1.7 and R4. R1.7 is requires you to have a procedure relating to</p>

Organization	Yes or No	Question 6 Comment
		<p>weekly conference calls while R4 requires participation in weekly calls.</p> <p>Requirement R2 in IRO-001 contains the words “which could include issuing Reliability Directives”, but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. These words should be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary.</p> <p><b>Response:</b> R2 requires the Reliability Coordinator to act. These actions could include Reliability Directives in the case of an Emergency; however, issuing Reliability Directives might not always be necessary, as the Reliability Coordinator may be acting proactively well in advance of an emergency. R2 promotes this proactive approach, but reserves the use of Reliability Directives for circumstances that require its use.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>		
PPL		<p>We are providing the following comments for the Standards Drafting Team to consider.</p> <p>1) Consider changing R1 to ‘Each RC shall have the capability for Interpersonal Communications with the following entities to exchange Interconnection and operating information...’ for clarity as Interpersonal Communications and capability are both nouns.</p> <p><b>Response:</b> Thank you for your suggestion to modify the sentence structure into a noun phrase, however the RCSDT believes the current form is unambiguous.</p> <p>2) We feel changing the applicability of the standard is important to the accuracy of the standard. The purpose of COM-002 is ‘To ensure emergency communications between operating personnel are effective’. Since operating personnel are covered by the applicability of RC, BA, TOP and GOP, we suggest the applicability to TSP, LSE, and PSE be removed from COM-002-3.</p> <p><b>Response:</b> We agree and have removed those entities</p> <p>3) Additionally, we would like to bring to the attention of the Standards Drafting Team, that the implementation plan for COM-001-2 and IRO-001-2 still includes TSP, LSE, and PSE although the revised standard does not include these entities in the Applicability Section. For COM-001-2 refer to the implementation plan, page 1. For IRO-001-2 refer to the implementation plan for new R2, new R3, new R4</p>

Organization	Yes or No	Question 6 Comment
		<p>and the chart on the last page. Thank you for your consideration in addressing these comments.</p> <p><b>Response:</b> The RCSDT has revised the applicability of COM-001, COM-002 and IRO-001 to align with each other. TSP, LSE and PSE are no longer in either standard.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>		
PSEG		<p>IRO COM-002-3 standard continues to include PSE. PSE's do not play an active role and have no authority or ability to perform reliability coordination. PSE's should be removed from the standard.-001-2 references PSE's in the implementation for R2, R3, R4 and "Functions that must comply with the requirements in this standard" table. PSE's were removed from the standard and should be removed from the implementation plan.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments. The RCSDT has revised the applicability of COM-001 and COM-002 to align with each other. TSP, LSE and PSE are no longer in either standard.</p>		
Dominion		<p>We do not agree with the addition of weekly conference calls as required in R4. We believe that RCs should schedule calls as needed but do not agree that a weekly scheduled call improves reliability.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments. The requirement for weekly conference calls exists in IRO-015-1. The RCSDT has revised the requirement and incorporated it into proposed IRO-014-2.</p> <p>R2. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Coordinators.</p> <p>R2.1. The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly.</p>		
SERC OC Standards Review Group		<p>Reliability Directives may be issued by blast calls from Reliability Coordinators. It is inefficient and may be a hindrance to reliability to require 3-part communications in these instances.</p> <p><b>Response:</b> The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation.</p> <p>There are several organizations registered as BAs, RCs and TOPs. It is not uncommon for those entities to be distributed across multiple desks in the same control room without regard to how an entity is registered.</p>

Organization	Yes or No	Question 6 Comment
		<p>Thus, a single System Operator may perform functions that are categorized under two or more of those functional entities. The drafting team should clarify that under no circumstances should that System Operator be required to issue a Reliability Directive to himself. This is a corporate governance issue.</p> <p><b>Response:</b> COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true:</p> <p style="padding-left: 40px;">“The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”.</p> <p>The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities.</p> <p>In IRO-014, R1, delete sub-requirement 1.7. The requirement for weekly conference calls related to operating procedures is duplicative to R4 and could be burdensome while adding very little value under certain circumstances. In IRO-014, R4, delete the phrase “(per Requirement 1, Part 1.7)” as a conforming change.</p> <p><b>Response:</b> The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators. These activities are listed as sub requirements. R1.7 requires you to have a procedure relating to weekly conference calls while R4 requires participation in weekly calls. Further, the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes.</p> <p>In IRO-014, Requirements R6-R8 allow at least the theoretical possibility that an RC may determine an Adverse Reliability Impact in another RC’s area that the other RC neither can see nor believes that any</p>

Organization	Yes or No	Question 6 Comment
		<p>action should be taken. R7 puts the burden on the first RC to develop a plan that it cannot implement because it has no agreement with the BAs and TOPs in the other RC area. As such, this requirement is unenforceable.</p> <p><b>Response:</b> Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone's model or processes or procedures. The RC's are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent. R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements.</p> <p>IRO-014-2, Revised R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements.</p> <p>Please review all the implementation plans to be sure the applicable entities match those in the standards.</p> <p><b>Response:</b> These have been updated.</p> <p>"The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>		
<p>IRC Standards Review Committee</p>		<p>The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to</p>

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		<p>their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company.</p> <p><b>Response:</b> COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true:</p> <p style="padding-left: 40px;">“The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”.</p> <p>The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities.</p> <p>We believe that, in place of requiring an operator, in real-time, to state “this is a Reliability Directive,” there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Therefore, we suggest modifying R1 to be</p> <p>“When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]”</p> <p><b>Response:</b> In regards to your suggested modification of R1 to include “or in advance through documented</p>

Organization	Yes or No	Question 6 Comment
		<p>procedures”, the intent of R1 in its current form is to provide that ability, as such any documented procedure would require stating such implemented action is considered a response to a Reliability Directive. And would follow acknowledge and confirmation requirements.</p> <p>Also, we believe that the definition of Emergency, as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team.</p> <p><b>Response:</b> The RCSDT believes that the term Emergency relates to the actual state of the system, including local and wide area, while an Adverse Reliability Impact is the impact resulting from an event resulting in instability or cascading that affects a widespread area of an Interconnection. There could be an Emergency that is local, or that threatens equipment but which does not necessarily result in cascading or instability; it is in this regard that the RCSDT believes that the definition of Emergency should not be dependent upon or pertain only to Adverse Reliability Impact events. The RCSDT coordinated the use of Adverse Reliability Impacts with the Real-Time Operations team.</p> <p>There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard.</p> <p><b>Response:</b> The text box was removed.</p> <p>Please delete the text box. IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update.</p> <p><b>Response:</b> The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators, these activities are listed as sub requirements. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. The relation of IRO-14-2 R1.7 to R4 is that R1.7 requires having a conference call, R4 requires participation by all impacted Reliability Coordinators, as such, neither replaces the other.</p> <p>In the definition of Reliability Directive, we suggest changing “to address an Emergency” to “to address a reliability constraint or a declared Emergency”. The RCSDT believes that reliability constraint is ambiguous and undefined, thus introducing confusion. Further modifying Reliability Directive by including “declared Emergency” would add unnecessary step in mitigation of the Emergency</p>

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		<p>Further, Requirement R2 in IRO-001 contains the words “which could include issuing Reliability Directives” but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest that these words be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary.</p> <p><b>Response:</b> R2 requires the Reliability Coordinator to act, these actions could in include Reliability Directives in the case of an Emergency, however issuing Reliability Directives it might not always be necessary, as the Reliability Coordinator may be acting pro-active well in advance of an emergency. R2 promotes this pro-active approach, but reserves the use of Reliability Directives for circumstances that require its use.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>		
<p>Midwest ISO Standards Collaborators</p>		<p>The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company.</p> <p><b>Response:</b> COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true:</p> <p>“The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-</p>



Organization	Yes or No	Question 6 Comment
		<p>002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”.</p> <p>The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities.</p> <p>We also are concerned about the need to conduct three-part communications for a Reliability Directive issued through a blast call. Under these circumstances, the need for immediate action of multiple parties may require a blast call and there may not be time for all parties to complete three-part communications before initiating actions. Thus, we believe blast calls should be treated separately and that should be made clear.</p> <p><b>Response:</b> The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation.</p> <p>COM-002-3 R2 needs to be rewritten as it is too verbose. The point is for the recipient of the original message to get the issuer to confirm that the message was understood. We suggest rewording R2 to “Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive.” Once the receiver has completed this requirement, the ball is in the issuer’s court per Requirement R3. No additional words are necessary in the requirement.</p> <p><b>Response:</b> The RCSDT believes that the additional verbiage is necessary to ensure that an entity understands the Reliability Directive and is able to communicate that understanding back to the Reliability</p>

Organization	Yes or No	Question 6 Comment
		<p>Coordinator. It is not necessary to repeat the exact same verbiage of the Reliability Directive, but rather the intent of the actions required. Having to repeat verbiage of the Reliability Directive word-for-word could be an impediment to achieving the reliability intent of the Reliability Directive when the focus is on repeating verbatim.</p> <p>Per COM-002-3 R1, who decides that actions need to be issued as a Reliability Directive? Shouldn't it be the responsible entity? Thus, can we assume that if the responsible entity does not identify a communication as a Reliability Directive that it is not a Reliability Directive per the requirement? After all, why would an entity require actions but not issue a Reliability Directive. Following this logic, the VSL for R1 would never apply. Would a compliance auditor second guess if an action required a Reliability Directive?</p> <p><b>Response:</b> Those orders issued as a Reliability Directive, and identified as such, will heighten awareness, tighten communications and require the receiver of the Reliability Directive to prioritize its response. Moreover, linking Reliability Directives to Emergencies establishes that normal non-Emergency operating communications or actions are not applicable to COM-002.</p> <p>Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team.</p> <p><b>Response:</b> The RCSDT coordinated the use of Adverse Reliability Impacts with the Real-Time Operations team</p> <p>There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box.</p> <p><b>Response:</b> The text box has been removed.</p> <p>Please strike part IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update.</p> <p><b>Response:</b> The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted</p>

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		<p>Reliability Coordinators, these activities are listed as sub requirements. R1.7 is requires you to have a procedure relating to weekly conference calls while R4 requires participation in weekly calls. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes.</p> <p>IRO-014-2 R4 is overly broad and would require Reliability Coordinators that will not impact one another to participate on conference calls with one another without any reliability benefit. The issue is created by the addition of the clause “within the same Interconnection” to the requirement. ISO-NE, FRCC, Midwest ISO, and SPP are all in the same Interconnection. It is hard to fathom there being reliability benefit to SPP and ISO-NE conversing weekly or Midwest ISO and FRCC conversing weekly. We suggest limiting the requirement to adjacent Reliability Coordinators.</p> <p><b>Response:</b> IRO-14-2 R4 is applicable to those Reliability Coordinators engaged in activities related to R1 and subsequently R1.7, it is unlikely that Reliability Coordinators whom are geographically and electrically distant will have <i>mutually agreed upon</i> operating procedures (per R1), and as such they are not applicable to R4.</p> <p>For IRO-014-2 R5, we suggest replacing “other” with “impacted” to limit the notification of Adverse Reliability Impacts to only those Reliability Coordinators that need to know. Because the definition of Adverse Reliability Impact includes “Bulk Electric System instability or Cascading”, it is possible that the cascading of 138 kV lines serving a load pocket or generator outlet stability issues could require a Reliability Coordinator to notify all other Reliability Coordinators regardless of impact. This would include Reliability Coordinators outside of the Interconnection with the problem. It would also include Reliability Coordinators that are not impacted. For instance, an issue in New England that would not pose a threat outside the northeast would require ISO-NE to notify SPP and FRCC and Reliability Coordinators in the Western Interconnection. There is no reliability benefit to this notification.</p> <p><b>Response:</b> This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC’s. This is intended to make all RCs aware of ARIs and support situational awareness.</p> <p>IRO-014-2 R6-R8 are problematic and need to be refined to make clear that the Reliability Coordinators shall operate to the most conservative limit. It should not require a Reliability Coordinator that disagrees with an action plan to implement the action plan. The Reliability Coordinator will be disagreeing with the action plan for reliability reasons. Assuming they are correct, the requirement to implement said action plan will actually put the Interconnection at greater risk. These requirements inappropriately attempt to codify the debate and analysis that occurs between and within Reliability Coordinators when there are differing results in reliability</p>

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		<p>analysis. This is part of the problem with having a Wide Area view that results in Reliability Coordinators having a view into other Reliability Coordinator Areas. Their results and conclusions may be different. There should be a hierarchical structure for whose results should be used. It should be the Reliability Coordinator with primary responsibility unless the other Reliability Coordinator has evidence to demonstrate that the Reliability Coordinator with primary responsibility is incorrect. What this should do is to trigger both to review their models and data to assess the problem. None of this needs to be codified in the standards though.</p> <p><b>Response:</b> Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone's model or processes or procedures. The RC's are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent.</p> <p>In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a declared Emergency". This would help limit second guessing for a situation where a System Operator took action because he truly believed he was an Emergency but after the fact analysis demonstrates there really was not an Emergency.</p> <p><b>Response:</b> Modifying Reliability Directive by including "declared Emergency" would add an unnecessary step in mitigation of the Emergency. The act of issuing a Reliability Directive to address an Emergency (per the proposed definition) is sufficient.</p> <p>The drafting team should expand its rationale for deleting IRO-002-1 R3. Currently, TOP-005 R1 is referenced. The Real-Time Operations drafting team proposed to retire TOP-005-2 R1 in its most recent posting.</p> <p><b>Response:</b> The data provisions are covered in recently approved IRO-010-1, R1-R3 which replaced TOP-005-1, R1. The secure network provisions are covered in the CIP body of standards.</p> <p>We disagree with deleting IRO-002-1 R5 and R7 which establish tools and monitoring capabilities. There should be basic tools requirements established for Reliability Coordinators. Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities will be addressing these issues in more detail. Thus, it does not make sense to delete these requirements until that drafting team completes its task.</p> <p><b>Response:</b> Each RC has been certified to continue operations as an RC or been certified prior to beginning operations as an RC. The minimum set of tools and capabilities for an RC are "checked off" during the certification process. The reliability objective of R5 and R7 is to perform analyses to ensure reliability of the</p>

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		<p>BES by specifying capability rather than mandating specific tools. The analysis provisions of R5 and R7 are covered under IRO-008-1, Requirements R1 (perform Operational Planning Analysis) and R2 (perform Real-time Analysis). It is anticipated that Project 2009-02 team will address this issue more fully.</p>
<p>MRO's NERC Standards Review Subcommittee</p>		<p>A. COM-002-3, R2 As stated in FERC Order 693, section 512, it is essential that RCs, BA's and TOP's have communications with DPs. R2 also applies to TSPs, LSEs and PSEs. There is no directive for this and it is going to be almost impossible to communicate with a DP since DPs are usually not operated 24 hours per day as like a RC, TOP, or BA. Many DPs have answering services that will relay a message once they receive it and then pass it along to someone. An answering company could repeat the directive word for word but this will not add to any reliability level. The SDT should reconsider the applicability section of this Standard to only apply to a RC, TOP and BA for the issuance of a Reliability Directive. BA's should have the responsibility to have an Interpersonal Communication medium with DPs in their BA area per COM-001-2.</p> <p><b>Response:</b> The purpose of COM-002 is "To ensure emergency communications between operating personnel are effective." It is not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication, in many cases this may be via a receptionist, or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.</p> <p>B. IRO-002-2, R1, Recommend that "System Operators" be replaced with "system operators" since NERC has defined System Operator to be an individual at a control center (BA, TOP, GOP, or RC). The lower cased system operator will only point to the RC system operator that will have this R1 authority.</p> <p><b>Response:</b> IRO-002-2 is applicable only to Reliability Coordinators, as such the using System Operator as it defined by the NERC Glossary of terms is appropriate.</p> <p>C. The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity</p>

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		<p>coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company.</p> <p><b>Response:</b> COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true:</p> <p style="padding-left: 40px;">“The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”.</p> <p>The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities.</p> <p>D. We also are concerned about the need to conduct three-part communications for a Reliability Directive issued through a blast call. Under these circumstances, the need for immediate action of multiple parties may require a blast call and there may not be time for all parties to complete three-part communications before initiating actions. Thus, we believe blast calls should be treated separately and that should be made clear.</p> <p><b>Response:</b> The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation.</p> <p>E. COM-002-3 R2 needs to be rewritten as it is too verbose. The point is for the recipient of the original message to get the issuer to confirm that the message was understood. We suggest rewording R2 to</p> <p>“Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient</p>

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		<p>of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive.”</p> <p>Once the receiver has completed this requirement, the ball is in the issuer’s court per Requirement R3. No additional words are necessary in the requirement.</p> <p><b>Response:</b> The RCSDT believes that the additional verbiage is necessary to ensure that an entity understands the Reliability Directive and is able to communicate that understanding back to the Reliability Coordinator. It is not necessary to repeat the exact same verbiage of the Reliability Directive, but rather the intent of the actions required. Having to repeat verbiage of the Reliability Directive word-for-word could be an impediment to achieving the reliability intent of the Reliability Directive when the focus is on repeating verbatim.</p> <p>F. Per COM-002-3 R1, who decides that actions need to be issued as a Reliability Directive? Shouldn’t it be the responsible entity? Thus, can we assume that if the responsible entity does not identify a communication as a Reliability Directive that it is not a Reliability Directive per the requirement? After all, why would an entity require actions but not issue a Reliability Directive. Following this logic, the VSL for R1 would never apply. Would a compliance auditor second guess if an action required a Reliability Directive?</p> <p><b>Response:</b> Those orders issued as a Reliability Directive, and identified as such, will heighten awareness, tighten communications and require the receiver of the Reliability Directive to prioritize its response. Moreover, linking Reliability Directives to Emergencies establishes that normal non-Emergency operating communications or actions are not applicable to COM-002.</p> <p>G. Because the Project 2007-03 (“Real-Time Operations SDT”) proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team.</p> <p><b>Response:</b> The RCSDT coordinated the use of Adverse Reliability Impacts with the Real-Time Operations team</p> <p>H. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box.</p> <p><b>Response:</b> The text box has been removed.</p> <p>I. Please strike part IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures,</p>

Organization	Yes or No	Question 6 Comment
		<p>Processes and Plans likely will not need to be discussed weekly as it only requires an annual update.</p> <p><b>Response:</b> The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators, these activities are listed as sub requirements. R1.7 is requires you to have a procedure relating to weekly conference calls while R4 requires participation in weekly calls. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes.</p> <p>J. IRO-014-2 R4 is overly broad and would require Reliability Coordinators that will not impact one another to participate on conference calls with one another without any reliability benefit. The issue is created by the addition of the clause “within the same Interconnection” to the requirement. ISO-NE, FRCC, Midwest ISO, and SPP are all in the same Interconnection. It is hard to fathom there being reliability benefit to SPP and ISO-NE conversing weekly or Midwest ISO and FRCC conversing weekly. We suggest limiting the requirement to adjacent Reliability Coordinators.</p> <p><b>Response:</b> IRO-14-2 R4 is applicable to those Reliability Coordinators engaged in activities related to R1 and subsequently R1.7, it is unlikely that Reliability Coordinators whom are geographically and electrically distant will have <i>mutually agreed upon</i> operating procedures (per R1), and as such they are not applicable to R4.</p> <p>K. For IRO-014-2 R5, we suggest replacing “other” with “impacted” to limit the notification of Adverse Reliability Impacts to only those Reliability Coordinators that need to know. Because the definition of Adverse Reliability Impact includes “Bulk Electric System instability or Cascading”, it is possible that the cascading of 138 kV lines serving a load pocket or generator outlet stability issues could require a Reliability Coordinator to notify all other Reliability Coordinators regardless of impact. This would include Reliability Coordinators outside of the Interconnection with the problem. It would also include Reliability Coordinators that are not impacted. For instance, an issue in New England that would not pose a threat outside the northeast would require ISO-NE to notify SPP and FRCC and Reliability Coordinators in the Western Interconnection. There is no reliability benefit to this notification.</p> <p><b>Response:</b> This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC’s. This is intended to make all RCs aware of ARIs and support situational awareness.</p> <p>L. IRO-014-2 R6-R8 are problematic and need to be refined to make clear that the Reliability Coordinators shall operate to the most conservative limit. It should not require a Reliability Coordinator that disagrees with an action plan to implement the action plan. The Reliability Coordinator will be disagreeing with the action plan for a reliability reasons. Assuming they are correct, the requirement to implement said action plan will actually put the Interconnection at greater risk. These requirements inappropriately attempt to codify the debate and analysis that occurs between and within Reliability Coordinators when there are differing results in reliability analysis. This is part of the problem with having a Wide Area view that results in Reliability Coordinators</p>



Organization	Yes or No	Question 6 Comment
		<p>having a view into other Reliability Coordinator Area. Their results and conclusions may be different. There should be a hierarchical structure for whose results should be used. It should be the Reliability Coordinator with primary responsibility unless the other Reliability Coordinator has evidence to demonstrate that the Reliability Coordinator with primary responsibility is incorrect. What this should do is, to trigger both to review their models and data to assess the problem. None of this needs to be codified in the standards though.</p> <p><b>Response:</b> Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone’s model or processes or procedures. The RC’s are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent.</p> <p>M. In the definition of Reliability Directive, we suggest changing “to address an Emergency” to “to address a declared Emergency”. This would help limit second guessing for a situation where a System Operator took action because he truly believed he was in an Emergency but after the fact analysis demonstrates there really was not an Emergency.</p> <p><b>Response:</b> Modifying Reliability Directive by including “declared Emergency” would add an unnecessary step in mitigation of the Emergency. The act of issuing a Reliability Directive to address an Emergency (per the proposed definition) is sufficient.</p> <p>N. The drafting team should expand its rationale for deleting IRO-002-1 R3. Currently, TOP-005 R1 is referenced. The project 2007-03 (“Real-Time Operations SDT”) proposed to retire TOP-005-2 R1 in its most recent posting.</p> <p><b>Response:</b> The data provisions are covered in recently approved IRO-010-1, R1-R3 which replaced TOP-005-1, R1. The secure network provisions are covered in the CIP body of standards.</p> <p>O. We disagree with deleting IRO-002-1 R5 and R7 which establishes tools and monitoring capabilities. There should be basic tool requirements established for Reliability Coordinators. The project 2009-02 (“Real-time Reliability Monitoring and Analysis Capabilities”) will be addressing these issues in more detail. Thus, it does not make sense to delete these requirements until that drafting team completes its task.</p> <p><b>Response:</b> Each RC has been certified to continue operations as an RC or been certified prior to beginning</p>

Organization	Yes or No	Question 6 Comment
		<p>operations as an RC. The minimum set of tools and capabilities for an RC are “checked off” during the certification process. The reliability objective of R5 and R7 is to perform analyses to ensure reliability of the BES by specifying capability rather than mandating specific tools. The analysis provisions of R5 and R7 are covered under IRO-008-1, Requirements R1 (perform Operational Planning Analysis) and R2 (perform Real-time Analysis). It is anticipated that Project 2009-02 team will address this issue more fully.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>		
FirstEnergy		<p>FirstEnergy offers the following additional comments:</p> <ol style="list-style-type: none"> <li>1. The effective dates of the standards indicate an effective date of the first day of the first calendar quarter following regulatory approval. The changes to these standards will require changes to existing compliance evidence, as well as the creation of compliance evidence for some entities such as the Generator Operator which is a new applicable entity in COM-001. Therefore, to give entities ample time to get their compliance evidence in place, we suggest the effective state “the first day of the second quarter after regulatory approval”.</li> </ol> <p><b>Response:</b> The RCSDT agrees and will change the implementation plan to reflect the “first day of the second quarter after regulatory approval.”</p> <ol style="list-style-type: none"> <li>3. With regard to the requirements for Alternative Interpersonal Communications, we question why the Generator Operator or Distribution Provider is not required to have backup communication. It would be difficult for a Reliability Coordinator, for instance, to contact a Generator Operator whose primary communications have been disabled if that entity does not have a backup. We suggest that the drafting team consider adding the GOP and DP as applicable entities requiring alternative communications.</li> </ol> <p><b>Response:</b> The RCSDT asserts the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Not requiring DP and GOP entities to have Alternative Interpersonal Communication capability meets FERC’s intention as stated here: “We (FERC) clarify that the NOPR did not propose to require redundancy on generator operators’ or distribution providers’ telecommunication facilities...” (Order 693, RM06-16-000, Paragraph 487).</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>		
SPP Standards Development		<p>IRO-001-2, R2 implies that the RC could interrupt the normal chain of command from the TOP and/or BA to their respective GOPs, ICs and DPs thereby circumventing the coordinating process that currently exists. In fact, these entities may not even know their RCs nor be able to identify them and as such any directive from</p>

Organization	Yes or No	Question 6 Comment
		<p>the RC may not be implemented in a timely manner. We would like to see a qualifier on this requirement that does not remove the normal coordination role from the TOP with his DP, etc.</p> <p><b>Response:</b> There may be unusual circumstances whereby the requirement may indeed circumvent the normal coordinating process in the interest of time / reliability. The RC has the ultimate authority with respect to BES reliability.</p> <p>We would suggest that "with enough details that the accuracy of the message has been confirmed" be deleted from COM-002-3, R2.</p> <p><b>Response:</b> The RCSDT believes that the additional verbiage is necessary to ensure that an entity understands the Reliability Directive and is able to communicate that understanding back to the Reliability Coordinator. It is not necessary to repeat the exact same verbiage of the Reliability Directive, but rather the intent of the actions required. Having to repeat verbiage of the Reliability Directive word-for-word could be an impediment to achieving the reliability intent of the Reliability Directive when the focus is on repeating verbatim.</p> <p>We would suggest the use of the term 'instruction" and its derivatives rather than 'direct' in IRO-001-2, R2, R3 and R4.</p> <p><b>Response:</b> This proposed change is stylistic in nature. Stakeholder consensus indicates that this is not an issue for the overwhelming majority of commenters.</p> <p>Delete 'issue an alert to' in IRO-005-4, R1. There are yellow boxes in IRO-005-4, redline versions, which indicate that this standard is being retired, but it isn't because two requirements from IRO-001 are being returned to this standard.</p> <p><b>Response:</b> These are typos and have been corrected as noted.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>		
Kansas City Power & Light		<p>There are more requirements that are being removed in the IRO standards than are currently proposed. It would be helpful if the SDT would consider a mapping of each requirement that is being eliminated and whether the requirement is duplicated elsewhere, moved elsewhere and where, or is deemed not needed would be helpful in judging if the changes are appropriate. Without this mapping it is difficult to fully support all the proposed changes to all these Standards.</p>

Organization	Yes or No	Question 6 Comment
<p><b>Response:</b> The RCSDT thanks you for your comments. The implementation plan contains the requested mapping.</p>		
<p>Competitive Suppliers</p>		<p>EPSA is the trade association for competitive suppliers including both generators and marketers that represent over 700 entities in the NERC compliance registry. As such, the EPSA membership includes members registered as Purchasing Selling Entities (PSE) in each NERC region. Moreover, many of EPSA's members are also registered as LSEs in several regions. In general, EPSA supports the progress made in revising COM-001, COM-002 and IRO-001 in Project 2006-06, particularly the improvements made to the definition of Reliability Directive.</p> <p>However, EPSA also has concerns with some proposed changes to the applicability sections of the revised standards. In addition, EPSA requests that the implementation plans be changed so that they are consistent with the standard.</p> <p>Regarding applicability, EPSA agrees that COM-001 should continue to not apply to Purchasing Selling Entity (PSE) and Load Serving Entity (LSE) functions.</p> <p>However, the implementation plan for COM-001-2 still includes a reference that PSEs and LSEs must comply (page 11 of the implementation plan). Additionally, EPSA supports the removal of LSEs and PSEs from IRO-001-2. Much like the situation with COM-001-2, the implementation plan for IRO-001-2 still includes a reference that LSEs and PSEs must comply (page 11 of the implementation plan). In both the implementation plans for COM-001-2 and IRO-001-2 these references should be removed. For reasons similar to those underlying why COM-001-2 and IRO-001-2 do not apply to PSEs and LSEs, EPSA opposes the addition of PSEs to the COM-002-3 applicability. The purpose of the emergency communications in these standards is "To ensure emergency communications between operating personnel are effective." The removal would recognize that PSEs and LSEs do not play an active role in reliability coordination under this standard since they have no authority, nor ability to assume or perform responsibilities associated with reliability coordination. When a RC, TOP, or BA needs to address an Emergency they do not contact, consult, or direct a PSE to take action to address the Emergency. Reliability is neither improved nor degraded by having these Standards applicable to PSEs or LSEs; therefore, COM-001, COM-002 and IRO-001 need not be applicable to PSEs or LSEs. Thanks to the drafting team members for their effort on revising the Project 2006-06 standards.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p> <p>The RCSDT has removed the PSE and LSE from the COM-001-2 and IRO-001-2 implementation plans.</p> <p>For COM-002, the RCSDT believes that all registered NERC entities engaged in daily operational activities must adhere to requirements related to Reliability</p>		

Organization	Yes or No	Question 6 Comment
<p>Directives. While LSE and PSE's are not engaged in coordination activities, they are engaged in load serving, as well as purchasing and selling activities on a daily basis. These activities could be subject to Reliability Directives, either in the form of load reduction, or schedule curtailments.</p>		
<p>Exelon</p>		<ol style="list-style-type: none"> <li>1. COM-002-2, R2 - Remove the word "recapitulate", feel that "restate or rephrase" is adequate. The word "recapitulate" is not commonly used and is somewhat obscure. <b>Response:</b> The proposed changes are stylistic in nature. The RCSDT included the phrase including "recapitulate" at the suggestion of another stakeholder, and has decided to leave the phrase "restate, rephrase, or recapitulate" intact as suggested by the other stakeholder.</li> <li>2. COM-002-2, R3 - Suggest using the words "repeat back" rather than "state or respond that" to more clearly identify the expectation with more commonly used language. <b>Response:</b> The proposed changes are stylistic in nature. The RCSDT included the phrase including "recapitulate" at the suggestion of another stakeholder, and has decided to leave the phrase "restate, rephrase, or recapitulate" intact as suggested by the other stakeholder.</li> <li>3. IRO-001-2, R3 - While we appreciate that the SDT has defined the term "directive" as a much needed definition, IRC-001-2 R.3 now introduces a new term "direction", what is a "direction" and how does it differ from "directive"? If a new term is going to be introduced it needs to be defined, if the intent was to use the word "directive" then "direction" should be replaced with "directive." <b>Response:</b> The requirement language specifically ties back to Requirement R2 which states that the RC "shall take actions or direct actions, which could include issuing Reliability Directives, ". This is the "direction in accordance with Requirement R2" stated in R3 and the "direction in accordance with Requirement R3" stated in R4.</li> <li>3. IRO-001-2, R4 - Again the term "as directed" is confusing, recommend that the text be changed to align with the term directive, "unable to perform the directive per Requirement R3." <b>Response:</b> The requirement language specifically ties back to Requirement R2 which states that the RC "shall take actions or direct actions, which could include issuing Reliability Directives, ". This is the "direction in accordance with Requirement R2" stated in R3 and the "direction in accordance with Requirement R3" stated in R4.</li> </ol>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>		
<p>PacifiCorp</p>		

Organization	Yes or No	Question 6 Comment
Arizona Public Service Company		
LG&E and KU Energy		<p>1) LG&amp;E/KU suggests that the definitions and related Reliability Standards be edited to provide a clearer understanding of what is required. When used in the requirements of COM-001, the proposed definitions for Interpersonal Communication and Alternative Interpersonal Communication read improperly (i.e., a “medium capability”). This may cause confusion as to what is required by the Applicable entities. Any further use of these terms may cause greater confusion. Suggested Alternative: Interpersonal Communication: Any instance where two or more individuals interact, consult, or exchange information. The definition of “Alternative Interpersonal Communication” would not have to be changed since it is dependent upon the definition of “Interpersonal Communication.”The change of the definitions of Interpersonal Communication and Alternative Interpersonal Communication shifts their focus to the communication itself-the event. This makes the Requirements themselves much clearer since the Requirements focus on the need that entities have the capabilities-the medium. It appears the SDT’s intent is to ensure that the event takes place by requiring that the medium for those events are in place. This is much clearer if there is a distinction between the two (the event and the medium) than if they have similar definitions (a medium and a “medium capability”).</p> <p><b>Response:</b> The RCSDT chose to use “medium” so as to not preclude the use of text, voice, electronic or other technology. The intent of the definition as well as the requirements is to require that functional entities have a means to communicate.</p> <p>2) LG&amp;E/KU question the consistency of the Applicability sections as they pertain to the TSP, LSE and PSE functions between COM-001 and COM-002. The deletion of the TSP, LSE and PSE from COM-001 is supported, but if these entities are not required to establish Interpersonal Communication (or Alternative Interpersonal Communication) capability with reliability entities (RC, BA, TOP), should they still be required to follow the reliability directive process of COM-002? If the probability of issuing a Reliability Directive to a TSP, LSE or PSE is so low that Interpersonal Communications capabilities with reliability entities is not justified under COM-001, why are the TSP, LSE and PSE still held to the</p> <p>3 way communication requirements of COM-002? Suggest the Applicability of COM-002 to TSP, LSE and PSE and associated requirements be deleted.</p> <p><b>Response:</b> The RCSDT has revised the applicability of COM-001 and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>		

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 6 Comment
Southern Company		<p>Comments: It appears that the requirements for entities designated in the IRO standards to have tools to access and/or monitor the system have been moved to pending standards that are not enforceable. It seems that if the newest revisions of the IRO standards are not implemented as a group there will be either missing requirements or duplicate requirements in the IRO standards.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments. The implementation plans note prerequisite approvals that must occur prior to retiring requirements. FERC recently approved IRO-008, 009 and 010. The standards under this project will be filed together with FERC.</p>		
Green Country Energy, Green Country Operating Services		<p>IRO-001-2 as proposed does not include the PSE in the applicability, nor does it require the PSE to respond to a directive. However, COM-002 requires them to repeat the directive back... If the directive is that important to repeat back should they not have to act upon the directive? I think the PSE should be included in IRO-001-2 this standard as they represent and direct generation facility deployment in many cases. Including the PSE in COM-001 may be a good idea too, just for the situations listed above.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments. The RCSDT has revised the applicability of COM-001 and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP.</p>		
Central Lincoln		<p>The stated purpose of COM-002 is:</p> <p>“To ensure emergency communications between operating personnel are effective.” As written, the standard fails to meet this purpose because the three requirements only deal with communications at the entity level. There is no requirement for the directing entity to even try to reach operating personnel at the receiving entity. The directing entity may follow all the requirements of this standard by following R1 and R3 with the receiving entity’s receptionist, answering service, janitor, night watchman, etc. The receiving entity only needs to meet R2, parroting the directive. Again this could be accomplished by anyone with no assurance the directive reaches the operating personnel who can implement it. When we stated a similar objection during the last comment period, The SDT’s answer suggested this was a PER staffing issue, but none of the PER requirements even apply to DP/LSE directive recipients. We suggest the entity issuing the directive should be required to make an attempt to get it to those who are competent to understand and implement the directive. This is not a staffing, training, or credentials issue; it is a performance issue that falls squarely within the stated purpose of this standard.</p> <p>COM-001 R10 presents a paradoxical situation to an entity attempting to comply. Consider an interpersonal communication capability failure that lasts longer than 60 minutes past initial detection. At or before 60 minutes, the affected entity is expected to notify impacted entities. If it has no interpersonal communication capability, how shall it make this notification? And if the entity does manage to make such a notification, it has thereby proven that it does have interpersonal communication capability making such notification</p>

Organization	Yes or No	Question 6 Comment
		<p>unnecessary.</p> <p><b>Response:</b> The DP or GOP has access to additional Interpersonal Communications, in all likelihood, to make notifications for failure. There is not a requirement for an alternative, but it is highly unlikely that someone couldn't use their cell phone to make the notification.</p> <p>We again ask the SDT to consider that not all the entities in the applicability sections of COM-001 and 002 have 24/7 dispatch centers. These are typically smaller entities that were required to register because they exceed 25 MW or were asked in the past to voluntarily provide UFLS. They do not and do not need to continuously communicate with TOPs, BAs, RCs, etc; and a "reliability directive" is a theoretical thing that has never happened during the memories of thirty year employees. The directive issuing entities simply realize the limitations around the receiving entities and work around them. The financial burden on these small entities and their customers to go to 24/7 dispatch will not have a corresponding reliability benefit. And while the two COM standards do not explicitly state that entities must maintain 24/7 dispatch, when all the requirements and definitions and time horizons are taken together 24/7 continuous competent communication is implied. During the last comment period, the SDT suggested this was a registration issue beyond their control. We submit instead that this is a standard applicability question that the SDT does have control over, since it is right there in Section A.4 of the two COM standards. While we appreciate that the SDT is responding to FERC order 693 to include DPs, we note that FERC also stated: Paragraph 487: "We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process." Paragraph 6: "A Reliability Standard may take into account the size of the entity that must comply and the costs of implementation" Paragraph 141: "...the Commission clarifies that it did not intend to ... impose new organizational structures..." Paragraph 31: "We emphasize that we are not, at this time, mandating a particular outcome by way of these directives, but we do expect the ERO to respond with an equivalent alternative and adequate support that fully explains how the alternative produces a result that is as effective as or more effective than the Commission's example or directive. We ask the SDT to exclude DPs, LSEs, and PSEs that do not have 24/7 dispatch centers from the applicability of these two standards in order to meet FERC order 693.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments. There is no requirement for 24/7 support - the requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is "To ensure emergency communications between operating personnel are <u>effective</u>." It is not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication, in many cases this may be via a receptionist, or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.</p>		



Organization	Yes or No	Question 6 Comment
Lakeland Electric		COM-002-3 R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message <b>can be</b> confirmed by the originator. (Replace 'has been' with 'can be' and add 'by the originator' to better fit into the sequence with R3.)
<p><b>Response:</b> The RCSDT thanks you for your comments. The RCSDT agrees with the intent of your comment and has modified R2 as:</p> <p>R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive issued in accordance with Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message is confirmed.</p>		
Manitoba Hydro		-The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. -Clarification required on the VSL for R9 - there appears to be no
<p><b>Response:</b> The RCSDT thanks you for your comment. The data retention periods for the set of standards proposed is consistent with the guidelines provided in the NERC Drafting team Guidelines. Your second comment is incomplete and does not reference specific standard(s) or requirement(s).</p>		
NextEra Energy, Inc.		At this stage in evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. COM-002, IRO-001, IRO-002 and IRO-014 do not meet this threshold. Thus, NextEra has numerous recommended corrections to provide clarity and completeness to these Reliability Standards.COM-002 R1The addition of defined terms for Reliability Directive and Emergency is a very good approach that helps provides clarity. Hence, it is also be appropriate to make the language in the requirement as clear as possible, and not add other implied or unexplained notions. Also, at times, in those regions with markets, it is not always clear whether a requirement to curtail for reliability reasons is being issued pursuant to market rules or from the Reliability Coordinator or Transmission Operator under the Reliability Standards. Therefore, it is also appropriate that the Reliability Coordinator, Transmission Operator, Balancing Authority be required to identify themselves;, and if they fail to identify themselves or fail to use the term Reliability Directive, the registered entity receiving the flawed issuance should not be consider in violation of a Reliability Standard for failing to act. Accordingly, R1 would be clearer and have the same intent, if it stated as follows:"A Reliability Coordinator, Transmission Operator or Balancing Authority have the authority to issue an oral or written Reliability Directive as authorized in [list the specific Reliability Standard requirements such as IRO-001 R8 and TOP-001 R3]. The issuance of an oral of written Reliability Directive,

Organization	Yes or No	Question 6 Comment
		<p>by a Reliability Coordinator, Transmission Operator or Balancing Authority shall: (1) use the term ‘Reliability Directive;’ and (2) identify the issuer of the Reliability Directive as a Reliability Coordinator, Transmission Operator or Balancing Authority. If a Reliability Coordinator, Transmission Operator or Balancing Authority issues an oral or written directive without using the term “Reliability Directive” or failing to identify itself as a Reliability Coordinator, Transmission Operator or Balancing Authority, the registered entity receiving the directive cannot be considered in violation for its failure to act.”</p> <p><b>Response:</b> Only reliability entities can issue Reliability Directives and only reliability entities are held compliant to NERC reliability standards. COM-002, R1 requires the issuer of a Reliability Directive to identify the action as a “Reliability Directive”, it is incumbent on the issuer or receiver to identify themselves in order establish authority, the RCSDT disagrees that identification should be part of the COM-002 standard, however, the RCSDT will pass this concern to Project 2007-02, Operating Personnel Communications Protocols SDT. Furthermore, your suggested revision is a compound requirement, making the requirement indistinct and difficult to measure and in contradiction with SAR. The RCSDT agrees that if an action is not identified as a “Reliability Directive” then the receiving entity cannot be held in violation of failing to follow a Reliability Directive.</p> <p>IRO-001The definition of Adverse Reliability Impacts uses the term “instability.” It is important that this term be technically defined in the same way “Cascading” is defined, otherwise the new requirement is not adding clarity; rather, it is maintaining the ambiguous term “instability” that will likely lead to confusion and debate.</p> <p><b>Response:</b> The RCSDT disagrees that the term “instability” is ambiguous, and further believes the term is understood in the industry. The majority of stakeholder comments do not indicate that the definition is confusing.</p> <p>R1 Similar to the comments set forth with respect to COM-001 (question #1), the term “at least” should be deleted from R1 - it serves no useful purpose from a technical or compliance perspective; instead, it will add unnecessary ambiguity to the requirement.</p> <p><b>Response:</b> The RCSDT agrees and has removed “at least” for IRO-001, R1.</p> <p>R2, as drafted, states:”Each Reliability Coordinator shall take actions or direct actions, which could include issuing oral or written Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse</p>

Organization	Yes or No	Question 6 Comment
		<p>Reliability Impacts. “This long sentence has several significant grammatical errors that result in the reader not being able to discern the meaning of the requirement. It also unnecessarily adds verbiage that detracts from its primary focus. It is, therefore, recommended that R2 be revised as follows:</p> <p>“Each Reliability Coordinator shall take all necessary actions to prevent identified Emergencies or Adverse Reliability Impacts. These Reliability Coordinator actions shall include, to the extent necessary, the issuing of oral or written Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers located within its Reliability Coordinator Area.</p> <p><b>Response:</b> The RCSDT disagrees that the suggested revisions adds clarity, and in fact removes directing actions “to mitigate the magnitude or duration of actual events” which weakens the requirement. Phrases such as “to the extent necessary” and “necessary actions” are not measurable and lead to a more confusing requirement. Stakeholders generally agree with the proposed verbiage of the proposed requirement.</p> <p>“R3, as drafted, is confusing and inconsistent with R2, and, thus, R3 should be revised to read as follows:</p> <p>”Upon receipt of a Reliability Directive issued pursuant to R2, a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall comply with the Reliability Directive, unless compliance would violate safety, equipment, regulatory or statutory requirements. In the event that a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider determines that compliance with a Reliability Directive would violate safety, equipment, regulatory or statutory requirements, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall, within 10 minutes after the determination, inform the Reliability Coordinator of its inability to comply.”</p> <p><b>Response:</b> The RCSDT disagrees with the suggested revision to R3. The revision creates a compound requirement with a specific time requirement. Upon recognition of the inability to perform a directed action, the receiver should immediately inform the Reliability Coordinator. Typically this would be during the original communication of the directive. The suggested 10 minute time is not technically justified and provides no reliability benefit beyond the currently worded requirement and only serves to extend the time before an RC is notified.</p> <p>IRO-002R1 and R2, as written, are confusing. It is recommended that R1 and R2 be combined to read as follows: “Pursuant to a written procedure to mitigate the impact of a Reliability Coordinator’s analysis tool outage, a Reliability Coordinator’s System Operator shall also have the authority to approve, deny or cancel a</p>

Organization	Yes or No	Question 6 Comment
		<p>planned outage for its analysis tool.”</p> <p><b>Response:</b> The suggested revision to IRO-002-2 creates a compound requirement, which is indistinct and difficult to measure and in contradiction with SAR. The SAR for this project directs the team to “Improve clarity of, improve measurability of, and remove ambiguity from the requirement”.</p> <p>IRO-014It is unclear why the terms Operating Procedure, Operating Process or Operating Plan needs to be plural, as currently written in the Standard. Hence, it is recommended that these terms be made singular, otherwise a violation may be inferred for not having more than one Procedure, Process or Plan.</p> <p><b>Response:</b> IRO-014, R1, The RCSDT disagrees with making Procedures, Processes, or Plans non-plural; this could lead to entities being audited on a procedure by procedure basis. In other words, it is meant that the weekly conference calls create an opportunity to discuss all of the Procedures, Processes, or Plans, and to not require a call for each.</p> <p>1.1 Insert the word “applicable” before “Reliability Coordinator.”</p> <p><b>Response:</b> The RCSDT disagrees with the use of applicable, as the 1.1 is subordinate to R1, which notes impacted Reliability Coordinators.</p> <p>2.1, as written, is confusing. Recommend that 2.1 read as follows:</p> <p style="padding-left: 40px;">”Review and update, if an update is necessary, on an annual basis. Annual basis means the review shall be within one month plus or minus that date of the last review.”</p> <p><b>Response:</b> The RCSDT disagrees, and believes the suggested revision is unclear. In its current draft form, the plan or procedure is required to be reviewed every 15 months, if the review indicates that there are no changes required, and then the update would simply be to change the revision date on the published procedure.</p> <p>R3 This requirement uses a very vague term “reliability-related information,” which, also, does not track the language used in R1 -- “information.” It is recommended that R1 and R3 use the same terms and read “. . . information, as defined by the Reliability Coordinator, . . . “</p> <p><b>Response:</b> The RCSDT believes the reference to R1 within R3 clearly is representative of exchange of information related to R1.</p> <p>R4 As stated above, “at least” does not add value, and, therefore, should be deleted.</p>

Organization	Yes or No	Question 6 Comment
		<p><b>Response:</b> The RCSDT disagrees. The inclusion of “at least” allows the calls take place every day or multiple times within a week if desired, and adds flexibility. e.g. if there was scheduled weekly call, however due to system conditions an interim call was held, during this interim call all of the necessary information for the week was exchanged, thus removing the need to the scheduled call, the use of “at least” allows for this kind of flexibility. R4 is applicable to those Reliability Coordinators engaged in activities related to R1 and subsequently R1.7, it is unlikely that Reliability Coordinators whom are geographically and electrically distant will have <i>mutually agreed upon</i> operating procedures (per R1), and as such they are not applicable to R4.</p> <p>R5, as written, is confusing. The recommended fix is to delete “all other” and replace with “impacted”.</p> <p><b>Response:</b> This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC’s. This is intended to make all RCs aware of ARIs and support situational awareness.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>		
United Illuminating Company		<p>Comments: 1. COM-002 R2 seems awkwardly worded.</p> <p>R2. Each [Entity] that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed. " R2 as it is written says the repeat is confirming the accuracy of the message itself. I think it is agreed that the repeat back in R2 is to allow the issuer of the Directive to confirm that the message was received accurately understood by the recipient. I suggest:R2. Each [Entity] that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to allow the Issuer to confirm that the directive recipient accurately understands the Directive"</p> <p><b>Response:</b> The RCSDT agrees with the intent of your comment and has modified COM-002-3, R2 as:</p> <p style="padding-left: 40px;">R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive issued in accordance with Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive.</p> <p>2. The VSL for R2 is severe and states "The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message was confirmed." The purpose of the R2 repeat-back is to allow the Issuer verify the message</p>

Organization	Yes or No	Question 6 Comment
		<p>was accurately received. This VSL penalizes the responsible entity for not accurately receiving the message. The VSL should penalize the refusal of the registered entity to repeat back the message not for receiving the message incorrectly. Suggested rewording: "The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message can be evaluated by the entity issuing the Reliability Directive"3. United Illuminating does agree with the definition of Reliability Directive and Emergency.</p> <p><b>Response:</b> The RCSDT agrees and has revised the VSL to:</p> <p>The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive. <del>with enough details that the accuracy of the message was confirmed.</del></p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>		
<p>Shell Energy North America (US), L.P.</p>		<p>The introduction of the definition of "Reliability Directive" and its connection to the definition of "Emergency" within this Project brings much needed clarity for the sector and will promote consistency between Regional Entities and within the audits of Registered Entities. Shell Energy supports the removal of Purchasing Selling Entities as a function to which IRO-001 applies. This removal recognizes that PSEs do not play a role in reliability coordination under this standard since they have no authorities and no abilities to assume or perform responsibilities associated with reliability coordination. This conclusion is reinforced by the adoption of the defined term "Reliability Directive". Where a RC, TOP, or BA needs to address an Emergency they do not contact, consult, or direct a PSE to take action that would address the Emergency. Rather, where the PSE is a user of the grid to perform or execute transactions, it is subject to the actions of these other entities that have the authority to stop, curtail, or alter the submitted transactions of the PSE in a way that aids in resolving the problem. With the fitting adoption of "Reliability Directive" into COM-002 as well, Shell Energy does not believe it is necessary or appropriate for the applicability of this standard to include Purchasing Selling Entities, as is contained in the current draft proposal. This standard does not apply to PSEs today, however, during the progression of Project 2006-06 this applicability was added to an early draft version that preceded the discussions and clarification that comes from the definition of a Reliability Directive in the standard. Shell Energy does not support the inclusion of PSEs in the current draft version of COM-002, and feels that it should be removed. The purpose of this standard is, "To ensure Emergency communications between operating personnel are effective" and relates directly to the capabilities and authorities established for the RC, TOP, or BA that requires actions to be taken by a recipient of a Reliability Directive. As noted previously, PSEs are acted upon by the entities with the necessary authority, and are not in a role that would initiate or fulfill the required actions. As additional matters related to the clarification and cleanup of the standards in this project, the implementation plans for both IRO-001 and COM-001 erroneously contain references to PSEs in the sections "Functions that Must Comply with the Requirements". These references</p>

Organization	Yes or No	Question 6 Comment
		need to be removed.
<p><b>Response:</b> The RCSDT thanks you for your comments. The applicability of COM-001 and COM-002 were revised to be consistent and only include the RC, TOP, BA, DP and GOP.</p>		
American Electric Power		<p>The language used in COM-002-3 R2 including “with enough details that the accuracy of the message has been confirmed” is subjective and ambiguous.</p> <p><b>Response:</b> The RCSDT agrees with the intent of your comment and has modified COM-002-3, R2 as:</p> <p style="padding-left: 40px;">R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive issued in accordance with Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive.</p> <p>IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling.</p> <p><b>Response:</b> IRO-001 is written so that typical daily operating orders or directives could be used, and also to cover emergency scenarios, but stating the use of Reliability Directives is included. The requirement language specifically ties back to Requirement R2 which states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives, “. This is the “direction in accordance with Requirement R2” stated in R3 and the “direction in accordance with Requirement R3” stated in R4.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>		
American Transmission Company		None

Organization	Yes or No	Question 6 Comment
ISO New England		<p>The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. We believe that, in place of requiring an operator, in real-time, to state “this is a Reliability Directive,” there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Therefore, we suggest modifying R1 to be “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]” Also, we believe that the definition of Emergency, as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. In the definition of Reliability Directive, we suggest changing “to address an Emergency” to “to address a reliability constraint or a declared Emergency”. Further, Requirement R2 in IRO-001 contains the words “which could include issuing Reliability Directives” but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest that these words be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a</p>



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		Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary.
<p><b>Response:</b> The RCSDT thanks you for your comments. See response to MRO above.</p>		
ERCOT ISO		<p>The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. We believe that, in place of requiring an operator, in real-time, to state “this is a Reliability Directive,” there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Therefore, we suggest modifying R1 to be “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]” Also, we believe that the definition of Emergency, as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. In the definition of Reliability Directive, we suggest changing “to address an Emergency” to “to address a reliability constraint or a declared Emergency”. Further, Requirement R2 in IRO-001 contains the words “which could include issuing Reliability Directives” but Reliability Directives</p>

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		<p>are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest that these words be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments. See response to MRO above.</p>		
WECC		<p>Suggested minor revision to the definition of Reliability Directive as follows (change in caps)A communication, IDENTIFIED AS A RELIABILITY DIRECTIVE, initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency. Clearly identifying a communication as a Reliability Directive provides immediate information to the recipient as to the nature of the communications.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments. The RCSDT believes embedding the term in “Reliability Directive” in the definition is a not proper method for defining a term.</p>		
BGE		<p>BGE has no additional comments.</p>
Duke Energy		<p>o COM-002-3 contains the proposed definition “Reliability Directive”. We continue to believe Requirement R1 should be deleted and that this definition should contain the phrase “identified as a Reliability Directive to the recipient”. Otherwise, compliance controversies will arise when auditors second-guess the RC, TOP or BA’s judgment regarding whether or not an abnormal system condition met the definition of “Emergency”, and warranted a “Reliability Directive” with 3-part communication. A conforming change will need to be made to R2, since it refers to R1. This change in the definition of “Reliability Directive” is also needed because this term is used in other standards such as IRO-001-2, and without repeating a similar requirement to COM-002-3 requirement R1 in IRO-001-2, there is potential for confusion.</p> <p><b>Response:</b> The RCSDT disagrees as the suggestion embeds a requirement in a definition. The SDT believes the requirements of COM-002 are clear as written.</p> <p>o We disagree with the VSL for COM-002-3. This is clearly a requirement with two possible compliance failures: Failure to acknowledge a correct repeat-back, and failure to resolve an incorrect repeat-back. These failures have dramatically different consequences, which the drafting team should recognize via a graduated VSL. We think that the failure to acknowledge should either be “Lower” or “Medium”.</p> <p><b>Response:</b> The RCSDT contends that missing the requirement is a binary violation that results in a severe</p>

Organization	Yes or No	Question 6 Comment
		<p>VSL. You are including risk to the BES in your proposal for the VSL. Risk to the BES is captured in VRFs, while VSLs consider the degree to which the entity failed to meet the Requirement.</p> <p>O Requirement R2 of IRO-001-2 is unclear and should be reworded as follows:</p> <p>“Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area) to either prevent identified events that could result in an Adverse Reliability Impact, or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts.”</p> <p><b>Response:</b> The RCSDT believes that the suggested revision does not add further clarity to the requirement.</p> <p>o Various changes have been made to the defined term “Adverse Reliability Impact” as this project has progressed. We believe the latest change should not be made, and the Phrase “uncontrolled separation” should be reinserted in the definition, because that phrase is part of the EAct 2005 legislation definition of “reliable operation”. Here is the text from the legislation: “The term ‘reliable operation’ means operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements.”</p> <p><b>Response:</b> During the last posting of the proposed definition, the RCSDT received the following comment and revised the definition appropriately: “This change is problematic in that any automatic protective element operation that trips a BES element could be construed to be an Adverse Reliability Impact.”. The modification eliminated the phrase “that affects a widespread area of the Interconnection” which clarified the scope of the definition. “Uncontrolled separation” has been deleted from the definition, as it is included in the definition of Cascading.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments. Please see responses above.</p>		
CECD		<p>1. COM-002 R2 states that "the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed." Recommend a change to "the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the desired outcome of the message is clear".</p> <p><b>Response:</b> The RCSDT agrees with the intent of your comment and has modified COM-002-3, R2 as:</p> <p>R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive issued in accordance with Requirement R1, shall repeat, restate,</p>

Organization	Yes or No	Question 6 Comment
		<p>rephrase or recapitulate the Reliability Directive.</p> <p>2. IRO-001 R2 states "Each Reliability Coordinator shall take actions or direct actions which could include issuing Reliability Directives of Transmission Operators, ...." Recommend a change to "Each Reliability Coordinator shall take actions or direct actions which could include issuing Reliability Directives [See COM-002] to Transmission Operators, ..."</p> <p><b>Response:</b> Based on feedback from other stakeholders, the RCSDT believes that the existing verbiage is clear and does not require further revision.</p> <p>3. IRO-001 R4 states entities "shall inform its Reliability Coordinator upon recognition of its inability to perform as directed per Requirement R3." Recommend a change to, entities "shall inform its Reliability Coordinator upon recognition of its inability to perform as directed."</p> <p><b>Response:</b> Based on feedback from other stakeholders, the RCSDT believes that the existing verbiage is clear and does not require further revision.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>		
Indeck Energy Services		
City of Springfield, IL - City Water Light and Power (CWLP)		<p>CWLP generally concurs with and supports comments previously submitted by the SERC Operating Committee where those comments are not in conflict with the specific comments above.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>		
South Carolina Electric and Gas		<p>1. Reliability Directives may be issued by blast calls from Reliability Coordinators. It is inefficient and may be a hindrance to reliability to require 3-part communications in these instances.</p> <p><b>Response:</b> The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation.</p> <p>2. There are several organizations registered as BAs, RCs and TOPs. It is not uncommon for those entities to be distributed across multiple desks in the same control room without regard to how an entity is registered. Thus, a single System Operator may perform functions that are categorized under two or more of those functional entities. The drafting team should clarify that under no circumstances should that System Operator be required to issue a Reliability Directive to himself. This is a corporate governance</p>

Organization	Yes or No	Question 6 Comment
		<p>issue.</p> <p><b>Response:</b> The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities</p> <p>3. In IRO-014, R1, delete sub-requirement 1.7. The requirement for weekly conference calls related to operating procedures is duplicative to R4 and could be burdensome while adding very little value under certain circumstances.</p> <p><b>Response:</b> R1, Part 1.7 requires an entity to address how and when they will hold conference calls in their Operating Plans, Processes or Procedures. R4 requires the participation in those calls.</p> <p>4. In IRO-014, R4, delete the phrase “(per Requirement 1, Part 1.7)” as a conforming change.</p> <p><b>Response:</b> R1, Part 1.7 requires an entity to address how and when they will hold conference calls in their Operating Plans, Processes or Procedures. R4 requires the participation in those calls.</p> <p>5. In IRO-014, Requirements R6-R8 allow at least the theoretical possibility that an RC may determine an Adverse Reliability Impact in another RC’s area that the other RC neither can see nor believes that any action should be taken. R7 puts the burden on the first RC to develop a plan that it cannot implement because it has no agreement with the BAs and TOPs in the other RC area. As such, this requirement is unenforceable.</p> <p><b>Response:</b> You are correct. Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone’s model or processes or procedures. The RC’s are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent.</p> <p>Revised R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements.</p>

Organization	Yes or No	Question 6 Comment
		<p>6. Please review all the implementation plans to be sure the applicable entities match those in the standards.</p> <p><b>Response:</b> We have revised the implementation plans to reflect the appropriate applicability.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>		
<p>Independent Electricity System Operator</p>		<p>1. IRO-001: Reliability Directive: We do not agree with the proposed definition since it addresses Emergencies only. There are situations where a Reliability Directive is issued such that the directed action must be taken by the receiving entity to address a reliability constraint or any condition on the BES which if left unattended could, in the judgment of the issuing entity, lead to an Emergency. These conditions themselves do not constitute an Emergency which is defined as “Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.” There could be no abnormal condition but the actions must nevertheless be taken promptly to prevent the bulk electric system from entering into an abnormal condition. We therefore suggest the term Reliability Directive be revised to: Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address a reliability constraint or an Emergency.</p> <p><b>Response:</b> The RCSDT believes that your comment concerns “directives” or “instructions” for normal operational activities rather than a Reliability Directive. There is no requirement preventing an entity from issuing either directives or instructions for the situations you mention. The intent of creating a Reliability Directive definition is to ensure that communications is tightened during Emergencies (per blackout report). When an RC issues a Reliability Directive, the RC has made a deliberate decision to formally end collaboration and require specific action(s).</p> <p>2. IRO-001, Requirement R2: This requirement contains the words “which could include issuing Reliability Directives” which is not referenced anywhere else in the standard. We do not think this inclusion is necessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest to remove these words. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary. We suggest replacing “identified events” with “anticipated events”. This requirement also lists Interchange Coordinators as one of the recipients of Reliability Directives which is not consistent with the</p>

Organization	Yes or No	Question 6 Comment
		<p>implementation plan.</p> <p><b>Response:</b> R2 requires the Reliability Coordinator to act. These actions could include Reliability Directives in the case of an Emergency. However, issuing Reliability Directives might not always be necessary, as the Reliability Coordinator may be acting proactively well in advance of an emergency. R2 promotes this proactive approach, but reserves the use of Reliability Directives for circumstances that require its use. Your suggested edits are not supported by the majority of stakeholder comments. The Interchange Coordinator has been removed from the standard.</p> <p>3. IRO-014: R4 as written creates unnecessary requirements for an RC to participate in conference calls for issues that may not affect the RC itself. We suggest to reinstate the original word “impacted” as opposed to “other”, and remove the words “within the same Interconnection” since such calls and coordination may be required for RCs on both side of the Interconnection boundary. Same change suggested for R5, i.e. replace “other” with “impacted”.</p> <p><b>Response:</b> The requirement for weekly conference calls exists in IRO-015-1. The RCSDT has revised the requirement and incorporated it into proposed IRO-014-2. IRO-14-2, R4 is applicable to those Reliability Coordinators engaged in activities related to R1 and subsequently R1.7, it is unlikely that Reliability Coordinators that are geographically and electrically distant will have mutually agreed upon operating procedures (per R1), and as such they are not applicable to R4. If RCs in different interconnections have operating procedures (per R1) with each other, then these operating procedures may include specifications for conference calls at least weekly.</p> <p>4. If an entity provides Interpersonal Communication for day-to-day communication using two different media, e.g. radio and telephone, the proposed definition of Alternative Interpersonal Communication suggests that it would not be possible for one medium to be used as the Alternative Interpersonal Communication for the other since the two media are both used every day.</p> <p><b>Response:</b> The intent of AIC is to make sure there is an alternative in case the IC fails. If you have two, you may designate one as the AIC regardless of how often you use it.</p> <p>5. COM-001-2 R10 suggests that the responsible entity must wait for at least 30 minutes before notifying other entities of the failure of its Interpersonal Communication capability. We recommend changing “that lasts 30 minutes” to “that lasts or is expected to last 30 minutes”. This allows responsible entities to start notifying other entities earlier.</p>

Organization	Yes or No	Question 6 Comment
		<p><b>Response:</b> The requirement is written such that an outer bound is set for notifications. An entity does not have to wait and can begin notifications immediately if it knows that an outage will last more than 30 minutes.</p> <p>6. In IRO-005-4 R1: Delete “notify”.</p> <p><b>Response:</b> The phrase “issue an alert” was removed in the redline version but was not removed from the clean version. This was corrected.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments.</p>		



## Standard Development Roadmap

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

### Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 3, 2010.
11. Initial Ballot conducted February 25 through March 7, 2011.

### Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the initial ballot. The team is posting for a successive ballot.

### Future Development Plan:

Anticipated Actions	Anticipated Date
1. Post Standards for a successive ballot.	January-February 2012
2. Respond to comments on Successive ballot	March - April 2012
3. Standards posted for recirculation ballot	May 2012

4. Standards to be sent to BOT for approval.	June 2012
5. Standards filed with regulatory authorities.	August 2012

### **Definitions of Terms Used in Standard**

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

**Interpersonal Communication:** Any medium that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communications used for day-to-day operation.

## A. Introduction

1. **Title:** **Communications**
2. **Number:** COM-001-2
3. **Purpose:** To establish Interpersonal Communication capabilities for the exchange of Interconnection and operating information necessary to maintain reliability.
4. **Applicability:**
  - 4.1. Transmission Operator
  - 4.2. Balancing Authority
  - 4.3. Reliability Coordinator
  - 4.4. Distribution Provider
  - 4.5. Generator Operator
5. **Effective Date:** The first day of the second calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption.

## B. Requirements

- R1. Each Reliability Coordinator shall have Interpersonal Communications capability with the following entities: *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*
  - R1.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.
  - R1.2. Adjacent Reliability Coordinators within the same Interconnection.
- R2. Each Reliability Coordinator shall designate an Alternative Interpersonal Communications capability with the following entities: *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*
  - R2.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.
  - R2.2. Adjacent Reliability Coordinators within the same Interconnection.
- R3. Each Transmission Operator shall have Interpersonal Communications capability with the following entities: *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*
  - R3.1. Its Reliability Coordinator.
  - R3.2. Each Balancing Authority within its Transmission Operator Area.
  - R3.3. Each Distribution Provider within its Transmission Operator Area.
  - R3.4. Each Generator Operator within its Transmission Operator Area.
  - R3.5. Adjacent Transmission Operators synchronously connected within the same Interconnection.

- R4.** Each Transmission Operator shall designate an Alternative Interpersonal Communications capability with the following entities: [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]
- R4.1.** Its Reliability Coordinator.
  - R4.2.** Each Balancing Authority within its Transmission Operator Area.
  - R4.3.** Adjacent Transmission Operators synchronously connected within the same Interconnection.
- R5.** Each Balancing Authority shall have Interpersonal Communications capability with the following entities: [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]
- R5.1.** Its Reliability Coordinator.
  - R5.2.** Each Transmission Operator that operates Facilities within its Balancing Authority Area.
  - R5.3.** Each Distribution Provider within its Balancing Authority Area.
  - R5.4.** Each Generator Operator that operates Facilities within its Balancing Authority Area.
  - R5.5.** Adjacent Balancing Authorities.
- R6.** Each Balancing Authority shall designate an Alternative Interpersonal Communications capability with the following entities: [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]
- R6.1.** Its Reliability Coordinator.
  - R6.2.** Each Transmission Operator that operates Facilities within its Balancing Authority Area).
  - R6.3.** Adjacent Balancing Authorities.
- R7.** Each Distribution Provider shall have Interpersonal Communications capability with the following entities: [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]
- R7.1.** Its Transmission Operator.
  - R7.2.** Its Balancing Authority.
- R8.** Each Generator Operator shall have Interpersonal Communications capability with the following entities: [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]
- R8.1.** Its Balancing Authority.
  - R8.2.** Its Transmission Operator.
- R9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communications capability at least once per calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or

designate a replacement Alternative Interpersonal Communications capability within 2 hours. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]*

**R10.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]*

**R11.** Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time for the restoration of Interpersonal Communication capability. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]*

### C. Measures

**M1.** Each Reliability Coordinator shall have and provide upon request evidence that it has Interpersonal Communications capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with adjacent Reliability Coordinators within the same Interconnection. Evidence could include, but is not limited to:

- physical assets
- dated equipment specifications and installation documentation
- dated test records
- dated operator logs
- dated and time-stamped voice recordings or dated and time-stamped transcripts of voice recordings
- electronic communications
- or equivalent evidence. (R1.)

**M2.** Each Reliability Coordinator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communications capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with adjacent Reliability Coordinators within the same Interconnection. Evidence could include, but is not limited to

- physical assets
- dated equipment specifications and installation documentation
- dated test records
- dated operator logs
- dated and time-stamped voice recordings or dated and time-stamped transcripts of voice recordings
- electronic communications

- or equivalent evidence. (R2.)
- M3.** Each Transmission Operator shall have and provide upon request evidence that it has Interpersonal Communications capability with its Reliability Coordinator, and within its Transmission Operator Area each Balancing Authority, Distribution Provider and Generator Operator. Evidence could include, but is not limited to
- physical assets
  - dated equipment specifications and installation documentation
  - dated test records
  - dated operator logs
  - dated and time-stamped voice recordings or dated and time-stamped transcripts of voice recordings,
  - electronic communications
  - or equivalent evidence. (R3.)
- M4.** Each Transmission Operator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communications capability with its Reliability Coordinator and with each Balancing Authority within its Transmission Operator Area and adjacent Transmission Operators synchronously connected within the same Interconnection. Evidence could include, but is not limited to
- physical assets
  - dated equipment specifications and installation documentation
  - dated test records
  - dated operator logs
  - dated and time-stamped voice recordings or dated and time-stamped transcripts of voice recordings
  - electronic communications
  - or equivalent evidence. (R4.)
- M5.** Each Balancing Authority shall have and provide upon request evidence that it has Interpersonal Communications capability with its Reliability Coordinator, each Transmission Operator that operates Facilities within its Balancing Authority Area, each Distribution Provider within its Balancing Authority Area, each Generator Operator that operates Facilities within its Balancing Authority Area, and each adjacent Balancing Authority. Evidence could include, but is not limited to
- physical assets
  - dated equipment specifications and installation documentation
  - dated test records
  - dated operator logs

- dated and time-stamped voice recordings or dated and time-stamped transcripts of voice recordings
  - electronic communications
  - or equivalent evidence . (R5)
- M6.** Each Balancing Authority shall have and provide upon request evidence that it designated an Alternative Interpersonal Communications capability with its Reliability Coordinator, each Transmission Operator that operates Facilities within its Balancing Authority Area, and adjacent Balancing Authorities. Evidence could include, but is not limited to
- physical assets
  - dated equipment specifications and installation documentation
  - dated test records
  - dated operator logs
  - dated and time-stamped voice recordings or dated and time-stamped transcripts of voice recordings
  - electronic communications
  - or equivalent evidence (R6)
- M7.** Each Distribution Provider shall have and provide upon request evidence that that it has Interpersonal Communications capability with its Transmission Operator and its Balancing Authority. Evidence could include, but is not limited to
- physical assets
  - dated equipment specifications and installation documentation
  - dated test records
  - dated operator logs
  - dated and time-stamped voice recordings or dated and time-stamped transcripts of voice recordings
  - electronic communications
  - or equivalent evidence (R7)
- M8.** Each Generator Operator shall have and provide upon request evidence that that it has Interpersonal Communications capability with its Balancing Authority and its Transmission Operator. Evidence could include, but is not limited to
- physical assets
  - dated equipment specifications and installation documentation
  - dated test records
  - dated operator logs



- dated and time-stamped voice recordings or dated and time-stamped transcripts of voice recordings
  - electronic communications
  - or equivalent evidence (R8)
- M9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it tested, at least on a monthly basis, its Alternative Interpersonal Communications capabilities designated in R2, R4 or R6. If the test was unsuccessful, the entity shall have and provide upon request evidence that it initiated action to repair or designated a replacement Alternative Interpersonal Communications capability within 2 hours. Evidence could include, but is not limited to dated test records, dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R9.)
- M10.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it notified impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.)
- M11.** Each Distribution Provider and Generator Operator shall have and provide upon request evidence that it consulted with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R11.)
- M12.**

## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance Enforcement Authority**

For entities that do not work for the Regional Entity, the Regional Entity shall serve as the Compliance Enforcement Authority.

For Reliability Coordinators that work for their Regional Entity, the ERO or a Regional Entity approved by the ERO and FERC or other applicable governmental authorities shall serve as the Compliance Enforcement Authority.

#### **1.2. Compliance Monitoring and Enforcement Processes**

Compliance Audit

Self-Certification

Spot Checking

Compliance Violation Investigation

Self-Reporting

Complaint

### **1.3. Data Retention**

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

The Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- Each Reliability Coordinator shall keep the most recent twelve months of historical data (evidence) for Requirements R1, R2, R9 and R10, Measures M1, M2, M9, and M10.
- Each Transmission Operator shall keep the most recent twelve months of historical data (evidence) for Requirements R3, R4, R9 and R10, Measures M3, M4, M9 and M10.
- Each Balancing Authority shall keep the most recent twelve months of historical data (evidence) for Requirements R5, R6, R9, and R10, Measures M5, M6, M9, and M10.
- Each Distribution Provider shall keep the most recent twelve months of historical data (evidence) for Requirements R7 and R11, Measures M7 and M11.
- Each Generator Operator shall keep the most recent twelve months of historical data (evidence) for Requirements R8 and R11, Measures M8 and M11.

If a Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider or Generator Operator is found non-compliant with a requirement, it shall keep information related to the noncompliance until the Compliance Enforcement Authority finds it compliant or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

### **1.4. Additional Compliance Information**

None

**2. Violation Severity Levels**

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	N/A	The Reliability Coordinator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 1.1 or 1.2.
R2	N/A	N/A	N/A	The Reliability Coordinator failed to designate Alternative Interpersonal Communications capability with one or more of the entities listed in Parts 2.1 or 2.2.
R3	N/A	N/A	N/A	The Transmission Operator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 3.1, 3.2, 3.3, 3.4, or 3.5.
R4	N/A	N/A	N/A	The Transmission Operator failed to designate Alternative Interpersonal Communications capability with one or more of the entities listed in Parts 4.1 or 4.2.
R5	N/A	N/A	N/A	The Balancing Authority failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 5.1, 5.2, 5.3, 5.4 or 5.5.
R6	N/A	N/A	N/A	The Balancing Authority failed to designate Alternative Interpersonal Communications capability with one or more of the entities listed in Parts

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
				6.1, 6.2 or 6.3.
R7	N/A	N/A	N/A	The Distribution Provider failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 7.1 or 7.2.
R8	N/A	N/A	N/A	The Generator Operator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 8.1 or 8.2.
R9	The responsible entity tested the Alternative Interpersonal Communications capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications in more than 2 hours and less than or equal to 4 hours.	The responsible entity tested the Alternative Interpersonal Communications capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications in more than 4 hours and less than or equal to 6 hours.	The responsible entity tested the Alternative Interpersonal Communications capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications in more than 6 hours and less than or equal to 8 hours.	The responsible entity failed to test the Alternative Interpersonal Communications capability on at least a monthly basis.  OR The responsible entity tested the Alternative Interpersonal Communications capability and identified a problem but didn't initiate action to repair or designate a replacement Alternative Interpersonal Communications in more than 8 hours.
R10	The responsible entity failed to notify the impacted entities in more than 60 minutes but less than or equal to 70 minutes.	The responsible entity failed to notify the impacted entities in more than 70 minutes but less than or equal to 80 minutes.  OR The responsible entity notified at least one, but not all, impacted entities of the failure of its	The responsible entity failed to notify the impacted entities in more than 80 minutes but less than or equal to 90 minutes.	The responsible entity failed to notify the impacted entities in more than 90 minutes.  OR The responsible entity failed to notify any impacted entities of the failure of its Interpersonal Communications capabilities.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
		Interpersonal Communications capabilities within 60 minutes.		
R11	N/A	N/A	N/A	The responsible entity failed to consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.

**E. Regional Differences**

None identified.

**F. Associated Documents****Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
2	TBD	Revised per SAR for Project 2006-06, RC SDT	Revised

## Standard Development Roadmap

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

### Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
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8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 3, 2010.

11. Initial Ballot conducted February 25 through March 7, 2011.

### Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the ~~third draft~~ initial ballot. The team is posting for a ~~30 day pre-successive ballot review~~.

### Future Development Plan:

Anticipated Actions	Anticipated Date
1. <del>Respond to comments on third posting</del> <u>Post Standards for a successive ballot.</u>	<del>March 2010</del> <u>January-February 2012</u>
2. <del>Post Standards for pre-</del> <u>Respond to comments on Successive</u> ballot period.	<del>January 2011</del> <u>March - April 2012</u>

3. Standards posted for <del>initial and</del> recirculation <del>ballots</del> . <u>ballot</u>	<del>February 2011</del> <u>May 2012</u>
4. Standards <u>to be</u> sent to BOT for approval.	<del>March 2011</del> <u>June 2012</u>
5. Standards filed with regulatory authorities.	<del>June 2011</del> <u>August 2012</u>



### Definitions of Terms Used in Standard

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

**Interpersonal Communication:** Any ~~medium~~method~~medium~~ that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any ~~method~~ Interpersonal Communication that is able to serve as a substitute for, and ~~is redundant to normal Interpersonal Communication and~~ does not utilize the same infrastructure (medium) as, ~~normal~~ Interpersonal Communications used for day-to-day operation.

## A. Introduction

1. **Title:** Communications
2. **Number:** COM-001-2
3. **Purpose:** To ~~ensure that operating entities have adequate~~establish Interpersonal Communication capabilities for the exchange of Interconnection and operating information necessary to maintain reliability.
4. **Applicability:**
  - 4.1. Transmission ~~Operators.~~Operator
  - 4.2. Balancing ~~Authorities.~~Authority
  - 4.3. Reliability ~~Coordinators.~~Coordinator
  - 4.4. Distribution ~~Providers.~~Provider
  - 4.5. Generator ~~Operators.~~Operator
5. **Effective Date:** The first day of the ~~first~~second calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption.

## B. Requirements

- ~~**R1.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. [Violation Risk Factor: High][Time Horizon: Real-time Operations]~~
- R1.** Each Reliability Coordinator shall have Interpersonal Communications capability with the following entities ~~to exchange Interconnection and operating information:~~  
[Violation Risk Factor: High][Time Horizon: Real-time Operations]:]
- R1.1.** All Transmission Operators, and Balancing Authorities ~~and Interchange Coordinators~~ within its Reliability Coordinator Area.
- R1.2.** Adjacent Reliability Coordinators within the same Interconnection.
- R2.** Each Reliability Coordinator shall designate an Alternative Interpersonal Communications capability with the following entities ~~to exchange Interconnection and operating information:~~ [Violation Risk Factor: High][Time Horizon: Real-time Operations]:]
- R2.1.** All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.
- R2.2.** Adjacent Reliability Coordinators within the same Interconnection.

- R3.** Each Transmission Operator shall have Interpersonal Communications capability with the following entities ~~to exchange Interconnection and operating information;~~ *[Violation Risk Factor: High][Time Horizon: Real-time Operations]:]*
- R3.1.** Its Reliability Coordinator.
  - R3.2.** Each Balancing Authority within its Transmission Operator Area.
  - R3.3.** Each Distribution Provider within its Transmission Operator Area.
  - R3.4.** Each Generator Operator within its Transmission Operator Area.
  - R3.5.** Adjacent Transmission Operators synchronously connected within the same Interconnection.
- R4.** Each Transmission Operator shall designate an Alternative Interpersonal Communications capability with the following entities ~~to exchange Interconnection and operating information;~~ *[Violation Risk Factor: High][Time Horizon: Real-time Operations]:]*
- R4.1.** Its Reliability Coordinator.
  - R4.2.** Each Balancing Authority within its Transmission Operator Area.
  - R4.3.** Adjacent Transmission Operators synchronously connected within the same Interconnection.
- R5.** Each Balancing Authority shall have Interpersonal Communications capability with the following entities ~~to exchange Interconnection and operating information;~~ *[Violation Risk Factor: High][Time Horizon: Real-time Operations]:]*
- R5.1.** Its Reliability Coordinator.
  - R5.2.** Each Transmission Operator that operates Facilities within its Balancing Authority Area.
  - R5.3.** Each Distribution Provider within its Balancing Authority Area.
  - R5.4.** Each Generator Operator that operates Facilities within its Balancing Authority Area.
  - ~~**R5.5.** Each Interchange Coordinator within its Balancing Authority area as well as adjacent Interchange Coordinators.~~
  - R5.5.** Adjacent Balancing Authorities.
- R6.** Each Balancing Authority shall designate an Alternative Interpersonal Communications capability with the following entities ~~to exchange Interconnection and operating information;~~ *[Violation Risk Factor: High][Time Horizon: Real-time Operations]:]*
- R6.1.** Its Reliability Coordinator.
  - R6.2.** Each Transmission Operator that operates Facilities within its Balancing Authority Area).
  - R6.3.** Adjacent Balancing Authorities.

- R7.** Each Distribution Provider shall have Interpersonal Communications capability with the following entities ~~to exchange Interconnection and operating information;~~ *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*
- R7.1.** Its Transmission Operator.
- R7.2.** Its Balancing Authority.
- R8.** Each Generator Operator shall have Interpersonal Communications capability with the following entities ~~to exchange Interconnection and operating information;~~ *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*
- R8.1.** ~~Its Balancing Authority.~~
- R8.2.** Its Transmission Operator.
- R9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall; ~~on at least a monthly basis;~~ test its Alternative Interpersonal Communications capability; at least once per calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications capability within 2 hours. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]*
- R10.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority; ~~Distribution Provider, and Generator Operator~~ shall notify ~~impacted~~ entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]*
- R11.** ~~Unless dictated by law or otherwise agreed to, each Reliability Coordinator, Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator; or Balancing Authority; Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity and Distribution Provider shall use English as the language applicable to determine a mutually agreeable time for communications between functional entities. the restoration of Interpersonal Communication capability.~~ *[Violation Risk Factor: Medium]++[Time Horizon: -Real-time Operations]* ~~[SCH]~~

### C. Measures

- M1.** Each Reliability Coordinator; ~~Transmission Operator, and Balancing Authority~~ shall have and provide upon request evidence that it has Interpersonal Communications capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with adjacent Reliability Coordinators within the same Interconnection. Evidence could include, but is not limited to:
- physical assets
  - dated equipment specifications and installation documentation
  - dated test records;
  - dated operator logs;

- dated and time-stamped voice recordings or dated and time-stamped transcripts of voice recordings;
- electronic communications;

~~M1.~~ \_\_\_\_\_ or equivalent, ~~that it identified and tested, on a quarterly basis, alternative Interpersonal Communications capabilities used for communicating real-time operating information. If the test was unsuccessful, the entity shall have and provide upon request evidence that it took action within 60 minutes to restore the identified alternative or identified a substitute Interpersonal Communications capability.~~ (R1.)

~~M1.~~ ~~Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated and timestamped voice recordings or dated and timestamped transcripts of voice recordings, electronic communications, or equivalent, that it has Interpersonal Communications capability with all Transmission Operators, Balancing Authorities and Interchange Coordinators within its Reliability Coordinator Area and with adjacent Reliability Coordinators within the same Interconnection.~~ (R1.)

~~M1.~~ M2. \_\_\_\_\_ Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated and timestamped voice recordings or dated and timestamped transcripts of voice recordings, electronic communications, or equivalent. Each Reliability Coordinator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communications capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with adjacent Reliability Coordinators within the same Interconnection. ~~(R2.)~~ Evidence could include, but is not limited to

- ~~Each Transmission Operator shall have and provide upon request evidence that could include, but is not limited to~~ physical assets;
- dated equipment specifications and installation documentation;
- dated test records;
- dated operator logs;
- dated and ~~timestamped~~ time-stamped voice recordings or dated and ~~timestamped~~ time-stamped transcripts of voice recordings;
- electronic communications;
- or equivalent; evidence. (R2.)

~~M2.~~ M3. \_\_\_\_\_ Each Transmission Operator shall have and provide upon request evidence that it has ~~a~~ Interpersonal Communications capability with its Reliability Coordinator, ~~with each Balancing Authority and each Distribution Provider and each Generator Operator and~~ within its Transmission Operator Area. ~~(R3.)~~ each Balancing

Authority, Distribution Provider and Generator Operator. Evidence could include, but is not limited to

- ~~Each Transmission Operator shall have and provide upon request evidence that could include, but is not limited to~~ physical assets;
- dated equipment specifications and installation documentation;
- dated test records;
- dated operator logs;
- dated and time-stamped voice recordings or dated and time-stamped transcripts of voice recordings,
- electronic communications;
- or equivalent, ~~that evidence.~~ (R3.)

~~M3.~~M4. Each Transmission Operator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communications capability with its Reliability Coordinator, and with each Balancing Authority within its Transmission Operator Area. ~~(R4.) and adjacent Transmission Operators synchronously connected within the same Interconnection. Evidence could include, but is not limited to~~

- ~~Each Balancing Authority shall have and provide upon request evidence that could include, but is not limited to~~ physical assets;
- dated equipment specifications and installation documentation;
- dated test records;
- dated operator logs;
- dated and time-stamped voice recordings or dated and time-stamped transcripts of voice recordings;
- electronic communications;
- or equivalent, ~~evidence.~~ (R4.)

M5. Each Balancing Authority shall have and provide upon request evidence that it has Interpersonal Communications capability with its Reliability Coordinator, each Transmission Operator that operates Facilities within its Balancing Authority Area, each Distribution Provider within its Balancing Authority Area, each Generator Operator that operates Facilities within its Balancing Authority Area, and each adjacent Balancing Authority. Evidence could include, but is not limited to

- physical assets
- dated equipment specifications and installation documentation
- dated test records
- dated operator logs

- dated and time-stamped voice recordings or dated and time-stamped transcripts of voice recordings
- electronic communications
- or equivalent evidence . (R5)

~~M4.M6.~~ Each Balancing Authority shall have and provide upon request evidence that it designated an Alternative Interpersonal Communications capability with its Reliability Coordinator, each Transmission Operator that operates Facilities within its Balancing Authority Area, and each Generator Operator that operates Facilities within its Balancing Authority Area and each Distribution Provider within its Balancing Authority Area, and each Interchange Coordinator within its Balancing Authority area as well as adjacent Interchange Coordinators. (R5)adjacent Balancing Authorities. Evidence could include, but is not limited to

- ~~Each Balancing Authority shall have and provide upon request evidence that could include, but is not limited to~~ physical assets;
- dated equipment specifications and installation documentation;
- dated test records;
- dated operator logs;
- dated and time-stamped voice recordings or dated and time-stamped transcripts of voice recordings;
- electronic communications;

~~M5.~~• \_\_\_\_\_ or equivalent, that it designated an Alternative Interpersonal Communications capability with its Reliability Coordinator and each Transmission Operator that operates Facilities within its Balancing Authority Area. evidence (R6)

~~M6.M7.~~ Each Distribution Provider shall have and provide upon request evidence that ~~could include, but is not limited to physical assets, dated equipment specifications and installation documentation, dated test records, dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent,~~ that it has Interpersonal Communications capability with its Transmission Operator and its Balancing Authority. (R7) Evidence could include, but is not limited to

- ~~Each Generator Operator shall have and provide upon request evidence that could include, but is not limited to~~ physical assets;
- dated equipment specifications and installation documentation;
- dated test records;
- dated operator logs;
- dated and time-stamped voice recordings or dated and time-stamped transcripts of voice recordings;

- electronic communications;
- or equivalent; evidence (R7)

~~M7.~~M8. Each Generator Operator shall have and provide upon request evidence that that it has Interpersonal Communications capability with its Balancing Authority and its Transmission Operator. ~~(R8)~~ Evidence could include, but is not limited to

- ~~Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to~~ physical assets
- dated equipment specifications and installation documentation
- dated test records;
- dated operator logs;
- dated and time-stamped voice recordings or dated and time-stamped transcripts of voice recordings;
- electronic communications;
- or equivalent; that evidence (R8)

~~M8.~~M9. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it tested, at least on a monthly basis, its Alternative Interpersonal Communications capabilities designated in R2, R4 or R6. If the test was unsuccessful, the entity shall have and provide upon request evidence that it initiated action to repair or designated a replacement Alternative Interpersonal Communications ~~within 2 hours; capability within 2 hours.~~ Evidence could include, but is not limited to dated test records, dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R9.)

M10. Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.)

~~M9.~~M11. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that it consulted with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent, ~~it notified impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer.~~ (R10 evidence. (R11.)

M12.



## D. Compliance

### 1. Compliance Monitoring Process

#### 1.1. Compliance Enforcement Authority

##### ~~Regional Entity~~

For entities that do not work for the Regional Entity, the Regional Entity shall serve as the Compliance Enforcement Authority.

For Reliability Coordinators that work for their Regional Entity, the ERO or a Regional Entity approved by the ERO and FERC or other applicable governmental authorities shall serve as the Compliance Enforcement Authority.

#### 1.2. Compliance Monitoring and Enforcement Processes

Compliance ~~Audits~~Audit

Self-~~Certifications~~Certification

Spot Checking

Compliance Violation ~~Investigations~~Investigation

Self-Reporting

~~Complaints~~

Complaint

#### 1.3. Data Retention

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

The Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o Each Reliability Coordinator, shall keep the most recent twelve months of historical data (evidence) for Requirements R1, R2, R9 and R10, Measures M1, M2, M9, and M10.
- o Each Transmission Operator, and shall keep the most recent twelve months of historical data (evidence) for Requirements R3, R4, R9 and R10, Measures M3, M4, M9 and M10.
- o Each Balancing Authority shall keep the most recent twelve months of historical data (evidence) for Requirements ~~R1, R2, R3, R4,~~ R5, R6, R9,

and R10, Measures ~~M1, M2, M3, M4~~, M5, M6, M9, and M10 ~~as applicable.~~

- Each Distribution Provider shall keep the most recent twelve months of historical data (evidence) for Requirements R7 and ~~R10~~R11, Measures M7 and ~~M10~~M11.
- Each Generator Operator shall keep the most recent twelve months of historical data (evidence) for Requirements R8 and ~~R10~~R11, Measures M8 and ~~M10~~M11.

If a Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider or Generator Operator is found non-compliant with a requirement, it shall keep information related to the noncompliance until the Compliance Enforcement Authority finds it compliant or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

#### **1.4. Additional Compliance Information**

None

**2. Violation Severity Levels**

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R4	<del>The responsible entity tested Alternative Interpersonal Communications capability but failed to take action within 60 minutes to restore the identified alternative</del>  OR <del>Failed to identify a substitute Alternative Interpersonal Communications capability</del>	N/A	N/A	<del>The responsible entity failed to test its Alternative Interpersonal Communications capability on a quarterly basis.</del>
R1	N/A	N/A	N/A	The Reliability Coordinator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 1.1 or 1.2.
R2	N/A	N/A	N/A	The Reliability Coordinator failed to designate Alternative Interpersonal Communications capability with one or more of the entities listed in Parts 2.1 or 2.2.
R3	N/A	N/A	N/A	The Transmission Operator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 3.1, 3.2, 3.3, <del>3.4</del> , or 3.45.
R4	N/A	N/A	N/A	The Transmission Operator failed to designate Alternative Interpersonal Communications capability with one or more of the entities listed in Parts 4.1 or 4.2.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R5	N/A	N/A	N/A	The Balancing Authority failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 5.1, 5.2, 5.3, 5.4 or 5.5.
R6	N/A	N/A	N/A	The Balancing Authority failed to designate Alternative Interpersonal Communications capability with one or more of the entities listed in Parts 6.1, <u>6.2</u> or <u>6.23</u> .
R7	N/A	N/A	N/A	The Distribution Provider failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 7.1 or 7.2.
R8	N/A	N/A	N/A	The Generator Operator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 8.1 or 8.2.
R9	The responsible entity tested the Alternative Interpersonal Communications capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications <u>within more than 2 hours and less than or equal to 4 hours.</u>	The responsible entity tested the Alternative Interpersonal Communications capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications <del>within 42 hours</del> <u>in more than 4 hours and less than or equal to 6 hours.</u>	The responsible entity tested the Alternative Interpersonal Communications capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications <del>within 24 hours</del> <u>in more than 6 hours and less than or equal to 8 hours.</u>	The responsible entity failed to test the Alternative Interpersonal Communications capability on at least a monthly basis.  OR The responsible entity tested the Alternative Interpersonal Communications capability and identified a problem but didn't initiate action to repair or designate a replacement Alternative Interpersonal Communications <del>within 2</del> <u>in more than</u>

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R10	<p>The responsible entity failed to notify the impacted entities in more than 60 minutes but less than or equal to 70 minutes.</p>	<p><del>The responsible entity notified at least one, but not all, impacted entities of the failure of its normal Interpersonal Communications capabilities within 60 minutes.</del></p> <p>OR</p> <p>The responsible entity failed to notify the impacted entities in more than 70 minutes but less than or equal to 80 minutes.</p> <p>OR</p> <p><u>The responsible entity notified at least one, but not all, impacted entities of the failure of its Interpersonal Communications capabilities within 60 minutes.</u></p>	<p>The responsible entity failed to notify the impacted entities in more than 80 minutes but less than or equal to 90 minutes.</p>	<p><u>8</u> hours.</p> <p><del>The responsible entity failed to notify any impacted entities of the failure of its normal Interpersonal Communications capabilities.</del></p> <p>OR</p> <p>The responsible entity failed to notify the impacted entities in more than 90 minutes.</p> <p>OR</p> <p><u>The responsible entity failed to notify any impacted entities of the failure of its Interpersonal Communications capabilities.</u></p>
<u>R11</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<p><u>The responsible entity failed to consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.</u></p>

**E. Regional Differences**

None identified.

**F. Associated Documents**

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
2	TBD	Revised per SAR for Project 2006-06, RC SDT	Revised

## Implementation Plan and Mapping Document for COM-001-2 – Communications

### Approvals Requested

The RC SDT requests the approval of COM-001-2 – Communications and two new NERC Glossary terms.

### Prerequisite Approvals

- None

### Defined Terms in the NERC Glossary

The RC SDT proposes the following new definitions:

**Interpersonal Communication:** Any medium that allows two or more individuals interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communications used for day-to-day operation.

### Conforming Changes to Requirements in Already Approved Standards

- None.

### Revisions to Approved Standards and Definitions

The RCSDT revised the COM-001-1 standard and is proposing retiring four requirements (R1, R4, R5 and R6). COM-001-1 requirement R1 is proposed to be replaced with COM-001-2 requirements R1, R2, R3, R4, R5, R6, R7 and R8 to achieve clarity to which entities were required to have to reliable communications. Requirement R2 in COM-001-1 will become requirement R9 in COM-001-2. Requirement R3 in COM-001-1 has been included within R1 of COM-001-2. Requirement R4 will remain enforceable until its inclusion into COM-003 being revised under Project 2007-02 Operating Personnel Communication Protocols and becomes mandatory and enforceable. Requirement R5 in COM-001-1 is redundant with EOP-008-0, R1 and EOP-008-1, R1 and will be retired upon the effective date of COM-001-2. COM-001-1, requirement R6 will be retired as it is an ERO procedural requirement and does not impact reliability. Changes were made to eliminate redundancies between standards (existing and proposed), to align with the ERO Rules of Procedure and to address issues in FERC Order 693.

### **Effective Dates**

The first day of the second calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption.

### **Retirements**

COM-001-1.1 will be retired at midnight the day before COM-001-2 becomes effective with the exception of Requirement R4. This requirement is being revised and will be included in Standard COM-003-1, Operating Personnel Communications Protocols. COM-001-1.1, Requirement R4 will be retired at midnight the day before COM-003-1 becomes effective.



**Revisions or Retirements to Already Approved Standards**

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
<ul style="list-style-type: none"> <li>▪ <b>COM-001-1.1</b></li> </ul>	
<p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></p>	<p><b>COM-001-2</b></p> <p><b>R1.</b> Each Reliability Coordinator shall have Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R1.1.</b> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R1.2.</b> Adjacent Reliability Coordinators within the same Interconnection.</p> <p><b>R2.</b> Each Reliability Coordinator shall designate an Alternative Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R2.1.</b> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R2.2.</b> Adjacent Reliability Coordinators within the same Interconnection.</p> <p><b>R3.</b> Each Transmission Operator shall have Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p>

**Implementation Plan and Mapping Document for COM-001-2 Communications**

	<p><b>R3.1.</b> Its Reliability Coordinator.</p> <p><b>R3.2.</b> Each Balancing Authority within its Transmission Operator Area.</p> <p><b>R3.3.</b> Each Distribution Provider within its Transmission Operator Area.</p> <p><b>R3.4.</b> Each Generator Operator within its Transmission Operator Area.</p> <p><b>R3.5.</b> Adjacent Transmission Operators synchronously connected within the same Interconnection.</p> <p><b>R4.</b> Each Transmission Operator shall designate an Alternative Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R4.1.</b> Its Reliability Coordinator.</p> <p><b>R4.2.</b> Each Balancing Authority within its Transmission Operator Area.</p> <p><b>R4.3.</b> Adjacent Balancing Authorities.</p>
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- **Notes:** The requirements were made clearer as to which capabilities specific entities were required to have to reliable communications.

	<b>Proposed Replacement Requirement(s)</b>
<b>Already Approved Standard</b>	

- **COM-001-1.1**

<p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></p>	<p><b>COM-001-2</b></p> <p><b>R5.</b> Each Balancing Authority shall have Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R5.1.</b> Its Reliability Coordinator.</p> <p><b>R5.2.</b> Each Transmission Operator that operates Facilities within its Balancing Authority Area</p> <p><b>R5.3.</b> Each <b>Distribution Provider</b> within its Balancing Authority Area</p> <p><b>R5.4.</b> Each <b>Generator Operator</b> that operates Facilities within its Balancing Authority Area</p> <p><b>R5.5.</b> Adjacent Balancing Authorities.</p> <p><b>R6.</b> Each Balancing Authority shall designate an Alternative Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R6.1.</b> Its Reliability Coordinator.</p> <p><b>R6.2.</b> Each Transmission Operator that operates Facilities within its Balancing Authority Area).</p> <p><b>R6.3.</b> Adjacent Balancing Authorities.</p> <p><b>R7.</b> Each <b>Distribution Provider</b> shall have Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R7.1.</b> Its Transmission Operator.</p> <p><b>R7.2.</b> Its Balancing Authority.</p>
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**Implementation Plan and Mapping Document for COM-001-2 Communications**

	<p><b>R8.</b> Each <b>Generator Operator</b> shall have Interpersonal Communications capability with the following entities:  <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R8.1.</b> Its Balancing Authority.</p> <p><b>R8.2.</b> Its Transmission Operator.</p>
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**Notes:** The requirements we made clearer as to which capabilities specific entities were required to have for reliable interpersonal communications. R7 and R8 were created to address the FERC directive to “expands the applicability to include generator operators and distribution providers and includes Requirements for their telecommunications facilities”

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1.1</b></p> <p><b>R2.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall <b>manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.</b> <i>[Violation Risk Factor: Medium]</i></p>	<p><b>COM-001-2</b></p> <p><b>R9.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall, on at least a monthly basis, test its Alternative Interpersonal Communications capability. If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications capability within 2 hours. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>

**Notes:**

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1.1</b></p> <p><b>R3.</b> Each Reliability Coordinator, Transmission</p>	<p><b>COM-001-2</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator, Balancing</p>

**Implementation Plan and Mapping Document for COM-001-2 Communications**

<p>Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas. <i>[Violation Risk Factor: Lower]</i></p>	<p>Authority, Distribution Provider, and Generator Operator shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b></p>	
<p><b>Already Approved Standard</b></p>	<p><b>Proposed Replacement Requirement(s)</b></p>
<p><b>COM-001-1.1</b></p> <p><b>R4.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. <i>[Violation Risk Factor: Medium]</i></p>	<p><b>None - retire</b></p> <ul style="list-style-type: none"> <li>▪ This requirement is being vetted by the OPCPSDT in COM-003. This requirement and measure will be removed from COM-001-1.1 upon the effective date of COM-003-1.</li> </ul>
<p><b>Notes:</b></p>	
<p><b>Already Approved Standard</b></p>	<p><b>Proposed Replacement Requirement(s)</b></p>

**COM-001-1.1**

**R5.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities.  
*[Violation Risk Factor: Lower]*

**EOP-008-0**

**R1.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements:

- R1.1.** The contingency plan shall not rely on data or voice communication from the primary control facility to be viable.
- R1.2.** The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules.
- R1.3.** The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities.
- R1.4.** The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas.
- R1.5.** The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.
- R1.6.** The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans.
- R1.7.** The plan shall be reviewed and updated annually.
- R1.8.** Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for

	<p>loss of primary control facility.</p> <p>EOP-008-1</p> <p>R1. Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have a current Operating Plan describing the manner in which it continues to meet its functional obligations with regard to the reliable operations of the BES in the event that its primary control center functionality is lost. This Operating Plan for backup functionality shall include the following, at a minimum: [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]</p> <ul style="list-style-type: none"><li>1.1. The location and method of implementation for providing backup functionality for the time it takes to restore the primary control center functionality.</li><li>1.2. A summary description of the elements required to support the backup functionality. These elements shall include, at a minimum:<ul style="list-style-type: none"><li>1.2.1. Tools and applications to ensure that System Operators have situational awareness of the BES.</li><li>1.2.2. Data communications.</li><li>1.2.3. Voice communications.</li><li>1.2.4. Power source(s).</li><li>1.2.5. Physical and cyber security.</li></ul></li><li>1.3. An Operating Process for keeping the backup functionality consistent with the primary control center.</li><li>1.4. Operating Procedures, including decision authority, for use in determining when to implement the Operating Plan for backup functionality.</li><li>1.5. A transition period between the loss of primary control center</li></ul>
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**Implementation Plan and Mapping Document for COM-001-2 Communications**

	<p>functionality and the time to fully implement the backup functionality that is less than or equal to two hours.</p> <p>1.6. An Operating Process describing the actions to be taken during the transition period between the loss of primary control center functionality and the time to fully implement backup functionality elements identified in Requirement R1, Part 1.2. The Operating Process shall include at a minimum:</p> <p>1.6.1. A list of all entities to notify when there is a change in operating locations.</p> <p>1.6.2. Actions to manage the risk to the BES during the transition from primary to backup functionality as well as during outages of the primary or backup functionality.</p> <p>1.6.3. Identification of the roles for personnel involved during the initiation and implementation of the Operating Plan for backup functionality.</p>
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**Notes:** The RC SDT proposes retiring COM-001-1 R5 as it is redundant with EOP-008-0 Requirement R1 as well as EOP-008-1 R1 which replaces it.

<b>Already Approved Standard</b>	<b>Proposed Replacement Requirement(s)</b>
<p><b>COM-001-1</b></p> <p><b>R6.</b> Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, “NERCNet Security Policy.” <i>[Violation Risk Factor: Lower]</i></p>	<p><b>None - retire</b></p>

**Notes:** The RC SDT is recommending that R6 be retired. This is an ERO procedural issue and should not be in a reliability standard. It should be included in the ERO Rules of Procedure.



**Implementation Plan and Mapping Document for COM-001-2 Communications**

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Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>None</b></p>	<p><b>New Requirement</b></p> <p><b>R11.</b> Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b></p>	

**Functions that Must Comply with the Requirements in the Standards**

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Purchasing Selling Entity	Transmission Operator	Transmission Service Provider	Load Serving Entity	Generator Operator	Distribution Provider
COM-001-2  Communi- cations	X	X		X	X		X	X

## Implementation Plan for COM-001-2 – Communications

### Approvals Requested

The RC SDT requests the approval of COM-001-2 – Communications and two new NERC Glossary terms.

### Prerequisite Approvals

- None

### Defined Terms in the NERC Glossary

The RC SDT proposes the following new definitions:

**Interpersonal Communication:** Any medium that allows two or more individuals interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communications used for day-to-day operation.

### Conforming Changes to Requirements in Already Approved Standards

- None.

### Revisions to Approved Standards and Definitions

The RCSDT revised the COM-001-1 standard and is proposing retiring ~~three-four~~ requirements (R1, R4, R5 and R6). COM-001-1 requirement R1 is proposed to be replaced with COM-001-2 requirements R1, R2, R3, R4, R5, R6, R7 and R8 to achieve clarity to which entities were required to have to reliable communications. Requirement R2 in COM-001-1 will become requirement R9 in COM-001-2. Requirement R3 in COM-001-1 has been included within R1 of COM-001-2. Requirement R4 will remain enforceable until its inclusion into COM-003 being revised under Project 2007-02 Operating Personnel Communication Protocols and becomes mandatory and enforceable. Requirement R5 in COM-001-1 is redundant with EOP-008-0, R1 and EOP-008-1, R1 and is will be retired upon the effective date of COM-001-2. COM-001-1, requirement R6 will be retired as it is an ERO procedural requirement and does not impact reliability. Changes were made to eliminate redundancies between standards (existing and proposed), to align with the ERO Rules of Procedure and to address issues in FERC Order 693.

## Effective Dates

The first day of the ~~first~~second calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption.

## Retirements

COM-001-1.1 will be retired at midnight the day before COM-001-2 becomes effective with the exception of Requirement R4. This requirement is being revised and will be included in Standard COM-003-1, Operating Personnel Communications Protocols. COM-001-1.1, Requirement R4 will be retired at midnight the day before COM-003-1 becomes effective.

## Mapping Document for COM-001-2

### Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
<ul style="list-style-type: none"> <li>▪ <b>COM-001-1.1</b></li> </ul>	
<p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></p>	<p><b>COM-001-2</b></p> <p><b>R1.</b> Each Reliability Coordinator shall have Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R1.1.</b> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R1.2.</b> Adjacent Reliability Coordinators within the same Interconnection.</p> <p><b>R2.</b> Each Reliability Coordinator shall designate an Alternative Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R2.1.</b> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R2.2.</b> Adjacent Reliability Coordinators within the same Interconnection.</p> <p><b>R3.</b> Each Transmission Operator shall have Interpersonal Communications capability with the following entities:</p>

	<p><i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R3.1.</b> Its Reliability Coordinator.</p> <p><b>R3.2.</b> Each Balancing Authority within its Transmission Operator Area.</p> <p><b>R3.3.</b> Each Distribution Provider within its Transmission Operator Area.</p> <p><b>R3.4.</b> Each Generator Operator within its Transmission Operator Area.</p> <p><b>R3.5.</b> Adjacent Transmission Operators synchronously connected within the same Interconnection.</p> <p><b>R4.</b> Each Transmission Operator shall designate an Alternative Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R4.1.</b> Its Reliability Coordinator.</p> <p><b>R4.2.</b> Each Balancing Authority within its Transmission Operator Area.</p> <p><b>R4.3.</b> Adjacent Balancing Authorities.</p>
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- **Notes:** The requirements were made clearer as to which capabilities specific entities were required to have to ~~reliability~~ reliable communications.

Already Approved Standard	Proposed Replacement Requirement(s)
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- **COM-001-1.1**

**R1.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: *[Violation Risk Factor: High]*

**R1.1.** Internally. *[Violation Risk Factor: High]*

**R1.2.** Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. *[Violation Risk Factor: High]*

**R1.3.** With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. *[Violation Risk Factor: High]*

**R1.4.** Where applicable, these facilities shall be redundant and diversely routed. *[Violation Risk Factor: High]*

**COM-001-2**

**R5.** Each Balancing Authority shall have Interpersonal Communications capability with the following entities: *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*

**R5.1.** Its Reliability Coordinator.

**R5.2.** Each Transmission Operator that operates Facilities within its Balancing Authority Area

**R5.3.** Each **Distribution Provider** within its Balancing Authority Area

**R5.4.** Each **Generator Operator** that operates Facilities within its Balancing Authority Area

**R5.5.** Adjacent Balancing Authorities.

**R6.** Each Balancing Authority shall designate an Alternative Interpersonal Communications capability with the following entities: *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*

**R6.1.** Its Reliability Coordinator.

**R6.2.** Each Transmission Operator that operates Facilities within its Balancing Authority Area).

**R6.3.** Adjacent Balancing Authorities.

**R7.** Each **Distribution Provider** shall have Interpersonal Communications capability with the following entities: *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*

**R7.1.** Its Transmission Operator.

	<p><b>R7.2.</b> Its Balancing Authority.</p> <p><b>R8.</b> Each <b>Generator Operator</b> shall have Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R8.1.</b> Its Balancing Authority.</p> <p><b>R8.2.</b> Its Transmission Operator.</p>
<p><b>Notes:</b> The requirements we made clearer as to which capabilities specific entities were required to have <del>for to reliability</del> <b>reliable interpersonal communications</b>. <del>R7 and R8 were 8</del> <b>is</b> created to address the FERC directive to “expands the applicability to include generator operators and distribution providers and includes Requirements for their telecommunications facilities”</p>	
Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1.1</b></p> <p><b>R2.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall <b>manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.</b> <i>[Violation Risk Factor: Medium]</i></p>	<p><b>COM-001-2</b></p> <p><b>R9.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall, on at least a monthly basis, test its Alternative Interpersonal Communications capability. If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications capability within 2 hours. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b></p>	
Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1.1</b></p>	<p><b>COM-001-2</b></p>



<p><b>R3.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>R1.</b> Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b></p>	
<p style="text-align: center;"><b>Already Approved Standard</b></p>	<p style="text-align: center;"><b>Proposed Replacement Requirement(s)</b></p>
<p><b>COM-001-1.1</b></p> <p><b>R4.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. <i>[Violation Risk Factor: Medium]</i></p>	<p><b><u>None - retire</u></b></p> <ul style="list-style-type: none"> <li>▪ This requirement is being vetted by the OPCPSDT in COM-003. This requirement and measure will be removed from COM-001-1.1 upon the effective date of COM-003-1.</li> </ul>
<p><b>Notes:</b></p>	
<p style="text-align: center;"><b>Already Approved Standard</b></p>	<p style="text-align: center;"><b>Proposed Replacement Requirement(s)</b></p>

**COM-001-1.1**

- R5.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities.  
*[Violation Risk Factor: Lower]*

**EOP-008-0**

- R1.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements:
- R1.1.** The contingency plan shall not rely on data or voice communication from the primary control facility to be viable.
  - R1.2.** The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules.
  - R1.3.** The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities.
  - R1.4.** The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas.
  - R1.5.** The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.
  - R1.6.** The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans.
  - R1.7.** The plan shall be reviewed and updated annually.
  - R1.8.** Interim provisions must be included if it is expected to take

more than one hour to implement the contingency plan for loss of primary control facility.

EOP-008-1

R1. Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have a current Operating Plan describing the manner in which it continues to meet its functional obligations with regard to the reliable operations of the BES in the event that its primary control center functionality is lost. This Operating Plan for backup functionality shall include the following, at a minimum: [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]

1.1. The location and method of implementation for providing backup functionality for the time it takes to restore the primary control center functionality.

1.2. A summary description of the elements required to support the backup functionality. These elements shall include, at a minimum:

1.2.1. Tools and applications to ensure that System Operators have situational awareness of the BES.

1.2.2. Data communications.

1.2.3. Voice communications.

1.2.4. Power source(s).

1.2.5. Physical and cyber security.

1.3. An Operating Process for keeping the backup functionality consistent with the primary control center.

1.4. Operating Procedures, including decision authority, for use in determining when to implement the Operating Plan for backup

	<p><u>functionality.</u></p> <p><u>1.5. A transition period between the loss of primary control center functionality and the time to fully implement the backup functionality that is less than or equal to two hours.</u></p> <p><u>1.6. An Operating Process describing the actions to be taken during the transition period between the loss of primary control center functionality and the time to fully implement backup functionality elements identified in Requirement R1, Part 1.2. The Operating Process shall include at a minimum:</u></p> <p><u>1.6.1. A list of all entities to notify when there is a change in operating locations.</u></p> <p><u>1.6.2. Actions to manage the risk to the BES during the transition from primary to backup functionality as well as during outages of the primary or backup functionality.</u></p> <p><u>1.6.3. Identification of the roles for personnel involved during the initiation and implementation of the Operating Plan for backup functionality.</u></p>
<p><b>Notes:</b> The RC SDT proposes retiring COM-001-1 R5 as it is redundant with EOP-008-0 Requirement R1 <u>as well as EOP-008-1 R1 which replaces it.</u></p>	
<p><b>Already Approved Standard</b></p>	<p><b>Proposed Replacement Requirement(s)</b></p>
<p><b>COM-001-1</b></p> <p><b>R6.</b> Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, “NERCNet Security Policy.” <i>[Violation Risk Factor: Lower]</i></p>	<p><b>None - retire</b></p>

**Notes:** The RC SDT is recommending that R6 be retired. This is an ERO procedural issue and should not be in a reliability standard. It should be included in the ERO Rules of Procedure.

Already Approved Standard	Proposed Replacement Requirement(s)
None	<p><b>New Requirement</b></p> <p><b>R11.</b> Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b></p>	

**Functions that Must Comply with the Requirements in the Standards**

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Purchasing Selling Entity	Transmission Operator	Transmission Service Provider	Load Serving Entity	Generator Operator	Distribution Provider
COM-001-2  Communications	X	X		X	X		X	X

# Unofficial Comment Form

## Reliability Coordination (Project 2006-06)

Please **DO NOT** use this form to submit comments. Please use the [electronic comment form](#) to submit comments on the first formal posting for Project 2006-06—Reliability Coordination. The electronic comment form must be completed by **February 8, 2011**.

[2006-06 Project Page](#)

If you have questions please contact Stephen Crutchfield at [stephen.crutchfield@nerc.net](mailto:stephen.crutchfield@nerc.net) or by telephone at 609-651-9455.

### Background

The RCSDT has revised the COM-001-2, COM-002-3 and IRO-001-1 standards based on stakeholder comments received during the initial ballot and formal comment period and quality reviews of each standard.

The RCSDT has addressed comments on the applicability of all three standards and implementation plans by aligning COM-001-2, COM-002-3, and IRO-001-2 to apply to the same entities and by removing LSE, PSE and TSP as applicable entities from the COM standards. Additionally, the Interchange Coordinator has been removed as an applicable entity from the standards and implementation plans.

Several commenters had suggestions for improvements to the requirement language and applicability of COM-001-2. The RCSDT believes the standard correctly and adequately requires each applicable entity that would have capability to receive Interconnection and operating information to have Interpersonal Communications, and Alternative Interpersonal Communications to be used when the Interpersonal Communication is not available. The RCSDT made the following changes to COM-001-2 based on stakeholder suggestions:

1. The following Requirement parts were added to COM-001-2:
  - 3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection
  - 4.3 Adjacent Transmission Operators synchronously connected within the same Interconnection
  - 5.5 Adjacent Balancing Authorities
  - 6.3 Adjacent Balancing Authorities
2. The phrase "to exchange Interconnection and operating information" was removed from requirements R1 through R8 to clarify that the intent of this capability is NOT for the exchange of data.
3. A new requirement was added for clarity regarding what is required of Distribution Providers and Generator Operators (i.e., collaboration between entities to restore a failed communications capability):
  - R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to

restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations]

The proposed definition of Reliability Directive shown in COM-002-3 was revised to include Adverse Reliability Impact as shown to more fully address emergencies or events that might lead to instability or Cascading:

**Reliability Directive:** A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.

As a reference, we have included the existing definition of Emergency and the BOT approved definition of Adverse Reliability Impact<sup>1</sup>:

**Emergency:** Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

**Adverse Reliability Impact:** The impact of an event that results in Bulk Electric System instability or Cascading.

Based on stakeholder feedback regarding IRO-001, the RCSDT removed Requirement R1. Other requirements were removed from IRO-001 and placed in more appropriate standards. These requirements did not fit with the purpose statement of IRO-001. Requirements R5 and R6 were removed from IRO-001 and placed in IRO-005-4. Requirements R7 and R8 were removed from IRO-001 and placed in IRO-002-2. These requirements were balloted and approved by stakeholders in July of 2011 and subsequently approved by the NERC BOT on August 4, 2011.

In addition, minor clarifications were made to the language of requirements and measures in COM-002-3 and IRO-001-3 based on suggestions from quality reviews of those standards.

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<sup>1</sup> This definition was approved by the NERC Board of Trustees on August 4, 2011. Filing with regulatory authorities is pending.



**You do not have to answer all questions. Enter all comments in Simple Text Format.**

1. The RCSDT has revised the applicability of the standards and implementation plans by aligning COM-001-2, COM-002-3, and IRO-001-2 to apply to the same entities and by removing LSE, PSE and TSP as applicable entities from the COM standards. Additionally, the Interchange Coordinator has been removed as an applicable entity from the standards. Do you agree with this change in applicability to the three standards? If not, please explain in the comment area below.

Yes

No

Comments:

2. Do you agree with the addition of "Adjacent" entities in COM-001-2, Parts 3.5, 4.3, 5.5 and 6.3 of COM-001-2? If not, please explain in the comment area below

Yes

No

Comments:

3. The RCSDT removed the phrase "to exchange Interconnection and operating information" in COM-001-2, Requirements R1 through R8 based on stakeholder comments. Do you agree with the revision? If not, please explain in the comment area below.

Yes

No

Comments:

4. A new requirement was added for clarity regarding what is required of Distribution Providers and the Generator Operators:

R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations]

This requirement requires collaboration between entities to restore a failed communications capability. Do you agree with the new requirement? If not, please explain in the comment area below

Yes

No

Comments:

- 5. The proposed definition of Reliability Directive shown in COM-002-3 was revised to include Adverse Reliability Impact as shown to more fully address emergencies or events that might lead to instability or Cascading:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.

Do you agree with the proposed definition? If not, please explain in the comment area below

Yes

No

Comments:

- 6. Do you have any other comment, not expressed in questions above, for the RC SDT?

Comments:

**A. Introduction**

- 1. Title:** **Telecommunications**
- 2. Number:** COM-001-1.1
- 3. Purpose:** Each Reliability Coordinator, Transmission Operator and Balancing Authority needs adequate and reliable telecommunications facilities internally and with others for the exchange of Interconnection and operating information necessary to maintain reliability.
- 4. Applicability**
  - 4.1.** Transmission Operators.
  - 4.2.** Balancing Authorities.
  - 4.3.** Reliability Coordinators.
  - 4.4.** NERCNet User Organizations.
- 5. Effective Date:** May 13, 2009

**B. Requirements**

- R1.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information:
  - R1.1.** Internally.
  - R1.2.** Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities.
  - R1.3.** With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability.
  - R1.4.** Where applicable, these facilities shall be redundant and diversely routed.
- R2.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.
- R3.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas.
- R4.** Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.
- R5.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities.
- R6.** Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, "NERCNet Security Policy."

**C. Measures**

- M1.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to communication facility test-procedure documents, records of testing, and maintenance records for communication facilities or equivalent that will be used to confirm that it manages, alarms, tests and/or actively monitors vital telecommunications facilities. (Requirement 2 part 1)
- M2.** The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine compliance to Requirement 4.
- M3.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request its current operating instructions and procedures, either electronic or hard copy that will be used to confirm that it meets Requirement 5.
- M4.** The NERCnet User Organization shall have and provide upon request evidence that could include, but is not limited to documented procedures, operator logs, voice recordings or transcripts of voice recordings, electronic communications, etc that will be used to determine if it adhered to the (User Accountability and Compliance) requirements in Attachment 1-COM-001. (Requirement 6)

**D. Compliance**

**1. Compliance Monitoring Process**

**1.1. Compliance Monitoring Responsibility**

NERC shall be responsible for compliance monitoring of the Regional Reliability Organizations

Regional Reliability Organizations shall be responsible for compliance monitoring of all other entities

**1.2. Compliance Monitoring and Reset Time Frame**

One or more of the following methods will be used to assess compliance:

- Self-certification (Conducted annually with submission according to schedule.)
- Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)
- Periodic Audit (Conducted once every three years according to schedule.)
- Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 calendar days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)

The Performance-Reset Period shall be 12 months from the last finding of non-compliance.

**1.3. Data Retention**

For Measure 1 each Reliability Coordinator, Transmission Operator, Balancing Authority shall keep evidence of compliance for the previous two calendar years plus the current year.

For Measure 2 each Reliability Coordinator, Transmission Operator, and Balancing Authority shall keep 90 days of historical data (evidence).

For Measure 3, each Reliability Coordinator, Transmission Operator, Balancing Authority shall have its current operating instructions and procedures to confirm that it meets Requirement 5.

For Measure 4, each Reliability Coordinator, Transmission Operator, Balancing Authority and NERCnet User Organization shall keep 90 days of historical data (evidence).

If an entity is found non-compliant the entity shall keep information related to the noncompliance until found compliant or for two years plus the current year, whichever is longer.

Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor.

The Compliance Monitor shall keep the last periodic audit report and all requested and submitted subsequent compliance records.

**1.4. Additional Compliance Information**

Attachment 1 — COM-001 — NERCnet Security Policy

**2. Levels of Non-Compliance for Transmission Operator, Balancing Authority or Reliability Coordinator**

**2.1. Level 1:** Not applicable.

**2.2. Level 2:** Not applicable.

**2.3. Level 3:** There shall be a separate Level 3 non-compliance, for every one of the following requirements that is in violation:

**2.3.1** The Transmission Operator, Balancing Authority or Reliability Coordinator used a language other than English without agreement as specified in R4.

**2.3.2** There are no written operating instructions and procedures to enable continued operation of the system during the loss of telecommunication facilities as specified in R5.

**2.4. Level 4:** Telecommunication systems are not actively monitored, tested, managed or alarmed as specified in R2.

**3. Levels of Non-Compliance — NERCnet User Organization**

**3.1. Level 1:** Not applicable.

**3.2. Level 2:** Not applicable.

**3.3. Level 3:** Not applicable.

**3.4. Level 4:** Did not adhere to the requirements in Attachment 1-COM-001, NERCnet Security Policy.

**E. Regional Differences**

None Identified.

**Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata

## Standard COM-001-1.1 — Telecommunications

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1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
1.1	October 29, 2008	BOT adopted errata changes; updated version number to “1.1”	Errata

**Attachment 1 — COM-001 — NERCnet Security Policy**

**Policy Statement**

The purpose of this NERCnet Security Policy is to establish responsibilities and minimum requirements for the protection of information assets, computer systems and facilities of NERC and other users of the NERC frame relay network known as “NERCnet.” The goal of this policy is to prevent misuse and loss of assets.

For the purpose of this document, information assets shall be defined as processed or unprocessed data using the NERCnet Telecommunications Facilities including network documentation. This policy shall also apply as appropriate to employees and agents of other corporations or organizations that may be directly or indirectly granted access to information associated with NERCnet.

The objectives of the NERCnet Security Policy are:

- To ensure that NERCnet information assets are adequately protected on a cost-effective basis and to a level that allows NERC to fulfill its mission.
- To establish connectivity guidelines for a minimum level of security for the network.
- To provide a mandate to all Users of NERCnet to properly handle and protect the information that they have access to in order for NERC to be able to properly conduct its business and provide services to its customers.

**NERC’s Security Mission Statement**

NERC recognizes its dependency on data, information, and the computer systems used to facilitate effective operation of its business and fulfillment of its mission. NERC also recognizes the value of the information maintained and provided to its members and others authorized to have access to NERCnet. It is, therefore, essential that this data, information, and computer systems, and the manual and technical infrastructure that supports it, are secure from destruction, corruption, unauthorized access, and accidental or deliberate breach of confidentiality.

**Implementation and Responsibilities**

This section identifies the various roles and responsibilities related to the protection of NERCnet resources.

**NERCnet User Organizations**

Users of NERCnet who have received authorization from NERC to access the NERC network are considered users of NERCnet resources. To be granted access, users shall complete a User Application Form and submit this form to the NERC Telecommunications Manager.

**Responsibilities**

It is the responsibility of NERCnet User Organizations to:

- Use NERCnet facilities for NERC-authorized business purposes only.
- Comply with the NERCnet security policies, standards, and guidelines, as well as any procedures specified by the data owner.
- Prevent unauthorized disclosure of the data.
- Report security exposures, misuse, or non-compliance situations via Reliability Coordinator Information System or the NERC Telecommunications Manager.
- Protect the confidentiality of all user IDs and passwords.
- Maintain the data they own.
- Maintain documentation identifying the users who are granted access to NERCnet data or applications.
- Authorize users within their organizations to access NERCnet data and applications.

- Advise staff on NERCnet Security Policy.
- Ensure that all NERCnet users understand their obligation to protect these assets.
- Conduct self-assessments for compliance.

### **User Accountability and Compliance**

All users of NERCnet shall be familiar and ensure compliance with the policies in this document.

Violations of the NERCnet Security Policy shall include, but not be limited to any act that:

- Exposes NERC or any user of NERCnet to actual or potential monetary loss through the compromise of data security or damage.
- Involves the disclosure of trade secrets, intellectual property, confidential information or the unauthorized use of data.

Involves the use of data for illicit purposes, which may include violation of any law, regulation or reporting requirement of any law enforcement or government body.



## Violation Risk Factor and Violation Severity Level Assignments

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in

### COM-001-2 — Telecommunications

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

### Justification for Assignment of Violation Risk Factors in COM-001-2

The SDT applied the following NERC criteria when proposing VRFs for the requirements in COM-001-2:

#### ***High Risk Requirement***

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

#### ***Medium Risk Requirement***

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

#### ***Lower Risk Requirement***

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a

requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

The SDT also considered consistency with the FERC Violation Risk Factor Guidelines for setting VRFs:<sup>1</sup>

**Guideline (1) — Consistency with the Conclusions of the Final Blackout Report**

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:<sup>2</sup>

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief.

**Guideline (2) — Consistency within a Reliability Standard**

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

**Guideline (3) — Consistency among Reliability Standards**

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

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<sup>1</sup> North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh'g and compliance filing, 120 FERC ¶ 61,145 (2007) (“VRF Rehearing Order”).

<sup>2</sup> Id. at footnote 15.

**Guideline (4) — Consistency with NERC’s Definition of the Violation Risk Factor Level**

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC’s definition of that risk level.

**Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation**

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC’s VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC’s Reliability Standards and implies that these requirements should be assigned a “High” VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

**VRF for COM-001-2:**

There are eleven requirements in COM-001-2. None of the eleven requirements were assigned a “Lower” VRF. Requirements R1-R8 were assigned a “High” VRF while the other **three** requirements were given a “Medium” VRF.

**VRF for COM-001-2, Requirements R1-R6:**

- FERC’s Guideline 2 — Consistency within a Reliability Standard. Each requirement specifies which functional entities that are required to have Interpersonal Communications capability and Alternative Interpersonal Communications capability. The VRFs for each requirement are consistent with each other and are only applied at the Requirement level.
- FERC’s Guideline 3 — Consistency among Reliability Standards. These requirements are facility requirements that provide communications capability between functional entities. There are no similar facility requirements in the standards. The approved VRF for COM-001-1.1, R1 (which proposed R1-R6 replaces) is High and therefore the proposed VRF for R1-R6 is consistent.
- FERC’s Guideline 4 — Consistency with NERC’s Definition of a VRF. Failure to have Interpersonal Communications capability and Alternative Interpersonal Communications capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the bulk power system and could lead to bulk power

system instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.

- FERC’s Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. COM-001-2, Requirements R1-R6 contain only one objective, therefore only one VRF was assigned.

**VRF for COM-001-2, Requirement R7:**

- FERC’s Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC’s Guideline 3 — Consistency among Reliability Standards. COM-001-2, Requirement R7 is an analog to Parts 3.3 and 5.3 and they have the same VRF (High).
- FERC’s Guideline 4 — Consistency with NERC’s Definition of a VRF. Failure to have Interpersonal Communications capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the bulk power system and could lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement was assigned a High VRF.
- FERC’s Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. COM-001-2, Requirement R7 addresses a single objective and has a single VRF.

**VRF for COM-001-2, Requirement R8:**

- FERC’s Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC’s Guideline 3 — Consistency among Reliability Standards. COM-001-2, Requirement R8 is an analog to Parts 3.4 and 5.4 and they have the same VRF (High).
- FERC’s Guideline 4 — Consistency with NERC’s Definition of a VRF. Failure to have Interpersonal Communications capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the bulk power system and could lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement was assigned a High VRF.
- FERC’s Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. COM-001-2, Requirement R8 addresses a single objective and has a single VRF.

**VRF for COM-001-2, Requirement R9:**

- FERC’s Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC’s Guideline 3 — Consistency among Reliability Standards. COM-001-2, Requirement R9 is a requirement for entities to test their Alternative Interpersonal Communications capability and to take restorative action should the test fail and is a replacement requirement for COM-001-1.1, R2, which has an approved VRF of Medium.

- FERC’s Guideline 4 — Consistency with NERC’s Definition of a VRF. COM-001-2, Requirement R9 is a requirement for entities to test their Alternative Interpersonal Communications capability and to take restorative action should the test fail. The act of testing in and of itself is not likely to “directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures...” Therefore, this requirement was assigned a Medium VRF.
- FERC’s Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. COM-001-2, Requirement R9 addresses a single objective and has a single VRF.

**VRF for COM-001-2, Requirement R10:**

- FERC’s Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC’s Guideline 3 — Consistency among Reliability Standards. COM-001-2, Requirement R10 is a new requirement that was assigned a Medium VRF. When evaluating the VRF to be assigned to this requirement, the SDT took into account that this requirement is a notification item, not an actual action that has a direct impact on the bulk power system. Therefore, the simple act of failing to notify another entity of the failure of Interpersonal Communications capability, while it may impair the entity’s ability communicate, does not, in itself, lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement was assigned a Medium VRF.
- FERC’s Guideline 4 — Consistency with NERC’s Definition of a VRF. COM-001-2, Requirement R10 mandates that entities notify entities of a failure of Interpersonal Communications capability. Bulk power system instability, separation, or cascading failures are not likely to occur due to a failure to notify another entity of the failure. Therefore, this requirement was assigned a Medium VRF.
- FERC’s Guideline 5 - Treatment of Requirements that Co-mingle More Than One Objective. TOP-001-2, Requirement R10 addresses a single objective and has a single VRF.

**VRF for COM-001-2, Requirement R11:**

- FERC’s Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC’s Guideline 3 — Consistency among Reliability Standards. COM-001-2, Requirement R11 is a new requirement that was assigned a Medium VRF. When evaluating the VRF to be assigned to this requirement, the SDT took into account that this requirement is a consultation item, not an actual action that has a direct impact on the bulk power system. Therefore, the simple act of failing to consult with another entity on the failure of Interpersonal Communications capability and its restoration, while it may impair the entity’s

**Justification for Assignment of Violation Risk Factors and Violation Severity Levels for Project 2006-06 – Reliability Coordination**

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ability communicate, does not, in itself, lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement was assigned a Medium VRF.

- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. COM-001-2, Requirement R11 mandates that entities consult with other entities regarding restoration of Interpersonal Communications capability. Bulk power system instability, separation, or cascading failures are not likely to occur due to a failure to consult with another entity on restoration times. Therefore, this requirement was assigned a Medium VRF.
- FERC's Guideline 5 - Treatment of Requirements that Co-mingle More Than One Objective. TOP-001-2, Requirement R11 addresses a single objective and has a single VRF.

**Justification for Assignment of Violation Severity Levels for COM-001-2**

In developing the VSLs for the TOP standard, the SDT anticipated the evidence that would be reviewed during an audit, and developed its VSLs based on the noncompliance an auditor may find during a typical audit. The SDT based its assignment of VSLs on the following NERC criteria:

Lower	Moderate	High	Severe
<p>Missing a minor element (or a small percentage) of the required performance The performance or product measured has significant value as it almost meets the full intent of the requirement.</p>	<p>Missing at least one significant element (or a moderate percentage) of the required performance. The performance or product measured still has significant value in meeting the intent of the requirement.</p>	<p>Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component. The performance or product has limited value in meeting the intent of the requirement.</p>	<p>Missing most or all of the significant elements (or a significant percentage) of the required performance. The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.</p>

FERC’s VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in TOP-xxx-x meet the FERC Guidelines for assessing VSLs:

**Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance**

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

**Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties**

A violation of a “binary” type requirement must be a “Severe” VSL.

Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

**Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement**

VSLs should not expand on what is required in the requirement.

**Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation,  
Not on A Cumulative Number of Violations**

. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.



VSLs for COM-001-2 Requirements R1 through R6:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties  Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent  Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
<b>R1-R6.</b>	Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	The proposed requirement is a revision of COM-001-1.1, R1 and its subrequirements. Each subrequirement was separated out into a new stand-alone requirement. The VSLs for the approved subrequirements are binary and this is reflected in the proposed VSLs.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

VSLs for COM-001-2 Requirement R7:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties  Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent  Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
<b>R7.</b>	Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	The most comparable VSLs for a similar requirement are for the proposed analog requirement and its parts COM-001-2, Part 3.3 and Part 5.3. This requirement specifies the two way nature of entities having Interpersonal Communications capability. In other words, if one entity is required to have Interpersonal Communications capability with another entity, then the reciprocal should also be required or the onus would be exclusively on one entity. Since Requirement 3 and	The proposed VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSLs use the same terminology as used in the associated requirement, and are, therefore, consistent with the requirement.	The VSLs are based on a single violation and not cumulative violations.

**Justification for Assignment of Violation Risk Factors and Violation Severity Levels for Project 2006-06 – Reliability Coordination**

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties  Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent  Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
		Requirement 5 are assigned binary VSLs, it appropriate for Requirement 7 to also be assigned a binary VSL.			

VSLs for COM-001-2 Requirement R8:

R#	Compliance with NERC's Revised VSL Guidelines	<p>Guideline 1</p> <p>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Guideline 2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>Guideline 4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>
<b>R8.</b>	Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	The most comparable VSLs for a similar requirement are for the proposed analog requirement and its parts COM-001-2, Part 3.4 and Part 5.4. This requirement specifies the two way nature of entities having Interpersonal Communications capability. In other words, if one entity is required to have Interpersonal Communications capability with another	The proposed VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSLs use the same terminology as used in the associated requirement, and are, therefore, consistent with the requirement.	The VSLs are based on a single violation and not cumulative violations.

**Justification for Assignment of Violation Risk Factors and Violation Severity Levels for Project 2006-06 – Reliability Coordination**

R#	Compliance with NERC's Revised VSL Guidelines	<p>Guideline 1</p> <p>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Guideline 2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>Guideline 4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>
		<p>entity, then the reciprocal should also be required or the onus would be exclusively on one entity. Since Requirement 3 and Requirement 5 are assigned binary VSLs, it appropriate for Requirement 7 to also be assigned a binary VSL.</p>			

VSLs for COM-001-2 Requirement R9:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties  Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent  Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
<b>R9.</b>	Meets NERC's VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	The proposed requirement is a new and there are no comparable VSLs.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

VSLs for COM-001-2 Requirement R10:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties  Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent  Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
<b>R10.</b>	Meets NERC's VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	The proposed requirement is new and there are no comparable VSLs.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

VSLs for COM-001-2 Requirement R11:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties  Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent  Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
<b>R11.</b>	Meets NERC's VSL guidelines. This is a binary requirement and the VSL is severe.	The proposed requirement is new and there are no comparable existing VSLs.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.



# Standards Announcement

Project 2006-06 Reliability Coordination

**Three Ballot Windows Extended, Three Non-binding poll Windows **Extended One Day****  
**Formal Comment Period **Extended One Day****  
**Through 8 p.m. Eastern TODAY (Thursday, February 9, 2012)**

## [Now Available](#)

Three non-binding polls of the VRFs and VSLs associated with the standards listed below failed to achieve a quorum and have been extended by one day. In addition, to accommodate ballot pool members and other stakeholders affected by a brief unavailability of NERC web services at the end of the ballot and comment period window, the formal comment period and three ballots of these standards and their associated implementation plans will also be extended one day. The non-binding polls, ballots, and formal comment period will close at **8 p.m. Eastern TODAY, Thursday, February 9, 2012.**

- COM-001-2 – Communications
- COM-002-3 – Communication and Coordination
- IRO-001-3 – Reliability Coordination – Responsibilities and Authorities

Please log in and cast your ballots for these standards, and opinions in the non-binding polls, if you have not already done so.

## **Standards Development Process**

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. For more information or assistance, please contact Monica Benson at [monica.benson@nerc.net](mailto:monica.benson@nerc.net).

*For more information or assistance, please contact Monica Benson,  
Standards Process Administrator, at [monica.benson@nerc.net](mailto:monica.benson@nerc.net) or at 404-446-2560.*

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# Standards Announcement

## Project 2006-06 Reliability Coordination

**Three Ballot Windows and Three Non-binding Poll Windows Now Open  
January 30 - February 8, 2012**

### [Now Available](#)

Ballot windows are open through **8 p.m. Eastern on Wednesday, February 8, 2012** for three successive ballots (one for each of the following standards and the associated implementation plans) and three non-binding polls of the VRFs and VSLs associated with each standard:

- COM-001-2 – Communications
- COM-002-3 – Communication and Coordination
- IRO-001-3 – Reliability Coordination – Responsibilities and Authorities

Clean and redline versions of each standard and the associated implementation plan and VRFs and VSLs are posted on the [project webpage](#). In addition, the following supporting materials have been posted on the project page:

- Mapping Document for each standard - Identifies each requirement in the approved version of the standard and how the requirement has been treated in the current draft.
- VRF and VSL Justification – Identifies how the proposed VRFs and VSLs for each standard meet NERC and FERC guidelines.
- Last approved versions of COM-001 and COM-002 – Because the changes from the last approved versions of these two standards are so extensive, a redline showing changes against that last approved version is not useful. The last approved versions are posted as a convenience to stakeholders.

### **Instructions for Balloting**

Members of the ballot pools associated with this project may log in and submit their votes for the standards and opinions for the non-binding polls from the following page:

<https://standards.nerc.net/CurrentBallots.aspx>.

### **Instructions for Commenting**

A formal comment period is open through **8 p.m. Eastern on Wednesday, February 8, 2012**. Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Monica Benson at [monica.benson@nerc.net](mailto:monica.benson@nerc.net). An off-line, unofficial copy of the comment form is posted on the [project page](#).

### **Special Instructions for Submitting Comments With a Ballot or Non-binding Poll**

Please note that comments submitted during the formal comment period, the ballots for the standards,

and the non-binding polls of VRFs and VSLs all use the same electronic form, and will be compiled into a single report with duplicate comments submitted by the same entity removed and duplicate comments submitted by multiple entities consolidated. **Therefore, it is NOT necessary for ballot pool members to submit more than one set of comments. The drafting team requests that all stakeholders (ballot pool members as well as other stakeholders) submit all comments through the electronic comment form.**

### Next Steps

The drafting team will consider all comments submitted to determine whether to make additional revisions to the standards.

### Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standard IRO-003-2.

The following three standards that are part of this project were approved by the ballot pool and were adopted by the NERC Board of Trustees in August 2012: IRO-002-3 Reliability Coordination – Analysis Tools; IRO-005-4 - Reliability Coordination-Current Day Operations; and IRO-014-2 – Coordination Among Reliability Coordinators. Additional information is available on the [project webpage](#).

### Standards Development Process

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# Standards Announcement

## Project 2006-06 Reliability Coordination

**Formal Comment Period Open January 9 – February 8, 2012**  
**Three Ballot Windows and Three Non-binding Poll Windows Open**  
**January 30 - February 8, 2012**

### [Now Available](#)

The following standards, and the associated implementation plans and VRFs and VSLs, have been posted for a formal comment period through **8 p.m. Eastern on Wednesday, February 8, 2012**:

- COM-001-2 – Communications
- COM-002-3 – Communication and Coordination
- IRO-001-3 – Reliability Coordination – Responsibilities and Authorities

Clean and redline versions of each standard and the associated implementation plan and VRFs and VSLs are posted on the [project webpage](#). In addition, the following supporting materials have been posted on the project page:

- Mapping Document for each standard - Identifies each requirement in the approved version of the standard and how the requirement has been treated in the current draft.
- VRF and VSL Justification – Identifies how the proposed VRFs and VSLs for each standard meet NERC and FERC guidelines.
- Last approved versions of COM-001 and COM-002 – Because the changes from the last approved versions of these two standards are so extensive, a redline showing changes against that last approved version is not useful. The last approved versions are posted as a convenience to stakeholders.

Three successive ballots (one for each standard and its implementation plan) and three nonbinding polls of the VRFs and VSLs associated with each standard will be conducted beginning on Monday, January 30, 2012 through **8 p.m. Eastern on Wednesday, February 8, 2012**.

### Instructions for Commenting

A formal comment period is open through **8 p.m. Eastern on Wednesday, February 8, 2012**. Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Monica Benson at [monica.benson@nerc.net](mailto:monica.benson@nerc.net). An off-line, unofficial copy of the comment form is posted on the [project page](#).

### Special Instructions for Submitting Comments with a Ballot or Non-binding Poll

Please note that comments submitted during the formal comment period, the ballots for the standards, and the non-binding polls of VRFs and VSLs all use the same electronic form, and will be compiled into a single report with duplicate comments submitted by the same entity removed and duplicate comments submitted by multiple entities consolidated. **Therefore, it is NOT necessary for ballot pool members to submit more than one set of comments. The drafting team requests that all stakeholders (ballot pool members as well as other stakeholders) submit all comments through the electronic comment form.**

### Next Steps

The drafting team will consider all comments submitted to determine whether to make additional revisions to the standards.

### Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standard IRO-003-2. Additional information is available on the [project webpage](#).

### Standards Development Process

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Log in

Register

- Ballot Pools
- Current Ballots
- Ballot Results
- Registered Ballot Body
- Proxy Voters

[Home Page](#)

Ballot Results	
<b>Ballot Name:</b>	Project 2006-06 Reliability Coordination COM-001-2 Jan 2012_in
<b>Ballot Period:</b>	1/30/2012 - 2/9/2012
<b>Ballot Type:</b>	Initial
<b>Total # Votes:</b>	279
<b>Total Ballot Pool:</b>	341
<b>Quorum:</b>	<b>81.82 % The Quorum has been reached</b>
<b>Weighted Segment Vote:</b>	54.64 %
<b>Ballot Results:</b>	<b>The drafting team is considering comments.</b>

Summary of Ballot Results								
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Abstain	No Vote
			# Votes	Fraction	# Votes	Fraction	# Votes	
1 - Segment 1.	88	1	41	0.672	20	0.328	7	20
2 - Segment 2.	11	0.8	4	0.4	4	0.4	2	1
3 - Segment 3.	85	1	36	0.522	33	0.478	1	15
4 - Segment 4.	24	1	10	0.476	11	0.524	0	3
5 - Segment 5.	69	1	32	0.615	20	0.385	4	13
6 - Segment 6.	44	1	24	0.649	13	0.351	2	5
7 - Segment 7.	0	0	0	0	0	0	0	0
8 - Segment 8.	8	0.6	4	0.4	2	0.2	0	2
9 - Segment 9.	4	0.2	1	0.1	1	0.1	1	1
10 - Segment 10.	8	0.6	1	0.1	5	0.5	0	2
<b>Totals</b>	<b>341</b>	<b>7.2</b>	<b>153</b>	<b>3.934</b>	<b>109</b>	<b>3.266</b>	<b>17</b>	<b>62</b>

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Allegheny Power	Rodney Phillips		
1	Ameren Services	Kirit Shah	Affirmative	
1	American Electric Power	Paul B. Johnson	Negative	<a href="#">View</a>
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Avista Corp.	Scott J Kinney	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Affirmative	<a href="#">View</a>
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	

1	Beaches Energy Services	Joseph S Stonecipher	Affirmative	<a href="#">View</a>
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Central Maine Power Company	Kevin L Howes	Negative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City of Vero Beach	Randall McCamish		
1	City Water, Light & Power of Springfield	Shaun Anders		
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Affirmative	
1	Colorado Springs Utilities	Paul Morland	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	<a href="#">View</a>
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Dominion Virginia Power	Michael S Crowley	Affirmative	
1	Duke Energy Carolina	Douglas E. Hils	Negative	<a href="#">View</a>
1	East Kentucky Power Coop.	George S. Carruba		
1	Empire District Electric Co.	Ralph F Meyer	Abstain	
1	Entergy Corporation	George R. Bartlett	Negative	<a href="#">View</a>
1	FirstEnergy Energy Delivery	Robert Martinko	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative	
1	Great River Energy	Gordon Pietsch	Affirmative	<a href="#">View</a>
1	Hoosier Energy Rural Electric Cooperative, Inc.	Robert Solomon		
1	Hydro One Networks, Inc.	Ajay Garg	Negative	<a href="#">View</a>
1	Hydro-Quebec TransEnergie	Bernard Pelletier		
1	Idaho Power Company	Ronald D. Schellberg		
1	International Transmission Company Holdings Corp	Michael Moltane		
1	Kansas City Power & Light Co.	Michael Gammon	Negative	<a href="#">View</a>
1	Keys Energy Services	Stan T. RZad		
1	Lake Worth Utilities	Walt Gill		
1	Lakeland Electric	Larry E Watt	Negative	<a href="#">View</a>
1	Lee County Electric Cooperative	John W Delucca	Affirmative	
1	Long Island Power Authority	Robert Ganley	Abstain	
1	Manitoba Hydro	Joe D Petaski	Negative	<a href="#">View</a>
1	MEAG Power	Danny Dees	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Negative	<a href="#">View</a>
1	Minnkota Power Coop. Inc.	Richard Burt	Abstain	
1	National Grid	Saurabh Saksena	Negative	<a href="#">View</a>
1	Nebraska Public Power District	Richard L. Koch		
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Negative	
1	New York Power Authority	Arnold J. Schuff	Affirmative	
1	Northeast Utilities	David Boguslawski	Negative	<a href="#">View</a>
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Abstain	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Negative	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Michael T. Quinn	Negative	<a href="#">View</a>
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson		
1	PacifiCorp	Colt Norrish		
1	PECO Energy	Ronald Schloendorn	Affirmative	
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	Frank F Afranji	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PowerSouth Energy Cooperative	Larry D Avery	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Negative	<a href="#">View</a>
1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative	
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Abstain	
1	Puget Sound Energy, Inc.	Catherine Koch		
1	Rochester Gas and Electric Corp.	John C. Allen	Negative	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell	Affirmative	
1	SCE&G	Henry Delk, Jr.	Affirmative	
1	Seattle City Light	Pawel Krupa	Affirmative	

1	Sierra Pacific Power Co.	Rich Salgo	Affirmative	
1	South Texas Electric Cooperative	Richard McLeon		
1	Southern California Edison Co.	Dana Cabbell		
1	Southern Company Services, Inc.	Robert Schaffeld	Affirmative	View
1	Southern Illinois Power Coop.	William G. Hutchison		
1	Southwest Transmission Cooperative, Inc.	James Jones	Negative	View
1	Southwestern Power Administration	Gary W Cox	Abstain	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Affirmative	
1	Tampa Electric Co.	Beth Young	Negative	
1	Tennessee Valley Authority	Larry Akens	Negative	View
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Negative	View
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Western Farmers Electric Coop.	Forrest Brock	Abstain	
1	Xcel Energy, Inc.	Gregory L Pieper	Affirmative	
2	Alberta Electric System Operator	Mark B Thompson	Abstain	
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
2	California ISO	Gregory Van Pelt	Abstain	
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	
2	Independent Electricity System Operator	Kim Warren	Negative	View
2	ISO New England, Inc.	Kathleen Goodman	Negative	View
2	Midwest ISO, Inc.	Jason L Marshall	Affirmative	View
2	New Brunswick System Operator	Alden Briggs	Negative	View
2	New York Independent System Operator	Gregory Campoli	Negative	View
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool	Charles H Yeung		
3	Alabama Power Company	Richard J. Mandes	Affirmative	View
3	Allegheny Power	Bob Reeping		
3	Anaheim Public Utilities Dept.	Kelly Nguyen		
3	APS	Steven Norris	Affirmative	
3	Atlantic City Electric Company	James V. Petrella	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blachly-Lane Electric Co-op	Bud Tracy	Negative	View
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Negative	View
3	Central Lincoln PUD	Steve Alexanderson	Negative	View
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila	Negative	
3	City of Farmington	Linda R Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoeinghaus	Affirmative	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	View
3	City of Leesburg	Phil Janik		
3	City of Redding	Bill Hughes	Affirmative	
3	Clearwater Power Co.	Dave Hagen	Negative	View
3	Cleco Corporation	Michelle A Corley	Affirmative	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Constellation Energy	Carolyn Ingersoll		
3	Consumers Energy	David A. Lapinski	Abstain	
3	Consumers Power Inc.	Roman Gillen	Negative	View
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Negative	View
3	Cowlitz County PUD	Russell A Noble		
3	Delmarva Power & Light Co.	Michael R. Mayer		
3	Detroit Edison Company	Kent Kujala	Negative	View
3	Dominion Resources Services	Michael F. Gildea	Affirmative	
3	Douglas Electric Cooperative	Dave Sabala	Negative	View
3	Duke Energy Carolina	Henry Ernst-Jr	Negative	View
3	East Kentucky Power Coop.	Sally Witt		
3	Entergy	Joel T Plessinger	Negative	View
3	Fall River Rural Electric Cooperative	Bryan Case	Negative	View
3	FirstEnergy Solutions	Kevin Querry	Affirmative	
3	Georgia Power Company	Anthony L Wilson	Affirmative	View
3	Georgia System Operations Corporation	Scott S. Barfield-McGinnis	Negative	View



3	Great River Energy	Sam Kokkinen	Affirmative	<a href="#">View</a>
3	Hydro One Networks, Inc.	David Kiguel	Negative	<a href="#">View</a>
3	Idaho Power Company	Shaun Jensen		
3	JEA	Garry Baker		
3	Kansas City Power & Light Co.	Charles Locke	Negative	<a href="#">View</a>
3	Kissimmee Utility Authority	Gregory D Woessner	Affirmative	
3	Lakeland Electric	Mace D Hunter	Negative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Negative	<a href="#">View</a>
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Negative	<a href="#">View</a>
3	Lincoln Electric System	Bruce Merrill		
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Lost River Electric Cooperative	Richard Reynolds	Negative	<a href="#">View</a>
3	Louisville Gas and Electric Co.	Charles A. Freibert	Negative	<a href="#">View</a>
3	Manitoba Hydro	Greg C. Parent	Negative	<a href="#">View</a>
3	MidAmerican Energy Co.	Thomas C. Mielnik	Negative	<a href="#">View</a>
3	Mississippi Power	Don Horsley	Affirmative	<a href="#">View</a>
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Affirmative	
3	Nebraska Public Power District	Tony Eddleman	Negative	<a href="#">View</a>
3	New York Power Authority	Marilyn Brown	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Negative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby	Negative	<a href="#">View</a>
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Negative	<a href="#">View</a>
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative	
3	PacifiCorp	John Apperson		
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Affirmative	
3	Public Utility District No. 2 of Grant County	Greg Lange		
3	Raft River Rural Electric Cooperative	Heber Carpenter	Negative	<a href="#">View</a>
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salmon River Electric Cooperative	Ken Dizes	Negative	<a href="#">View</a>
3	Salt River Project	John T. Underhill	Affirmative	
3	San Diego Gas & Electric	Scott Peterson		
3	Santee Cooper	Zack Dusenbury	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Southern California Edison Co.	David Schiada		
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey	Negative	<a href="#">View</a>
3	Tennessee Valley Authority	Ian S Grant	Negative	<a href="#">View</a>
3	Umatilla Electric Cooperative	Steve Eldrige	Negative	<a href="#">View</a>
3	West Oregon Electric Cooperative, Inc.	Marc M Farmer	Negative	<a href="#">View</a>
3	Wisconsin Electric Power Marketing	James R Keller	Negative	<a href="#">View</a>
3	Wisconsin Public Service Corp.	Gregory J Le Grave	Affirmative	
3	Xcel Energy, Inc.	Michael Ibold	Affirmative	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Negative	<a href="#">View</a>
4	American Municipal Power - Ohio	Kevin Koloini	Negative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Negative	<a href="#">View</a>
4	City of Clewiston	Kevin McCarthy	Negative	
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Negative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	<a href="#">View</a>
4	Consumers Energy	David Frank Ronk		
4	Cowlitz County PUD	Rick Syring		
4	Florida Municipal Power Agency	Frank Gaffney	Negative	<a href="#">View</a>
4	Fort Pierce Utilities Authority	Thomas W. Richards		
4	Georgia System Operations Corporation	Guy Andrews	Negative	<a href="#">View</a>
4	Illinois Municipal Electric Agency	Bob C. Thomas	Negative	<a href="#">View</a>
4	Madison Gas and Electric Co.	Joseph DePoorter	Negative	<a href="#">View</a>
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Negative	<a href="#">View</a>
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish	John D Martinsen	Affirmative	

	County			
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	Tacoma Public Utilities	Keith Morissette	Affirmative	
4	Tallahassee Electric	Allan Morales	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative	<a href="#">View</a>
5	AEP Service Corp.	Brock Ondayko	Negative	<a href="#">View</a>
5	AES Corporation	Leo Bernier	Abstain	
5	Amerenue	Sam Dwyer	Affirmative	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Avista Corp.	Edward F. Groce	Affirmative	
5	BC Hydro and Power Authority	Clement Ma	Affirmative	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	City of Grand Island	Jeff Mead	Abstain	
5	City of Redding	Paul Cummings	Affirmative	
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick	Affirmative	
5	City of Tallahassee	Alan Gale		
5	Cleco Power	Stephanie Huffman	Affirmative	
5	Cogentrix Energy, Inc.	Mike D Hirst	Negative	<a href="#">View</a>
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Affirmative	<a href="#">View</a>
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Affirmative	
5	Consumers Energy	James B Lewis	Abstain	
5	Cowlitz County PUD	Bob Essex		
5	CPS Energy	Robert B Stevens		
5	Detroit Edison Company	Christy Wicke	Negative	
5	Dominion Resources, Inc.	Mike Garton	Affirmative	
5	Duke Energy	Dale Q Goodwine	Negative	<a href="#">View</a>
5	Dynegy Inc.	Dan Roethemeyer	Negative	<a href="#">View</a>
5	Electric Power Supply Association	John R Cashin		
5	Entergy Corporation	Stanley M Jaskot	Negative	<a href="#">View</a>
5	Exelon Nuclear	Michael Korchynsky	Affirmative	
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative	
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Negative	<a href="#">View</a>
5	Great River Energy	Preston L Walsh	Affirmative	<a href="#">View</a>
5	Green Country Energy	Greg Froehling	Affirmative	
5	Indeck Energy Services, Inc.	Rex A Roehl		
5	Kansas City Power & Light Co.	Scott Heidtbrink		
5	Kissimmee Utility Authority	Mike Blough	Negative	
5	Lakeland Electric	James M Howard	Negative	<a href="#">View</a>
5	Liberty Electric Power LLC	Daniel Duff	Negative	<a href="#">View</a>
5	Lincoln Electric System	Dennis Florom	Negative	<a href="#">View</a>
5	Los Angeles Department of Water & Power	Kenneth Silver		
5	Luminant Generation Company LLC	Mike Laney	Affirmative	
5	Manitoba Hydro	S N Fernando	Negative	<a href="#">View</a>
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider	Negative	<a href="#">View</a>
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Negative	<a href="#">View</a>
5	New York Power Authority	Gerald Mannarino	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Affirmative	<a href="#">View</a>
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard Kinan		
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Pete Ungerman		
5	Portland General Electric Co.	Gary L Tingley		
5	PPL Generation LLC	Annette M Bannon	Negative	<a href="#">View</a>
5	Public Service Enterprise Group Incorporated	Dominick Grasso	Affirmative	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative	
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative	
5	Salt River Project	Glen Reeves		
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	

5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	Southern Company Generation	William D Shultz	Affirmative	<a href="#">View</a>
5	Tampa Electric Co.	RJames Rocha	Negative	
5	Tenaska, Inc.	Scott M. Helyer		
5	Tennessee Valley Authority	David Thompson	Negative	<a href="#">View</a>
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	US Power Generating Company	Bohdan M Dackow		
5	Wisconsin Electric Power Co.	Linda Horn	Negative	<a href="#">View</a>
5	Wisconsin Public Service Corp.	Leonard Rentmeester	Affirmative	
6	AEP Marketing	Edward P. Cox	Negative	<a href="#">View</a>
6	Ameren Energy Marketing Co.	Jennifer Richardson	Affirmative	
6	Arizona Public Service Co.	Justin Thompson	Affirmative	
6	Black Hills Power	andrew heinle		
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Affirmative	
6	Cleco Power LLC	Robert Hirschak	Affirmative	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative	<a href="#">View</a>
6	Constellation Energy Commodities Group	Brenda Powell	Affirmative	
6	Dominion Resources, Inc.	Louis S. Slade	Affirmative	
6	Duke Energy Carolina	Walter Yeager	Negative	<a href="#">View</a>
6	Entergy Services, Inc.	Terri F Benoit	Negative	<a href="#">View</a>
6	Exelon Power Team	Pulin Shah	Affirmative	
6	FirstEnergy Solutions	Mark S Travaglianti	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Negative	<a href="#">View</a>
6	Florida Municipal Power Pool	Thomas Washburn	Negative	<a href="#">View</a>
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	<a href="#">View</a>
6	Lakeland Electric	Paul Shipps	Negative	<a href="#">View</a>
6	Lincoln Electric System	Eric Ruskamp	Negative	<a href="#">View</a>
6	Manitoba Hydro	Daniel Prowse	Negative	<a href="#">View</a>
6	MidAmerican Energy Co.	Dennis Kimm	Abstain	
6	Muscatine Power & Water	Brandy D Olson		
6	New York Power Authority	William Palazzo	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	Omaha Public Power District	David Ried	Affirmative	
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	PPL EnergyPlus LLC	Mark A Heimbach	Negative	<a href="#">View</a>
6	Progress Energy	John T Sturgeon	Abstain	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative	
6	Sacramento Municipal Utility District	Claire Warshaw	Affirmative	
6	Salt River Project	Steven J Hulet	Affirmative	
6	Santee Cooper	Suzanne Ritter	Affirmative	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Shell Energy North America (US), L.P.	Paul Kerr	Affirmative	
6	South California Edison Company	Lujuanna Medina		
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Negative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Negative	<a href="#">View</a>
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons		
8		Roger C Zaklukiewicz	Negative	
8		James A Maenner	Affirmative	
8		Edward C Stein	Affirmative	
8	JDRJC Associates	Jim Cyrulewski	Affirmative	
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Negative	<a href="#">View</a>
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon		
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Negative	<a href="#">View</a>
9	National Association of Regulatory Utility Commissioners	Diane J Barney	Affirmative	



9	Oregon Public Utility Commission	Jerome Murray	Abstain	
9	Snohomish County PUD No. 1	William Moojen		
10	Florida Reliability Coordinating Council	Linda Campbell		
10	Midwest Reliability Organization	James D Burley		
10	New York State Reliability Council	Alan Adamson	Negative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Negative	<a href="#">View</a>
10	ReliabilityFirst Corporation	Anthony E Jablonski	Negative	<a href="#">View</a>
10	SERC Reliability Corporation	Carter B. Edge	Negative	<a href="#">View</a>
10	Texas Reliability Entity	Larry D. Grimm	Negative	
10	Western Electricity Coordinating Council	Louise McCarren	Affirmative	

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 Washington Office: 1120 G Street, N.W. : Suite 990 : Washington, DC 20005-3801

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# Project 2006-06 Non-binding Poll

## COM-001-2

Ballot Results	
<b>Non-binding Poll Name:</b>	Project 2006-06 Non-binding COM-001-2
<b>Poll Period:</b>	1/30/2012 - 2/9/2012
<b>Total # Votes:</b>	274
<b>Total Ballot Pool:</b>	341
<b>Ballot Results:</b>	80.35% of those who registered to participate provided an opinion or abstention; 71.35% of those who provided an opinion or abstention indicated support for the VRFs and VSLs.

Individual Ballot Pool Results				
Segment	Organization	Member	Opinions	Comments
1	Allegheny Power	Rodney Phillips		
1	Ameren Services	Kirit Shah	Abstain	
1	American Electric Power	Paul B. Johnson	Negative	View
1	American Transmission Company, LLC	Andrew Z Pusztai	Abstain	
1	Arizona Public Service Co.	Robert Smith	Abstain	
1	Avista Corp.	Scott J Kinney	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Abstain	
1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Central Maine Power Company	Kevin L Howes	Negative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City of Vero Beach	Randall McCamish		
1	City Water, Light & Power of Springfield	Shaun Anders		
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Abstain	
1	Colorado Springs Utilities	Paul Morland	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Abstain	
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Dominion Virginia Power	Michael S Crowley	Abstain	
1	Duke Energy Carolina	Douglas E. Hils	Negative	View
1	East Kentucky Power Coop.	George S. Carruba		
1	Empire District Electric Co.	Ralph F Meyer	Abstain	

1	Entergy Corporation	George R. Bartlett	Affirmative	
1	FirstEnergy Energy Delivery	Robert Martinko	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative	
1	Great River Energy	Gordon Pietsch	Affirmative	<a href="#">View</a>
1	Hoosier Energy Rural Electric Cooperative, Inc.	Robert Solomon		
1	Hydro One Networks, Inc.	Ajay Garg	Abstain	
1	Hydro-Quebec TransEnergie	Bernard Pelletier		
1	Idaho Power Company	Ronald D. Schellberg		
1	International Transmission Company Holdings Corp	Michael Moltane		
1	Kansas City Power & Light Co.	Michael Gammon	Negative	<a href="#">View</a>
1	Keys Energy Services	Stan T. Rzad		
1	Lake Worth Utilities	Walt Gill		
1	Lakeland Electric	Larry E Watt	Negative	<a href="#">View</a>
1	Lee County Electric Cooperative	John W Delucca	Affirmative	
1	Long Island Power Authority	Robert Ganley	Abstain	
1	Manitoba Hydro	Joe D Petaski	Negative	<a href="#">View</a>
1	MEAG Power	Danny Dees	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Abstain	
1	Minnkota Power Coop. Inc.	Richard Burt	Abstain	
1	National Grid	Saurabh Saksena		
1	Nebraska Public Power District	Richard L. Koch		
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Abstain	
1	New York Power Authority	Arnold J. Schuff	Affirmative	
1	Northeast Utilities	David Boguslawski	Abstain	
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Abstain	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Negative	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Michael T. Quinn		
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson		
1	PacifiCorp	Colt Norrish		
1	PECO Energy	Ronald Schloendorn	Affirmative	
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	Frank F Afranji	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Abstain	
1	PowerSouth Energy Cooperative	Larry D Avery	Negative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Abstain	
1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Abstain	
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Abstain	
1	Puget Sound Energy, Inc.	Catherine Koch		

1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Abstain	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell	Affirmative	
1	SCE&G	Henry Delk, Jr.	Affirmative	
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Sierra Pacific Power Co.	Rich Salgo	Abstain	
1	South Texas Electric Cooperative	Richard McLeon		
1	Southern California Edison Co.	Dana Cabbell		
1	Southern Company Services, Inc.	Robert Schaffeld	Affirmative	<a href="#">View</a>
1	Southern Illinois Power Coop.	William G. Hutchison		
1	Southwest Transmission Cooperative, Inc.	James Jones	Negative	<a href="#">View</a>
1	Southwestern Power Administration	Gary W Cox	Abstain	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	
1	Tampa Electric Co.	Beth Young	Negative	
1	Tennessee Valley Authority	Larry Akens	Abstain	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	<a href="#">View</a>
1	Westar Energy	Allen Klassen	Abstain	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Western Farmers Electric Coop.	Forrest Brock	Abstain	
1	Xcel Energy, Inc.	Gregory L Pieper		
2	Alberta Electric System Operator	Mark B Thompson	Abstain	
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Gregory Van Pelt	Abstain	
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	
2	Independent Electricity System Operator	Kim Warren	Affirmative	
2	ISO New England, Inc.	Kathleen Goodman		
2	Midwest ISO, Inc.	Jason L Marshall	Affirmative	<a href="#">View</a>
2	New Brunswick System Operator	Alden Briggs	Abstain	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool	Charles H Yeung		
3	Alabama Power Company	Richard J. Mandes	Affirmative	<a href="#">View</a>
3	Allegheny Power	Bob Reeping		
3	Anaheim Public Utilities Dept.	Kelly Nguyen		
3	APS	Steven Norris	Affirmative	
3	Atlantic City Electric Company	James V. Petrella	Abstain	
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Blachly-Lane Electric Co-op	Bud Tracy	Affirmative	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc.	Dave Markham	Affirmative	

	(Redmond, Oregon)			
3	Central Lincoln PUD	Steve Alexanderson	Abstain	
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila	Negative	
3	City of Farmington	Linda R Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoehinghaus	Abstain	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	View
3	City of Leesburg	Phil Janik		
3	City of Redding	Bill Hughes	Affirmative	
3	Clearwater Power Co.	Dave Hagen	Affirmative	
3	Cleco Corporation	Michelle A Corley	Abstain	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Abstain	
3	Constellation Energy	Carolyn Ingersoll		
3	Consumers Energy	David A. Lapinski	Abstain	
3	Consumers Power Inc.	Roman Gillen	Affirmative	
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Affirmative	
3	Cowlitz County PUD	Russell A Noble		
3	Delmarva Power & Light Co.	Michael R. Mayer		
3	Detroit Edison Company	Kent Kujala	Negative	
3	Dominion Resources Services	Michael F. Gildea	Abstain	
3	Douglas Electric Cooperative	Dave Sabala	Affirmative	
3	Duke Energy Carolina	Henry Ernst-Jr	Negative	View
3	East Kentucky Power Coop.	Sally Witt		
3	Entergy	Joel T Plessinger	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Affirmative	
3	FirstEnergy Solutions	Kevin Querry	Affirmative	
3	Georgia Power Company	Anthony L Wilson	Affirmative	View
3	Georgia System Operations Corporation	Scott S. Barfield-McGinnis	Negative	View
3	Great River Energy	Sam Kokkinen	Affirmative	View
3	Hydro One Networks, Inc.	David Kiguel	Abstain	
3	Idaho Power Company	Shaun Jensen		
3	JEA	Garry Baker		
3	Kansas City Power & Light Co.	Charles Locke	Negative	View
3	Kissimmee Utility Authority	Gregory D Woessner	Affirmative	
3	Lakeland Electric	Mace D Hunter	Negative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Affirmative	
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Affirmative	
3	Lincoln Electric System	Bruce Merrill		
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Lost River Electric Cooperative	Richard Reynolds	Affirmative	
3	Louisville Gas and Electric Co.	Charles A. Freibert		
3	Manitoba Hydro	Greg C. Parent	Negative	View
3	MidAmerican Energy Co.	Thomas C. Mielnik	Abstain	
3	Mississippi Power	Don Horsley	Affirmative	View
3	Municipal Electric Authority of	Steven M. Jackson	Affirmative	



	Georgia			
3	Muscatine Power & Water	John S Bos	Abstain	
3	Nebraska Public Power District	Tony Eddleman	Abstain	
3	New York Power Authority	Marilyn Brown	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby	Affirmative	
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Affirmative	
3	Orange and Rockland Utilities, Inc.	David Burke	Abstain	
3	Orlando Utilities Commission	Ballard K Mutters	Abstain	
3	PacifiCorp	John Apperson		
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Abstain	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Abstain	
3	Public Utility District No. 2 of Grant County	Greg Lange		
3	Raft River Rural Electric Cooperative	Heber Carpenter	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Abstain	
3	Salmon River Electric Cooperative	Ken Dizes	Affirmative	
3	Salt River Project	John T. Underhill	Affirmative	
3	San Diego Gas & Electric	Scott Peterson		
3	Santee Cooper	Zack Dusenbury	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Southern California Edison Co.	David Schiada		
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey	Negative	
3	Tennessee Valley Authority	Ian S Grant	Abstain	
3	Umatilla Electric Cooperative	Steve Eldrige	Affirmative	
3	West Oregon Electric Cooperative, Inc.	Marc M Farmer	Affirmative	
3	Wisconsin Electric Power Marketing	James R Keller	Abstain	
3	Wisconsin Public Service Corp.	Gregory J Le Grave	Affirmative	
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power - Ohio	Kevin Koloini	Negative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Abstain	
4	City of Clewiston	Kevin McCarthy	Negative	
4	City of New Smyrna Beach Utilities Commission	Timothy Beyrle		
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	
4	Consumers Energy	David Frank Ronk		
4	Cowlitz County PUD	Rick Syring		
4	Florida Municipal Power Agency	Frank Gaffney	Negative	View
4	Fort Pierce Utilities Authority	Thomas W. Richards		

4	Georgia System Operations Corporation	Guy Andrews	Negative	<a href="#">View</a>
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Madison Gas and Electric Co.	Joseph DePoorter	Abstain	
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Affirmative	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Abstain	
4	Sacramento Municipal Utility District	Mike Ramirez	Abstain	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Tallahassee Electric	Allan Morales	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative	
5	AEP Service Corp.	Brock Ondayko	Negative	<a href="#">View</a>
5	AES Corporation	Leo Bernier	Abstain	
5	Amerenue	Sam Dwyer	Abstain	
5	Arizona Public Service Co.	Edward Cambridge	Abstain	
5	Avista Corp.	Edward F. Groce	Affirmative	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	City of Grand Island	Jeff Mead	Abstain	
5	City of Redding	Paul Cummings	Affirmative	
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick	Affirmative	
5	City of Tallahassee	Alan Gale		
5	Cleco Power	Stephanie Huffman	Abstain	
5	Cogentrix Energy, Inc.	Mike D Hirst	Negative	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Abstain	
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Affirmative	
5	Consumers Energy	James B Lewis	Abstain	
5	Cowlitz County PUD	Bob Essex		
5	CPS Energy	Robert B Stevens		
5	Detroit Edison Company	Christy Wicke	Negative	
5	Dominion Resources, Inc.	Mike Garton	Abstain	
5	Duke Energy	Dale Q Goodwine	Negative	<a href="#">View</a>
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	Electric Power Supply Association	John R Cashin		
5	Entergy Corporation	Stanley M Jaskot	Affirmative	
5	Exelon Nuclear	Michael Korchynsky	Affirmative	
5	ExxonMobil Research and Engineering	Martin Kaufman	Abstain	
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Negative	<a href="#">View</a>

5	Great River Energy	Preston L Walsh	Affirmative	<a href="#">View</a>
5	Green Country Energy	Greg Froehling	Affirmative	
5	Indeck Energy Services, Inc.	Rex A Roehl		
5	Kansas City Power & Light Co.	Scott Heidtbrink		
5	Kissimmee Utility Authority	Mike Blough	Negative	
5	Lakeland Electric	James M Howard	Negative	<a href="#">View</a>
5	Liberty Electric Power LLC	Daniel Duff	Negative	
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver		
5	Luminant Generation Company LLC	Mike Laney	Affirmative	
5	Manitoba Hydro	S N Fernando	Negative	<a href="#">View</a>
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider	Negative	<a href="#">View</a>
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Abstain	
5	New York Power Authority	Gerald Mannarino	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard Kinas		
5	PacifiCorp	Sandra L. Shaffer	Abstain	
5	Platte River Power Authority	Pete Ungerman		
5	Portland General Electric Co.	Gary L Tingley		
5	PPL Generation LLC	Annette M Bannon	Negative	<a href="#">View</a>
5	Public Service Enterprise Group Incorporated	Dominick Grasso	Abstain	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative	<a href="#">View</a>
5	Sacramento Municipal Utility District	Bethany Hunter	Abstain	
5	Salt River Project	Glen Reeves		
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Abstain	
5	Southern Company Generation	William D Shultz	Affirmative	<a href="#">View</a>
5	Tampa Electric Co.	RJames Rocha	Negative	
5	Tenaska, Inc.	Scott M. Helyer		
5	Tennessee Valley Authority	David Thompson	Abstain	
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	US Power Generating Company	Bohdan M Dackow		
5	Wisconsin Electric Power Co.	Linda Horn	Abstain	
5	Wisconsin Public Service Corp.	Leonard Rentmeester	Abstain	
6	AEP Marketing	Edward P. Cox	Negative	<a href="#">View</a>
6	Ameren Energy Marketing Co.	Jennifer Richardson	Abstain	
6	Arizona Public Service Co.	Justin Thompson	Abstain	

6	Black Hills Power	andrew heinle	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Affirmative	
6	Cleco Power LLC	Robert Hirschak	Abstain	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Abstain	<a href="#">View</a>
6	Constellation Energy Commodities Group	Brenda Powell	Abstain	
6	Dominion Resources, Inc.	Louis S. Slade	Abstain	
6	Duke Energy Carolina	Walter Yeager	Negative	
6	Entergy Services, Inc.	Terri F Benoit	Affirmative	
6	Exelon Power Team	Pulin Shah	Affirmative	
6	FirstEnergy Solutions	Mark S Travaglianti	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Negative	<a href="#">View</a>
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	<a href="#">View</a>
6	Lakeland Electric	Paul Shipps	Negative	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Manitoba Hydro	Daniel Prowse	Negative	<a href="#">View</a>
6	MidAmerican Energy Co.	Dennis Kimm	Negative	<a href="#">View</a>
6	Muscatine Power & Water	Brandy D Olson		
6	New York Power Authority	William Palazzo	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	Omaha Public Power District	David Ried	Affirmative	
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	PPL EnergyPlus LLC	Mark A Heimbach	Negative	<a href="#">View</a>
6	Progress Energy	John T Sturgeon	Abstain	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Abstain	
6	Sacramento Municipal Utility District	Claire Warshaw	Abstain	
6	Salt River Project	Steven J Hulet	Affirmative	
6	Santee Cooper	Suzanne Ritter	Affirmative	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Shell Energy North America (US), L.P.	Paul Kerr	Affirmative	
6	South California Edison Company	Lujuanna Medina		
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Negative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Abstain	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons		
8		Roger C Zaklukiewicz	Negative	
8		James A Maenner	Affirmative	
8		Edward C Stein	Affirmative	

8	JDRJC Associates	Jim Cyrulewski	Affirmative	
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Abstain	
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon		
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Negative	<a href="#">View</a>
9	National Association of Regulatory Utility Commissioners	Diane J Barney	Abstain	
9	Oregon Public Utility Commission	Jerome Murray	Abstain	
9	Snohomish County PUD No. 1	William Moojen		
10	Florida Reliability Coordinating Council	Linda Campbell		
10	Midwest Reliability Organization	James D Burley		
10	New York State Reliability Council	Alan Adamson	Negative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Negative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Negative	<a href="#">View</a>
10	SERC Reliability Corporation	Carter B. Edge	Abstain	
10	Texas Reliability Entity	Larry D. Grimm	Negative	
10	Western Electricity Coordinating Council	Louise McCarren	Affirmative	

- Name (40 Responses)
- Organization (40 Responses)
- Group Name (22 Responses)
- Lead Contact (22 Responses)
- Question 1 (55 Responses)
- Question 1 Comments (62 Responses)
- Question 2 (50 Responses)
- Question 2 Comments (62 Responses)
- Question 3 (52 Responses)
- Question 3 Comments (62 Responses)
- Question 4 (53 Responses)
- Question 4 Comments (62 Responses)
- Question 5 (55 Responses)
- Question 5 Comments (62 Responses)
- Question 6 (0 Responses)
- Question 6 Comments (62 Responses)

Individual
Jennifer Wright
San Diego Gas & Electric
Yes
Yes
Yes
Yes
Yes
Yes
Individual
Steve Alexanderson
Central Lincoln
Yes
Yes
No
The new requirement presents us with a paradoxical situation. The communication has failed, so we must consult: yet consultation requires communication. We note that the SDT used the word "any", implying that multiple communication paths are required. The reality of the situation at Central Lincoln, due to our remote location, is that a single backhoe incident at the right location can take out all of our of our communication capability (including the terrestrial portion of the cellular networks) with our BAV/O, making this requirement impossible to meet for this circumstance using our present capabilities. We also note that no time limit was indicated. Most interruptions are brief, and fixed before consultation could reasonably take place. CEAs will be finding entities non-compliant for quickly fixing problems at their end without first consulting to ensure the restoration time was agreeable. To avoid non-compliance, entities will be forced delay repairs while they investigate alternative communication paths for consultation purposes. We fail to see how such an outcome improves reliability. The new requirement is one sided, requiring the DP and GOP to consult with no corresponding requirement for the TO or BA to have personnel available for such a consultation. Consultation failure or failure to mutually agree due to actions or inactions on the part of the TO or BA should not result in an enforcement action against the DP or GOP, yet that is how the requirement is written. The new requirement fails to add any "clarity" to the other requirements, and we don't see that the stakeholders thought there was a problem with DP/GOP obligation clarity. Instead, it adds new obligations with no justification for how they enhance reliability. We suggest removing the requirement.
Yes
As stated in our prior comments, we continue to have problems with COM-002 R2 and R3 as written. The SDT's answer ("It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive") addresses our concern perfectly, and we would agree with such an expectation. Unfortunately, the expressed expectation is not in the proposed standard or even in a proposed guideline for the standard.
Group
SERC OC Standards Review Group
Gerald Beckerle
Yes
No
We are concerned regarding communications between Transmission Operators on opposite ends of DC ties which may or may not be in the same interconnection. Similarly, COM-001, R1.2 limits the requirement of adjacent Reliability Coordinators to the same interconnection and this should not be limited to the same interconnection whether it is synchronous or non-synchronous. The measures should also be verified to ensure that they align properly with the final requirements.
Yes
We suggest that this phrase should also be removed from the "Purpose" statement.
No
We suggest Requirement 11 should be deleted as the generic nature of the term "...any of its Interpersonal Communications capabilities..." could be interpreted to include communications capabilities used for internal DP/GO purposes. Such DP/GO internal communications capability would not be critical to BES reliability. Also, no BES reliability benefit is realized by the parties simply agreeing to a time for the restoration of the failed Interpersonal Communication capability.
No
We suggest adding the words "and identified as a reliability directive to the recipient" at the end of the definition of Reliability Directive. As written, this definition could lead to a dispute of what communications are Reliability Directives: leading to further dispute as to what Requirements are applicable. By adding this clarity in the definition of this term, clarity will not be needed in the application of this definition as is proposed in COM-002-3, Req 1. This would allow the removal of R1 from COM-002-3
COM-001-2 Comments Definition of Alternative Interpersonal Communication: The proposed definition uses the term "medium". What is the scope of that? Telephony is a "medium" but there is wired, wireless, satellite, etc. Was "medium" intended to differentiate voice, paper, text, email, teletype, or something else? Does the qualifying term "same" when modifying infrastructure mean something like voice versus written? What about situations where the primary telephone system is Voice Over Internet Protocol (VOIP) and it is using the same computer network infrastructure as an email or messaging system. That is the "same infrastructure" but a different "medium" R1 and R2 - We suggest the drafting team look at Standard EOP-008, Requirements R3 and R8 and add appropriate language in Standard COM-001-2, to avoid instantaneous non-compliance for loss of Interpersonal Communications and/or alternate Interpersonal communications. R1 - In later requirements it is proposed that the entity "...shall designate an...". It is suggested that for consistently and audit ability, this concept be used for R1, R3, R5, R7 and R8. In addition, the qualifier of "primary" should be used such that the requirements read "... shall have designated, primary Interpersonal Communications capability with the following entities:." Although it is appropriate that "Alternative" be capitalized since it is used in a defined term (i.e. Alternative Interpersonal Communication) that bounds acceptable alternative methods, we do not see the need to capital "primary". R9 - The requirement is unclear if the required monthly test is a general functionality test or if there is the expectation of testing the designated Alternative Interpersonal Communications with all of the entities defined in the sub-requirements of R2, R4, and R6. There is no expectation of testing the primary Interpersonal Communications - is this intentional or an oversight? Although functional testing of this should be done as a normal course of business, should an explicit test be required with each entity in the sub-requirements of R1, R3, R5, R7 and R8 to insure, for example, that all the phone numbers are correct? R10 - The following scenario seems plausible: The Interpersonal Communications fails and is detected at 14:00 and gets fixed at 14:35. It lasted more than 30 minutes but is fixed. As written the requirement would require the responsible entity to notify entities identified in R1 through R6 by 15:00 (i.e. 60 minutes from detection) even though the problem no longer exists. Is that the expectation? Does COM-001 apply only to primary control centers or back-ups, per EOP-008, as well? M9 reads "at least on a monthly basis". We suggest that this be changed to "at least once per calendar month" as written in R9. This change should also be corrected in the VSLs. M8 - We suggest removing the second "that" in the first sentence of the measure. M10 - We suggest this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6), therefore M10 should read: "Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10)." M12 needs to be removed. We question why the first paragraph of Section 1.3 - Data Retention has been included in each of these three standards. We suggest that it should be removed from each standard. COM-002-3 Comments R2 - We recommend that the following phrase (in quotes) be added to R2: Each Balancing Authority, Transmission Operator and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive "immediately upon receiving it." As written, there is no limit as to when the entity must repeat it (i.e. they could wait 2 hours) The Standard is not clear as to what each entity is to do when more than one entity receives a Reliability Directive at the same time (e.g. during a RC area teleconference call). For example, is a roll call of receiving entities expected to be held so that they individually can repeat, restate, rephrase or recapitulate the Reliability Directive followed by individual confirmation required in R3? IRO-001-3 Comments We recommend that where the verb "direct/directed" or noun "direction" is used in Purpose, R1, R2 and R3, that it be replaced with the verb "instruct/instructed" or noun "instruction", as appropriate. This would help the industry avoid confusion often referred to as "big D" or "little d" directives. It is noted that the term "Reliability Directive" does that to a great degree but avoiding the

verb/noun "direct/direction" would augment the difference. R1 - At what point in time is "identified" referring to in "...to prevent identified events or..."? Is it referring to current or future events? One might assume both since the "Time Horizon" is defined as Real-time Operations, Same Day Operations and Operations Planning, but the requirement may be enhanced if explicitly stated ("...to prevent events identified in real-time or in the future or to mitigate the magnitude..."). For clarity, the scope of the authority should be limited to the Reliability Coordinator Area ("...that result in an Emergency or Adverse Reliability Impacts within its Reliability Coordinator Area"). As written, it implies the authority should extend outside its RC Area. R2 - We question the phrase "physically implemented" and recommend that the intent be clarified in the language. We note the following comment and response posted under Consideration of Comments on Initial Ballot - Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25 - March 7, 2011: "IRO-001 R2, R3, and R4 have replaced "Directives" with the word direction in lower case (while it appears that "Directives" is a subset of "directions"). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use "Directives" and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities is fulfilling. Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC "shall take actions or direct actions, which could include issuing Reliability Directives, ". This is the "direction in accordance with Requirement R2" stated in R3 and the "direction in accordance with Requirement R3" stated in R4." We believe the entity's comments remain valid and the response provided by the SDT does not address all aspects of the concern. We suggest that the language be changed to "Reliability Directive" consistent with COM-002, R3 - The requirement states the responsible entities shall "inform" its RC when unable to perform as directed but it is unclear when the notification needs to take place. Although the term "as soon as practical" may seem to be unmeasurable, as written now there is no time deadline to perform the notification - i.e. it could be 4 hours later after recognition. M2 - need to add the following words "compliance with, physically, unless" which were included in R2, therefore M2 should read "Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time -stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator's direction. (R2) * Section 1.3, the second bullet: need to add calendar to 12 calendar months "The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
Group
Salt River Project
Chris Chavez
Yes
Yes
Yes
Yes
Yes
Group
Pacific Northwest Generating Cooperative
Ron Sporseen
Yes
Yes
Yes
No
As per COM-001-2, R7, "Each Distribution Provider shall have Interpersonal Communications capability with the following entities..." R11 states that the DP or GO that experiences a failure of its Interpersonal Communications ability shall consult with TOPs and BAs and agree on how to restore Interpersonal Communications. We believe better language might be, "Restore Interpersonal Communications with your TOP/BA as soon as operationally feasible."
Yes
The PNGC Comment Group believes COM-002-3, R2, lacks justification for applicability to a Distribution Provider (DP). RCs in the WECC region do not communicate reliability directives to DP only entities. Having this requirement apply to DPs seems to indicate that we will need 24/7 communications capability to record and respond to calls that will never come in order to satisfy the requirement with no improvement to reliability. The SDT's response from the last round of comments: "It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive". Nowhere is this expectation provided for in the written standard. If the issuer of a reliability directive has already called the DP, are they going to then re-issue the reliability directive after the DP calls them back?
Individual
Paul Kerr
Shell Energy North America
Yes
Yes
Individual
Keira Kazmerski
Xcel Energy
Yes
No
In COM-001-2, R4.3. Adjacent Transmission Operators synchronously connected within the same Interconnection. This new requirement has a term that is not defined Adjacent Transmission Operators.
Yes
Yes
Yes
Group
Northeast Power Coordinating Council
Guy Zito
No
NERC uses the terms "adjacent" and "neighboring" in various standards. It is generally believed that those terms have the same meanings, but there are those who believe those terms, as used, are intended to have different meanings. To ensure a consistent usage and understanding, the definition of the term adjacent must be made known before its addition to the standard. Consideration should be given to using only one term in all standards if adjacent and neighboring are intended to mean the same thing. Both terms are used in NERC Standards, sometimes both in the same standard. For example, EOP-001-2b uses "neighboring" in R5, and "adjacent" in R3.3.

For COM-001: 1. R1.2 and R2.2: The phrase "within the same Interconnection" is improper; it needs to be removed. RCs between two Interconnections still need to communicate with each other for reliability coordination (e.g. between Quebec and the other RCs in the NPCC region to coordinate reliability issues including curtailing interchange transactions crossing an Interconnection boundary). The SDT's response to industry comments on the previous posting that the phrase was added to address the ERCOT situation (that ERCOT does not need to communicate with other RCs and that such coordination takes place between TOPs) leaves a reliability gap. 2. R3.5 and R4.3: The phrase "synchronously connected within the same Interconnection" is also improper; it needs to be removed. TOPs do communicate with other TOPs including those asynchronously connected and in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). The reason that was used in response to the above comments (coordination among TOPs for DC tie operation) contradicts with the inclusion of this phrase in R3.5 and R4.3. 3. R4 and R6: Not requiring an Alternative Interpersonal Communication capability between the BAs and the DP and GOP can result in a reliability gap. If Interpersonal Communication capability between the BAs and these entities is required to begin with to enable BAs to communicate with these entities (such as operating instructions or Reliability Directives) to ensure reliable operations, then an alternative capability is also needed to ensure this objective is achieved when the primary capability fails. 4. To preclude the possibility of problems arising from having different languages spoken between entities, COM-001-1.1 R4 should remain as it was or those ideas kept in the revised requirement. R4 read: "R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations." 5. Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised. For IRO-001: The Data Retention Section does not reflect the revised requirements. As examples: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1. Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2. And, in the Data Retention Section, R4 and M4 are mentioned. However, there are only three requirements with their corresponding measures in the standard.
Group
Arizona Public Service Company
Janet Smith, Regulatory Affairs Supervisor
No
There is a risk of not properly identifying an abnormal condition (Emergency or Adverse Reliability Impact) in time to require specific use of the statement 'this is a Reliability Directive' when issuing switching on the system in the event of an emergency. This is a deviation from consistently using 3-way communication when an emergency occurs. It may not be apparent that an emergency exists and breaking from consistent use of expected 3-way communication could cause confusion.
Individual
Edward J Davis
Entergy Services, Inc
No
R3 adds additional responsibilities for the TOP to have Interpersonal Communications capability with EACH DP and GOP in its footprint. Similarly, R4 gives the TOP responsibility to have alternative communications capability with each of these entities. This is a significant additional responsibility for the TOP to document and perhaps arrange for additional means of communication with these entities. The short time frame provided for implementation of these requirements is not consistent with the additional effort and compliance documentation that is necessary to implement these requirements. Entergy recommends that the implementation time frame for these new requirements that apply to new entities, or expand the application of COM-001 for existing entities have an effective date 12 months beyond the applicable regulatory approval. Additionally, the implementation of the requirements that apply to the DP and GOP will represent an increase in the amount of documentation that must be retained to demonstrate compliance, and in some cases may also result in their having to purchase equipment or install new alternate means of communication. What is the improvement in reliability expected as a result of these new requirements?
Yes
Entergy agrees with the inclusion of the term "Adjacent" in these requirements to limit the entities that the BA or TOP must have communications capability with to those that they border.
Yes
Yes, the requirements of this standard pertain to having communications capability. The specific content of that communication should not be the subject of the standard.
No
The DP or GOP should have to notify the TOP and BA of its communications failure, similar to the requirement in R10 for TOP and BA. The DP or GOP should restore the communications capability as soon as possible. Entergy does not agree that the TOP or BA should have to negotiate the restoration time with the DP or GOP. This is an unreasonable burden on the BA and TOP.
No
An Adverse Reliability Impact is a type of Emergency. Including a new term for Adverse Reliability Impact and including both terms in the definition for Reliability Directive doesn't add clarity. I suggest changing the definition for Reliability Directive to remove phrase "or Adverse Reliability Impact."
Entergy does not agree with including the DP and GOP in this standard. However, if they are to be included and are required to have the communications capability indicated, they should be included in R10. Why would it be important for the TOP to notify the DP that their communications method has failed, but it is not important for the DP to notify the TOP when their communications method has failed. The distinction doesn't seem reasonable or meaningful. Additionally, in the draft of COM-002-3 requirement 2 contains the language that the recipient of the directive shall "repeat, restate, rephrase or recapitulate" the directive. Why are so many synonyms of repeat necessary. Repeat or restate should be sufficient to get the point across.
Individual
Michael Falvo
Independent Electricity System Operator
No
In COM-001, we commented earlier that the entities in R4 and R6 (now R5 and R6) should be the same, i.e. the BA needs to have the Interpersonal Communication capability as well as the Alternative Interpersonal Communication capability with the same entities. The SDT's response indicates that the suggested change is not needed since additionally requiring DP and GOP entities to have Alternative Interpersonal Communication capability would impose more cost on smaller DP and GOP entities that have little or no risk impact to the bulk electric system. We disagree with this assessment since the need to have Alternative Interpersonal Communication capability should be assessed from the viewpoint that whether or not the absence of such capability can adversely affect reliability. If Interpersonal Communication capability is needed between a BA and a DP/GOP to communicate reliability instructions or directives, then it is deemed necessary that such communication be provided at all times, which indicates the need for an alternative capability. We once again urge the SDT to make the list of entities in R5 and R6 to be the same.
No
(1) We agree with the addition of "Adjacent" entities in the quoted parts except the qualifier "synchronously connected within the same Interconnection" need to be removed from Parts 3.5 and 4.3 since TOPs do communicate with other TOPs even in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). Even in the case of ERCOT, TOPs on the two sides of a DC tie do communicate with each other for daily operations. (2) Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised.
No
In the last posting, we suggest removing the phrase "within the same Interconnection" from R1 (now R2.2) since there are RCs between two Interconnections that need to communicate with each other for reliability coordination (e.g. between Quebec and the RCs the Northeast such as IESO, NYISO, NBSO and ISO-NE, and between the RCs in WECC with the RCs in the Eastern Interconnection). Such coordination may include but not limited to curtailing interchange transactions crossing Interconnection/RC boundary, as stipulated in IRO-006. The SDT's response to our comments citing that the phrase was added to address the ERCOT situation leaves a reliability gap to the other situations. We again urge the SDT to remove the phrase. If necessary, the ERCOT situation can be addressed by a regional variance.
Yes
Yes
(1) The proposed implementation plan conflicts with Ontario regulatory practice respecting the effective date of the standard. It is suggested that this conflict be removed by appending to the implementation plan wording, after "applicable regulatory approval" in the Effective Dates Section A5 on P. 4 of the draft standard COM-001, COM-002 and IRO-001, and on P. 2 of COM-001's Implementation Plan and P. 1 of COM-002's and IRO-001's Implementation Plans, to the following effect: ", or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities." (2) COM-001: Measure M9: "monthly basis". Suggest changing "monthly basis" to "at least once per calendar month" to be consistent with the wording in R9. (3) IRO-001: Measures M1, M2, M3 - The types of evidence are listed in paragraph form. This is not consistent with presentation style in COM-001-2 Measures, where evidence is listed in bullet format. Suggest using bullet form for consistency. (4) IRO-001, Data Retention Section: i. The retention requirements do not reflect the revised requirements. For example: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4. ii. Section 1.3, second paragraph: "The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider... shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation." The word "or" between Generator Operator and Distribution Provider should be changed to "and".
Group
MRO NSRF
Will Smith
Yes
No
NERC has formally defined "Adjacent Balancing Authority" in the NERC Glossary of Terms, but not "Adjacent Transmission Operator". The MRO NSRF recommends that "Adjacent Transmission Operator" be defined similar to the "Adjacent Balancing Authority" definition in the NERC Glossary of Terms.



Yes
No
Please note that the use of the word "any" as in "Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities..." will be viewed as meaning every Interpersonal Communication medium that an Entity has or uses. The NSRF recommends that the word "any" be removed from this Requirement. The NSRF recommends that R11 be revised to read: "Each Distribution Provider and Generator Operator that experiences a failure of any of its primary (or defined) Interpersonal Communication capabilities with its Transmission Operator or Balancing Authority..." In that way it focuses it down to the communications issues with the TOP or BA. In lieu of "primary" the SDT could state "defined" as long as it is not meant to be "any". The latter part of R11 states: "...shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability." This ambiguous statement does not support reliability. Consulting with a TOP or BA does not solve the problem of the lack of Interpersonal Communication capabilities. The NSRF recommends this be rewritten as: "...shall consult with inform their Transmission Operator or Balancing Authority as applicable as to the status of the Interpersonal Communication capability". So the new R11 would read: "Each Distribution Provider and Generator Operator that experiences a failure of its primary (or designated) Interpersonal Communication with their Transmission Operator or Balancing Authority shall inform them, as applicable, as to the status of the Interpersonal Communication capability."
Yes
Has the SDT looked at combining COM-002-3 and IRO-001-3 into a single Standard? It would allow Entities a one stop shopping place to refer to issuing and receiving a Reliability Directive. The definition of Interpersonal Communication is: "Any medium that allows two or more individuals to interact, consult, or exchange information". As stated in Question 4, the use of the word any will bring in mediums that are outside the scope of this Standard. The NSRF recommends the following: Interpersonal Communication: The primary (or designated) medium that allows two or more individuals to interact, consult, or exchange information. In Standard COM-002-3 the MRO NSRF recommends that the Effective Date be the first day of the second calendar quarter after applicable regulatory approval, to be the same as COM-001-2 and IRO-001-3. In that way all 3 standards would be effective at the same time, making implementation much smoother. The below section will lead to entities hold evidence past the 12 month retention period. This ambiguous wording will force entities to hold data past the 12 month period as stated in the following paragraph, after the below sighting. Recommend that the first paragraph within 1.3 be deleted in its entirety. 1.3. Data Retention The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.
Individual
Si Truc PHAN
Hydro-Quebec TransEnergie
For COM-001: R1.2 and R2.2: The phrase "within the same Interconnection" is improper: it needs to be removed. RCs between two Interconnections still need to communicate with each other for reliability coordination (e.g. between Quebec and the other RCs in the NPCC region to coordinate reliability issues including curtailing interchange transactions crossing an Interconnection boundary). The SDT's response to industry comments on the previous posting that the phrase was added to address the ERCOT situation (that ERCOT does not need to communicate with other RCs and that such coordination takes place between TOPs) leaves a reliability gap. 2. R3.5 and R4.3: The phrase "synchronously connected within the same Interconnection" is also improper: it needs to be removed. TOPs do communicate with other TOPs including those asynchronously connected and in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). The reason that was used in response to the above comments (coordination among TOPs for DC tie operation) contradicts with the inclusion of this phrase in R3.5 and R4.3. 3. R4 and R6: Not requiring an Alternative Interpersonal Communication capability between the BAs and the DP and GOP can result in a reliability gap. If Interpersonal Communication capability between the BAs and these entities is required to begin with to enable BAs to communicate with these entities (such as operating instructions or Reliability Directives) to ensure reliable operations, then an alternative capability is also needed to ensure this objective is achieved when the primary capability fails. 4. To preclude the possibility of problems arising from having different languages spoken between entities, COM-001-1.1 R4 should remain as it was or those ideas kept in the revised requirement. R4 read: "R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations." 5. Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised. For IRO-001: The Data Retention Section does not reflect the revised requirements. As examples: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1. Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2. And, in the Data Retention Section, R4 and M4 are mentioned. However, there are only three requirements with their corresponding measures in the standard.
Individual
Daniel Duff
Liberty Electric Power LLC
Yes
Yes
Yes
No
The phrase "mutually agreeable time" needs to be replaced in order to make this standard acceptable. This phrasing creates a potential violation if equipment functionality cannot be restored in the time frame preferred by another entity, even if the time of repair is beyond the control of the RE. This phrase should be replaced with "inform their TO or BA as applicable of the failure, and provide estimates as to the time the Interpersonal Communication capabilities will be restored".
Yes
Individual
Joe O'Brien
NIPSCO
Yes
Yes
Yes
If the Interpersonal Communication is down, and no backup is required for the DP and GOP, how are they to consult and collaborate?
The question of whether one is in a state of Emergency or Instability, or in an Abnormal Condition can be still be subjective: it may be difficult to provide evidence for an audit.
In IRO-001 R2 an "and" is missing after Generator Operator, and the comma should be removed. Why are there 3 different Effective Dates for this project, each standard being different? To simplify, can't they all be made identical?
Group
City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power
Claire Lloyd
Yes
Yes
Yes
Yes
Yes
Yes
Individual
Darryl Curtis
Oncor Electric Delivery Company LLC

Yes
Yes
Yes
Yes
Yes
for COM-001-2 Oncor takes the position that contacting all impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer as prescribed in R1 through R6 is not doable within the ERCOT interconnect for a Transmission Operator. Oncor takes the position that notification only to the RC and BA is sufficient and that those two entities have the operational functionality to contact within the prescribed time all affected Distribution Providers, Generator Operators, and other Transmission Operators. R10 - Oncor takes the position that the word "impacted" added to R10 will clarify that notification only needs to be made to the entities that are affected by the failure of a communication path. This will also more align with the language in M10 For COM-002-3 Oncor request clarity about what constitutes a "recipient". For example, if a Transmission Grid Operator performing the functions of a Transmission Operator issues a Reliability Directive to its own field operations personnel to perform an action on behalf of the same entity, does the field operations personnel as the recipient become in affect a "Transmission Operator" subject to R2.
Individual
Chris de Graffenried
Consolidated Edison Co. of NY, Inc.
Yes
Yes
Yes
Regarding COM-002 Requirement R1, we recommend that this requirement be reworded as follows: "When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall require that the Reliability Directive be communicated using three-part communications as described in Requirements R2 and R3 of this standard". The reason for this recommended rewording are threefold: 1. Good operating practice calls for use of three-part communications at all times. The recommended re-write encourages the use of the good operating practice of three-part communications at all times, but does not require it. 2. It is not good operating practice to require that an additional (unnecessary) phrase be used during emergency situations. During emergency situations, it is best to use standard operating protocols so as to limit unnecessary burdens on operating personnel during critical and stressful times. 3. By implementing the proposed new R1 requirement, it would effectively weaken the need for rigorous compliance with any and all directives issued by the RC's, TO's or BA's. Regarding IRO-001 Requirement R1, we recommend that the current requirement R3 be reinstated as the new requirement R1. That is, the new requirement R1 should read as follows: R1. The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. We do not support any further dilution of Reliability Coordinator authority to enforce Reliability Directives through deletion of the 30 minute maximum response time period. The timely actions in response to any Reliability Coordinator issued Reliability Directives is an essential part of the process.
Individual
Anthony Jankowski
We Energies
Yes
Yes
Yes
Please add "does not include telemetered or derived data"
No
R11 Implies that R8 and R9 are independent and redundant to R5.3, R5.4 and R3.3 and R3.4. R11 is not clear on the purpose of the statement " determine a mutually agreeable time for restoration" this could be driven by forces outside the control any of the entities. I think" provide estimated restoration and actual restoration time and determine mutually agreeable alternative during outage" would be better. Update M9 accordingly
Yes
The definition is acceptable, but as used may imply that all Emergency communications must be Reliability Directives.
COM-001, Although a great improvement over existing COM-001, and eliminates the data component see comments: •For R5.1 Can the solutions included to meet R1 be included, same R3.2 and R5.2, same R5.3 and R7.2, same R5.4 and R8.1 •For R5.2 Can the solutions included to meet R2 be included, same R4.2 and R6.2 •R9 a 2 hour response for a once a month test seems extreme, as would require a secondary Alternate Interpersonal Communications capability •M9 is reasonable, but should include something about communication actual repair and or time estimates •R10 The use of R1 through R6 implies notification of both Interpersonal Communications and Alternate Interpersonal Communications failures. Do you notify if you become aware after the link is back up if it was down for GT 30 minutes, and Doesn't address notifying when restored •R11 Implies that R8 and R9 are independent and redundant to R5.3, R5.4 and R3.3 and R3.4. R11 is not clear on the purpose of the statement " determine a mutually agreeable time for restoration" this could be driven by forces outside the control any of the entities. I think" provide estimated restoration and actual restoration time and determine mutually agreeable alternative during outage" would be better. Update M9 accordingly COM-002 •Since all the Requirements are related to Reliability Directives, is it implied that all "Emergency Communications" are Reliability Directives even if not designated as such per R1. •The M2 measure could be difficult for a recipient such as a Distribution Provider or Generator Operator. A recipient's phone may not be recorded but a initiator's always should. If a receiver refused to meet the R2 requirement, an initiator should have an alternative. I.e. repeat the directive and provide potential penalties if recipient refuses to comply. Should the initiator have responsibility for providing the entire 3-way evidence as M3 implies? IRO-001, Although a great improvement over existing IRO-001, see comments: •R2 needs to be clear that it is the Reliability Coordinator's Reliability Directive that must be complied with not just any Reliability Coordinator's direction as stated. •The M2 measure could be difficult, as the operator would have to have access to documents proving the safety, equipment, regulatory or statutory requirements, which may be the assessment of an individual applying the safety rule. Is the measure requiring a deposition of the individual to be performed for each instance? With an assumed data retention of 90 day (voice) 12 month document retention the deposition would be unlikely to be acquired prior to the retention period ending. •R3 needs to be clear that it is the inability to perform the Reliability Coordinator's Reliability Directive that must be communicated not just any "Reliability Coordinator's as directed". •The Data Retention section does not align with the standard: The Reliability Coordinator shall retain its evidence for the most recent 90 calendar days for voice recordings or 12 months for documentation for Requirement R2, Measure M2. R2 and M2 apply to the Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider. There is no R4 and M4.
Individual
J. S. Stonecipher, PE
City of Jacksonville Beach dba/ Beaches Energy Services
In R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply/demand balance is not local and in markets that allow retail competition, I'm thinking LSE is the right functional entity. For Florida, it doesn't really matter. If the LSE is the "correct" entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added
Yes
Yes
Yes
Yes
COM-001-2, R9 - "Each ... shall test its Alternative Interpersonal Communications capability". I would suggest adding the phrase "...to each entity for which Alternative Interpersonal Communications is required." to add clarity.
Individual
Scott Berry
Indiana Municipal Power Agency
No comment.
No comment.
No comment.
No

<p>IMPA does not believe that this requirement is necessary in order to ensure communication lines are restored by Distribution Providers and Generator Operators. If this requirement is kept, IMPA does not think the use of the words "a failure of any of its Interpersonal Communication capabilities" is acceptable. The wording is too inclusive and should apply to only primary Interpersonal Communication capabilities. IMPA is also concerned about how entities are supposed to know when the telephone companies may have equipment repaired in order to determine a mutually agreeable time to restore Interpersonal Communication capability. The entity may have no control over the restoration and hence would not be able to set a time other than whenever the capabilities are restored by for instance the telephone company. In addition, entities will have to keep evidence to show that a "mutually" agreeable time was reached by two or more entities. The most workable solution would be to require notification if primary Interpersonal Communication is lost and a follow-up notification when that capability is restored.</p>
No comment.
For R2 in IRO-001-3, the requirement needs to have the entities comply with their Reliability Coordinator's direction received in R1. Currently, requirement 2 directions are not linked back to R1 which means entities would have to comply with all Reliability Coordinator's directions regardless if they are associated with R1. For R7 in COM-001-2, IMPA does not believe that every Distribution Provider needs to be included in requirement 7. IMPA recommends stating that requirement 7 only applies to Distribution Providers who own an UFLS or UFLS system.
Individual
Jeff Longshore
Luminant Energy Company LLC
Yes
Yes
Yes
Yes
Yes
Yes
<p>IRO-001-3 R1 is not consistent with the direction taken in COM-002-3 which requires the Reliability Coordinator to identify Reliability Directive as such. The same approach should be taken with IRO-001-3 R1 so that the Reliability Coordinator is required to identify directions that are made to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts as such prior to or when issuing the directions. This extra specification is needed to eliminate any possible confusion in areas where the market operator and Reliability Coordinator are the same entity. In these areas, the Reliability Coordinator/market operator routinely gives directions to other entities that are not to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. Without the added clarification the receiving entity may not know the urgency of the situation and may not know to inform the Reliability Coordinator if they are unable to perform as required by R3.</p>
Group
CCG, CPG, CECD
Brenda Powell
No
As we commented on Project 2007-03 TOP-001-2, the definition of Reliability Directive is an improvement but the definition must capture the identification concept that is reflected in the Requirement (R1). As a result, when Reliability Directive is used elsewhere, it would be clear that the communication must be identified as a Reliability Directive. We suggest the following revision to the definition and it should follow through to Project 2006-06 IRO-001-3 and Project 2007-03 TOP-001-2, eventually being added to the Reliability Standards Glossary of Terms. A communication identified as a Reliability Directive by a Reliability Coordinator, Transmission Operator, or Balancing Authority to initiate action by the recipient to address an Emergency or Adverse Reliability Impact.
Comments: IRO-001-3 uses the term "direct" in its purpose statement, R1, R2 and R3. To avoid confusion with a Reliability Directive (both for auditors and entities), we suggest the following: To establish the authority of Reliability Coordinators to make requests of other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System, R1: Each Reliability Coordinator shall have the authority to act or request others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. R2: Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator's request unless compliance with the request cannot be physically implemented, or unless such actions would violate safety, equipment, regulatory or statutory requirements, or unless the TOP, BA, GOP or DP convey a business reason not to comply with the request but express that they will comply if a Reliability Directive is given. R3: Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as requested in accordance with Requirement R2.
Individual
Brian J. Murphy
NextEra Energy, Inc.
Yes
Yes
Yes
No
<p>NextEra Energy, Inc. (NextEra), which includes Florida Power &amp; Light Company, believes that Requirement 11 of COM-001-2, as drafted, is too vague to be adopted as a mandatory Reliability Standard. For example, it is unclear what is meant by "shall consult." The North American Electric Reliability Corporation's (NERC) Rules of Procedure state that a foundation of any Reliability Standard is that "... [the] reliability standard shall be stated using clear and unambiguous language. Responsible entities, using reasonable judgment and in keeping with good utility practices, are able to arrive at a consistent interpretation of the required performance." The term "shall consult" is not a term generally understood or used in the electric utility industry, and, therefore, does not enable a consistent interpretation of the performance required. Accordingly, NextEra requests that Requirement 11 either: (i) be deleted; or (ii) be redrafted to read more like Requirement 10.</p>
No
<p>NextEra objects to the use of "Adverse Reliability Impact" in Reliability Standards COM-002-3 and IRO-001-3. NextEra requests that the use of Adverse Reliability Impact be revised as suggested below or be deleted from the definition of Reliability Directive. NextEra does not agree with the use of Adverse Reliability Impact in the definition of "Reliability Directive" for the following reasons: 1. This term Adverse Reliability Impact is ambiguous. In part, the term is ambiguous because it includes in its definition the term "instability," which has led to considerable misunderstanding and confusion in the industry. There are also differing views on what is (and is not) Cascading, because the definition is not sufficiently clear. For example, some believe instability and Cascading occur when an event affects multiple substations of one Transmission Operator, while others believe instability or Cascading only occur when the event affects more than one Transmission Operator's system. As mentioned in response to item 4, above, Reliability Standards must be clear and consistently interpreted. It is not appropriate to issue a Standard that perpetuates the use of terms that lack consistent interpretation. 2. While not perfect, the term Emergency is better understood in the industry, and it may include many or all of the instances of instability or Cascading intended to be captured by Adverse Reliability Impact. Consequently, it is not advisable to introduce Adverse Reliability Impact as a new term, when it is not clearly distinguishable from Emergency. NextEra is concerned that an unclear and imprecise term, such as Adverse Reliability Impact, does not promote reliability, and, such a term is particularly troublesome in the context of real time system operations. Therefore, for the reasons stated above, NextEra believes that the term Adverse Reliability Impact should be deleted from the definition of Reliability Directive. In the alternative, if Adverse Reliability Impact is not deleted from the definition of Reliability Directive in Reliability Standards COM-002-3 and IRO-001-3, NextEra requests that Adverse Reliability Impact be revised to read: "an event or condition on the Bulk Electric System that may, or is leading to, Cascading over more than one Bulk Electric System transmission system."</p>
<p>NextEra has the following additional comments. COM-002-3 The purpose of COM-002-3 is: "To ensure Emergency communications between operating personnel are effective." This stated purpose is not the same as the specific requirement that three-way communication is used for a Reliability Directive. Thus, NextEra requests that the purpose be revised to read as follows: "To ensure that when a Reliability Directive is given that the Reliability Directive is explicitly stated and three-way communication is used." Consolidation of COM-002-3 and IRO-001-3 NextEra notes a continuing area of concern with the somewhat unsynchronized approach taken in the drafting process. Reliability Standards COM-002 and IRO-001 are now on version three, and still there is a somewhat unsynchronized approach being proposed. A clear and consolidated approach seems easily achievable with minimal effort. Thus, as proposed below, NextEra requests that COM-002-3 and IRO-001-3 be combined, which also would appear to allow for the retirement of certain requirements, such as TOP-001-1 R1-4. NextEra also is concerned that the current approach may have contributed to several significant misstatements in IRO-001-3, R1-3, which use the terms "direct," "direction" and "directed," instead of the term Reliability Directive as used in COM-002-3. COM-002-3 and IRO-001-3 indicate that three-way communication only is required when a Reliability Directive is issued. This begs the question of what are the potentially other, lower classes of directives in IRO-001-3 R1-3? And why do they need to be followed with or without three-way communication? Thus, at a minimum, NextEra requests that the terms direct, direction and directed be deleted from IRO-001-3 R1-3, respectively, and that Reliability Directive be inserted. This change, and other proposed changes, are reflected in NextEra's overall proposal to combine COM-002-3 and IRO-001-3 into one COM-002-3 standard: (Note: If the term Adverse Reliability Impact is revised as proposed by NextEra, then the term would not need to be stricken) R1. Each Reliability Coordinator shall have the authority to act and to issue a Reliability Directive to a Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider within its operating region to prevent identified events that may lead to, or to mitigate the magnitude or duration of, an Emergency. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] R1.1 Each Transmission Operator shall have the authority to act or issue a Reliability Directive to a Balancing Authority, Generator Operator and Distribution Provider within its operating region to prevent identified events that may lead to, or to mitigate the magnitude or duration of, an Emergency. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] R1.2 Each Balancing Authority shall have the authority to act or issue a Reliability Directive to a Generator Operator and Distribution Provider within its balancing region to prevent identified events that may lead to, or to mitigate the magnitude or duration of, an Emergency. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] R2. When a Reliability Coordinator, Transmission Operator or Balancing Authority issues a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time] R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive. [Violation Risk Factor: High][Time Horizon: Real-Time] R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall either [Violation Risk Factor: High][Time Horizon: Real-Time]: • Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or • Reissue the Reliability Directive to resolve any misunderstandings. R4. Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator's Reliability Directive, unless compliance with the Reliability Directive cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] R4.1 Each Transmission Operator, Balancing Authority, Generator Operator, and</p>

Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform a Reliability Directive in accordance with Requirement R4. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] R5. Each Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Transmission Operator's Reliability Directive, unless compliance with the Reliability Directive cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] R5.1. Each Balancing Authority, Generator Operator, and Distribution Provider shall inform its Transmission Operator upon recognition of its inability to perform a Reliability Directive in accordance with Requirement R5. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] R6. Each Generator Operator or Distribution Provider shall comply with its Balancing Authority's Reliability Directive, unless compliance with the Reliability Directive cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] R6.1. Each Generator Operator or Distribution Provider shall inform its Balancing Authority upon recognition of its inability to perform a Reliability Directive in accordance with Requirement R6. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Conclusion Given the importance of having clear and concise Reliability Standards on the issue of directives and three-way communication, until the above concerns raised by NextEra in Items 4 through 6 are addressed, NextEra intends to continue to vote "no" on COM-001-2, COM-002-3 and IRO-001-3.
Individual
David Thorne
Pepco Holdings Inc.
Yes
Yes
Yes
Yes
Yes
Yes
Individual
John Bee
Exelon
Yes
No
May have an unintended effect on registrations as some GOPs use a intermediately dispatch organization that perform actions on behalf of the generating units.
Yes
Yes
Yes
Group
LG&E and KU Services Company
Brent Ingebrigtsen
Yes
Yes
Yes
No
Regarding R11, as written it is unclear when the DP and GOP are required to consult with their TOP or BA. "[A] failure of any of its Interpersonal Communication capabilities" could be construed to mean any internal phone line of either the DP or GOP failing. Internal phone lines do not affect either the DP's or GOP's ability to communicate with the TOP or BA. It is also unclear whether a failure of an interpersonal communication capability would require consultation if there were multiple other interpersonal communication capabilities that were still fully functional. Furthermore, what exactly is required in "consultation" and who would be responsible if the "consulting" entities did not come to a "mutually agreeable time" are questions that are left unanswered. LG&E and KU Services Company suggest the following language: R11. Each Distribution Provider and Generator Operator that experiences a failure of more than one of its Means for Interpersonal Communications or failure of its Alternative Means for Interpersonal Communication with their Transmission Operator or Balancing Authority shall notify their Transmission Operator or Balancing Authority regarding the time to restore the impacted Means for Interpersonal Communication or Alternative Means for Interpersonal Communication.
Yes
COM-001-2 Regarding COM-001-2 and proposed definitions, LG&E and KU Services recommends changing the terms being defined from "Interpersonal Communications" and "Alternative Interpersonal Communication" to "Means for Interpersonal Communication" and "Alternative Means for Interpersonal Communication." A communication is an exchange of information, not a medium. The medium is simply the means. LG&E and KU Services Company further recommend that each requirement be rewritten with these new defined terms as appropriate and that the word "capabilities" currently following the defined terms be removed from each of the requirements. We suggest the definition for "Means for Interpersonal Communication" be "A medium utilizing electromagnetic energy that allows two or more individuals to interact, consult or exchange information." We suggest the definition for "Alternative Means for Interpersonal Communication" be "Any Means for Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Means for Interpersonal Communications used for day-to-day operation." Finally, LG&E and KU Services Company request clarification that the requirements to have in place Interpersonal Communications and Alternative Interpersonal Communications do not establish noncompliance for the unavailability of either medium provided the reporting requirements set forth in the standard are otherwise met. All Proposed Standards LG&E and KU Services Company suggest that the first paragraph in section 1.3 Data Retention be removed from all proposed standards. It states: "...For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit. While LG&E and KU Services Company is confident that the SDT intended to clarify entities' data retention responsibilities, this paragraph could be clarified to indicate that it does not require that any additional evidence be retained and provided beyond that written in the standard's requirements
Group
Bonneville Power Administration
Chris Higgins
Yes
Yes
Yes
Yes
Yes
Yes
BPA supports COM-001-2, COM-002-3 and IRO-001-3 as written and has no comments or concerns at this time.
Individual
Joe Petaski
Manitoba Hydro
Yes
Yes

Yes
No
COM-001-2 R11 does not specify a timeline in which entities have to come up with a 'mutually agreeable' time to restore Interpersonal Communication capability. Manitoba Hydro believes this omission creates a reliability gap and suggests that wording be revised as follows: '... shall consult with their Transmission Operator or Balancing Authority as applicable and determine a mutually agreeable time to restore the Interpersonal Communication capability within 24 hours of experiencing the failure.'
Yes
COM-001-2 -Definition 'Interpersonal Communication' - for clarity, the definition should explicitly state that data exchange is not included. -R9 - for clarity, the wording '... within 2 hours' should be replaced with '... within 2 hours of the unsuccessful test'. Conforming change required to M9 as well. -R10 - for clarity, the wording '... as identified in R1 through R6...' should be replaced with '... with which it is required to have Interpersonal Communications capability or Alternative Interpersonal Communication capability...'. -M6 - the term 'Adjacent' needs to be capitalized in the last sentence of the paragraph as 'Adjacent Balancing Authority' is a NERC defined term. -M7 - 'that' in the first line is repeated -M9 - the wording 'on a monthly basis' should be replaced with 'once per calendar month' to be consistent with the wording of the R9. -M11 - the words 'that experiences a failure of any of its Interpersonal Communications capabilities' should be added after Operator to be consistent with the wording of the Requirement -Compliance - 1.3 bulleted sentences - the term 'historical data' should be removed. The term 'evidence' is sufficiently descriptive and is consistently used in other requirements -Data Retention (1.3) - The data retention requirements are too uncertain for two reasons. First, the requirement to 'provide other evidence' if the evidence retention period specified is shorter than the time since the last audit introduces uncertainty because a responsible entity has no means of knowing if or when an audit may occur of the relevant standard. Secondly, it is unclear what 'other evidence' besides the specified logs, recordings and emails, an entity may be asked to provide to demonstrate it was compliant for the full time period since their last audit. This comment also applies to COM-002-3 and IRO-001-3. -Data Retention (1.3) - COM-002-3 requires that voice recordings are kept for the most recent 3 calendar months but COM-001-2 requires that they be kept for the most recent 12 calendar months. Manitoba Hydro does not see the reliability benefit of storing voice recordings for longer than 3 months and suggests that voice recordings be removed as evidence for COM-001-2. Evidence of the availability of Interpersonal Communications and Alternative Interpersonal Communications can be demonstrated using the other forms of evidence listed. -VSLs (general comment) - for clarity, use for example R1.1 and R1.2 to refer to requirements instead of Part 1.1 and Part 1.2. -VSL R4 - a reference to R4.3 is missing COM-002-3 -Title - to capture the purpose and intent of the standard, the title should be changed to 'Emergency Communications'. -R2 - for clarity, the words 'back to the sender' should be added to the end of the sentence -R3 - for clarity, the words 'to the recipient' should be added to both of the bulleted sentences after 'confirm' and 'reissue'. The words 'evident from the response' should be added to the end of the second bullet. -A question for the drafting team: has it been discussed whether there should be an additional requirement which indicates that the Reliability Coordinator, Transmission Operator and Balancing Authority shouldn't take any action in a Reliability Directive until such time as it has been confirmed accurate by the sender? If so, does the team feel that its a worthwhile requirement to consider? -M2 - the words 'restate, rephrase or recapitulated' should be added after 'repeated' to be consistent with wording of the requirement. -M3 - the words 'to show' should be deleted from the end of this paragraph. IRO 001-3 -Purpose - the words 'to the Bulk Electric System' already appear in the definitions of Emergency and Adverse Reliability Impact and do not need to be repeated here. -Effective Date - the effective date should be changed to the 2nd calendar quarter following BOT approval in jurisdictions not requiring regulatory approval to be consistent with jurisdictions requiring regulatory approval. -General comment - There are repeated references to 'identified events' - It is not clear what this is referring to. M1 - M1 refers to Adverse Reliability Impacts 'within its Reliability Coordinator Area'. The requirement does not refer to 'within its Reliability Coordinator Area' - the wording in the measure and in the requirement should be consistent. -M2 - missing the word 'physically' when describing that a direction could not be implemented, should be consistent with the wording in the requirement. -Compliance - the entire section needs to be updated as it refers to requirements and measures that don't exist. -VSLs R2 - the reference to 'fully comply' is very vague. It is only a violation if the entity does not fall within the exception. - R2 VSL - For clarity, change 'RC's directive' to 'Reliability Coordinator's Reliability Directive'.
Group
Southern Company
Antonio Grayson
Yes
No
We are concerned regarding communications between Transmission Operators on opposite ends of DC ties which may or may not be in the same interconnection. Similarly, COM-001, R1.2 limits the requirement of adjacent Reliability Coordinators to the same interconnection and this should not be limited to the same interconnection whether it is synchronous or non-synchronous. The measures should also be verified to ensure that they align properly with the final requirements.
Yes
We suggest that this phrase should also be removed from the "Purpose" statement.
No
We suggest the following changes: 1. Requirement 10 should include Distribution Providers and Generator Operators, 2. Entities to be notified should be "as identified in requirements R1 through R8", 3. Requirement 11 should be deleted, and, 4. Measures (M10) and VSLs should be adjusted accordingly.
No
This definition would encompass more communication than is now included. The definition now requires that a directive be declared as a part of the three part communication. For example, sending out the voltage schedule each morning would be included as a directive using the new definition. We suggest adding the words "and identified as a reliability directive to the recipient" at the end of the definition of Reliability Directive. This would allow the removal of R1 from COM-002-3
We question why the first paragraph of Section 1.3 - Data Retention has been included in each of these three standards. We suggest that it should be removed from each standard. We suggest the drafting team look at Standard EOP-008, Requirements R3 and R8 and add appropriate language in Standard COM-001-2, to avoid instantaneous non-compliance for loss of Interpersonal Communications and/or alternate interpersonal communications (R1 and R2). COM-001-2 Dominion VP: COM-001-2, M9 reads "at least on a monthly basis". Dominion suggests that this be changed to "at least once per calendar month" as written in R9. This change should also be corrected in the VSLs. M8 - We suggest removing the second "that" in the first sentence of the measure. M10 - Dominion suggests this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6), therefore M10 should read: "Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.) * M12 needs to be removed. Southern: Definition of Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communications used for day-to-day operation. Comments: • The proposed definition uses the term "medium". What is the scope of that? Telephony is a "medium" but there is wired, wireless, satellite, etc. Was "medium" intended to differentiate voice, paper, text, email, teletype, or something else? • Similar to that last question - does the qualifying term "same" when modifying infrastructure mean something like voice versus written? What about situations where the primary telephone system is Voice Over Internet Protocol (VOIP) and it is using the same computer network infrastructure as an email or messaging system. That is the "same infrastructure" but a different "medium" R1 Each Reliability Coordinator shall have Interpersonal Communications capability with the following entities: ..... Comments • In later requirements it is proposed that the entity "...shall designate an...". It is suggested that for consistency and auditability, this concept be used for R1, R3, R5, R7 and R8. In addition, the qualifier of "primary" should be used such that the requirements read "...shall have designated, primary Interpersonal Communications capability with the following entities." Although it is appropriate that "Alternative" be capitalized since it is used in a defined term (i.e. Alternative Interpersonal Communication) that bounds acceptable alternative methods, we do not see the need to capital "primary". R9 Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communications capability at least once per calendar month. Comments • The requirement is unclear if the required monthly test is a general functionality test or if there is the expectation of testing the designated Alternative Interpersonal Communications with all of the entities defined in the subrequirements of R2, R4, and R6. • There is no expectation of testing the primary Interpersonal Communications is this intentional or an oversight? Although functional testing of this should be done as a normal course of business, should an explicit test be required with each entity in the subrequirements of R1, R3, R5, R7 and R8 to insure, for example, that all the phone numbers are correct? R10 Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer. Comments • The following scenario seems plausible: The Interpersonal Communications fails and is detected at 14:00 and gets fixed at 14:35. It lasted more than 30 minutes but is fixed. As written the requirement would require the responsible entity to notify entities identified in R1 through R6 by 15:00 (i.e. 60 minutes from detection) even though the problem no longer exists. Is that the expectation? General Question • Does COM-001 apply only to primary control centers or back-ups, per EOP-008, as well? COM-002-3 Southern R1 When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. Comment • It is recommended that the requirement be clarified that the Reliability Directive be identified as such during its delivery. (e.g. "...shall identify the action as a Reliability Directive to the recipient during its delivery.") R2 Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive. Comment • It is recommended that the requirement be clarified that an entity receiving a Reliability Directive repeat, restate, rephrase or recapitulate it immediately upon receiving it. (e.g. "...shall shall repeat, restate, rephrase or recapitulate the Reliability Directive immediately upon receiving it.") As written, there is not limit as to when the entity must repeat it (i.e. they could wait 2 hours) General Question • The Standard is not clear as to what each entity is to do when more than one entity receives a Reliability Directive at the same time (e.g. during a RC area teleconference call) . Is, for example, a roll call of receiving entities expected to be held so that they individually can repeat, restate, rephrase or recapitulate the Reliability Directive followed by Individual confirmation required in R3? IRO-001-3 Dominion VP R2 - Dominion questions the phrase "physically implemented" and recommends that the intent be clarified in the language. Dominion notes the following comment and response posted under Consideration of Comments on Initial Ballot - Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25 - March 7, 2011: "IRO-001 R2, R3, and R4 have replaced "Directives" with the word direction in lower case (while it appears that "Directives" is a subset of "directions"). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use "Directives" and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling. Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC "shall take actions or direct actions, which could include issuing Reliability Directives, ". This is the "direction in accordance with Requirement R2" stated in R3 and the "direction in accordance with Requirement R3" stated in R4." Dominion believes the entity's comments remain valid and the response provided by the SDT does not address all aspects of the concern. Dominion suggests that the language be changed to "Reliability Directive" consistent with COM-002. M2 - need to add the following words "compliance with, physically, unless" which were included in R2, therefore M2 should read "Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time -stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator's direction. (R2) Section 1.3, the second bullet, need to add calendar to 12 calendar months Southern General recommendation • It is recommended that where the verb "direct/directed" or noun "direction" is used in Purpose, R1, R2 and R3, that it be replaced with the verb "instruct/instructed" or noun "instruction", as appropriate. This would help the industry avoid confusion often referred to as "big D" or "little d" directives. It is noted that the term "Reliability Directive" does that to a great degree but avoiding the verb/noun "direct/direction" would augment the difference. R1 Each Reliability Coordinator shall have the authority to act or direct others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. Comment • At what point in time is "identified" referring to in "...to prevent identified events or..." Is it referring to current or future events? One might assume both since the "Time Horizon" is defined as Real-time Operations, Same Day Operations and Operations Planning but the requirement may be enhanced if explicitly stated ("...to prevent events identified in real-time or in the future or to mitigate the magnitude..."). • For clarity, the scope of the authority should be limited to the Reliability Coordinator Area ("...that result in an Emergency or Adverse Reliability Impacts within its Reliability Coordinator Area"). As written, it implies the authority should extend outside its RC Area. R2 Editorial comment - The words "compliance with" are in a different font in the posted version. R3 Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. Comment The requirement states the responsible entities shall "inform" its RC when unable to perform as directed but it is unclear when the notification needs to take place. Although the term "as soon as practicable" may seem be unmeasurable, as written now there is no time deadline to perform the notification - i.e. it could be 4 hours later after recognition.

Group
PPL Electric Utilities and PPL Supply NERC Registered Organizations
Annette M. Bannon
No
PPL has concerns with the use of the word "any" in this requirement. PPL recommends striking the words "any of" and instead using "Its primary" as follows: Each Distribution Provider and Generator Operator that experiences a failure of its primary Interpersonal Communication capabilities with its Transmission Operator or Balancing Authority...". In the current version, it is unclear when the DP and GOP are required to consult with their TOP or BA. "[A] failure of any of its Interpersonal Communication capabilities" could be construed to mean an internal phone line of either the DP or GOP failing. Internal phone lines do not affect either the DP's or the GOP's ability to communicate with the TOP or BA. It is also unclear whether a failure of an interpersonal communication capability would require consultation if there were multiple other interpersonal communication capabilities that were still fully functional.
Individual
Michael Brytowski
Great River Energy
Yes
No
"to exchange interconnection and operation information" was removed from the requirements in COM-001-2 but remains in the purpose. For consistency it needs to be removed. It could read "To establish Interpersonal Communication capabilities for the exchange of information necessary to maintain reliability."
No
Capability is not used consistently in R7 and R11. It changes from singular to plural.
In IRO-001-3 "authority" should be removed and the verbage returned to "shall act." In COM-002-3 R2 and in Applicability we suggest removing the Distribution Provider as the RC would not likely give a Reliability Directive to a Distribution Provider. The Reliability Directive would more likely come from the Transmission Operator to the Distribution Provider. In COM-002-3 R3 we suggest replacing "Reissue" with "Restate." You are not technically reissuing the Reliability Directive.
Individual
David Burke
Orange and Rockland Utilities, Inc.
Yes
Yes
Yes
Regarding COM-002 Requirement R1, we recommend that this requirement be reworded as follows: "When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall require that the Reliability Directive be communicated using three-part communications as described in Requirements R2 and R3 of this standard". The reason for this recommended rewording are threefold: 1. Good operating practice calls for use of three-part communications at all times. The recommended re-write encourages the use of the good operating practice of three-part communications at all times, but does not require it. 2. It is not good operating practice to require that an additional (unnecessary) phrase be used during emergency situations. During emergency situations, it is best to use standard operating protocols so as to limit unnecessary burdens on operating personnel during critical and stressful times. 3. By implementing the proposed new R1 requirement, it would effectively weaken the need for rigorous compliance with any and all directives issued by the RC's, TO's or BA's. Regarding IRO-001 Requirement R1, we recommend that the current requirement R3 be reinstated as the new requirement R1. That is, the new requirement R1 should read as follows: R1. The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. We do not support any further dilution of Reliability Coordinator authority to enforce Reliability Directives through deletion of the 30 minute maximum response time period. The timely actions in response to any Reliability Coordinator issued Reliability Directives is an essential part of the process.
Group
SPP Standards Review Group
Robert Rhodes
Yes
Yes
We concur with the addition of "Adjacent" but ask that the SDT give some consideration to allowing an exemption in R6.3 for relatively small loads, less than 20 MW, that are pseudo tied into a Balancing Authority. Loss of these facilities would not place a burden on the BES and should not require Alternative Interpersonal Communications capabilities.
Yes
No
We would suggest deleting the phrase "any of" in the Requirement. It would then read "Each DP and GOP that experiences a failure of its Interpersonal Communication...". Also, how does the DP or GOP consult with its TOP or BA when it loses its Interpersonal Communications capability? To do this wouldn't they have to have an Alternative Interpersonal Communications capability?
Yes
COM-001-2: Requirement 10 is too open ended as written. The measure, M10, indicates that only impacted entities need to be notified. The requirement should be changed to make it consistent with the measure. The requirement would then read "Each RC, TOP And BA shall notify impacted entities as identified...". Requirements 3 and 5 places the responsibility for establishing Interpersonal Communication capability on the TOP and BA. It is quite conceivable that a TOP or BA may not know all, or newly, registered DPs and GOPs in its respective area. In Requirements 7 and 8, the DP and GOP, respectively, are in turn responsible for establishing Interpersonal Communication capability. The TOPs/BAs and the DPs/GOPs should not be responsible for this. The DPs and GOPs should be held accountable for requesting that capability of their TOP and BA. Therefore, we suggest adding the following phrase at the end of Requirements 3.3, 3.4, 5.3 and 5.4 – "that has requested Interpersonal Communications capability." Then R3.3 would read "Each Distribution Provider within its Transmission Operator Area that has requested Interpersonal Communications capability." COM-002-3: Requirement 2/Measure 2: There is an inconsistency between the requirement and the measure. The requirement allows the recipient to repeat, restate, rephrase or recapitulate the directive. Measure 1 only mentions repeating the directive.
Group
Dominion
Mike Garton
Yes
Yes
Yes
Yes
Dominion agrees with the intent of R11; however, suggest language changes for consistency with R10 as follows: R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations]
Yes
COM-001-2: M9 reads "at least on a monthly basis", Dominion suggests that this be changed to "at least once per calendar month" as written in R2. M8 Dominion suggests removing the second "that" in the first sentence of the measure. M10 Dominion suggests this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6). therefore M10







Individual
Neil Phinney
Georgia System Operations
No
While we agree with removing LSE, PSE, and TSP, we do not agree with the need to include Distribution Provider in all the standards. For example, in IRO-001-3, the Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. More likely, the Reliability Directive will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related. Accordingly, NERC's Reliability Functional Model V5 describes and identifies the DP's relationships with other Functional Entities to the TOP and BA with respect to Real Time. Real Time 7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority. 8. Implements system restoration plans as coordinated by the Transmission Operator. 9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment.
Yes
No
: The intent of this requirement is not yet clear. Technically, the air we breathe, as well as other mediums like "any" cell phone, fax lines, and/or email accounts would qualify under this proposed definition of Interpersonal Communication. The burden for compliance evidence to demonstrate failure of "any of its Interpersonal Communication capability" would seem unobtainable and could prove to be a daily occurrence (dropped phone calls, etc.). The following is suggested: R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capability shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.
Yes
Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator "to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact". Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and trigger the use of three-part communications identified in COM-002-3. COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: "When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive". What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact? Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent. It is recommended that the treatment of Reliability Directives shall be consistent with those being developed for TOP-001-2 as proposed by the Real-Time Operations drafting team (Project 2007-03). As such, consider using the following language for R2: "Each TOP, BA, and GOP shall comply with each identified Reliability Directive issued and identified as such by its RC, unless such actions would violate safety, equipment, regulatory, or statutory requirements." Accordingly, please consider using the following language for R3: "Each TOP, BA, and GOP shall inform its RC of its inability to perform an identified Reliability Directive issued by that RC." Again, we do not believe the DP would receive an identified Reliability Directive directly from the RC and the DP applicability should be removed from this standard. The DP is appropriately captured under COM-002 and TOP-001 with respect to Reliability Directives. Accordingly, NERC's Reliability Functional Model V5 describes and identifies the DP's relationships with other functional entities to TOP and BA with respect to Real Time. Real Time 7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority. 8. Implements system restoration plans as coordinated by the Transmission Operator. 9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment. The following comments are regarding COM-001-2. The SDT should include an additional qualifier to Interpersonal Communications within the context of these requirements, for example (operational or dispatch center communications??). Technically, the air we breathe, as well as other mediums like "any" cell phone, fax lines, and/or email accounts would qualify under this proposed definition of Interpersonal Communication. Assuming at least one employed individual can speak, all entities could demonstrate compliance of this capability at all times, therefore, it is not clear the intent of these requirements are accurately being presented. It is recommended to include the use of "signed attestation letters" as examples of evidence under M4 and M11 and other measures as appropriate.
Group
FirstEnergy
Sam Ciccone
Yes
Yes
Yes
No
Although we agree with the intent of the requirement, we are concerned with the use of "any of its Interpersonal Communication". The word "any" is very inclusive and the team should consider narrowing it down to those capabilities that may adversely impact reliability.
Yes
Definition of Interpersonal Communications - We understand that the team does not want to be prescriptive as far as the specific types of communication mediums since we live in an age of many forms of communication. But in this case it may be helpful to give examples in the definition. An auditor may interpret Interpersonal Communication to strictly include voice-related and two-way conversations. Depending on the circumstances, other mediums may be adequate, such as blast calls or instant messaging. This should be clarified in the definition. COM-001-2 - In R9, it should be clear that the 2 hour timeframe is for initiation of corrective action because mitigation may take much longer. We suggest the last sentence of R9 state: "If the test is unsuccessful, the responsible entity shall, within 2 hours, initiate action to repair or designate a replacement Alternative Interpersonal Communications capability." - In R10, the phrase "R1 through R6" should state "R1 through R8". COM-002-3 - In R2, the use of the term recapitulate may not be appropriate. This term means "to summarize" the directive. Three-part communication during emergency situations should assure that the essential details of the directives are understood and a summary may inadvertently leave out important information. - The effective date of COM-002-3 should be consistent with COM-001-2 and IRO-001-3 and state "the 1st calendar day of the 2nd calendar quarter". It currently shows the "1st calendar quarter in the standard and implementation plan. IRO-001-3 - The third bullet under Data Retention addresses requirement R4 and measure M4 neither of which exist in the standard. - In R1, the word "and" is missing between Generator Operator and Distribution Provider. - VSL for R2 - "NA" should be removed from the High VSL - Furthermore, the VSL should include language for instances when the entity cannot meet the RC's directive as afforded by R2.
Individual
Michelle D'Antuono
Ingleside Cogeneration LP
Yes
Ingleside Cogeneration LP believes that the intent of these three standards is to ensure reliable normal and emergency communications between BES operating entities. It should be the rare exception that BES-critical information must be communicated directly to an LSE, PSE, and TSP and IC. The impact of the Standards would be lessened if diffusely applied to multiple entities who do not normally engage in operations communications.
No
In the background section of this ballot, the project team indicates that the removal of the phrase is intended to signal that these requirements do NOT apply to the exchange of data. Although Ingleside Cogeneration LP agrees that the phrase is not a helpful description of the need for inter-entity communications - and should be removed - we do not see how the remaining language achieves the project team's purpose. It seems the confusion stems from the multitude of data communication types. Email messages between operating entities may be a valid communications path under COM-001-2, while telemetry/control is covered under other Standards. We believe that a technical guideline may be an appropriate vehicle to distinguish what types of communications are subject to these requirements, and which are not.
No
Most of Ingleside Cogeneration's communications capabilities rely on carriers who will immediately deploy technicians to repair land-based or wireless systems when they break. Although we may contact the carrier to inform them that the systems are not available - or to determine their progress - we do not want them waiting for our go-ahead before proceeding. If the intent of this requirement is to validate the operation of the repaired connection, or to establish interim means of communications with other operating entities, then Ingleside Cogeneration believes a re-write is in order. There is no reliability purpose being served otherwise that we can tell.
Yes
Ingleside Cogeneration agrees that it is important to clearly denote when a directive must be issued. In previous definitions, we believed that imprecise language made it difficult for the BA, RC, or TOP to determine if a gray area situation required a directive or not. With a more precise definition, it will eliminate second guessing by auditors that a directive was necessary because an outcome turned out poorly - even if an Emergency was not declared or an Adverse Reliability Impact did not occur.
Ingleside Cogeneration LP is concerned that the entity-to-entity organization of the COM Standards is quickly being outdated by voice and video conferencing or one-to-many broadcasts. In addition, email may be a preferred mode of most communications to and from small Generator Operators. It is not clear that these technologies are precluded from consideration by COM-001 and COM-002 - which means that some auditors may believe that they are. This leads to inconsistent application of the compliance criteria, and may discourage the use of some powerful technologies. It appears to us that some technical guidelines would be appropriate to help entities and auditors decide which are applicable under these Standards.
Group
MISO Standards Collaborators
Marie Knox
Yes
(1) In COM-001, the entities in R4 and R6 (now R5 and R6) should be the same, i.e. the BA needs to have the Interpersonal Communication capability as well as the Alternative Interpersonal Communication capability with the same entities. Although the need to have Alternative Interpersonal Communication capability should be assessed from the viewpoint that whether or not the absence of such capability can adversely affect reliability, the proposed standard does not require the capability in all cases. At the same time, this standard does not preclude such capability. Even though Interpersonal Communication capability is needed between a BA and a DP/GOP to communicate reliability instructions or directives, there are other communications paths which can be used in the case of the loss of that capability. Since TOPs are also required to have the capability, the BA can call the TOP and ask the TOP to contact the DP/GOP for them until they can implement capability. In addition, it is difficult to visualize entities which would not have the public telephone system or even cell phones available for use in the event of the loss of the capability.
Yes

(1) We agree with the addition of "Adjacent" entities in the quoted parts. However, there are some entities which may need the capability even though they are not "synchronously connected within the same interconnection". This standard does not require them to have the capability, but it does not preclude such capability. In these cases, those entities should evaluate whether the need for the capability is a reliability need or market coordination. If the entities were connected synchronously, actions taken by an entity could have immediate effect upon other entities. However, if not synchronously connected, changes in flows across the asynchronous ties would have to follow the interchange scheduling process with approval by all involved entities before changes could be enacted. Some TOPs do communicate with other TOPs even in another interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). (2) Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised.
Yes
We urge the SDT to remove the phrase. If necessary, regional situations can be addressed by a regional variance.
Yes
Yes
The Data Retention Section in IRO-001 does not reflect the revised requirements. For example: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4. Additional comments associated with COM-002 We are concerned with the use of "shall" in the measurement sections. "Shall" statements should only be used in the Requirements, as these are the only enforceable items in the standard. The measures should not limit how we show compliance. If there are specific issues that the drafting team is proposing to be a requirement, they should be added to the requirements section of the standard. Measurement M1 should also allow entities to develop procedures, that are distributed to and trained on, in advance with recipients of directives that meet the requirements for the communication of what constitutes a Reliability Directive. The last sentence in the measurement should be revised to read: "Such evidence could include, but is not limited to, dated and time-stamped voice recordings, dated and time-stamped transcripts of voice recordings, or dated operator logs to show that it identified the action as a Reliability Directive to the recipient or approved procedures that identify what constitutes a Reliability Directive and when Reliability Directives are issued." (R1) The Data Retention section states: "For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit." It is unclear on how an entity would be expected to provide evidence beyond 3 months when requested if the data retention period and established procedures do not require the evidence to be retained. The SDT should provide examples of what other types of evidence could be expected or the phrase should be removed.
Group
Florida Municipal Power Agency
Frank Gaffney
Yes
In COM-001-2 R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply / demand balance is not local and in markets that allow retail competition, it may be that the LSE is the more appropriate functional entity. For instance, the Functional Model when discussing LSE on page 55 states that one of the LSE's real time duties is: "12. Receives requests from the Balancing Authority and Distribution Provider for voluntary load curtailment." If the LSE is the more appropriate entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added. For Florida, which does not have retail competition, it doesn't matter whether the DP or the LSE is more appropriate; hence, the "yes" answer.
Yes
Yes
No
By use of the term "any" in the phrase "a failure of any of its Interpersonal Communication" the standard will actually create a disincentive for redundant communications with DPs and GOPs due to compliance risk. To truly further the goals of reliability, the requirement should align with R3.3 and R3.4 which requires a primary Interpersonal Communications capability and R4 which does not require DPs or GOPs to have Alternative Interpersonal Communications capability. A possible solution is through use of the terms "Primary" for R3 and "Alternate" for R4 and then make R11 applicable to Primary only.
Yes
In the definition of Interpersonal Communication, the use of the word "medium" is ambiguous. Suggestions for alternatives: "system", "channel". COM-001-2, R1 and R3, the phrase: "have Interpersonal Communications capabilities", what if the communication system fails? Is that an immediate non-compliance (especially R3.3 and R3.4 which do not require a redundant system). Suggest using EOP-008 type of language to allow restoration of failed equipment without non-compliance. COM-001-2 R9 - "Each... shall test its Alternative Interpersonal Communications capability", suggest adding the phrase "to each entity for which Alternative Interpersonal Communications is required" to add clarity. In addition, the type of testing is unclear and ambiguous. There is also ambiguity in the terms "direct", "directive", "direction" and "Reliability Directive". The SDT may want to consider using the terms "instruct" and "instruction" in place of "direct", "directive", "direction" to more clearly distinguish from a Reliability Directive.
Individual
Greg Rowland
Duke Energy
Yes
Yes
However, we believe that the phrase "synchronously connected within the same interconnection" should be struck, because TOPs are controlling DC ties and should be required to have communications with each other.
Yes
However, the definition of Interpersonal Communication should also be expanded to clearly include the drafting team's intent that the capability is NOT for the exchange of data. The phrase "for the exchange of interconnection and operating information" should also be struck from the Purpose statement.
No
The phrase "consult with... to determine a mutually agreeable time" makes this requirement too open-ended to be auditable and enforceable. We question why R11 does not establish a timeframe for notification similar to R10, which requires the RC, TOP or BA to make notification within 60 minutes of failure detection. We also question why DPs and GOPs are not required to have Alternative Interpersonal Communications capability in order to be able to make such notifications.
No
• Since FERC has not yet approved the new definition of Adverse Reliability Impact, we believe the term "Adverse Reliability Impact" should be replaced by the words of the BOT-approved definition: "the impact of an event that results in Bulk Electric System instability or cascading". • Also, add the phrase "and the communication is identified as a reliability directive to the recipient" to the end of the definition of Reliability Directive. This will eliminate potential confusion regarding when a communication is a Reliability Directive, and when a communication is a routine instruction. Revising the definition in this manner may also eliminate the need Requirement R1 of COM-002-3. If R1 is retained, we suggest rewording as follows: "Each Reliability Coordinator, Transmission Operator, or Balancing Authority shall identify a Reliability Directive to the recipient when it issues a Reliability Directive that requires an action or actions to be executed." • Proposed reworded definition: "Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency or the impact of an event that results in Bulk Electric System instability or cascading, and the communication is identified as a Reliability Directive to the recipient."
• COM-001-2 does not specify how much time an entity is allowed to restore failed Interpersonal Communications capability or failed Alternative Interpersonal Communications capability. R1 through R6 require that the RC, TOP and BA have both. R7 and R8 require that DPs and GOPs have Interpersonal Communications capability. An auditor could find an entity non-compliant with these requirements upon failure of either capability. R9, R10 and R11 specify actions to take upon failure, but do not relieve entities of responsibility under R1 through R8. • COM-001-2 R9, M9 and VSLs – M9 and VSLs should be revised to be consistent with wording of R9 phrase "at least once per calendar month". • COM-001-2 R10, M10 and VSLs – Clarity is needed regarding when the 60-minute clock starts. For example, suppose a failure is detected immediately upon occurrence of the failure. Does the 60-minute clock start immediately, or after the failure has lasted 30 minutes? When does the 60-minute clock start if a failure is detected and the entity is unsure when it occurred? • COM-001-2 R10, M10 and VSLs – If the failure only lasts for 35 minutes, it appears that the RC, TOP or BA is still required to notify entities identified in R1 through R6. Is this the drafting team's intent? • COM-001-2 R10, M10 and VSLs – Should be revised since the RC, TOP and BA are only required to have Alternative Interpersonal Communications capability with other RCs, TOPs and BAs per R2, R4 and R6. Suggested rewording for R10: "Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify entities with which it is required to have Alternative Interpersonal Communications capability as identified in R2, R4 and R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer." • COM-001-2 M11 and VSL – Replace the word "their" with the word "its". • COM-001-2 Data Retention – The way Data Retention is being enforced, this whole section could just be reduced to a blanket statement that an entity must be able to provide evidence that it has been in compliance since its last audit. • COM-002-3 R2, M2 and VSL – Replace "and" with "or". Also, the phrase "repeat, restate, rephrase or recapitulate" seems excessive and may be intended to avoid a violation where an entity fails to repeat the Reliability Directive word for word. Suggested rewording: "Each Balancing Authority, Transmission Operator, Generator Operator or Distribution Provider that is the recipient of a Reliability Directive shall repeat the Reliability Directive back to the issuer with sufficient accuracy so that understanding can be confirmed." • COM-002-3 R3, M3 - Replace "and" with "or". • IRO-001-3 – We believe that the Purpose and the Requirements of this standard should be focused solely on situations where the Reliability Coordinator issues Reliability Directives to prevent an Emergency or Adverse Reliability Impact. • IRO-001-3 – The Purpose should be rewritten as follows: "To establish the authority of Reliability Coordinators to issue Reliability Directives to other entities to prevent an Emergency or the impact of an event that results in Bulk Electric System instability or cascading." • IRO-001-3 – R1 should be rewritten as follows: "Each Reliability Coordinator shall have authority to act or to issue Reliability Directives to others, including but not limited to the Transmission Operator, Balancing Authority and Generator Operator within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or the impact of an event that results in Bulk Electric System instability or cascading." • IRO-001-3 – R2 should be rewritten as follows: "Each Transmission Operator, Balancing Authority, Generator Operator or Distribution Provider shall comply with a Reliability Directive issued by the Reliability Coordinator unless the Reliability Directive cannot be physically implemented or unless such action would violate safety, equipment, regulatory, or statutory requirements." • IRO-001-3 – R3 should be rewritten as follows: "Each Transmission Operator, Balancing Authority, Generator Operator or Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to comply with a Reliability Directive in accordance with Requirement R2." • IRO-001-3 Measures and VSLs – Should be revised to conform with the above suggested revisions to requirements.
Individual
Kathleen Goodman
ISO New England
Yes

No
ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such "requirements" (i.e. capabilities) should be verified through an entity certification process. Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to have communications facilities (electronic or voice).
No
ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such "requirements" (i.e. capabilities) should be verified through an entity certification process. Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to have communications facilities (electronic or voice).
No
ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such "requirements" (i.e. capabilities) should be verified through an entity certification process. Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to have communications facilities (electronic or voice).
Yes
none
Individual
H. Steven Myers
ERCOT ISO
No
Some concern for removal of LSE in particular from R2 and R3 from current IRO-001-2 R7 for the ERCOT region. ERCOT Region has QSE's that manage Load Resources. There may be some QSEs that are not registered as a GOP that deploy Load Resources. Per the current LSE JRO, QSEs with Load Resources are registered as LSEs. Not requiring them to deploy Load Resource directives could be perceived as a reliability gap created from previous version to this version. PSEs could be removed as long as they fall under BA authority.
Yes
These changes will clarify intentions regarding the undefined term "adjacent".
Yes
Yes
Yes
The definition of Reliability Directive appropriately clarifies the importance of knowing the level of importance of any instructions being issued. If there is no room for variance from the specific action required, or if there is no time to further negotiate or discuss the action required, it is important that the instruction be identified as a Reliability Directive and for such instructions to be followed in a timely fashion. Normal operating instructions typically do not rise to this level of urgency and some variation from the words will not result in unmanageable reliability impacts. Also, there typically may be time for addressing the instructions in more than one way.
Regarding COM-001-2: We are not clear on the time horizon of requirements for COM-001-2. Based upon the purpose statement, it appears that establishment would be ahead of real time. Wording in the requirements could be construed as maintaining at all times vs. establishing communications. The timeline for mandatory/effectiveness may not be acceptable to establish communications with DPs if hardware procurement/projects must take place. Regarding IRO-001-3: We have some concern for the removal of LSE in particular from R2 and R3 from current IRO-001-2 for the ERCOT region. The ERCOT region has QSEs that manage Load Resources. There may be some QSEs that are not registered as a GOP that deploy Load Resources. Per the current LSE JRO, QSEs with Load Resources are registered as LSEs. Not requiring them to deploy Load Resource directives could be perceived as a reliability gap created from the previous version to this version. PSEs could be removed as long as they fall under BA authority. The Data Retention section should be corrected to match the new requirements numbers and elimination of the previous version R1 with ERO. The Version History mentions six requirements retired, but only details five.
Individual
Anthony Jablonski
ReliabilityFirst
Yes
Yes
ReliabilityFirst agrees with adding the term adjacent but is unclear what the term adjacent is referring to. Does it mean directly connected or is it more than one layer out.
Yes
No
ReliabilityFirst believes Distribution Provider and Generator Operator should be added to Requirement R10 and Requirement R11 should be removed. Finite time frames should be prescribed for each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities. ReliabilityFirst believes that the failure of Interpersonal Communication between Distribution Providers/Generator Operators and Transmission Operators/Balancing Authorities could have the same negative effects similar to the failure of Interpersonal Communication by the Reliability Coordinator, Transmission Operator, and Balancing Authority.
No
ReliabilityFirst believes the definition of "Reliability Directive" should be all inclusive and include "all" actions initiated by the Reliability Coordinator, Transmission Operator or Balancing Authority (not just Emergency or Adverse Reliability Impacts). Even though Emergency or Adverse Reliability Impacts are defined, during operations, it may become a gray area to whether or not it falls under the intent of a "Reliability Directive." Furthermore, if the system falls under a condition that results in an Adverse Reliability Impact, it may be too late for a Reliability Coordinator, Transmission Operator or Balancing Authority to issue a Reliability Directive. ReliabilityFirst recommends the following for revision to the term "Reliability Directive": Reliability Directive - A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where an action by the recipient is required.
Comments on COM-001-2 1. Applicability Section a. RFC recommends adding the Generator Owner to the applicability section of the standard along with corresponding Requirements R8 and R11. ReliabilityFirst believes to maintain system reliability and based on certain business practices in effect, Generator Owners need to be required to have associated Interpersonal Communications with its Balancing Authority and Transmission Operator. 2. Requirement R7 and R8 a. ReliabilityFirst seeks further clarity on why the Distribution Provider and Generator Operator are not required to designate an Alternative Interpersonal Communications capability? Requirements R7 and R8 require the Distribution Providers and Generator Operators to have Interpersonal Communications capability but there is not corresponding requirement to have an Alternative Interpersonal Communications capability. ReliabilityFirst recommends adding two new requirements for the Distribution Provider and Generator Operator to designate an Alternative Interpersonal Communications capability. This will be consistent with how Requirements R1 through R6 are set up. 3. Requirement R9 a. Assuming new requirements for the Distribution Provider and Generator Operator to designate an Alternative Interpersonal Communications capability (based on previous comment) are added to the standard, the Distribution Provider and Generator Operator will need to be added to Requirement R9 to test its Alternative Interpersonal Communications capability at least once per calendar month. 4. Requirement R10 a. Based on the ReliabilityFirst comment submitted for Question 4, ReliabilityFirst believes the Distribution Provider and Generator Operator should be included in Requirement R10. b. Since Interpersonal Communications capabilities is a very important piece of operating the BES in a reliable manner, ReliabilityFirst believes the timeframe in which an entity is required to notify the entities is too long. ReliabilityFirst recommends the following language for Requirement R10: i. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall notify entities as identified in Requirements R1 through R8 of a failure of its Interpersonal Communications capabilities that lasts 15 minutes or longer. The notification shall be made within 30 minutes of the detection of a failure. 5. VSLs for Requirement R1 through R8 a. ReliabilityFirst suggest gradating the VSLs for R1 through R8. Listed below is an example of how to grade the VSL for R1. The same type of approach could be used for R2 through R8 as well. i. High VSL- the Reliability Coordinator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 1.1 and 1.2. ii. Severe VSL- The Reliability Coordinator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 1.1 and 1.2. 6. VSL for Requirement R9 a. For consistency with the requirement language, ReliabilityFirst recommends adding the words "at least on a monthly basis" to the Lower, Moderate and High VSLs and adding the words "if the test was unsuccessful" to the end of the Lower, Moderate and High VSLs. Listed below is an example of the Lower VSL. i. The responsible entity tested the Alternative Interpersonal Communications capability at least once per calendar month but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications in more than 2 hours and less than or equal to 4 hours if the test was unsuccessful. 7. VSL for Requirement R10 a. ReliabilityFirst provided alternate language for R10 in the comments listed above. If the alternate language is not incorporated, ReliabilityFirst recommends the following language for the Lower VSL. Similar language could be used for the Moderate, High and Severe VSLs as well. i. The responsible entity failed to notify entities as identified in Requirements R1 through R6 more than 60 minutes but less than or equal to 70 minutes of the detection of a failure of its Interpersonal Communications capabilities. b. If the alternate language for R10, in the comments listed above, is incorporated, ReliabilityFirst recommends the following language for the Lower VSL. Similar language could be used for the Moderate, High and Severe VSLs as well. i. The responsible entity failed to notify entities as identified in Requirements R1 through R6 more than 30 minutes but less than or equal to 740 minutes of the detection of a failure of its Interpersonal Communications capabilities c. For Moderate VSL (the VSL after the OR statement), ReliabilityFirst recommends using a percentage rather than the "least one, but not all" statement. For example, if there is say 100 impacted entities and the applicable entity only notify 1, they would only fall under the Moderate. In another scenario there is say 100 impacted entities and the applicable entity only notified 99, they would also fall under the Moderate as well. The use of percentages will help even this out. 8. VSL for Requirement R11 a. For consistency with the requirement language, ReliabilityFirst recommends the following language: i. The responsible entity that experiences a failure of any of its Interpersonal Communication capabilities failed to consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. Comments on COM-002-3 1. Requirement R1 a. Based on ReliabilityFirst suggested change to the definition of "Reliability Directive" as noted in Question 5, ReliabilityFirst recommends deleting Requirement R1. Based on the suggested definition, any communication initiated, where an action by the recipient is required, is considered a "Reliability Directive." Thus, there would no longer be a need for responsible entity to identify the action as a "Reliability Directive" to the recipient. 2. VSL for Requirement R3 a. For consistency with the requirement language, ReliabilityFirst recommends the following language: i. The responsible entity issued a Reliability Directive, but failed to confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate. Comments on IRO-001-3 1. Requirement R1 a. ReliabilityFirst seeks further clarity on why Requirement R1 only requires the Reliability Coordinator to have the "authority to act" rather than requiring the Reliability Coordinator to actually "take action" to prevent identified events that result in an Emergency or Adverse Reliability Impacts. Having the "authority to act" does not inherently require the Reliability Coordinator to take action, if appropriate. b. ReliabilityFirst seeks further clarity on the language "to prevent identified events." If the event was already identified, how can the Reliability Coordinator act to prevent it? ReliabilityFirst recommends adding the word "potential" in between the words "prevent" and "identified." 2. Requirement R3 a. There is no time qualifier specified in Requirement R3 dealing with the timeframe in which the applicable entity has to inform its Reliability Coordinator of its inability to perform as directed in accordance with Requirement R2. Without a time qualifier, Requirement R3 is open ended and could cause issues if the applicable entity does not inform its Reliability Coordinator upon recognition of its inability to perform as directed in a timely manner. ReliabilityFirst recommends the following language for Requirement R3: i. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator within 30 minutes upon recognition of its inability to perform as directed in accordance with Requirement R2. 3. VSL for Requirement R1 a. Requirement R1 requires the Reliability Coordinator to "... have the authority to act" - and the VSL does not reflect this language. ReliabilityFirst had questioned why Requirement R1, does not specifically require the RC to take action or direct actions in a comment submitted under Requirement R1. If the SDT does not change the language in Requirement R1, ReliabilityFirst recommends the following language: i. The Reliability Coordinator failed to have the authority to take action or direct actions, to prevent an identified event that resulted in an Adverse Reliability Impact

4. VSL for Requirement R2 a. For the High VSL, the words "fully comply" are ambiguous and open to interpretation. ReliabilityFirst recommends only having a Severe VSL. b. The Severe VSL states "directive" while Requirement R2 states "direction". To be consistent, ReliabilityFirst recommends the following language: i. "The Responsible Entity failed to comply with its Reliability Coordinator's direction"
Individual
Randall McCamish
City of Vero Beach
Yes
In COM-001-2 R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply / demand balance is not local and in markets that allow retail competition, it may be that the LSE is the more appropriate functional entity. For instance, the Functional Model when discussing LSE on page 55 states that one of the LSE's real time duties is: "12. Receives requests from the Balancing Authority and Distribution Provider for voluntary load curtailment." If the LSE is the more appropriate entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added. For Florida, which does not have retail competition, it doesn't matter whether the DP or the LSE is more appropriate; hence, the "yes" answer.
Yes
Yes
No
By use of the term "any" in the phrase "a failure of any of its Interpersonal Communication" the standard will actually create a disincentive for redundant communications with DPs and GOPs due to compliance risk. To truly further the goals of reliability, the requirement should align with R3.3 and R3.4 which requires a primary Interpersonal Communications capability and R4 which does not require DPs or GOPs to have Alternative Interpersonal Communications capability. A possible solution is through use of the terms "Primary" for R3 and "Alternate" for R4 and then make R11 applicable to Primary only.
Yes
In the definition of Interpersonal Communication, the use of the word "medium" is ambiguous. Suggestions for alternatives: "system", "channel". COM-001-2, R1 and R3, the phrase: "have Interpersonal Communications capabilities", what if the communication system fails? Is that an immediate non-compliance (especially R3.3 and R3.4 which do not require a redundant system). Suggest using EOP-008 type of language to allow restoration of failed equipment without non-compliance. COM-001-2, R9 - "Each ... shall test its Alternative Interpersonal Communications capability", suggest adding the phrase "to each entity for which Alternative Interpersonal Communications is required" to add clarity. In addition, the type of testing is unclear and ambiguous. The is also ambiguity in the terms "direct", "directive", "direction" and "Reliability Directive". The SDT may want to consider using the terms "instruct" and "instruction" in place of "direct", "directive", "direction" to more clearly distinguish from a Reliability Directive.
Individual
Rich Salgo
NV Energy
Yes
Yes
Yes
Yes
Agree, however, the ability for a DP or GOP to have such consultation with its TOP or BA would likely be hampered by the failure of the Interpersonal Communications itself. DP and GOP are only required to have a single source for this Interpersonal Communications.
Yes
The meaning of R9 is open to some interpretation. It states that if the monthly test is unsuccessful, the entity shall "initiate action to repair or designate a replacement" AIC within 2 hours. The meaning of this is unclear in several ways: First, does "initiate action" apply to the remainder of the sentence or just to the "repair" option? Second, what constitutes initiation of action? Is it the intent of the SDT that the alternate interpersonal communications be restored within a 2-hour limit? If so, the words do not clearly state that, and it seems an impossible task to ensure no more than 2-hr outage to an alternate communications medium. I am voting affirmative under the interpretation that one must only "initiate" the repair or "initiate" the designation of a replacement option within this tight 2-hour limit.
Individual
Rebecca Moore Darrah
Midwest Independent Transmission System Operator
Yes
Yes
Yes
No
MISO requests clarification regarding (1) when Distribution Providers/Generator Operators have an obligation to collaborate with Transmission Operators versus Balancing Authorities; and (2) the obligation of Transmission Operators to inform Balancing Authorities (and vice versa) of an agreed upon time for restoration of Interpersonal Communication capability when collaboration occurs only between Transmission Operators and Distribution Providers/Generator Operators or, conversely, Balancing Authorities and Distribution Providers/Generator Operators.
No
The proposed definition of Reliability Directive is unacceptable because the use of the defined terms "Emergency" and "Adverse Reliability Impact" results in an undefined, broadened scope of responsibility for Reliability Coordinators when coupled with the definition of the Bulk Electric System. This may lead to confusion/ambiguity for Reliability Coordinators that must be clarified to ensure compliance. Further, this broadened scope may mis-direct Reliability Coordinator's attention and mitigation efforts to small-scale, localized issues that represent no true threat to the operation of the Interconnection.
COM-001-2, R2 and R6: MISO requests clarification as to whether the designation of Interpersonal Communications and Alternative Interpersonal Communications methods by Responsible Entities must be formally documented and/or agreed upon with those entities with which communications capability must be established. COM-001-2, R9: MISO suggests that the designation of Alternative Interpersonal Communications methods should not require formal documentation and may be agreed upon (when necessary) informally with those entities with which communications capability must be established in the event of an unsuccessful test of its Alternative Interpersonal Communications capability. COM-001-2, Requirement R10: MISO requests clarification as to whether "impacted entities" refers to those entities with which the Responsible Entity must have Interpersonal Communications and Alternative Interpersonal Communications capability. Further, MISO requests clarification as to whether the notification required by R10 must be made using the Alternative Interpersonal Communications method selected by the Responsible Entity. COM-002-3, R1 - R3: MISO respectfully submits that, while it appreciates the distinction in responsibilities proposed in the new COM-002-3 and acknowledges that such distinction is beneficial, these requirements increase compliance risk and potential penalty liability without attendant benefit to the reliability of the Bulk Electric System. MISO respectfully suggests that Requirements 2 and 3 be converted into sub-requirements as follows: R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time] R1.1. When the Reliability Coordinator, Transmission Operator or Balancing Authority identifies a stated action as a Reliability Directive, the receiving Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall repeat, restate, rephrase or recapitulate the Reliability Directive to the Issuing Reliability Coordinator, Transmission Operator or Balancing Authority. [Violation Risk Factor: High][Time Horizon: Real-Time] R1.2. When the Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive receives a response from the receiving Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider, it shall then either [Violation Risk Factor: High][Time Horizon: Real-Time]: • Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or • Reissue the Reliability Directive to resolve any misunderstandings.
Individual
Don Jones
Texas Reliability Entity
Yes
No
(1) Requirements R1, R2, R3 and R4 should apply to all adjacent Reliability Coordinators and Transmission Operators, regardless of whether they are in the same Interconnection. The ERCOT Interconnection is asynchronously connected to adjacent Interconnections, and it is imperative that Functional Entities within Texas RE's purview be able to exchange operating information with Transmission Operators and Reliability Coordinators in those adjacent areas, even if they are in a different Interconnection. (2) Requirement parts R5.5 and R6.3 refer to "Adjacent Balancing Authorities." Measures M5 and M6 refer to "adjacent Balancing Authority" - note the small "a" on adjacent. "Adjacent Balancing Authority" is a defined term in the NERC Glossary, which has a more specific meaning than "adjacent Balancing Authority." Which term is intended in R5.5 and R6.3? If you don't intend to use the defined term, perhaps use a word like "contiguous" or "neighboring" rather than "adjacent."
Yes
No
(1) Why does R10 refer to "failure of its Interpersonal Communications capabilities" while R11 refers to "failure of **any of** its Interpersonal Communications capabilities"? What is the distinction that is

intended by addition of the words "any of"? (2) As a Compliance Enforcement Authority, we have several fundamental questions regarding what is intended in this standard. It appears the drafting team is using the defined term "Interpersonal Communications" to refer to a designated primary communication medium, and the term "Alternative Interpersonal Communications" to refer to one or more designated backup communication mediums. Is that correct? This should be clarified in the Standard. (3) There is ambiguity in the current draft because the defined term "Interpersonal Communications" appears to include primary, back-up and all other mediums that may be available (which may include landline phone, cell phone, satellite phone, instant messaging, email, and data links, all in one facility), including any "Alternative Interpersonal Communications". Do R10 and R11 apply to ALL available mediums, or just to the designated primary and back-up mediums? Does R9 apply to ALL available back-up mediums, or just to a specifically designated back-up medium?

No

We oppose the definition of Reliability Directive as it is currently being proposed in this standard because three-part communication should not be required only after an Emergency or Adverse Reliability Impact actually occurs. In particular we object to the removal of the word "expected" (or "anticipated") from the definition, because Reliability Directives may be required before a situation escalates to an Emergency, in order to prevent the Emergency from occurring. This proposed change potentially undermines efforts required to avoid emergencies and events. We note that there are instances in other Reliability Standards where "anticipated" conditions require actions to be taken (e.g. TOP-001-1 R5 and EOP-002 R4), when clear, concise, and definitive communication, verbal or electronic, is required to avoid or mitigate an impending emergency

(1) There are numerous errors in the Mapping Document in referencing the current version of the standard and requirement. Specifically, referencing IRO-001-2 where it appears that the document should reference standard IRO-001-3. In addition, the notes on page 2 of COM-002-3 are incorrect. (2) In the VRF/VSL Justification document, there are numerous errors in referring to standard versions and requirements: (3) In IRO-001-3, R1 – What is an "identified event," and who "identifies" an event that requires compliance with this requirement R1? An RC may choose not to "identify" an event, such as a limit violation, and run the risk of causing or exacerbating an emergency. If the RC does not "identify" the event, it may become an actual event and then fall within the standard. (4) In the VSL for IRO-001-3, R1, there should be language in the VSL to capture the term "Emergency," which was added in the Requirement. The High VSL for R2 needs to be fixed. (5) In IRO-001-3, R1, remove the "s" in the phrase "Adverse Reliability Impacts." (6) Referring to the Implementation Plan for IRO-001 – There is a different list in the Implementation Plan (R2, R4, R5, R6, R7, R9) than the Revision History of the Standard (R2, R4, R5, R6, R8). Where is the retirement of R1 shown? (7) Referring to COM-001-2: Measure 7, the word "that" is inadvertently repeated in the first sentence. (8) In COM-001-2, Measure 9, is "at least on a monthly basis" to be interpreted differently than "at least once per calendar month" as stated in the requirement? (9) In COM-001-2, there is a "Measure 12" bullet that should be removed. (10) Referring to COM-002-3: Electronic directives (which may be issued over many different types of electronic communication channels) are increasingly necessary to manage the modern, dynamic Bulk Power System (generation and transmission) on a real-time basis. The effective use of electronic directives is undermined by this proposed Standard in its current form. This draft standard, in conjunction with other standards that refer to directives, appears to require that directives (at least Reliability Directives) be given verbally. The failure of the NERC standards to address electronic directives may cause significant manpower issues for BAs with large portfolios of generation to manage. (11) In the VSL for COM-001-2 R4, a reference to Part 4.3 should be added. (12) In IRO-001-3, Part 1.3 Data Retention, the reference in the first bullet to "Electric reliability Organization" is incorrect. We think it should say "Reliability Coordinator" instead. The other references to entities and to Requirements in this Part 1.3 also appear to be incorrect and need to be updated and corrected. (13) Referring to COM-001-2, the prior version of this standard included Requirement R5: "Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities." This Requirement has been removed from the present draft of COM-001-2. The mapping document seems to suggest that this Requirement was moved to EOP-008, but it is not there. We are concerned that removal of this Requirement will result in a reduction in the level of BES reliability and introduce a potential reliability gap.

Individual

David Kiguel

Hydro One Networks Inc.

Yes

No

(1) We agree with the addition of "Adjacent" entities in the quoted parts except the qualifier "synchronously connected within the same Interconnection" need to be removed from Parts 3.5 and 4.3 since TOPs do communicate with other TOPs even in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). Even in the case of ERCOT, TOPs on the two sides of a DC tie do communicate with each other for daily operations. (2) Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised.

No

(1) In the last posting, there were suggestions of removing the phrase "within the same Interconnection" from R1 (now R2.2) since there are RCs between two Interconnections that need to communicate with each other for reliability coordination (e.g. between Quebec and the RCs the Northeast such as IESO, NYISO, NBSO and ISO-NE, and between the RCs in WECC with the RCs in the Eastern Interconnection). Such coordination may include but not limited to curtailing interchange transactions crossing Interconnection/RC boundary, as stipulated in IRO-006. The SDT's response to our comments citing that the phrase was added to address the ERCOT situation leaves a reliability gap to the other situations. We again urge the SDT to remove the phrase. If necessary, the ERCOT situation can be addressed by a regional variance.

Yes

Yes

(1) The proposed implementation plan conflicts with Ontario regulatory practice respecting the effective date of the standard. It is suggested that this conflict be removed by appending to the implementation plan wording, after "applicable regulatory approval" in the Effective Dates: Section A5 on P. 4 of the draft standard COM-001, COM-002 and IRO-001, and on P. 2 of COM-001's Implementation Plan and P. 1 of COM-002's and IRO-001's Implementation Plans, to the following effect: ", or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities." (2) COM-001: Measure M9: - "monthly basis". Suggest changing "monthly basis" to "at least once per calendar month" to be consistent the wording in R9. (3) IRO-001: Measures M1, M2, M3 – The types of evidence are listed in paragraph form. This is not consistent with presentation style in COM-001-2 Measures, where evidence is listed in bullet format. Suggest using bullet form for consistency. (4) IRO-001, Data Retention Section: i. The retention requirements do not reflect the revised requirements. For example: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4. ii. Section 1.3, second paragraph: "The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider... shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation." The word "or" between Generator Operator and Distribution Provider should be changed to "and".

Individual

Gregory Campoli

New York Independent System Operator

Yes

No

It is not clear the distinction between an Emergency and ARI. We would like to confirm that Since ARI is the impact of an event that results in instability or cascading, that an ARI is a subset of an emergency? Or said differently is an ARI simply instability or cascading? Ultimately if ARI is a subset of Emergency, then why do we need both in the requirement?

COM-001 The drafting team has complicated the requirements by having different requirements between RC/TOP/BA and other entities such as GOP/LSE/DP. The proposal is for redundancy to be required only between RC/TOP/BA. The requirement should be simplified to require all identified entities to have plans for loss of primary communication channels. This could include third parties as a communication channel. COM-002 The drafting team added a requirement to identify a Reliability Directive is being initiated during an emergency to track 3-part communication for compliance purposes. This will change and complicate the communication protocols between normal and emergency operations simply to simplify compliance assessments. The NYISO is asking for clarification that an entity may identify Reliability Directives as a category of communications to be communicated through procedures and training; and will not require a different communication protocol between normal and emergency operations. Affective communications can only be achieved through consistent processes for all conditions. Compliance assessments should be made on when we are in an emergency or not, and not on how the dialogue was initiated.

Group

ZGlobal Engineering and Energy Solutions

Mary Jo Cooper

Yes

Yes

No

No

We are pleased that the drafting team addition provides additional description on the process for communicating failed Interpersonal Communication. However additional clarity should be made regarding if there is an expectation that the Interpersonal Communication should be available 24x7. There are many Distribution Providers that do not have a 24x7 managed facility that can view and respond to a communication received in real time on the Interpersonal Communication device. These DPs rely on on-call personnel for off-hour emergencies such as an outage on the distribution system. The on-call personnel may use a cell phone, pager, etc. In other cases the Transmission Operator or Balancing Authority may communicate by email and response is provided during business hours. In these cases, if the Transmission Operator or Balancing Authority had a system emergency they have the ability to isolate the distribution system from the grid and therefore do not require a 24x7 manned distribution. If the intent of the Standard is for ensuring real-time communication than the applicability should be limited to those Distribution Providers who have been required by the Transmission Operator or Balancing Authority to have a manned 24x7 manned facility. Many of the DPs referred to here have not received a real-time call in the last 20 years. Requiring them to staff 24x7 for a condition likely not to occur is cost prohibited and does not improve reliability.

Yes

Group

ACES Power Marketing Standards Collaborators
Jason Marshall
No
While we agree with removing LSE, PSE, and TSP, we do not agree with the need to include Distribution Provider in all the standards. For example, in IRO-001-3, the Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. More likely, the Reliability Directive will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related.
Yes
Yes
We thank the drafting team for making this change and for the clear communication that the intent of this standard is not for data exchange in the response to comments. However, we do believe one additional change is necessary to make the intent absolutely clear. The purpose of statement of COM-001-2 still includes the phrase "to exchange Interconnection and operating information". Since a standard must stand on its own, we believe it is necessary to remove that phrase from the purpose statement to avoid misinterpretations in the future. Auditors and enforcement personnel are not required to understand the development history when enforcing the standard. Furthermore, the purpose is really to enable communications between these functional entities.
No
Requirement R11 does not fully address the issue of what is required by Distribution Providers and Generator Operators and introduces new issues. First, while the standard is intended to clarify that the Distribution Provider and Generator Operator do not need backup communications capability, it simply does not. Distribution Providers and Generator Operators are required to have an Interpersonal Communications capability in Requirement R7 and R8 respectively. Unfortunately, the effectiveness of these requirements persists even when the Distribution Provider or Generator Operator experiences a failure of its Interpersonal Communications capability. When Requirement R11 applies, the Distribution Provider or Generator Operator will still be obligated to comply with Requirements R7 and R8 respectively and will, in fact, be in violation of these requirements because the Distribution Provider or Generator Operator no longer has the capability. Second, capability is used inconsistently between Requirement R7 and R11 which leads to confusion. In Requirement R7, it is singular while in Requirement R11 is plural. It needs to be clear that only the failure of the capability identified in R7 and R8 needs to be reported by the Distribution Provider and Generator Operator respectively. Third, if the requirements focused on communications devices rather than capabilities, they would come closer to communicating the intent. Requirement R11 would better complement Requirement R7 and R8 if the focus was on having a communication medium or device. A Generator Operator with an installed communications device or medium still has that device or medium even when it is not functioning properly and could still meet Requirements R7 and R8. However, they don't have the Interpersonal Communications capability if the device is not functioning properly.
Yes
The following comments are regarding IRO-001-3. We disagree with including "authority" in this standard. FERC Order 693a, paragraph 112, made it clear that the authority of a registered entity is established through the approval of the standards by FERC. Thus, a Reliability Coordinator gets its authority to issue Reliability Directives by having a requirement that states it must issue Reliability Directives approved by the Commission. Please change "shall have authority to act" in Requirement R1 back to "shall act". Please also remove all other vestiges of authority from the standards including in the purpose, measures and VSLs. Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator "to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact". Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and trigger the use of three-part communications identified in COM-002-3. COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: "When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive". What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact? Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent. For clarity and consistency, Requirement R2 and R3 should also be clear that the responsible entities will respond to the Reliability Coordinator's Reliability Directives. Furthermore, this would make the standard consistent with how Reliability Directives are handled by the Transmission Operator in the draft TOP-001-2 standard proposed by the Real-Time Operations drafting team (Project 2007-03). The Data Retention section needs to be modified. The first bullet applies to the Electric Reliability Organization and Requirement R1 and Measure M1. The actual requirement and measure apply to the Reliability Coordinator. Furthermore, five calendar years exceeds the audit period of three years for a Reliability Coordinator. The second bullet incorrectly applies to the Reliability Coordinator and Requirement R2 and Measure M2. Requirement R2 and Measurement M2 apply to Transmission Operators, Balancing Authorities, Generator Operators and Distribution Providers. The third bullet mentions Requirement R4 and Measurement M4. There is no Requirement R4 and Measurement M4 in the standard. The VSLs for Requirement R1 are not consistent with the requirement. The VSL states that it is for failure to act while the requirement compels the Reliability Coordinator to have the authority to act. This modifies the requirement which is not allowed under FERC VSL guidelines. The VSLs for Requirement R2 need to include the "unless" clause from the requirement. Otherwise, the VSL implies that the responsible entity violated the requirement for failing to follow the directive even if they could not for one of the reasons listed in the requirement. This again is not consistent with FERC guidelines that state VSLs cannot modify the requirement. The following comments pertain to COM-001-2. We recommend striking "capability" from all of the requirements. It is not clear to us how this helps when a definition for Interpersonal Communications is written already and applies to a communication medium. Furthermore, we think it causes confusion and actually contradicts the intent of the standard. Because Requirements R1, R3, R5, R7 and R8 focus on capability, the responsible entity will be in violation anytime it medium that it uses for the primary capability does not function properly. Whereas if the requirement stated that the responsible entity was to designate a primary communications medium, the responsible entity is not in violation if that medium is not functioning properly. It would be clear that Requirement R2, R4 and R6 are intended to be complementary. Furthermore, it is not clear why Requirements R1, R3, R5, R7 and R8 state that the responsible entity shall "have" when the companion Requirements R2, R4, and R6 state "designate." Since Requirement R10 deals with a failure of its Interpersonal Communications capabilities and not Alternate Interpersonal Communications capability, it should only refer to the entities in Requirements R1, R3, and R5. Currently, it includes R1 through R6. We suggest changing "physical assets" to "demonstration of physical assets". Since evidence is provided to the auditor and the auditor takes the evidence with them, providing them evidence that is a "physical asset" would be problematic. We believe that the VSLs could be written to provide more gradations. For example, if a Transmission Operator or Balancing Authority failed to have Interpersonal Communications capability with a Distribution Provider but had Interpersonal Communications capability with all other required entities, it has met the vast majority of the requirement. Since VSLs are a measure of how much the requirement was missed by the responsible entity, jumping to a Severe VSL does not seem to adequately capture that the responsible entity met the vast majority of the requirement. Requirements R4 and R6 even seem to recognize this by not including Distribution Provider in the list of entities to which the Transmission Operator or Balancing Authority are required to designate Alternate Interpersonal Communications capability. The following comments pertain to COM-002-3. While COM-002-3 is well written to explain the three-part communications requirements and makes it perfectly clear when Reliability Directive has been issued, the opening clause leaves the responsible entity open to second guessing on whether they should have issued a Reliability Directive. This problem could be solved by changing the opening clause to "When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive". In the second bullet of Requirement R3, we suggest using "Restate" in place of "Reissue". The responsible entity is not really reissuing the Reliability Directive. They are still in the act of trying to get the Reliability Directive issued and are simply re-communicating it because it was not understood.
Individual
Andrew Z. Puztal
American Transmission Company, LLC
Yes
Yes
Yes
Yes
Yes
Yes
Group
Kansas City Power & Light
Michael Gammon
Yes
No
Requirements R4.3 and R6.3 require TOP's and BA's to establish alternative means of "interpersonal communications" with other TOP's and BA's without regard to the reliability impact each TOP or BA has on the interconnection. Why would it be necessary for a TOP with one 161kv transmission line or a BA with 100 MW of total load, or one GOP with a 30MW unit to realize additional costs when the facilities they operate have little reliability impact? Rationale criteria should be included here to identify the TOP's and BA's where alternative means of "interpersonal communications" should be implemented. Furthermore, these requirements do not recognize the condition when another party refuses to install alternative communication equipment. TOP's and BA's have no authority over other TOP's and BA's to establish alternative means of communication. Requirements that are dependent on the actions of other parties over which you have no control or authority are poor requirements. In addition, most RC's have established satellite telephone systems as back-up communication with TOP's and BA's. Some RC's may have to establish additional communication systems with some BA's as these requirements impose to avoid Standards of Conduct issues.
Yes
No
How does a DP or GOP experiencing a failure of its "interpersonal communications" consult with its TOP or BA to determine a mutually agreeable time for restoration of "interpersonal communications"? There are no requirements that require alternative "interpersonal communications" for the DP and GOP. This requirement cannot be fulfilled and should be removed.
Yes
R9 – considering the reliability of communication systems and System Operator attention may be on more important operational concerns, a 2 hour response to a problem with the alternative means of communication is over sensitive. Allowing for sometime in an operating shift would be more in line, such as 8 hours. Violation Severity Levels for COM-001-2: The VSL's for requirements R1-R8 and R11 do not recognize the efforts of Entities to meet the requirements. If an Entity failed to establish communications or alternative communications with 1 Entity out of 20 should that be Severe? Implementation Plan for COM-001-2: The implementation plan is too aggressive at completing in 6 months after regulatory approvals. Establishing agreements with other RC's, TOP's and BA's for alternative "interpersonal communications" regarding the various types of communications available that meet these requirements will take more than 6 months. Recommend 12 months to allow Entities sufficient time to reach agreements and to establish the communications.

# Consideration of Comments

## Reliability Coordination – Project 2006-06

The Reliability Coordination Drafting Team thanks all commenters who submitted comments on the fifth formal posting for Project 2006-06—Reliability Coordination. These standards were posted for a 30-day public comment period from January 9, 2012 through February 8, 2012. Stakeholders were asked to provide feedback on the standards and associated documents through a special electronic comment form. There were 62 sets of comments, including comments from approximately 170 different people from approximately 106 companies representing 9 of the 10 Industry Segments, as shown in the table on the following pages.

### Summary Consideration

The RCSDT received comments from stakeholders, where a majority of those comments were focused on compliance elements of the standards, various errors, and other ambiguities. The RCSDT believes it has been responsive to the many comments and has either provided adequate explanation, where applicable, as well as incorporating the needed clarifications or corrections. There were no strong minority issues revealed in the comments which the RCSDT could not address. Revisions made to the standards are summarized in the following sections by standard.

#### COM-001-2

In the last posting and successive ballot, the standard received approval from about half of the ballot body with numerous comments. The RCSDT made substantive changes to the standard based on comments. The changes to COM-001-2, R3 and R4 require the standard to undergo a second successive ballot. The RCSDT believes it has addressed stakeholder comments and concerns in such a way that the standard is improved and meets the expectation expressed in comments for reliability and industry approval. Upon achieving industry consensus, this standard will advance to a recirculation ballot.

**Purpose:** Removed the text “for the exchange of Interconnection and operating information” based on comments received and due to the fact that the standard is for capability, which enables information exchange under other standards.

**Effective Date:** The language in the effective date was made consistent with current Standard Drafting Guidelines.

**Requirements:** Most changes were minor. In places where the capitalized word “Adjacent” began the requirement Parts, the RCSDT added the word “Each” and made “Adjacent” lowercase to avoid the perception of a defined glossary term. This change occurred in Parts 1.2, 2.2, 3.5, 4.3, 5.5, and 6.3. A significant change occurred in requirements R3 and R4. The RCSDT addressed stakeholders concerns

about the use of “synchronously connected within the same Interconnection.” This was addressed by removing the phrase “within the same Interconnection;” however, other comments were concerned that synchronously did not address DC ties. The RCSDT addressed this by adding a Part, which reads, “Each Transmission Operator asynchronously connected” to Requirements R3 and R4. Requirement R10 was updated to more accurately reflect the reference to other requirements. It should not have referenced R1 through R6; but, rather, R1, R3, and R5. Requirement R11 was updated to address stakeholder concerns about reaching a “mutually agreeable time,” so was changed to “mutually agreeable action.” Other minor changes included making plural terms singular and replacing “per” for “each” for readability and understanding.

Some commenters had concerns about conditions of non-compliance if the entity’s Interpersonal Communication capability failed. To address this concern, the RCSDT added conforming language to Requirements R1, R3, R5, R7 and R8 that bridges the potential gap in non-compliance for a failed Interpersonal Communication capability.

**Measures:** Most changes to the measures were non-substantive and provided better formatting for readability. Measures M3 and M4 were updated to align with the changes to the parts of Requirements R3 and R4 regarding synchronous and asynchronous. Several measures had inconsistent example evidence for the performance of the requirement. For example, time (hour/minute) based elements are introduced in R9 and R10; however, the measures did not note using dated and “time-stamped” evidence. Likewise, previous requirements did make use of “time-stamped” where there was no time based (hour/minute) performance. The RCSDT found this an unnecessary compliance burden. Other minor changes included making plural terms singular and replacing “per” for “each,” for readability and understanding.

**Compliance, Compliance Enforcement Authority:** The language in the CEA section was made consistent with current Standard Drafting Guidelines.

**Compliance, Data Retention:** The language in the data retention section was made consistent with current Standard Drafting Guidelines. The bulleted items were reformatted for consistency and readability.

**Violation Severity Levels:** Clarifying changes were made to the VSLs. Terms were made singular, the word “Requirement” added to appropriately designate the applicable requirement, and added the two newly-created parts from Requirements R3 and R4. The RCSDT added High VSLs for Requirements R1 through R8 to conform with VSL Guidelines. Requirements R1 through R8 are not binary only.

### **COM-002-3**

The changes to COM-002-3 are considered non-substantive; therefore, the standard will advance to a recirculation ballot. The RCSDT believes it addressed stakeholder comments and concerns in such a



way that the updated sections of the standard is improved and overall meets industry's expectation for approval. Following approval, this standard will be submitted for adoption by the NERC Board of Trustees

**Effective Date:** The language in the effective date was made consistent with current Standard Drafting Guidelines.

**Requirements:** For the named functional entities in Requirements R2 and R4, the conjunction "and" previously used has been changed to "or," based on comments received from stakeholders.

**Measures:** Corresponding changes to Measures M2 and M3 were made in regards to Requirement R2 and R3. Measure M2 received an addition to include the phrasing, "restated, rephrased, or recapitulated" for consistency with Requirement R2.

**Compliance, Compliance Enforcement Authority:** The language in the CEA section was made consistent with current Standard Drafting Guidelines.

**Compliance, Data Retention:** The language in the data retention section was made consistent with current Standard Drafting Guidelines. Some bulleted items were corrected to accurately align them with the respective requirements.

**Violation Severity Levels:** One clarifying change was made to the R3 VSL. The RCSDT added a High VSL to accurately capture the condition where the entity failed to confirm the response of the recipient and removed the first part of the Severe VSL.

### **IRO-001-3**

The changes to IRO-001-3 are considered nonsubstantive; therefore, the standard will advance to a recirculation ballot. The RCSDT believes it addressed stakeholder comments and concerns in such a way that the updated sections of the standard are improved and overall meets industry's expectation for approval. Following approval, this standard will be submitted for adoption by the NERC Board of Trustees

**Effective Date:** The language in the effective date was made consistent with current Standard Drafting Guidelines.

**Requirements:** In requirement R1, the last word (glossary term) was made singular for clarity and consistency with the definition. Requirement R2 was missing a conjunction in the functional entities, and this has been added.

**Measures:** Measure M1 was updated to use past tense language, consistent with drafting guidelines. Also, the parenthetical on “Reliability Directive(s)” was removed and the glossary term made singular for consistency with R1. Measure M2 addressed stakeholder comments by adding the word “physically,” phrase now reads, “physically implemented” to be consistent with Requirement R2, as well as making the term “direction” singular.

**Compliance, Compliance Enforcement Authority:** The language in the CEA section was made consistent with current Standard Drafting Guidelines.

**Compliance, Data Retention:** The language in the data retention section was made consistent with current Standard Drafting Guidelines. Some bulleted items were corrected to accurately align them with the respective requirements and remove inaccurate bullets from previous postings.

**Violation Severity Levels:** Clarifying changes were made to the R1 VSL. The phrase, “exercise its authority” was added, based on stakeholder comment, to more accurately reflect Requirement R1. The RCSDT removed the High VSL from R2, and more accurately incorporated it into the Sever VSL.

### **Additional Information**

All comments submitted may be reviewed in their original format on the standard’s project page:

[http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President of Standards and Training, Herb Schrayshuen, at 404-446-2560, or at [herb.schrayshuen@nerc.net](mailto:herb.schrayshuen@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

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<sup>1</sup> The appeals process is in the Standard Processes Manual: [http://www.nerc.com/files/Appendix\\_3A\\_StandardsProcessesManual\\_20120131.pdf](http://www.nerc.com/files/Appendix_3A_StandardsProcessesManual_20120131.pdf)

## Index to Questions, Comments, and Responses

1. The RCSDT has revised the applicability of the standards and implementation plans by aligning COM-001-2, COM-002-3, and IRO-001-2 to apply to the same entities and by removing LSE, PSE and TSP as applicable entities from the COM standards. Additionally, the Interchange Coordinator has been removed as an applicable entity from the standards. Do you agree with this change in applicability to the three standards? If not, please explain in the comment area below. ... 14
2. Do you agree with the addition of “Adjacent” entities in COM-001-2, Parts 3.5, 4.3, 5.5 and 6.3 of COM-001-2? If not, please explain in the comment area below. .... 28
3. The RCSDT removed the phrase "to exchange Interconnection and operating information" in COM-001-2, Requirements R1 through R8 based on stakeholder comments. Do you agree with the revision? If not, please explain in the comment area below. .... 39
4. A new requirement was added for clarity regarding what is required of Distribution Providers and the Generator Operators: R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations] This requirement requires collaboration between entities to restore a failed communications capability. Do you agree with the new requirement? If not, please explain in the comment area below..... 47
5. The proposed definition of Reliability Directive shown in COM-002-3 was revised to include Adverse Reliability Impact as shown to more fully address emergencies or events that might lead to instability or Cascading: Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact. Do you agree with the proposed definition? If not, please explain in the comment area below. .... 76
6. Do you have any other comment, not expressed in questions above, for the RC SDT?..... 96

**The Industry Segments are:**

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment										
				1	2	3	4	5	6	7	8	9	10	
1.	Group	Gerald Beckerle	SERC OC Standards Review Group	X		X								
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	Mike Hirst	Cogentrix	SERC	5										
2.	Jeff Harrison	AECI	SERC	1, 3, 5, 6										
3.	Sam Holeman	Duke Energy	SERC	1, 3, 5, 6										
4.	Michael Belle	SCE&G	SERC	1, 3, 5, 6										
5.	Bob Dalrymple	TVA	SERC	1, 3, 5, 6										
6.	Joel Wise	TVA	SERC	1, 3, 5, 6										
7.	Jake Miller	Dynegy	SERC	5										
8.	Robert Thomasson	BREC	SERC	1										
9.	Alvis Lanton	SIPC	SERC	1										
10.	Tim Hattaway	PowerSouth	SERC	1, 5										
11.	Shardra Scott	Southern	SERC	1, 5										
12.	Greg Stone	Duke Energy	SERC	1, 3, 5, 6										
13.	Tom Burns	PJM	SERC	2										

Group/Individual	Commenter	Organization	Registered Ballot Body Segment											
			1	2	3	4	5	6	7	8	9	10		
14. Steve Corbin	SERC Reliability Corp.	SERC 10												
15. Brad Young	LGE/KU	SERC 3												
16. Wayne Van Liere	LGE/KU	SERC 3												
17. Gary Hutson	SMEPA	SERC 1, 3, 4, 5												
18. Scott Brame	NCEMC	SERC 1, 3, 4, 5												
19. Devan Hoke	SERC Reliability Corp.	SERC 10												
20. Jim Case	Entergy	SERC 1, 3, 6												
21. William Berry	OMU	SERC 3, 5												
22. John Troha	SERC Reliability Corp.	SERC 10												
2. Group	Ron Sporseen	Pacific Northwest Generating Cooperative	X		X	X					X			
<b>Additional Member Additional Organization Region Segment Selection</b>														
1. Bud Tracy	Blachly-Lane Electric Cooperative	WECC 3												
2. Dave Markham	Central Electric Cooperative	WECC 3												
3. Dave Hagen	Clearwater Power Company	WECC 3												
4. Roman Gillen	Consumers Power Inc.	WECC 1, 3												
5. Roger Meader	Coos-Curry Electric Cooperative	WECC 3												
6. Dave Sabala	Douglas Electric Cooperative	WECC 8												
7. Bryan Case	Fall River Electric Cooperative	WECC 3												
8. Rick Crinklaw	Lane Electric Cooperative	WECC 3												
9. Ray Ellis	Lincoln Electric Cooperative	WECC 8												
10. Annie Terracciano	Northern Lights Inc.	WECC 3												
11. David Gottula	Okanogan Electric Cooperative	WECC 8												
12. Aleka Scott	PNGC Power	WECC 4												
13. Heber Carpenter	Raft River Electric Cooperative	WECC 3												
14. Steve Eldrige	Umatilla Electric Cooperative	WECC 1, 3												
15. Marc Farmer	West Oregon Electric Cooperative	WECC 4												
16. Margaret Ryan	PNGC Power	WECC 8												
3. Group	Guy Zito	Northeast Power Coordinating Council												X
<b>Additional Member Additional Organization Region Segment Selection</b>														
1. Alan Adamson	New York State Reliability Council, LLC	NPCC 10												
2. Greg Campoli	New York Independent System Operator	NPCC 2												

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
			1	2	3	4	5	6	7	8	9	10								
3.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1																
4.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1																
5.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10																
6.	Brian Evans-Mongeon	Utility Services	NPCC	8																
7.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5																
8.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3																
9.	Chantel Haswell	FPL Group, Inc.	NPCC	5																
10.	David Kiguel	Hydro One Networks Inc.	NPCC	1																
11.	Michael R. Lombardi	Northeast Utilities	NPCC	1																
12.	Randy MacDonald	New Brunswick Power Transmission	NPCC	9																
13.	Bruce Metruck	New York Power Authority	NPCC	6																
14.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10																
15.	Robert Pellegrini	The United Illuminating Company	NPCC	1																
16.	Si Truc Phan	Hydro-Quebec TransEnergie	NPCC	1																
17.	David Ramkalawan	Ontario Power Generation, Inc.	NPCC	5																
18.	Saurabh Saksena	National Grid	NPCC	1																
19.	Michael Schiavone	National Grid	NPCC	1																
20.	Wayne Sipperly	New York Power Authority	NPCC	5																
21.	Tina Teng	Independent Electricity System Operator	NPCC	2																
22.	Donald Weaver	New Brunswick System Operator	NPCC	2																
23.	Ben Wu	Orange and Rockland Utilities	NPCC	1																
4.	Group	Will Smith	MRO NSRF		X	X	X	X	X	X										X
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Mahmood Safi	OPPD	MRO	1, 3, 5, 6																
2.	Chuck Lawrence	ATC	MRO	1																
3.	Tom Webb	WPS	MRO	3, 4, 5, 6																
4.	Jodi Jenson	WAPA	MRO	1, 6																
5.	Ken Goldsmith	ALTW	MRO	4																
6.	Alice Ireland	XCEL/NSP	MRO	1, 3, 5, 6																
7.	Dave Rudolph	BEPC	MRO	1, 3, 5, 6																
8.	Eric Ruskamp	LES	MRO	1, 3, 5, 6																
9.	Joe DePoorter	MGE	MRO	3, 4, 5, 6																

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																																																												
			1	2	3	4	5	6	7	8	9	10																																																			
10. Scott Nickels	RPU	MRO	4																																																												
11. Terry Harbour	MEC	MRO	3, 5, 6, 1																																																												
12. Marie Knox	MISO	MRO	2																																																												
13. Lee Kittelson	OTP	MRO	1, 3, 4, 5																																																												
14. Scott Bos	MPW	MRO	1, 3, 5, 6																																																												
15. Tony Eddleman	NPPD	MRO	1, 3, 5																																																												
16. Mike Brytowski	GRE	MRO	1, 3, 5, 6																																																												
17. Richard Burt	MPC	MRO	1, 3, 5, 6																																																												
5.	Group	Claire Lloyd	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	X		X	X	X	X																																																						
No additional members listed.																																																															
6.	Group	Brenda Powell	CCG, CPG, CECD						X																																																						
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9.		RFC	6																																																												
10.		SERC	6																																																												
7.	Group	Brent Ingebrigtsen	LG&E and KU Services Company	X		X		X	X																																																						
No additional members listed.																																																															
8.	Group	Chris Higgins	Bonneville Power Administration	X		X		X	X																																																						
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2. Paul	Blake	WECC	1																																																												
3. Ted	Snodgrass	WECC	1																																																												
9.	Group	Annette M. Bannon	PPL Electric Utilities and PPL Supply NERC	X				X	X																																																						

Group/Individual	Commenter	Organization	Registered Ballot Body Segment												
			1	2	3	4	5	6	7	8	9	10			
		Registered Organizations													
<b>Additional Member Additional Organization Region Segment Selection</b>															
1.	Annette Bannon	PPL Generation, LLC on behalf of NERC Registered Entities	RFC	5											
2.			WECC	5											
3.	Mark Heimbach	PPL EnergyPlus, LLC	MRO	6											
4.			NPCC	6											
5.			RFC	6											
6.			SERC	6											
7.			SPP	6											
8.			WECC	6											
9.	Brenda Truhe	PPL Electric Utilities Corp.	RFC	1											
10.	Group	Robert Rhodes	SPP Standards Review Group			X	X	X	X	X	X				
<b>Additional Member Additional Organization Region Segment Selection</b>															
1.	John Allen	City Utilities of Springfield	SPP	1, 4											
2.	Michelle Corley	CLECO Power	SPP	1, 3, 5											
3.	Jonathan Hayes	Southwest Power Pool	SPP	2											
4.	Allen Klassen	Westar Energy	SPP	1, 3, 5, 6											
5.	Terri Pyle	Oklahoma Gas & Electric	SPP	1, 3, 5											
11.	Group	Mike Garton	Dominion			X		X		X	X				
<b>Additional Member Additional Organization Region Segment Selection</b>															
1.	Michael Gildea	Dominion Resource Services, Inc.	NPCC	5, 6											
2.	Louis Slade	Dominion Resource Services, Inc.	RFC	5, 6											
3.	Connie Lowe	Dominion Resource Services, Inc.	MRO	5, 6											
4.	Michael Crowley	Virginia Electric and Power Company	SERC	1											
12.	Group	Steve Rueckert	Western Electricity Coordinating Council												X
No additional members listed.															
13.	Group	Emily Pennel	Southwest Power Pool Regional Entity												X
No additional members listed.															
14.	Group	Sam Ciccone	FirstEnergy			X		X	X	X	X				
<b>Additional Member Additional Organization Region Segment Selection</b>															



Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
			1	2	3	4	5	6	7	8	9	10								
1. John Reed	FE	RFC	1																	
2. Mark Pavlick	FE	RFC	1, 3, 4, 5, 6																	
3. Doug Hohlbaugh	FE	RFC	1, 3, 4, 5, 6																	
4. Brian Orians	FE	RFC	5																	
5. Bill Duge	FE	RFC	5																	
6. Kevin Querry	FE	RFC	5																	
15. Group	Marie Knox	MISO Standards Collaborators		X																
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1. Jim Cyrulewski	JDRJC Associates, LLC	RFC	8																	
2. Barb Kedrowski	We Energies	RFC	3, 4, 5																	
3. Joe O'Brien	NIPSCO	RFC	1, 3, 5, 6																	
16. Group	Frank Gaffney	Florida Municipal Power Agency		X		X	X	X	X											
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1. Timothy Beyrle	City of New Smyrna Beach	FRCC	4																	
2. Jim Howard	Lakeland Electric	FRCC	3																	
3. Greg Woessner	Kissimmee Utility Authority	FRCC	3																	
4. Lynne Mila	City of Clewiston	FRCC	3																	
5. Joe Stonecipher	Beaches Energy Services	FRCC	1																	
6. Cairo Vanegas	Fort Pierce Utility Authority	FRCC	4																	
7. Randy Hahn	Ocala Utility Services	FRCC	3																	
17. Group	Mary Jo Cooper	Global Engineering and Energy Solutions				X														
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1. Colin Murphey	City of Ukiah	WECC	3																	
2. Elizabeth Kirkley	City of Lodi	WECC	3																	
3. Salmon River Electric Coop	Salmon River Electric Coop	WECC	3																	
18. Group	Jason Marshall	ACES Power Marketing Standards Collaborators											X							
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1. Mark Ringhausen	Old Dominion Electric Cooperative	SERC	3, 4																	
2. Susan Sosbe	Wasbash Valley Power Association	RFC	3																	
19. Group	Michael Gammon	Kansas City Power & Light		X		X		X	X											

Group/Individual	Commenter	Organization	Registered Ballot Body Segment										
			1	2	3	4	5	6	7	8	9	10	
<b>Additional Member Additional Organization Region Segment Selection</b>													
1.	Jessi Tucker	Kansas City Power & Light	SPP	1, 3, 5, 6									
2.	Brett Holland	Kansas City Power & Light	SPP	1, 3, 5, 6									
20.	Individual	Chris Chavez	Salt River Project	X		X		X	X				
21.	Individual	Janet Smith, Regulatory Affairs Supervisor	Arizona Public Service Company	X		X		X	X				
22.	Individual	Antonio Grayson	Southern Company	X		X		X	X				
23.	Individual	Jennifer Wright	San Diego Gas & Electric	X		X		X					
24.	Individual	Steve Alexanderson	Central Lincoln			X	X					X	
25.	Individual	Paul Kerr	Shell Energy North America						X				
26.	Individual	Keira Kazmerski	Xcel Energy	X		X		X	X				
27.	Individual	Edward J Davis	Entergy Services, Inc	X		X		X	X				
28.	Individual	Michael Falvo	Independent Electricity System Operator		X								
29.	Individual	Si Truc PHAN	Hydro-Quebec TransEnergie	X									
30.	Individual	Daniel Duff	Liberty Electric Power LLC					X					
31.	Individual	Joe O'Brien	NIPSCO	X		X		X	X				
32.	Individual	Darryl Curtis	Oncor Electric Delivery Company LLC	X									
33.	Individual	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.	X		X		X	X				
34.	Individual	Anthony Jankowski	We Energies			X	X	X					
35.	Individual	J. S. Stonecipher, PE	City of Jacksonville Beach dba/ Beaches Energy Services	X								X	
36.	Individual	Scott Berry	Indiana Municipal Power Agency				X						
37.	Individual	Jeff Longshore	Luminant Energy Company LLC						X				
38.	Individual	Brian J. Murphy	NextEra Energy, Inc.	X		X		X	X				
39.	Individual	David Thorne	Pepco Holdings Inc.	X		X							
40.	Individual	John Bee	Exelon	X		X		X					
41.	Individual	Joe Petaski	Manitoba Hydro	X		X		X	X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
42.	Individual	Michael Brytowski	Great River Energy	X		X		X	X				
43.	Individual	David Burke	Orange and Rockland Utilities, Inc.	X		X							
44.	Individual	Michael Schiavone	Niagara Mohawk (dba National Grid)			X							
45.	Individual	Thad Ness	American Electric Power	X		X		X	X				
46.	Individual	RoLynda Shumpert	South Carolina Electric and Gas	X		X		X	X				
47.	Individual	Jason Snodgrass	Georgia Transmission Corporation	X									
48.	Individual	Bill Keagle	BGE	X									
49.	Individual	Don Schmit	Nebraska Public Power District	X		X		X					
50.	Individual	Neil Phinney	Georgia System Operations			X	X						
51.	Individual	Michelle D'Antuono	Ingleside Cogeneration LP					X					
52.	Individual	Greg Rowland	Duke Energy	X		X		X	X				
53.	Individual	Kathleen Goodman	ISO New England		X								
54.	Individual	H. Steven Myers	ERCOT ISO		X								
55.	Individual	Anthony Jablonski	ReliabilityFirst										X
56.	Individual	Randall McCamish	City of Vero Beach	X		X						X	
57.	Individual	Rich Salgo	NV Energy	X		X		X					
58.	Individual	Rebecca Moore Darrah	Midwest Independent Transmission System Operator		X								
59.	Individual	Don Jones	Texas Reliability Entity										X
60.	Individual	David Kiguel	Hydro One Networks Inc.	X		X							
61.	Individual	Gregory Campoli	New York Independent System Operator		X								
62.	Individual	Andrew Z. Pusztai	American Transmission Company, LLC	X									

1. The RCSDT has revised the applicability of the standards and implementation plans by aligning COM-001-2, COM-002-3 and IRO-001-3 to apply to the same entities and by removing LSE, PSE and TSP as applicable entities from the COM standards. Additionally, the Interchange Coordinator has been removed as an applicable entity from the standards. Do you agree with this change in applicability to the three standards? If not, please explain in the comment area below.

**Summary Consideration:** Most commenters agreed with removing the LSE, PSE, and TSP from the three standards. Some did not agree with keeping the Distribution Provider (DP) within the standards. The RCSDT in being responsive to the FERC directive in Order No. 693, Paragraph 487, considered the DP entity; however, concluded having the DP is appropriate in responding to the directive to allow for reliable operations in normal and emergency situations. In reference to the implementation for DPs and GOPs, the RCSDT believes there is not a significant burden for most DP and GOP entities to implement an Interpersonal Communication capability. Some comments referenced the NERC Functional Model V5 concerning DP and GOP entities; however, the model is clear on the basic activities and supports the DP and GOP being applicable to the standards. The model also supports the removal of LSEs, for example. The RCSDT did not modify the applicability of the standards with regard to functional entities.

Organization	Yes or No	Question 1 Comment
ACES Power Marketing Standards Collaborators	No	While we agree with removing LSE, PSE, and TSP, we do not agree with the need to include Distribution Provider in all the standards. For example, in IRO-001-3, the Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. More likely, the Reliability Directive will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related.
<p><b>Response:</b> The RCSDT is addressing a FERC directive (P487, Order 693) to include the DP in COM-001, and the RCSDT has included the DP in COM-002 and IRO-001 applicability because these standards are related to reliability communications. The RCSDT agrees with the point that communication will most likely be from the BA or TOP; however, the communications may come from the RC. No change made.</p>		
Entergy Services, Inc	No	R3 adds additional responsibilities for the TOP to have Interpersonal Communications capability with EACH DP and GOP in its footprint. Similarly, R4 gives the TOP responsibility to have alternative

Organization	Yes or No	Question 1 Comment
		<p>communications capability with each of these entities. This is a significant additional responsibility for the TOP to document and perhaps arrange for additional means of communication with these entities.</p> <p>The RCSDT is addressing a FERC directive (P487, Order 693) to include the DP and GOP. The intent is to have Interpersonal Communication capability with the DP and GOP, and not to build additional communication facilities, but to be able “to interact, consult, or exchange information.” In contrast to R3, R4 does not include the DP or GOP. No change made.</p> <p>The short time frame provided for implementation of these requirements is not consistent with the additional effort and compliance documentation that is necessary to implement these requirements. Entergy recommends that the implementation time frame for these new requirements that apply to new entities, or expand the application of COM-001 for existing entities have an effective date 12 months beyond the applicable regulatory approval.</p> <p>Additionally, the implementation of the requirements that apply to the DP and GOP will represent an increase in the amount of documentation that must be retain to demonstrate compliance, and in some cases may also result in their having to purchase equipment or install new alternate means of communication.</p> <p>The RCSDT believes that six months is adequate, considering additional facilities should not have to be built to establish communications with the DP and GOP; similarly, compliance documentation should not impose significant work on the entities part. No change made.</p> <p>What is the improvement in reliability expected as a result of these new requirements?</p> <p>The expected reliability result is addressed in the FERC directive (P487, Order 693), “...ensure there is no reliability gap during normal and</p>

Organization	Yes or No	Question 1 Comment
		<p>emergency operations. For example, during a blackstart when normal communications may be disrupted, it is essential that the Transmission Operator, Balancing Authority and Reliability Coordinator maintain communications with their Distribution Providers and Generator Operators.” No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>Independent Electricity System Operator</p>	<p>No</p>	<p>In COM-001, we commented earlier that the entities in R4 and R6 (now R5 and R6) should be the same, i.e. the BA needs to have the Interpersonal Communication capability as well as the Alternative Interpersonal Communication capability with the same entities. The SDT’s response indicates that the suggested change is not needed since additionally requiring DP and GOP entities to have Alternative Interpersonal Communication capability would impose more cost on smaller DP and GOP entities that have little or no risk impact to the bulk electric system.</p> <p>We disagree with this assessment since the need to have Alternative Interpersonal Communication capability should be assessed from the viewpoint that whether or not the absence of such capability can adversely affect reliability. If Interpersonal Communication capability is needed between a BA and a DP/GOP to communicate reliability instructions or directives, then it is deemed necessary that such communication be provided at all times, which indicates the need for an alternative capability.</p> <p>We once again urge the SDT to make the list of entities in R5 and R6 to be the same.</p>
<p><b>Response:</b> The RCSDT asserts the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Additionally, requiring DP and GOP entities to have Alternative Interpersonal Communication capability only imposes more cost on smaller DP and GOP entities that have little or no risk impact to the Bulk Electric System. No change made.</p>		

Organization	Yes or No	Question 1 Comment
Georgia System Operations	No	<p>While we agree with removing LSE, PSE, and TSP, we do not agree with the need to include Distribution Provider in all the standards. For example, in IRO-001-3, the Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. More likely, the Reliability Directive will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related.</p> <p>The RCSDT is addressing a FERC directive (P487, Order 693) to include the DP in COM-001, and the RCSDT has included the DP in COM-002 and IRO-001 applicability because these standards are related to reliability communications. The RCSDT agrees with the point that communication will most likely be from the BA or TOP; however, the communications may come from the RC. No change made.</p> <p>Accordingly, NERC’s Reliability Functional Model V5<sup>2</sup> describes and identifies the DP’s relationships with other Functional Entities to the TOP and BA with respect to Real Time.</p> <p>Real Time<sup>3</sup></p> <p>7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority.</p> <p>8. Implements system restoration plans as coordinated by the Transmission Operator.</p> <p>9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment.</p> <p>With respect to the Functional Model V5, please see Page 31, “18. Issues</p>

<sup>2</sup> NERC Functional Model Version 5, ([http://www.nerc.com/files/Functional\\_Model\\_V5\\_Final\\_2009Dec1.pdf](http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf))

<sup>3</sup> NERC Functional Model Version 5, “Functional Entity – Distribution Provider,” pg 47, ([http://www.nerc.com/files/Functional\\_Model\\_V5\\_Final\\_2009Dec1.pdf](http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf))

Organization	Yes or No	Question 1 Comment
		corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators.” No change made.
<b>Response:</b> See response above.		
ERCOT ISO	No	Some concern for removal of LSE in particular from R2 and R3 from current IRO-001-2 R7 for the ERCOT region. ERCOT Region has QSE’s <sup>4</sup> that manage Load Resources. There may be some QSEs that are not registered as a GOP that deploy Load Resources. Per the current LSE JRO, QSEs with Load Resources are registered as LSEs. Not requiring them to deploy Load Resource directives could be perceived as a reliability gap created from previous version to this version. PSEs could be removed as long as they fall under BA authority.
<b>Response:</b> The RCSDT believes the DP is the correct entity because the LSE does not own assets. The definition of LSE is, “The functional entity that secures energy and transmission service (and reliability related services) to serve the electrical demand and energy requirements of its end use customers.” In contrast, the definition of a DP is, “The functional entity that provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer.” Additionally, the Functional Model V5 demonstrates this under the Reliability Coordinator, “18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators.” No change made.		
City of Green Cove Springs	Affirmative	COM-001-2: In R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply / demand balance is not local and in markets that allow retail competition, I'm thinking LSE is the right functional entity. For Florida,

<sup>4</sup> Qualifying Scheduling Entities, (<http://www.ercot.com/services/rq/qse/>)



Organization	Yes or No	Question 1 Comment
		<p>it doesn't really matter. If the LSE is the "correct" entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added.</p> <p>The RCSDT believes the DP should be included and that the LSE should not because the Functional Model V5 addresses this case. See Page 47, "Distribution Provider," of the Functional Model V5, Item 9. "Directs Load-Serving Entities to communicate requests for voluntary load curtailment." The DP is the asset owner and would direct the LSE to perform actions. No change made.</p> <p>COM-001-2, R9 – "Each ... shall test its Alternative Interpersonal Communications capability", suggest adding the phrase "to each entity for which Alternative Interpersonal Communications is required" to add clarity.</p> <p>The RCSDT believes the additional phrasing has little value to the overall requirement. The requirement specifically applies to those responsible entities listed, and it further aligns with R2, R4 and R6. No change made.</p>
<p><b>Response:</b> See response above.</p>		
Beaches Energy Services	Affirmative	<p>COM-001-2: In R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply/demand balance is not local and in markets that allow retail competition, I'm thinking LSE is the right functional entity. For Florida, it doesn't really matter. If the LSE is the "correct" entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added.</p>
<p><b>Response:</b> The RCSDT believes the DP should be included and not the LSE because the Functional Model V5 addresses this case. See Page 47, "Distribution Provider," of the Functional Model V5, Item 9. "Directs Load-Serving Entities to communicate requests for voluntary load curtailment." With regard to R7, the DP is the asset owner and would direct the LSE to perform actions. No</p>		

Organization	Yes or No	Question 1 Comment
change made.		
MISO Standards Collaborators	Yes	<p>(1) In COM-001, the entities in R4 and R6 (now R5 and R6) should be the same, i.e. the BA needs to have the Interpersonal Communication capability as well as the Alternative Interpersonal Communication capability with the same entities. Although the need to have Alternative Interpersonal Communication capability should be assessed from the viewpoint that whether or not the absence of such capability can adversely affect reliability, the proposed standard does not require the capability in all cases. At the same time, this standard does not preclude such capability. Even though Interpersonal Communication capability is needed between a BA and a DP/GOP to communicate reliability instructions or directives, there are other communications paths which can be used in the case of the loss of that capability.</p> <p>Since TOPs are also required to have the capability, the BA can call the TOP and ask the TOP to contact the DP/GOP for them until they can implement capability. In addition, it is difficult to visualize entities which would not have the public telephone system or even cell phones available for use in the event of the loss of the capability.</p>
<p><b>Response:</b> The RCSDT stresses the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Additionally, requiring DP and GOP entities to have Alternative Interpersonal Communication capability only imposes more cost on smaller DP and GOP entities that have little or no risk impact to the Bulk Electric System. No change made.</p>		
Florida Municipal Power Agency	Yes	<p>In COM-001-2 R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply / demand balance is not local and in markets that allow retail competition, it may be that the LSE is the more appropriate functional entity. For instance, the Functional Model when discussing LSE on page 55</p>

Organization	Yes or No	Question 1 Comment
		<p>states that one of the LSE’s real time duties is:            “12. Receives requests from the Balancing Authority and Distribution Provider for voluntary load curtailment.”<sup>5</sup></p> <p>The RCSDT believes the DP should be included and not the LSE because the Functional Model V5 addresses this case. See Page 47, “Distribution Provider,” of the Functional Model V5, Item 9. “Directs Load-Serving Entities to communicate requests for voluntary load curtailment.” In this case (COM-001), the load curtailment is voluntary and would generally be for economics, the exchange of operating information and not reliability actions. No change made.</p> <p>If the LSE is the more appropriate entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added.</p> <p>For Florida, which does not have retail competition, it doesn’t matter whether the DP or the LSE is more appropriate; hence, the “yes” answer.</p> <p>With regard to R7, the DP is the asset owner and would direct the LSE to perform actions. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>Georgia Transmission Corporation</p>	<p>Yes</p>	<p>While we agree with removing LSE, PSE, and TSP, we do not agree with the need to include Distribution Provider in all the standards. For example, in IRO-001-3, the Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. Reliability Directives received by Distribution Providers will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related. Accordingly, NERC’s Reliability Functional Model V5</p>

<sup>5</sup> NERC Functional Model Version 5, “Functional Entity – Load Serving Entity,” pg 55, ([http://www.nerc.com/files/Functional\\_Model\\_V5\\_Final\\_2009Dec1.pdf](http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf))

Organization	Yes or No	Question 1 Comment
		<p>describes and identifies the DP’s relationships with other Functional Entities to the TOP and BA with respect to Real Time.</p> <p>Real Time<sup>6</sup></p> <p>7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority.</p> <p>8. Implements system restoration plans as coordinated by the Transmission Operator.</p> <p>9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment.</p> <p>The RCSDT is addressing a FERC directive (P487, Order 693) to include the DP in COM-001, and the RCSDT has included the DP in COM-002 and IRO-001 applicability because these standards are related to reliability communications. The RCSDT agrees with the point that communication will most likely be from the BA or TOP; however, the communications may come from the RC. With respect to the Functional Model V5, please see Page 31, “18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators.” No change made.</p> <p>Lastly, we believe that Distribution Providers requirements with respect to complying with Reliability Directives received by TOPs and BAs are adequately covered by Reliability Standards TOP-001 and COM-002.</p> <p>The RCSDT agrees that TOP-001 and COM-002 apply to DP complying with Reliability Directives; however, IRO-001 applies to having the authority to act or direct others act and may not necessarily be done by issuing a</p>

<sup>6</sup> NERC Functional Model Version 5, “Functional Entity – Distribution Provider,” pg 47, ([http://www.nerc.com/files/Functional\\_Model\\_V5\\_Final\\_2009Dec1.pdf](http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf))

Organization	Yes or No	Question 1 Comment
		Reliability Directive. No change made.
<b>Response:</b> See response above.		
Ingleside Cogeneration LP	Yes	Ingleside Cogeneration LP believes that the intent of these three standards is to ensure reliable normal and emergency communications between BES operating entities. It should be the rare exception that BES-critical information must be communicated directly to an LSE, PSE, and TSP and IC. The impact of the Standards would be lessened if diffusely applied to multiple entities who do not normally engage in operations communications.
<b>Response:</b> Thank you for your comment.		
City of Vero Beach	Yes	<p>In COM-001-2 R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply / demand balance is not local and in markets that allow retail competition, it may be that the LSE is the more appropriate functional entity. For instance, the Functional Model when discussing LSE on page 55 states that one of the LSE’s real time duties is:</p> <p>“12. Receives requests from the Balancing Authority and Distribution Provider for voluntary load curtailment.”<sup>7</sup></p> <p>The RCSDT notes that the LSE should not be included because the Functional Model V5 addresses this case. See Page 47, “Distribution Provider,” of the Functional Model V5, Item 9. “Directs Load-Serving Entities to communicate requests for voluntary load curtailment.” No change made.</p>

<sup>7</sup> NERC Functional Model Version 5, “Functional Entity – Load Serving Entity,” pg 55, ([http://www.nerc.com/files/Functional\\_Model\\_V5\\_Final\\_2009Dec1.pdf](http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf))

Organization	Yes or No	Question 1 Comment
		<p>If the LSE is the more appropriate entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added.</p> <p>For Florida, which does not have retail competition, it doesn't matter whether the DP or the LSE is more appropriate; hence, the "yes" answer.</p> <p>With regard to R7, the DP is the asset owner and directs the LSE to perform actions. No change made.</p>
<p><b>Response:</b> See response above.</p>		
SERC OC Standards Review Group	Yes	
Pacific Northwest Generating Cooperative	Yes	
MRO NSRF	Yes	
City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Yes	
LG&E and KU Services Company	Yes	
Bonneville Power Administration	Yes	
SPP Standards Review Group	Yes	
Dominion	Yes	
Western Electricity Coordinating Council	Yes	

Organization	Yes or No	Question 1 Comment
Southwest Power Pool Regional Entity	Yes	
FirstEnergy	Yes	
Global Engineering and Energy Solutions	Yes	
Kansas City Power & Light	Yes	
Salt River Project	Yes	
Southern Company	Yes	
San Diego Gas & Electric	Yes	
Central Lincoln	Yes	
Shell Energy North America	Yes	
Xcel Energy	Yes	
Liberty Electric Power LLC	Yes	
NIPSCO	Yes	
Oncor Electric Delivery Company LLC	Yes	
Consolidated Edison Co. of NY, Inc.	Yes	
We Energies	Yes	

Organization	Yes or No	Question 1 Comment
Luminant Energy Company LLC	Yes	
NextEra Energy, Inc.	Yes	
Pepco Holdings Inc.	Yes	
Exelon	Yes	
Manitoba Hydro	Yes	
Great River Energy	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Niagara Mohawk (dba National Grid)	Yes	
American Electric Power	Yes	
South Carolina Electric and Gas	Yes	
BGE	Yes	
Nebraska Public Power District	Yes	
Duke Energy	Yes	
ISO New England	Yes	
ReliabilityFirst	Yes	
NV Energy	Yes	



Organization	Yes or No	Question 1 Comment
Midwest Independent Transmission System Operator	Yes	
Texas Reliability Entity	Yes	
Hydro One Networks Inc.	Yes	
New York Independent System Operator	Yes	
American Transmission Company, LLC	Yes	
City of Jacksonville Beach dba/ Beaches Energy Services		<p>In R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply/demand balance is not local and in markets that allow retail competition, I'm thinking LSE is the right functional entity. For Florida, it doesn't really matter. If the LSE is the "correct" entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added</p>
<p><b>Response:</b> The RCSDT notes that the LSE not should be included because the Functional Model V5 addresses this case. See Page 47, "Distribution Provider," of the Functional Model V5, Item 9. "Directs Load-Serving Entities to communicate requests for voluntary load curtailment." With regard to R7, the DP is the asset owner and directs the LSE to perform actions. No change made.</p>		
Indiana Municipal Power Agency		No comment.

2. Do you agree with the addition of “Adjacent” entities in COM-001-2, Parts 3.5, 4.3, 5.5 and 6.3 of COM-001-2? If not, please explain in the comment area below.

**Summary Consideration:** The majority of comments were regarding COM-001-2, R3 and R4. Concerns included issues with the use of “Adjacent Transmission Operators” and “synchronously connected within the same Interconnection.” The capitalized word “Adjacent,” beginning the requirement gives the appearance of an undefined glossary term. Therefore, the RCSDT addressed this by starting the applicable Parts of those requirements with “Each” to form “Each adjacent Transmission Operator...” and avoiding the need for another glossary term for something that is widely understood within the industry. The RCSDT made an additional clarifying change to address the issue that some Transmission Operators may not be adjacent for situations other than synchronously connected within the same Interconnection in the traditional understanding. For example, some entities have connections beyond the interconnection and some connections are asynchronous. To address this concern, the RCSDT separated the requirements to identify “synchronously connected” and “asynchronously connected,” and removed the “within the same Interconnection” criteria. Other minor formatting and reference errors were noted and corrected.

Organization	Yes or No	Question 2 Comment
SERC OC Standards Review Group	No	<p>We are concerned regarding communications between Transmission Operators on opposite ends of DC ties, which may or may not be in the same interconnection.</p> <p>Similarly, COM-001, R1.2 limits the requirement of adjacent Reliability Coordinators to the same interconnection and this should not be limited to the same interconnection whether it is synchronous or non-synchronous.</p> <p>The measures should also be verified to ensure that they align properly with the final requirements.</p>
<p><b>Response:</b> The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators, and has eliminated the phrase “within the same interconnection.” See change in COM-001-2, R3 and R4. Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinator’s from one interconnection to another. No change made.</p>		

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	<p>NERC uses the terms “adjacent” and “neighboring” in various standards. It is generally believed that those terms have the same meanings, but there are those who believe those terms, as used, are intended to have different meanings. To ensure a consistent usage and understanding, the definition of the term adjacent must be made known before its addition to the standard. Consideration should be given to using only one term in all standards if adjacent and neighboring are intended to mean the same thing. Both terms are used in NERC Standards, sometimes both in the same standard. For example, EOP-001-2b uses “neighboring” in R5, and “adjacent” in R3.3.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made clarify changes to the requirements and measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.</p>		
MRO NSRF	No	<p>NERC has formally defined “Adjacent Balancing Authority” in the NERC Glossary of Terms, but not “Adjacent Transmission Operator.” The MRO NSRF recommends that “Adjacent Transmission Operator” be defined similar to the “Adjacent Balancing Authority” definition in the NERC Glossary of Terms.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made clarify changes to the requirements and measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.</p>		
Kansas City Power & Light	No	<p>Requirements R4.3 and R6.3 require TOP’s and BA’s to establish alternative means of “interpersonal communications” with other TOP’s and BA’s without regard to the reliability impact each TOP or BA has on the interconnection. Why would it be necessary for a TOP with one 161kv transmission line or a BA with 100 MW of total load, or one GOP with a 30MW unit to realize additional costs when the facilities they operate have little reliability impact?</p> <p>Rationale criteria should be included here to identify the TOP’s and BA’s where</p>

Organization	Yes or No	Question 2 Comment
		<p>alternative means of “interpersonal communications” should be implemented.</p> <p>Furthermore, these requirements do not recognize the condition when another party refuses to install alternative communication equipment. TOP’s and BA’s have no authority over other TOP’s and BA’s to establish alternative means of communication. Requirements that are dependent on the actions of other parties over which you have no control or authority are poor requirements.</p> <p>In addition, most RC’s have established satellite telephone systems as back-up communication with TOP’s and BA’s. Some RC’s may have to establish additional communication systems with some BA’s as these requirements impose to avoid Standards of Conduct issues.</p>
<p><b>Response:</b> The RCSDT has not placed any limiting applicability on entities in being responsive to the FERC directive (P487, Order 693), “...ensure there is no reliability gap during normal and emergency operations. For example, during a blackstart when normal communications may be disrupted, it is essential that the Transmission Operator, Balancing Authority and Reliability Coordinator maintain communications with their Distribution Providers and Generator Operators.” The RCSDT does not prescribe the criteria for alternative means of Interpersonal Communication capability, so each entity may determine its own needs to meet the requirement. With regard to requiring other BAs or TOPs to install Alternative Interpersonal Communication capability as registered entities, other BAs or TOPs have the same responsibility to comply with the requirement. Having a satellite backup is an acceptable form of communication; however, the RCSDT does not understand the comment about the Standards of Conduct issues. No change made.</p>		
Southern Company	No	<p>We are concerned regarding communications between Transmission Operators on opposite ends of DC ties, which may or may not be in the same interconnection.</p> <p>Similarly, COM-001, R1.2 limits the requirement of adjacent Reliability Coordinators to the same interconnection and this should not be limited to the same interconnection whether it is synchronous or non-synchronous.</p> <p>The measures should also be verified to ensure that they align properly with the final requirements.</p>
<p><b>Response:</b> The RCSDT has made clarifying changes by adding Parts to R3 and R4 to address asynchronous connections between</p>		

Organization	Yes or No	Question 2 Comment
<p>Transmission Operators and have eliminated the phrase “within the same interconnection.” See change in COM-001-2, R3 and R4. Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinators from one Interconnection to another. No change made.</p>		
Xcel Energy	No	<p>In COM-001-2, R4.3. Adjacent Transmission Operators synchronously connected within the same Interconnection. This new requirement has a term that is not defined Adjacent Transmission Operators.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made clarifying changes to the requirements and measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.</p>		
Independent Electricity System Operator	No	<p>(1) We agree with the addition of “Adjacent” entities in the quoted parts except the qualifier “synchronously connected within the same Interconnection” need to be removed from Parts 3.5 and 4.3 since TOPs do communicate with other TOPs even in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). Even in the case of ERCOT, TOPs on the two sides of a DC tie do communicate with each other for daily operations.</p> <p>The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the phrase “within the same interconnection.” See change in COM-001-2, R3 and R4.</p> <p>(2) Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised.</p> <p>The RCSDT thanks you for catching this oversight. The corresponding TOP entity in R3.5 has been added to the Measure M3.</p>
<p><b>Response:</b> See response above.</p>		

Organization	Yes or No	Question 2 Comment
Exelon	No	May have an unintended effect on registrations as some GOPs use an intermediately dispatch organization that perform actions on behalf of the generating units.
<p><b>Response:</b> Having an intermediary dispatching actions for generation units is okay; however, the responsible GOP should have adequate agreements to perform these activities; for example, a Joint Registration Organization (Type 1) or Coordinated Functional Registration (Formerly Type 2). No change made.</p>		
ISO New England	No	<p>ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such "requirements" (i.e. capabilities) should be verified through an entity certification process.</p> <p>Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to have communications facilities (electronic or voice).</p>
<p><b>Response:</b> Although this is not a results-based standard, the RCSDT believes it is a significant improvement over the current COM-001 standard. No change made.</p>		
Texas Reliability Entity	No	<p>(1) Requirements R1, R2, R3 and R4 should apply to all adjacent Reliability Coordinators and Transmission Operators, regardless of whether they are in the same Interconnection.</p> <p>The ERCOT Interconnection is asynchronously connected to adjacent Interconnections, and it is imperative that Functional Entities within Texas RE's purview be able to exchange operating information with Transmission Operators and Reliability Coordinators in those adjacent areas, even if they are in a different Interconnection.</p> <p>The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the phrase "within the same Interconnection." See change in COM-001-2, R3 and R4.</p> <p>(2) Requirement parts R5.5 and R6.3 refer to "Adjacent Balancing Authorities."</p>

Organization	Yes or No	Question 2 Comment
		<p>Measures M5 and M6 refer to “adjacent Balancing Authority” - note the small “a” on adjacent. “Adjacent Balancing Authority” is a defined term in the NERC Glossary, which has a more specific meaning than “adjacent Balancing Authority.” Which term is intended in R5.5 and R6.3? If you don’t intend to use the defined term, perhaps use a word like “contiguous” or “neighboring” rather than “adjacent.”</p> <p>The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made clarifying changes to the requirements and measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.</p>
<p><b>Response:</b> See response above.</p>		
Hydro One Networks Inc.	No	<p>(1) We agree with the addition of “Adjacent” entities in the quoted parts except the qualifier “synchronously connected within the same Interconnection” need to be removed from Parts 3.5 and 4.3 since TOPs do communicate with other TOPs even in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). Even in the case of ERCOT, TOPs on the two sides of a DC tie do communicate with each other for daily operations.</p> <p>The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the phrase “within the same Interconnection.” See change in COM-001-2, R3 and R4.</p> <p>(2) Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised.</p> <p>The RCSDT thanks you for catching this oversight. The corresponding TOP entity in R3.5 has been added to the Measure M3.</p>
<p><b>Response:</b> See response above.</p>		

Organization	Yes or No	Question 2 Comment
SPP Standards Review Group	Yes	<p>We concur with the addition of “Adjacent” but ask that the SDT give some consideration to allowing an exemption in R6.3 for relatively small loads, less than 20 MW, that are pseudo tied into a Balancing Authority. Loss of these facilities would not place a burden on the BES and should not require Alternative Interpersonal Communications capabilities.</p>
<p><b>Response:</b> The RCSDT has not placed any limiting applicability on entities in being responsive to the FERC directive (P487, Order 693), “...ensure there is no reliability gap during normal and emergency operations. For example, during a blackstart when normal communications may be disrupted, it is essential that the Transmission Operator, Balancing Authority and Reliability Coordinator maintain communications with their Distribution Providers and Generator Operators.” The RCSDT does not prescribe the criteria for alternative means of Interpersonal Communication capability so each entity may determine its own needs to meet the requirement. With regard to requiring other BAs or TOPs to install Alternative Interpersonal Communication capability as registered entities, other BAs or TOPs have the same responsibility to comply with the requirement. Having a satellite backup is an acceptable form of communication. No change made.</p>		
MISO Standards Collaborators	Yes	<p>(1) We agree with the addition of “Adjacent” entities in the quoted parts. However, there are some entities which may need the capability even though they are not “synchronously connected within the same Interconnection.” This standard does not require them to have the capability, but it does not preclude such capability. In these cases, those entities should evaluate whether the need for the capability is a reliability need or market coordination. If the entities were connected synchronously, actions taken by an entity could have immediate effect upon other entities. However, if not synchronously connected, changes in flows across the asynchronous ties would have to follow the interchange scheduling process with approval by all involved entities before changes could be enacted. Some TOPs do communicate with other TOPs even in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors).</p> <p>The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the</p>



Organization	Yes or No	Question 2 Comment
		<p>phrase “within the same Interconnection.” See change in COM-001-2, R3 and R4.</p> <p>(2) Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised.</p> <p>The RCSDT thanks you for catching this oversight. The corresponding TOP entity in R3.5 has been added to the Measure M3.</p>
<p><b>Response:</b> See response above.</p>		
<p>Entergy Services, Inc</p>	<p>Yes</p>	<p>Entergy agrees with the inclusion of the term “Adjacent” in these requirements to limit the entities that the BA or TOP must have communications capability with to those that they border.</p>
<p><b>Response:</b> Thank you for your comment.</p>		
<p>Duke Energy</p>	<p>Yes</p>	<p>However, we believe that the phrase “synchronously connected within the same Interconnection” should be struck, because TOPs are controlling DC ties and should be required to have communications with each other.</p>
<p><b>Response:</b> The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the phrase “within the same Interconnection.” See change in COM-001-2, R3 and R4.</p>		
<p>ERCOT ISO</p>	<p>Yes</p>	<p>These changes will clarify intentions regarding the undefined term "adjacent."</p>
<p><b>Response:</b> The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made conforming measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.</p>		
<p>ReliabilityFirst</p>	<p>Yes</p>	<p>ReliabilityFirst agrees with adding the term adjacent but is unclear what the term adjacent is referring to. Does it mean directly connected or is it more than one layer out.</p>

Organization	Yes or No	Question 2 Comment
<p><b>Response:</b> The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made conforming measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.</p>		
Pacific Northwest Generating Cooperative	Yes	
City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Yes	
LG&E and KU Services Company	Yes	
Bonneville Power Administration	Yes	
Dominion	Yes	
Western Electricity Coordinating Council	Yes	
Southwest Power Pool Regional Entity	Yes	
FirstEnergy	Yes	
Florida Municipal Power Agency	Yes	
Global Engineering and	Yes	

Organization	Yes or No	Question 2 Comment
Energy Solutions		
ACES Power Marketing Standards Collaborators	Yes	
Salt River Project	Yes	
San Diego Gas & Electric	Yes	
Liberty Electric Power LLC	Yes	
NIPSCO	Yes	
Oncor Electric Delivery Company LLC	Yes	
We Energies	Yes	
City of Jacksonville Beach dba/ Beaches Energy Services	Yes	
Luminant Energy Company LLC	Yes	
NextEra Energy, Inc.	Yes	
Pepco Holdings Inc.	Yes	
Manitoba Hydro	Yes	
Niagara Mohawk (dba	Yes	

Organization	Yes or No	Question 2 Comment
National Grid)		
American Electric Power	Yes	
South Carolina Electric and Gas	Yes	
Georgia Transmission Corporation	Yes	
BGE	Yes	
Nebraska Public Power District	Yes	
Georgia System Operations	Yes	
City of Vero Beach	Yes	
NV Energy	Yes	
Midwest Independent Transmission System Operator	Yes	
American Transmission Company, LLC	Yes	
Indiana Municipal Power Agency		No comment.

3. The RCSDT removed the phrase "to exchange Interconnection and operating information" in COM-001-2, Requirements R1 through R8 based on stakeholder comments. Do you agree with the revision? If not, please explain in the comment area below.

**Summary Consideration:** Several commenters noted the phrase “to exchange Interconnection and operating information” should also be removed from the Purpose statement. The RCSDT agrees and removed this phrase from the Purpose statement. Some concerns also noted COM-001-2 should also add additional language to clarify the standard is not for the exchange of data. Since the standard focuses on having communication capability, the additional clarity is not needed; therefore, the RCSDT made no change. Some commenters noted items which have been addressed in the questions above.

Organization	Yes or No	Question 3 Comment
Global Engineering and Energy Solutions	No	
Independent Electricity System Operator	No	<p>In the last posting, we suggest removing the phrase “within the same Interconnection” from R1 (now R2.2) since there are RCs between two Interconnections that need to communicate with each other for reliability coordination (e.g. between Quebec and the RCs in the Northeast such as IESO, NYISO, NBSO and ISO-NE, and between the RCs in WECC with the RCs in the Eastern Interconnection). Such coordination may include but not limited to curtailing interchange transactions crossing Interconnection/RC boundary, as stipulated in IRO-006. The SDT’s response to our comments citing that the phrase was added to address the ERCOT situation leaves a reliability gap to the other situations. We again urge the SDT to remove the phrase. If necessary, the ERCOT situation can be addressed by a regional variance.</p>
<p><b>Response:</b> The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the phrase “within the same Interconnection.” See change in COM-001-2, R3 and R4.</p>		

Organization	Yes or No	Question 3 Comment
Great River Energy	No	<p>"to exchange interconnection and operation information" was removed from the requirements in COM-001-2 but remains in the purpose. For consistency, it needs to be removed. It could read,</p> <p><i>"To establish Interpersonal Communication capabilities for the exchange of information necessary to maintain reliability."</i></p>
<p><b>Response:</b> The SDT agrees and has made a conforming change to the Purpose of COM-001. See revised Purpose statement.</p>		
Ingleside Cogeneration LP	No	<p>In the background section of this ballot, the project team indicates that the removal of the phrase is intended to signal that these requirements do NOT apply to the exchange of data. Although Ingleside Cogeneration LP agrees that the phrase is not a helpful description of the need for inter-entity communications - and should be removed - we do not see how the remaining language achieves the project team's purpose.</p> <p>It seems the confusion stems from the multitude of data communication types. Email messages between operating entities may be a valid communications path under COM-001-2, while telemetry/control is covered under other Standards. We believe that a technical guideline may be an appropriate vehicle to distinguish what types of communications are subject to these requirements, and which are not.</p>
<p><b>Response:</b> The RCSDT has drafted performance requirements that are intended to be flexible enough to accommodate different technologies and innovation by industry. It is not the intent of the drafting team to establish all the possible methods of communicating. Drafting teams generally do not create guidelines. No change made.</p>		
ISO New England	No	<p>ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such "requirements" (i.e. capabilities) should be verified through an entity certification process.</p> <p>Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to</p>

Organization	Yes or No	Question 3 Comment
		have communications facilities (electronic or voice).
<p><b>Response:</b> Although this is not a results-based standard, the RCSDT believes it is a significant improvement over the current COM-001 standard. No change made.</p>		
Hydro One Networks Inc.	No	<p>(1) In the last posting, there were suggestions of removing the phrase “within the same Interconnection” from R1 (now R2.2) since there are RCs between two Interconnections that need to communication with each other for reliability coordination (e.g. between Quebec and the RCs the Northeast such as IESO, NYISO, NBSO and ISO-NE, and between the RCs in WECC with the RCs in the Eastern Interconnection). Such coordination may include but not limited to curtailing interchange transactions crossing Interconnection/RC boundary, as stipulated in IRO-006. The SDT’s response to our comments citing that the phrase was added to address the ERCOT situation leaves a reliability gap to the other situations. We again urge the SDT to remove the phrase. If necessary, the ERCOT situation can be addressed by a regional variance.</p>
<p><b>Response:</b> Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinators from one Interconnection to another. No change made.</p>		
SERC OC Standards Review Group	Yes	We suggest that this phrase should also be removed from the “Purpose” statement.
<p><b>Response:</b> The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement.</p>		
MISO Standards Collaborators	Yes	We urge the SDT to remove the phrase. If necessary, regional situations can be addressed by a regional variance.
<p><b>Response:</b> The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement.</p>		

Organization	Yes or No	Question 3 Comment
ACES Power Marketing Standards Collaborators	Yes	<p>We thank the drafting team for making this change and for the clear communication that the intent of this standard is not for data exchange in the response to comments. However, we do believe one additional change is necessary to make the intent absolutely clear.</p> <p>The purpose of statement of COM-001-2 still includes the phrase “to exchange Interconnection and operating information.” Since a standard must stand on its own, we believe it is necessary to remove that phrase from the purpose statement to avoid misinterpretations in the future. Auditors and enforcement personnel are not required to understand the development history when enforcing the standard. Furthermore, the purpose is really to enable communications between these functional entities.</p>
<p><b>Response:</b> The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement.</p>		
Southern Company	Yes	We suggest that this phrase should also be removed from the “Purpose” statement.
<p><b>Response:</b> The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement.</p>		
Entergy Services, Inc	Yes	Yes, the requirements of this standard pertain to having communications capability. The specific content of that communication should not be the subject of the standard.
<p><b>Response:</b> The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement.</p>		
We Energies	Yes	Please add "does not include telemetered or derived data"
<p><b>Response:</b> The standard COM-001 is for Interpersonal Communication capability, which facilitates the communication (i.e., “... to interact, consult, or exchange information.”) and not the exchange of data which is addressed in IRO-010. No change made.</p>		
Duke Energy	Yes	However, the definition of Interpersonal Communication should also be expanded to clearly include the drafting team’s intent that the capability is NOT for the exchange



Organization	Yes or No	Question 3 Comment
		<p>of data.</p> <p>The phrase “for the exchange of Interconnection and operating information” should also be struck from the Purpose statement.</p>
<p><b>Response:</b> The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement.</p> <p>The standard COM-001 is for Interpersonal Communication capability, which facilitates the communication (i.e., “... to interact, consult, or exchange information.”) and not the exchange of data which is addressed in IRO-010. No change made.</p>		
Pacific Northwest Generating Cooperative	Yes	
MRO NSRF	Yes	
City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Yes	
LG&E and KU Services Company	Yes	
Bonneville Power Administration	Yes	
SPP Standards Review Group	Yes	
Dominion	Yes	
Western Electricity Coordinating Council	Yes	

Organization	Yes or No	Question 3 Comment
Southwest Power Pool Regional Entity	Yes	
FirstEnergy	Yes	
Florida Municipal Power Agency	Yes	
Kansas City Power & Light	Yes	
Salt River Project	Yes	
San Diego Gas & Electric	Yes	
Central Lincoln	Yes	
Xcel Energy	Yes	
Liberty Electric Power LLC	Yes	
NIPSCO	Yes	
Oncor Electric Delivery Company LLC	Yes	
Consolidated Edison Co. of NY, Inc.	Yes	
City of Jacksonville Beach dba/ Beaches Energy Services	Yes	

Organization	Yes or No	Question 3 Comment
Luminant Energy Company LLC	Yes	
NextEra Energy, Inc.	Yes	
Pepco Holdings Inc.	Yes	
Exelon	Yes	
Manitoba Hydro	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Niagara Mohawk (dba National Grid)	Yes	
American Electric Power	Yes	
South Carolina Electric and Gas	Yes	
BGE	Yes	
Nebraska Public Power District	Yes	
ERCOT ISO	Yes	
ReliabilityFirst	Yes	
City of Vero Beach	Yes	

Organization	Yes or No	Question 3 Comment
NV Energy	Yes	
Midwest Independent Transmission System Operator	Yes	
Texas Reliability Entity	Yes	
American Transmission Company, LLC	Yes	
Indiana Municipal Power Agency		No comment.

4. **A new requirement was added for clarity regarding what is required of Distribution Providers and the Generator Operators: R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations] This requirement requires collaboration between entities to restore a failed communications capability. Do you agree with the new requirement? If not, please explain in the comment area below.**

**Summary Consideration:** Most of the comments pertain to compliance and clarity concerns; for example, the use of “any of” in the requirement. The phrase “any of” has been eliminated to resolve this concern. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. Other comments recommended using the terms, such as, “primary,” “secondary,” “device,” “means,” and “medium” with regard to the proposed definitions. The RCSDT emphasizes the requirements are for “capability” and adding such proposed terms is not needed to achieve the necessary clarity. Some commenters raised concerns about being able to reach “mutually agreeable time” for restoration. The RCSDT addressed these concerns by revising the phrase to “mutually agreeable action,” which allows the applicable entities to reach consensus on the effort needed to restore communications. This change also provides flexibility to the entities in addressing the steps to restore communications rather than focusing on the time for restoration. The requirement does not limit the sources of information. Allowing the DP and GOP to reach a mutually agreeable action, eliminates the need for Alternative Interpersonal Communication capability considering the limited impact a failure might have on DPs and GOPs overall. From a compliance standpoint, the DP or GOP that is working to restore its Interpersonal Communication capability is not out of compliance as far as the entity is meeting the requirement for taking action to restore its capability. Other similar concerns pertained to having 24/7 dispatch, which is an operational function. The requirements are constructed around having communication capability. The RCSDT understands there may be entities that have certain operations where there is not 24/7 staffing and these cases should be addressed by their operation with other entities through agreements, procedures or other means as needed for reliable operations. Other minor corrections and formatting issues noted were reviewed and corrected accordingly.

Some commenters were concerned that large entities would not be capable of meeting the 60-minute notification upon the loss of their Interpersonal Communication capability. The RCSDT notes this pertains to the BA, RC, and TOP, which are required to have an Alternative Interpersonal Communication capability, and should have the ability to accomplish the required notification. Also, the loss of Interpersonal Communication capability may not always impact the entire capability. This time frame does not apply to the DP and GOP since the Alternative Interpersonal Communication capability is not required for these functional entities. Other minor formatting and corrections to references were made, such as, focusing on using the singular form of words rather than the plural to avoid confusion.

Organization	Yes or No	Question 4 Comment
Alliant Energy Corp. Services, Inc.	Negative	COM-001-2: Alliant Energy is opposed to the use of the word "any" as it is too broad. It should be revised to the primary Interpersonal Communication capabilities with the Transmission Operator or Balancing Authority.
<p><b>Response:</b> The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p>The RCSDT emphasizes the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made.</p>		
Wisconsin Electric Power Marketing; Wisconsin Electric Power Co.	Negative	R11 is not clear on the purpose of the statement “determine a mutually agreeable time for restoration” this could be driven by forces outside the control any of the entities. I think, “provide estimated restoration and actual restoration time and determine mutually agreeable alternative during outage” would be better.
<p><b>Response:</b> The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration.</p>		
Lakeland Electric	Negative	Use of the term "any" in the new R11 and immediate non-compliance if there is a failure in a communication system.
<p><b>Response:</b> The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p>		
SERC OC Standards Review Group	No	We suggest Requirement 11 should be deleted as the generic nature of the term “...any of its Interpersonal Communications capabilities...” could be interpreted to include communications capabilities used for internal DP/GO purposes. Such DP/GO internal communications capability would not be critical to BES reliability. Also, no BES reliability benefit is realized by the parties simply agreeing to a time for the

Organization	Yes or No	Question 4 Comment
		restoration of the failed Interpersonal Communication capability.
<p><b>Response:</b> The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p>		
Pacific Northwest Generating Cooperative	No	<p>As per COM-001-2, R7, “Each Distribution Provider shall have Interpersonal Communications capability with the following entities...” R11 states that the DP or GOP that experiences a failure of its Interpersonal Communications ability shall consult with TOPs and BAs and agree on how to restore Interpersonal Communications. We believe better language might be, “Restore Interpersonal Communications with your TOP/BA as soon as operationally feasible.”</p>
<p><b>Response:</b> The RCSDT notes that R11 does not limit the sources of information used by the DP or GOP in establishing a mutually agreeable restoration time for its Interpersonal Communication capability with its TOP or BA. That is precisely why R11 is written in this manner. This allows flexibility on the part of the TOP and BA in determining when the Interpersonal Communication capability must be restored. In situations where there is little or no impact to the reliability of the BES, some flexibility could be allowed without requiring the acquisition of Alternative Interpersonal Communication capability. The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration.</p>		
MRO NSRF	No	<p>Please note that the use of the word “any” as in “Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities...” will be viewed as meaning every Interpersonal Communication medium that an Entity has or uses. The NSRF recommends that the word “any” be removed from this Requirement.</p> <p>The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p>The NSRF recommends that R11 be revised to read:</p>

Organization	Yes or No	Question 4 Comment
		<p><i>“Each Distribution Provider and Generator Operator that experiences a failure of any of its primary (or defined) Interpersonal Communication capabilities with its Transmission Operator or Balancing Authority...”</i></p> <p>In that way it focuses it down to the communications issues with the TOP or BA. In lieu of “primary” the SDT could state “defined” as long as it is not meant to be “any.”</p> <p>The RCSDT emphasizes the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made.</p> <p>The latter part of R11 states; “...shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.” This ambiguous statement does not support reliability. Consulting with a TOP or BA does not solve the problem of the lack of Interpersonal Communication capabilities. The NSRF recommends this be rewritten as:</p> <p><i>“...shall consult with inform their Transmission Operator or Balancing Authority as applicable as to the status of the Interpersonal Communication capability.”</i></p> <p>So the new R11 would read:</p> <p><i>“Each Distribution Provider and Generator Operator that experiences a failure of its primary (or designated) Interpersonal Communication with their Transmission Operator or Balancing Authority shall inform them, as applicable, as to the status of the Interpersonal Communication capability.”</i></p> <p>The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration.</p>
<p><b>Response:</b> See response above.</p>		



Organization	Yes or No	Question 4 Comment
<p>LG&amp;E and KU Services Company</p>	<p>No</p>	<p>Regarding R11, as written it is unclear when the DP and GOP are required to consult with their TOP or BA. “[A] failure of any of its Interpersonal Communication capabilities” could be construed to mean any internal phone line of either the DP or GOP failing. Internal phone lines do not affect either the DP’s or GOP’s ability to communicate with the TOP or BA.</p> <p>If the DP or GOP loses its Interpersonal Communication with an entity it is required to have the capability with, then the entity must consult with that entity to determine a mutually agreeable action (was time) to restore. A failure of the entity’s capability means the entity is no longer able to communicate with its BA or TOP, then it must consult with the affected entity.</p> <p>It is also unclear whether a failure of an interpersonal communication capability would require consultation if there were multiple other interpersonal communication capabilities that were still fully functional.</p> <p>Furthermore, what exactly is required in “consultation” and who would be responsible if the “consulting” entities did not come to a “mutually agreeable time” are questions that are left unanswered.</p> <p>LG&amp;E and KU Services Company suggest the following language:</p> <p><i>R11. Each Distribution Provider and Generator Operator that experiences a failure of more than one of its Means for Interpersonal Communications or failure of its Alternative Means for Interpersonal Communication with their Transmission Operator or Balancing Authority shall notify their Transmission Operator or Balancing Authority regarding the time to restore the impacted Means for Interpersonal Communication or Alternative Means for Interpersonal Communication.</i></p> <p>The RCSDT thanks you for your comment; however, great lengths were taken in communicating mediums regarding IC and AIC and finds that adding “Means” to the proposed terms being defined diminishes clarity of the definition. No change made.</p>

Organization	Yes or No	Question 4 Comment
<p><b>Response:</b> See response above.</p>		
<p>PPL Electric Utilities and PPL Supply NERC Registered Organizations</p>	<p>No</p>	<p>PPL has concerns with the use of the word “any” in this requirement. PPL recommends striking the words “any of” and instead using “its primary” as follows:</p> <p>The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p><i>Each Distribution Provider and Generator Operator that experiences a failure of its primary Interpersonal Communication capabilities with its Transmission Operator or Balancing Authority...</i> In the current version, it is unclear when the DP and GOP are required to consult with their TOP or BA.</p> <p>The RCSDT notes that the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made.</p> <p>“[A] failure of any of its Interpersonal Communication capabilities” could be construed to mean an internal phone line of either the DP or GOP failing. Internal phone lines do not affect either the DP’s or the GOP’s ability to communicate with the TOP or BA.</p> <p>It is also unclear whether a failure of an interpersonal communication capability would require consultation if there were multiple other interpersonal communication capabilities that were still fully functional.</p> <p>The RCSDT believes an entity meets the intent of the requirement when it has Interpersonal Communication capability, whether through a single capability or multiple capabilities. A single failure of an entity’s capability would not require any consultation if the entity continues to have the capability. The drafting team has removed the phrase “any of” as a clarifying change. Additionally, the RCSDT made a</p>

Organization	Yes or No	Question 4 Comment
		clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.
<b>Response:</b> See response above.		
SPP Standards Review Group	No	<p>We would suggest deleting the phrase ‘any of’ in the Requirement. It would then read:</p> <p><i>‘Each DP and GOP that experiences a failure of its Interpersonal Communication...’</i></p> <p>The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p>Also, how does the DP or GOP consult with its TOP or BA when it loses its Interpersonal Communications capability?</p> <p>To do this wouldn’t they have to have an Alternative Interpersonal Communications capability?</p> <p>The RCSDT believes each entity must determine how to accomplish this (R11) and having another requirement or change would be overly prescriptive. No change made.</p>
<b>Response:</b> See response above.		
Western Electricity Coordinating Council	No	<p>We have two concerns with R11 as worded.</p> <p>First, the term "as applicable" is undefined. Who decides what is applicable. We suggest that words clarifying which entity, TOP or BA, the DP and GO experiencing a failure of any of its Interpersonal Communication capabilities must consult with.</p> <p>The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “as applicable” in COM-001, R11.</p>

Organization	Yes or No	Question 4 Comment
		<p>Second, the inclusion of the "mutually agreeable" time to restore the Interpersonal Communication capability is problematic. Although unlikely, two entities could "mutually agree" to an exceptionally long time frame for restoration (two years) and that unreasonable timeframe would meet the requirement as long as they both agreed. Suggest some finite time limit be included.</p> <p>The RCSDT has made clarifying changes to R11 to reference "mutually agreeable action," rather than "time" for restoration. The use of "action" eliminates the need for a timeframe. New information regarding the restoration parameters may change under a mutually agreeable action.</p>
<p><b>Response:</b> See response above.</p>		
FirstEnergy	No	<p>Although we agree with the intent of the requirement, we are concerned with the use of "any of its Interpersonal Communication." The word "any" is very inclusive and the team should consider narrowing it down to those capabilities that may adversely impact reliability.</p>
<p><b>Response:</b> The RCSDT appreciates your comment and has made clarifying changes by removing the phrase "any of" in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p>		
Florida Municipal Power Agency	No	<p>By use of the term "any" in the phrase "a failure of any of its Interpersonal Communication" the standard will actually create a disincentive for redundant communications with DPs and GOPs due to compliance risk.</p> <p>The RCSDT appreciates your comment and has made clarifying changes by removing the phrase "any of" in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p>To truly further the goals of reliability, the requirement should align with R3.3 and R3.4 which requires a primary Interpersonal Communications capability and R4 which</p>

Organization	Yes or No	Question 4 Comment
		<p>does not require DPs or GOPs to have Alternative Interpersonal Communications capability.</p> <p>A possible solution is through use of the terms “Primary” for R3 and “Alternate” for R4 and then make R11 applicable to Primary only.</p> <p>The term “Interpersonal Communication” is a defined term in this standard. As such, it has a different meaning than “Alternative Interpersonal Communication,” thus there should be no confusing of the two. In addition, the word “primary” purposely does not exist in the requirements since the RCSDT did not intend to create a requirement for redundancy. Redundancy continues to be a good practice, but it is not required by this standard except that some entities must have both an Interpersonal Communication capability and a designated Alternative Interpersonal Communication capability. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>Global Engineering and Energy Solutions</p>	<p>No</p>	<p>We are pleased that the drafting team addition provides addition description on the process for communicating failed Interpersonal Communication. However additional clarity should be made regarding if there is an expectation that the Interpersonal Communication should be available 24x7. There are many Distribution Providers that do not have a 24x7 managed facility that can view and respond to a communication received in real time on the Interpersonal Communication device. These DPs rely on on-call personnel for off-hour emergencies such as an outage on the distribution system. The on-call personnel may use a cell phone, pager, etc. In other cases, the Transmission Operator or Balancing Authority may communicate by email and response is provided during business hours. In these cases, if the Transmission Operator or Balancing Authority had a system emergency they have the ability to isolate the distribution system from the grid and therefore do not require a 24x7 manned distribution.</p> <p>If the intent of the Standard is for ensuring real-time communication than the</p>

Organization	Yes or No	Question 4 Comment
		<p>applicability should be limited to those Distribution Providers who have been required by the Transmission Operator or Balancing Authority to have a manned 24x7 manned facility. Many of the DPs referred to here have not received a real-time call in the last 20 years. Requiring them to staff 24x7 for a condition likely not to occur is cost prohibited and does not improve reliability.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The Purpose of COM-001-2 is, “To establish Interpersonal Communication capabilities necessary to maintain reliability. No change made.</p>		
<p>ACES Power Marketing Standards Collaborators</p>	<p>No</p>	<p>Requirement R11 does not fully address the issue of what is required by Distribution Providers and Generator Operators and introduces new issues.</p> <p>The RCSDT notes that R11 grants the DP and GOP flexibility in determining, in conjunction with its TOP or BA, when its Interpersonal Communication capability requires restoration. This would provide allowances for those entities, which have little or no impact on the reliability of the BES. No change made.</p> <p>First, while the standard is intended to clarify that the Distribution Provider and Generator Operator do not need backup communications capability, it simply does not. Distribution Providers and Generator Operators are required to have an Interpersonal Communications capability in Requirement R7 and R8 respectively. Unfortunately, the effectiveness of these requirements persists even when the Distribution Provider or Generator Operator experiences a failure of its Interpersonal Communications capability. When Requirement R11 applies, the Distribution Provider or Generator Operator will still be obligated to comply with Requirements R7 and R8 respectively and will, in fact, be in violation of these requirements because the Distribution Provider or Generator Operator no longer has the capability.</p> <p>The RCSDT thanks you for your comment. Requirements R7 and R8 have been revised to account for the failure of Interpersonal Communication capability. The</p>

Organization	Yes or No	Question 4 Comment
		<p>intent of R11 is to require the responsible entity to take action upon the failure of its Interpersonal Communication.</p> <p>Second, capability is used inconsistently between Requirement R7 and R11, which leads to confusion. In Requirement R7, it is singular while in Requirement R11 is plural. It needs to be clear that only the failure of the capability identified in R7 and R8 needs to be reported by the Distribution Provider and Generator Operator respectively.</p> <p>The RCSDT thanks you for your observation and has modified COM-001-2 R11 to be singular and to more clearly address the entities being consulted with upon a failure.</p> <p>Third, if the requirements focused on communications devices rather than capabilities, they would come closer to communicating the intent. Requirement R11 would better complement Requirement R7 and R8 if the focus was on having a communication medium or device.</p> <p>The RCSDT believes that prescribing a device or medium would limit an entity. In regards to a device not functioning properly is contrary to R10, notification of Interpersonal Communication capability failure. Please refer to the definition of Interpersonal Communication and Alternative Interpersonal Communication. No change made.</p> <p>A Generator Operator with an installed communications device or medium still has that device or medium even when it is not functioning properly and could still meet Requirements R7 and R8. However, they don't have the Interpersonal Communications capability if the device is not functioning properly.</p> <p>The RCSDT thanks you for your comment. Requirements R7 and R8 have been revised to account for the failure of Interpersonal Communication capability. The intent of R11 is to require the responsible entity to take action upon the failure of its Interpersonal Communication.</p>

Organization	Yes or No	Question 4 Comment
<p><b>Response:</b> See response above.</p>		
<p>Kansas City Power &amp; Light</p>	<p>No</p>	<p>How does a DP or GOP experiencing a failure of its “interpersonal communications” consult with its TOP or BA to determine a mutually agreeable time for restoration of “interpersonal communications”? There are no requirements that require alternative “interpersonal communications” for the DP and GOP. This requirement cannot be fulfilled and should be removed.</p>
<p><b>Response:</b> The RCSDT notes that R11 does not limit the sources of information used by the DP or GOP in establishing a mutually agreeable restoration time for its Interpersonal Communication capability with its TOP or BA; that is precisely why R11 is written in this manner. This allows flexibility on the part of the TOP and BA in determining when the Interpersonal Communication capability must be restored. In situations where there is little or no impact to the reliability of the BES, some flexibility could be allowed without requiring the acquisition of Alternative Interpersonal Communication capability. The RCSDT has made clarifying changes to R11 to use mutually agreeable action, rather than time for restoration.</p>		
<p>Southern Company</p>	<p>No</p>	<p>We suggest the following changes:</p> <ol style="list-style-type: none"> <li>Requirement 10 should include Distribution Providers and Generator Operators, The RCSDT stresses that R11 grants the DP and GOP flexibility in determining, in conjunction with its TOP or BA, when its Interpersonal Communication capability must be restored. This would provide allowances for those entities, which have little or no impact on the reliability of the BES, while not requiring them to obtain Alternative Interpersonal Communication capabilities. Making the proposed changes would eliminate this flexibility. Removing R11 takes away the RCSDT’s effort to include those provisions in the standard. No change made.</li> <li>Entities to be notified should be “as identified in requirements R1 through R8”, The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements.</li> </ol>



Organization	Yes or No	Question 4 Comment
		<p>3. Requirement 11 should be deleted, and, The RCSDT thanks you for your comment. COM-001-2 R11 requires the entity to consult with its BA or TOP when it experiences a failure of its Interpersonal Communication capability. The BA or TOP need to know communication is compromised between the DP or GOP.</p> <p>4. Measures (M10) and VSLs should be adjusted accordingly. The RCSDT did not elect to include the DP and GOP in R10; therefore, Measure, M10 and the corresponding VSLs were not adjusted. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>Central Lincoln</p>	<p>No</p>	<p>The new requirement presents us with a paradoxical situation. The communication has failed, so we must consult; yet consultation requires communication. We note that the SDT used the word “any”, implying that multiple communication paths are required. The reality of the situation at Central Lincoln, due to our remote location, is that a single back hoe incident at the right location can take out all of our of our communication capability (including the terrestrial portion of the cellular networks) with our BA/TO; making this requirement impossible to meet for this circumstance using our present capabilities.</p> <p>The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p>Furthermore, R11 addresses the direction given in Order 693 that DP and GOP entities do not necessarily need to have Alternative Interpersonal Communication capability. The requirement allows flexibility in “consult with” by not naming the method. If all communications are out, then the DP or GOP may have to meet the requirement by an in-person consultation.</p>

Organization	Yes or No	Question 4 Comment
		<p>We also note that no time limit was indicated. Most interruptions are brief, and fixed before consultation could reasonably take place. CEAs will be finding entities non-compliant for quickly fixing problems at their end without first consulting to ensure the restoration time was agreeable. To avoid non-compliance, entities will be forced delay repairs while they investigate alternative communication paths for consultation purposes. We fail to see how such an outcome improves reliability.</p> <p>The DP and GOP are only required to have Interpersonal Communication capability. If the DP or GOP restores its Interpersonal Communication capability before it could reasonably contact the affected entity by another method, there is no failure to comply. The DP or GOP could then consult with the affected entity to determine a mutually agreeable action. In this case, the RCSDT believes the "action" would then be the entities acknowledging the failure and the repair; therefore, no mutually agreeable action is needed. The RCSDT recognizes there is no way to account for all the various circumstances in a failure. To comply, the DP and GOP are still required to consult the entity which the failure affected regardless of whether the Interpersonal Communication capability was restored or is still failed. No change made.</p> <p>The new requirement is one sided, requiring the DP and GOP to consult with no corresponding requirement for the TO or BA to have personnel available for such a consultation. Consultation failure or failure to mutually agree due to actions or inactions on the part of the TO or BA should not result in an enforcement action against the DP or GOP, yet that is how the requirement is written.</p> <p>The RCSDT notes that once the failure has been detected, the responsible entity must make the consultation with the BA or TOP; that relieves the compliance burden. While the RCSDT understands your concern about single points of failure, the question becomes should this relieve the DP or GOP of the requirement for having Interpersonal Communication capabilities. No change made.</p> <p>The new requirement fails to add any "clarity" to the other requirements, and we don't see that the stakeholders thought there was a problem with DP/GOP obligation</p>

Organization	Yes or No	Question 4 Comment
		<p>clarity. Instead, it adds new obligations with no justification for how they enhance reliability. We suggest removing the requirement.</p> <p>Based on the RCSDT’s understanding of the comments received on the previous posting, the industry desired additional clarity on specifically what communication capabilities the DP and GOP were required to have. There was confusion that the standard did not specifically say that the DP and GOP were required to have Alternative Interpersonal Communication capabilities. R11 clarifies that a DP and GOP are not required to have Alternative Interpersonal Communication capability if the DP or GOP consult with their TOP or BA, whichever is applicable in the given situation, and they mutually agree that the restoration action does not adversely impact the reliability of the BES. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>Entergy Services, Inc</p>	<p>No</p>	<p>The DP or GOP should have to notify the TOP and BA of its communications failure, similar to the requirement in R10 for TOP and BA. The DP or GOP should restore the communications capability as soon as possible. Entergy does not agree that the TOP or BA should have to negotiate the restoration time with the DP or GOP. This is an unreasonable burden on the BA and TOP.</p>
<p><b>Response:</b> The RCSDT notes that R11 does not exempt the DP or GOP from notifying its TOP or BA when they experience a communication failure. There is nothing in R11 that says a DP or GOP does not have to restore its communications capability. What is in R11 is flexibility. The RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. While one could consider this a negotiation, the notification is required so some sort of communication must be made. All that is being asked of the BA and TOP is to give some consideration for the entities involved and the overall situation. The SDT modified the requirement so mutual agreement must be reached on an “action” for restoration rather than a “time” for restoration.</p>		
<p>Liberty Electric Power LLC</p>	<p>No</p>	<p>The phrase "mutually agreeable time" needs to be replaced in order to make this standard acceptable. This phrasing creates a potential violation if equipment functionality cannot be restored in the time frame preferred by another entity, even</p>

Organization	Yes or No	Question 4 Comment
		<p>if the time of repair is beyond the control of the RE. This phrase should be replaced with "inform their TO or BA as applicable of the failure, and provide estimates as to the time the Interpersonal Communication capabilities will be restored."</p>
<p><b>Response:</b> The RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. Mutually agreeable implies that both parties are willing to accept the outcome. It doesn't mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. However, what transpires in the consultation is a realization of what the situation is, what the impacts to reliability are and a determination of what is amicable to both parties. The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration.</p>		
We Energies	No	<p>R11 Implies that R8 and R9 are independent and redundant to R5.3, R5.4 and R3.3 and R3.4.</p> <p>R11 is not clear on the purpose of the statement "determine a mutually agreeable time for restoration" this could be driven by forces outside the control any of the entities. I think" provide estimated restoration and actual restoration time and determine mutually agreeable alternative during outage" would be better.</p> <p>Update M9 accordingly.</p>
<p><b>Response:</b> The RCSDT has made clarifying changes to R11 to use mutually agreeable action, rather than time for restoration.</p>		
Indiana Municipal Power Agency	No	<p>IMPA does not believe that this requirement is necessary in order to ensure communication lines are restored by Distribution Providers and Generator Operators. If this requirement is kept, IMPA does not think the use of the words "a failure of any of its Interpersonal Communication capabilities" is acceptable.</p> <p>The RCSDT notes the intent of this requirement is not to ensure that DP and GOP communication lines are restored. The intent of this requirement is to provide some flexibility for the DP or GOP that does not have an impact on the reliability of the BES. Depending on the impact of the given entity, the TOP or BA can be flexible in specifying when the Interpersonal Communication capability must be restored,</p>

Organization	Yes or No	Question 4 Comment
		<p>rather than requiring the availability and use of an Alternative Interpersonal Communication capability. No change made.</p> <p>The wording is too inclusive and should apply to only primary Interpersonal Communication capabilities. IMPA is also concerned about how entities are supposed to know when the telephone companies may have equipment repaired in order to determine a mutually agreeable time to restore Interpersonal Communication capability. The entity may have no control over the restoration and hence would not be able to set a time other than whenever the capabilities are restored by for instance the telephone company.</p> <p>The RCSDT deliberately avoided the use of primary and secondary mediums and elected to use communications capabilities. As such, R11 applies to Interpersonal Communication capabilities of the DP and GOP. The RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. No change made.</p> <p>It does not mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. However, what transpires in the consultation is a realization of the situation, what the impacts to reliability are and a determination of what is amicable to both parties. No change made. The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration.</p> <p>In addition, entities will have to keep evidence to show that a “mutually” agreeable time was reached by two or more entities. The most workable solution would be to require notification if primary Interpersonal Communication is lost and a follow-up notification when that capability is restored.</p> <p>The RCSDT notes that R11 does not limit the sources of information used by the DP or GOP in establishing a mutually agreeable restoration action for its Interpersonal Communication capability with its TOP or BA; that is precisely why R11 is written in</p>

Organization	Yes or No	Question 4 Comment
		<p>this manner. This allows flexibility on the part of the TOP and BA in determining when the Interpersonal Communication capability must be restored. In situations where there is little or no impact to the reliability of the BES, some flexibility could be allowed without requiring the acquisition of Alternative Interpersonal Communication capability. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>NextEra Energy, Inc.</p>	<p>No</p>	<p>NextEra Energy, Inc. (NextEra), which includes Florida Power &amp; Light Company, believes that Requirement 11 of COM-001-2, as drafted, is too vague to be adopted as a mandatory Reliability Standard.</p> <p>For example, it is unclear what is meant by “shall consult.” The North American Electric Reliability Corporation’s (NERC) Rules of Procedure state that a foundation of any Reliability Standard is that: “. . . [the] reliability standard shall be stated using clear and unambiguous language. Responsible entities, using reasonable judgment and in keeping with good utility practices, are able to arrive at a consistent interpretation of the required performance.” The term “shall consult” is not a term generally understood or used in the electric utility industry, and, therefore, does not enable a consistent interpretation of the performance required. Accordingly, NextEra requests that Requirement 11 either:</p> <ul style="list-style-type: none"> <li>(i) be deleted; or</li> <li>(ii) be redrafted to read more like Requirement 10.</li> </ul>
<p><b>Response:</b> The RCSDT believes the term, “consult,” is well understood. Basically, entities must have a conversation. No change made.</p>		
<p>Manitoba Hydro</p>	<p>No</p>	<p>COM-001-2 R11 does not specify a timeline in which entities have to come up with a ‘mutually agreeable’ time to restore Interpersonal Communication capability. Manitoba Hydro believes this omission creates a reliability gap and suggests that wording be revised as follows: ‘... shall consult with their Transmission Operator or</p>

Organization	Yes or No	Question 4 Comment
		Balancing Authority as applicable and determine a mutually agreeable time to restore the Interpersonal Communication capability within 24 hours of experiencing the failure.'
<p><b>Response:</b> The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration. The RCSDT believes R11 grants the DP and GOP flexibility in determining, in conjunction with its TOP or BA, when its Interpersonal Communication capability must be restored. This would provide allowances for those entities, which have little or no impact on the reliability of the BES while not requiring them to obtain Alternative Interpersonal Communication capabilities. No change made.</p>		
Great River Energy	No	Capability is not used consistently in R7 and R11. It changes from singular to plural.
<p><b>Response:</b> The RCSDT thanks you for your observation. Generally, the singular implies the plural or vice-versa. The RCSDT has corrected R10 and R11 to be consistent with the singular application.</p>		
American Electric Power	No	Regarding COM-001-02 R10 and R11, some of the entity pairs (for example, BA to a GO) are not required to have alternative inter-personnel communication. How can the notification occur with 60 minutes for example, when primary communication is not available for a role that doesn't require an alternate means of communication? In addition, requiring notification within 60 minutes in Requirement 10 would not be feasible for larger entities that might have hundreds of contacts to make.
<p><b>Response:</b> The RCSDT thanks you for your comment. The notification within 60 minutes found in R10 pertains to the BA, RC and TOP; therefore, these entities are required to have designated Alternative Interpersonal Communication capability with other entities and more specifically other BA, TOP and RC entities. It is understood by virtue of R11 that the DP and GOP may not have Alternative Interpersonal Communication capability and may not be notified within 60 minutes. No change made.</p>		
Georgia Transmission Corporation	No	The intent of this requirement is not yet clear. Technically, the air we breathe, as well as other mediums like "any" cell phone, fax lines, and/or email accounts would qualify under this proposed definition of Interpersonal Communication. The burden for compliance evidence to demonstrate failure of "any of its Interpersonal Communication capability" would seem unobtainable and could prove to be a daily

Organization	Yes or No	Question 4 Comment
		<p>occurrence (dropped phone calls, etc.). The following is suggested to utilize the singular form of capability rather than plural form of capabilities:</p> <p><i>R11. Each Distribution Provider and Generator Operator that experiences a failure of its Interpersonal Communication capability shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.</i></p>
<p><b>Response:</b> The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p>		
Nebraska Public Power District	No	<p>We would suggest deleting the phrase ‘any of’ in the Requirement. It would then read:</p> <p><i>‘Each DP and GOP that experiences a failure of its Interpersonal Communication...’</i></p> <p>The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p>Also, how does the DP or GOP consult with its TOP or BA when it loses its Interpersonal Communications capability?</p> <p>To do this wouldn’t they have to have an Alternative Interpersonal Communications capability?</p> <p>The RCSDT notes that R11 does not limit the sources of information used by the DP or GOP in establishing mutually agreeable action for restoration for its Interpersonal Communication capability with its TOP or BA; that is precisely why R11 is written in this manner. This allows flexibility on the part of the TOP and BA in determining when the Interpersonal Communication capability must be restored. In situations where there is little or no impact to the reliability of the BES, some flexibility could be</p>



Organization	Yes or No	Question 4 Comment
		allowed without requiring the acquisition of Alternative Interpersonal Communication capability. No change made.
<b>Response:</b> See response above.		
Georgia System Operations	No	<p>The intent of this requirement is not yet clear. Technically, the air we breathe, as well as other mediums like “any” cell phone, fax lines, and/or email accounts would qualify under this proposed definition of Interpersonal Communication. The burden for compliance evidence to demonstrate failure of “any of its Interpersonal Communication capability” would seem unobtainable and could prove to be a daily occurrence (dropped phone calls, etc.). The following is suggested:</p> <p><i>R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capability shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.</i></p>
<b>Response:</b> The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.		
Ingleside Cogeneration LP	No	<p>Most of Ingleside Cogeneration’s communications capabilities rely on carriers who will immediately deploy technicians to repair land-based or wireless systems when they break. Although we may contact the carrier to inform them that the systems are not available – or to determine their progress – we do not want them waiting for our go-ahead before proceeding. If the intent of this requirement is to validate the operation of the repaired connection, or to establish interim means of communications with other operating entities, then Ingleside Cogeneration believes a re-write is in order. There is no reliability purpose being served otherwise that we can tell.</p>
<b>Response:</b> The RCSDT believes there is nothing in R11 that says repairs by communication technicians should wait on anyone for a		

Organization	Yes or No	Question 4 Comment
		<p>go-ahead. The RCSDT sees it working this way: When a communication link goes down, a communication technician is dispatched as soon as the failure is noted and according to the agreements regarding repair between the provider and the user. When the user contacts the provider, an estimate of the anticipated repair time should be provided. One would expect this type of arrangement in service agreements. The user, DP or GOP, then takes that time to the consultation with the TOP or BA. Based on this anticipated restoration time and the impact the DP or GOP has on the reliability of the BES, a mutually agreed to restoration action is established. No change made.</p>
<p>Duke Energy</p>	<p>No</p>	<p>The phrase “consult with... to determine a mutually agreeable time” makes this requirement too open-ended to be auditable and enforceable.</p> <p>The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration.</p> <p>We question why R11 does not establish a timeframe for notification similar to R10, which requires the RC, TOP or BA to make notification within 60 minutes of failure detection.</p> <p>The RCSDT thanks you for your comment. The notification within 60 minutes found in R10 pertains to the BA, RC and TOP; therefore, these entities are required to have designated Alternative Interpersonal Communication capability with other entities and more specifically other BA, TOP and RC entities. It is understood by virtue of R11 that the DP and GOP would not have Alternative Interpersonal Communication capability and would not be notified within 60 minutes. No change made.</p> <p>We also question why DPs and GOPs are not required to have Alternative Interpersonal Communications capability in order to be able to make such notifications.</p> <p>The RCSDT believes that R11 grants the DP and GOP flexibility in determining, in conjunction with its TOP or BA, when its Interpersonal Communication capability must be restored. This would provide allowances for those entities which have little or no impact on the reliability of the BES while not requiring them to obtain Alternative Interpersonal Communication capabilities. The requirement allows flexibility in “consult with” by not naming the method. If all communications are out,</p>

Organization	Yes or No	Question 4 Comment
		then the DP or GOP may have to meet the requirement by an in-person consultation. No change made.
<b>Response:</b> See response above.		
ISO New England	No	ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such “requirements” (i.e. capabilities) should be verified through an entity certification process.  Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to have communications facilities (electronic or voice).
<b>Response:</b> Although this is not a results-based standard, the RCSDT believes it is a significant improvement over the current COM-001 standard. No change made.		
ReliabilityFirst	No	ReliabilityFirst believes Distribution Provider and Generator Operator should be added to Requirement R10 and Requirement R11 should be removed. Finite time frames should be prescribed for each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities. ReliabilityFirst believes that the failure of Interpersonal Communication between Distribution Providers/Generator Operators and Transmission Operators/Balancing Authorities could have the same negative effects similar to the failure of Interpersonal Communication by the Reliability Coordinator, Transmission Operator, and Balancing Authority.
<b>Response:</b> If the RCSDT made the changes proposed, the standards loses the flexibility of the TOP and BA to work with DPs and GOPs which have little or no adverse reliability impact on the BES. The RCSDT feels we need to maintain this flexibility. In fact, FERC directed NERC to do so in Order 693. No change made.		
City of Vero Beach	No	By use of the term “any” in the phrase “a failure of any of its Interpersonal

Organization	Yes or No	Question 4 Comment
		<p>Communication” the standard will actually create a disincentive for redundant communications with DPs and GOPs due to compliance risk.</p> <p>The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p>To truly further the goals of reliability, the requirement should align with R3.3 and R3.4 which requires a primary Interpersonal Communications capability and R4 which does not require DPs or GOPs to have Alternative Interpersonal Communications capability. A possible solution is through use of the terms “Primary” for R3 and “Alternate” for R4 and then make R11 applicable to Primary only.</p> <p>The RCSDT deliberately stayed away from the use of primary and secondary mediums and prefers to use communications capabilities. Further, the RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. Mutually agreeable implies that both parties are willing to accept the outcome. It doesn’t mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. But what transpires in the consultation is a realization of what the situation is, what the impacts to reliability are and a determination of what is amicable to both parties. No change made.</p> <p>The RCSDT emphasizes the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made.</p>
<p><b>Response:</b> See response above.</p>		
Midwest Independent	No	MISO requests clarification regarding

Organization	Yes or No	Question 4 Comment
Transmission System Operator		<p>(1) when Distribution Providers/Generator Operators have an obligation to collaborate with Transmission Operators versus Balancing Authorities; and</p> <p>(2) the obligation of Transmission Operators to inform Balancing Authorities (and vice versa) of an agreed upon time for restoration of Interpersonal Communication capability when collaboration occurs only between Transmission Operators and Distribution Providers/Generator Operators or, conversely, Balancing Authorities and Distribution Providers/Generator Operators.</p>
<p><b>Response:</b> The RCSDT believes, (1) As specified in R11, the DP and GOP have an obligation to consult with their TOP and/or BA with who they are experiencing an Interpersonal Communication capability failure. If the DP or GOP experiences a failure with the TOP, then they consult with the TOP. If that failure is with the BA, they consult with the BA. If the failure is with both the TOP and BA, they consult with both. (2) There is no such obligation. Both the TOP and BA are required to have Alternative Interpersonal Communication capability, which would be used as a substitute for the Interpersonal Communication capability. No change made.</p>		
Texas Reliability Entity	No	<p>(1) Why does R10 refer to “failure of its Interpersonal Communications capabilities” while R11 refers to “failure of **any of** its Interpersonal Communications capabilities”?</p> <p>What is the distinction that is intended by addition of the words “any of”?</p> <p>The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p>(2) As a Compliance Enforcement Authority, we have several fundamental questions regarding what is intended in this standard. It appears the drafting team is using the defined term “Interpersonal Communications” to refer to a designated primary communication medium, and the term “Alternative Interpersonal Communications” to refer to one or more designated backup communication mediums.</p> <p>Is that correct?</p>

Organization	Yes or No	Question 4 Comment
		<p>This should be clarified in the Standard.</p> <p>(2) The RCSDT deliberately stayed away from the use of primary and secondary mediums and prefers to use communications capabilities. However, you are correct in considering the Alternative Interpersonal Communication capability as a substitute for the Interpersonal Communication capability, as specified in their respective definitions. No change made.</p> <p>(3) There is ambiguity in the current draft because the defined term “Interpersonal Communications” appears to include primary, back-up and all other mediums that may be available (which may include landline phone, cell phone, satellite phone, instant messaging, email, and data links, all in one facility), including any “Alternative Interpersonal Communications.”</p> <p>(3) Interpersonal Communication capability could use any of the mediums mentioned in your comment. Likewise, the Alternative Interpersonal Communication capability could be any of those mediums, as well, provided that it did not use the same infrastructure as the Interpersonal Communication capability. No change made.</p> <p>Do R10 and R11 apply to ALL available mediums, or just to the designated primary and back-up mediums?</p> <p>Does R9 apply to ALL available back-up mediums, or just to a specifically designated back-up medium?</p> <p>The RCSDT deliberately stayed away from the use of primary and secondary mediums and prefers to use communications capabilities. Further, the RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. Mutually agreeable implies that both parties are willing to accept the outcome. It doesn’t mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. But what transpires in the consultation is a realization of what the situation is, what the impacts to reliability are</p>

Organization	Yes or No	Question 4 Comment
		and a determination of what is amicable to both parties. No change made.
<b>Response:</b> See response above.		
Dominion	Yes	<p>Dominion agrees with the intent of R11; however, suggest language changes for consistency with R10 as follows:</p> <p><i>R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>
<b>Response:</b> The RCSDT has made clarifying changes to R11 to use mutually agreeable action, rather than time for restoration.		
NV Energy	Yes	Agree, however, the ability for a DP or GOP to have such consultation with its TOP or BA would likely be hampered by the failure of the Interpersonal Communications itself. DP and GOP are only required to have a single source for this Interpersonal Communications.
<b>Response:</b> RCSDT did not want to burden the DP and GOP with having Alternative Interpersonal Communication capability based on Paragraph 508 of Order No. 693. There are multiple avenues of communication technology available to comply with R11. No change made.		
NIPSCO		If the Interpersonal Communication is down, and no backup is required for the DP and GOP, how are they to consult and collaborate?
<b>Response:</b> RCSDT did not want to burden the DP and GOP with having Alternative Interpersonal Communication capability based on Paragraph 508 of Order No. 693. There are multiple avenues of communication technology available to comply with R11. No change made.		
City of Tacoma, Department	Yes	

Organization	Yes or No	Question 4 Comment
of Public Utilities, Light Division, dba Tacoma Power		
Bonneville Power Administration	Yes	
Southwest Power Pool Regional Entity	Yes	
MISO Standards Collaborators	Yes	
Salt River Project	Yes	
San Diego Gas & Electric	Yes	
Xcel Energy	Yes	
Independent Electricity System Operator	Yes	
Oncor Electric Delivery Company LLC	Yes	
City of Jacksonville Beach dba/ Beaches Energy Services	Yes	
Luminant Energy Company LLC	Yes	
Pepco Holdings Inc.	Yes	



Organization	Yes or No	Question 4 Comment
Exelon	Yes	
Niagara Mohawk (dba National Grid)	Yes	
South Carolina Electric and Gas	Yes	
BGE	Yes	
ERCOT ISO	Yes	
Hydro One Networks Inc.	Yes	
American Transmission Company, LLC	Yes	

5. The proposed definition of Reliability Directive shown in COM-002-3 was revised to include Adverse Reliability Impact as shown to more fully address emergencies or events that might lead to instability or Cascading: Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact. Do you agree with the proposed definition? If not, please explain in the comment area below.

**Summary Consideration:** There were a significant number of comments about the definition of Reliability Directive with accompanying suggested language; for example, having the definition to prescribe a level of performance. The practice of writing a level of performance within a definition is discouraged and generally prevents future use of the term. Several comments pertained to compliance with the requirements; for example, would an entity be required to use three-part communication for a voltage schedule? The requirements do not preclude an entity from doing so; however, the requirements focus on the situation of addressing an Emergency or Adverse Reliability Impact. Other concerns were raised that the terms “Emergency” and “Adverse Reliability Impact” are the same. The RCSDT believes these terms capture independent conditions. The term “Emergency” implies situations where the event is anticipated or currently happening. Likewise, Adverse Reliability Impact clearly identifies a potential or actual event in the phrase, “an event that results in.” The RCSDT notes the definition of Adverse Reliability Impact is the revised term, which is NERC Board of Trustees adopted and is pending regulatory filing in IRO-014-2. Additionally, using the currently adopted version does not capture the full spectrum of the proposed definition by the RCSDT.

The development of the term Reliability Directive concept places a heightened awareness on actions that are required to avoid an Adverse Reliability Impact. Additionally, the use of “direct” is consistent with the uses of “direct” in other standards. A commenter had a concern about the removal of “issued in a clear, concise, and definitive manner” would lead to repeating the process. The RCSDT believes it to be in the interest of the issuer to do this without the burden of a requirement. Additionally, this type of requirement would be difficult to measure and by virtue of the issuer having to confirm the Reliability Directive; it is to the issuer’s advantage to be clear for efficient communications. Other minor formatting and corrections to references were made to align requirements, measures, and compliance components. Several other comments were made that are addressed in the questions above.

Organization	Yes or No	Question 5 Comment
Constellation Power Source Generation, Inc.	Negative	As we commented on Project 2007-03 TOP-001-2, the definition of Reliability Directive is an improvement but the definition must capture the identification concept that is reflected in the Requirement (R1). As a result, when Reliability

Organization	Yes or No	Question 5 Comment
		<p>Directive is used elsewhere, it would be clear that the communication must be identified as a Reliability Directive.</p> <p>We suggest the following revision to the definition and it should follow through to Project 2006-06 IRO-001-3 and Project 2007-03 TOP-001-2, eventually being added to the Reliability Standards Glossary of Terms.</p> <p><i>A communication identified as a Reliability Directive by a Reliability Coordinator, Transmission Operator, or Balancing Authority to initiate action by the recipient to address an Emergency or Adverse Reliability Impact.</i></p> <p>The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made.</p> <p>“R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”</p> <p>IRO-001-3 uses the term ‘direct’ in its purpose statement, R1, R2 and R3. To avoid confusion with a Reliability Directive (both for auditors and entities), we suggest the following:</p> <p>To establish the authority of Reliability Coordinators to make requests of other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System.</p> <p><i>R1: Each Reliability Coordinator shall have the authority to act or request others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or</i></p>

Organization	Yes or No	Question 5 Comment
		<p><i>Adverse Reliability Impacts.</i></p> <p><i>R2: Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator’s request unless compliance with the request cannot be physically implemented, or unless such actions would violate safety, equipment, regulatory or statutory requirements, or unless the TOP, BA, GOP or DP convey a business reason not to comply with the request but express that they will comply if a Reliability Directive is given.</i></p> <p><i>R3: Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as requested in accordance with Requirement R2.</i></p> <p>The RCSDT feels the use of direct and directed is consistent with the purpose and application of those terms in other standards. The RCSDT believes using the word “request” makes the requirement conditional and is not consistent with the purpose of the standard. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>MidAmerican Energy Co.</p>	<p>Negative</p>	<p>Do not nest definitions.</p> <p>The use of the word “any” in the COM-002-3 and IRO-001-3 definition of “Emergency” is too broad and should be deleted. The use of “any” in regulatory standards almost always causes unintended consequences.</p> <p>The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p>The definition should be shortened to read:</p> <p><i>“Abnormal system condition that requires automatic or immediate manual actions to prevent or limit Bulk Electric System transmission facility or generation failures that</i></p>

Organization	Yes or No	Question 5 Comment
		<p><i>could result in instability, uncontrolled separation, or cascading.”</i></p> <p>The RCSDT appreciates the suggested rewording of the definition. The suggestion creates a disconnect with the already approved NERC glossary term. Additionally, the proposed definition adds new words which were not included originally. The RCSDT does not propose a new definition of Emergency. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>Tennessee Valley Authority</p>	<p>Negative</p>	<p>We suggest adding the words “and identified as a reliability directive to the recipient” at the end of the definition of Reliability Directive.</p> <p>The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made.</p> <p>“R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”</p> <p>For R2, we question the phrase “physically implemented” and recommend that the intent be clarified in the language.</p> <p>The RCSDT believes there may be conditions where an entity may not be able to physically implement the direction; for example, an entity that does not have the right to access certain equipment or cannot manually operate a broken apparatus. We feel the proposed language achieves the intended purpose. No change made.</p>
<p><b>Response:</b> See response above.</p>		

Organization	Yes or No	Question 5 Comment
SERC OC Standards Review Group	No	<p>We suggest adding the words “and identified as a reliability directive to the recipient” at the end of the definition of Reliability Directive. As written, this definition could lead to a dispute of what communications are Reliability Directives; leading to further dispute as to what Requirements are applicable. By adding this clarity in the definition of this term, clarity will not be needed in the application of this definition as is proposed in COM-002-3, Req 1.</p> <p>This would allow the removal of R1 from COM-002-3</p>
<p><b>Response:</b> The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made.</p> <p>“R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”</p>		
CCG, CPG, CECD	No	<p>As we commented on Project 2007-03 TOP-001-2, the definition of Reliability Directive is an improvement but the definition must capture the identification concept that is reflected in the Requirement (R1). As a result, when Reliability Directive is used elsewhere, it would be clear that the communication must be identified as a Reliability Directive.</p> <p>We suggest the following revision to the definition and it should follow through to Project 2006-06 IRO-001-3 and Project 2007-03 TOP-001-2, eventually being added to the Reliability Standards Glossary of Terms.</p> <p><i>“A communication identified as a Reliability Directive by a Reliability Coordinator, Transmission Operator, or Balancing Authority to initiate action by the recipient to address an Emergency or Adverse Reliability Impact.”</i></p>
<p><b>Response:</b> The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-</p>		

Organization	Yes or No	Question 5 Comment
<p>002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made.</p> <p>“R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”</p>		
<p>Arizona Public Service Company</p>	<p>No</p>	<p>There is a risk of not properly identifying an abnormal condition (Emergency or Adverse Reliability Impact) in time to require specific use of the statement ‘this is a Reliability Directive’ when issuing switching on the system in the event of an emergency.</p> <p>The RCSDT believes that it is the responsibility of each entity to identify abnormal conditions when it requires an action to be executed as a Reliability Directive. If conditions are not identified as having Emergency or Adverse Reliability Impact, then the requirement is not applicable. No change made.</p> <p>This is a deviation from consistently using 3-way communication when an emergency occurs. It may not be apparent that an emergency exists and breaking from consistent use of expected 3-way communication could cause confusion.</p> <p>The RCSDT believes this does not preclude an entity from utilizing 3-part communications for activities other than Reliability Directives. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>Southern Company</p>	<p>No</p>	<p>This definition would encompass more communication than is now included. The definition now requires that a directive be declared as a part of the three part communication. For example, sending out the voltage schedule each morning would be included as a directive using the new definition.</p> <p>The RCSDT thanks you for your comment; however, we believe the definition of Reliability Directive is specific in the nature of the communication while providing</p>

Organization	Yes or No	Question 5 Comment
		<p>adequate flexibility for the responsible entity to define those conditions that would rise to the level of a Reliability Directive. No change made.</p> <p>We suggest adding the words “and identified as a reliability directive to the recipient” at the end of the definition of Reliability Directive. This would allow the removal of R1 from COM-002-3</p> <p>The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made.</p> <p>“R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”</p>
<p><b>Response:</b> See response above.</p>		
Entergy Services, Inc	No	<p>An Adverse Reliability Impact is a type of Emergency. Including a new term for Adverse Reliability Impact and including both terms in the definition for Reliability Directive doesn’t add clarity. I suggest changing the definition for Reliability Directive to remove phrase “or Adverse Reliability Impact.”</p>
<p><b>Response:</b> The RCSDT thanks you for your comment; however, the RCSDT believes the definition captures two independent conditions, anticipated and after or post event. The definition of Emergency implies situations where the event is anticipated or currently happening. Likewise, the definition of Adverse Reliability Impact clearly identifies as a potential or actual event in the phrase, “an event that results in.” Both conditions are important to the definition. The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk</p>		



Organization	Yes or No	Question 5 Comment
Electric System instability or Cascading.” No change made.		
NextEra Energy, Inc.	No	<p>NextEra objects to the use of “Adverse Reliability Impact” in Reliability Standards COM-002-3 and IRO-001-3. NextEra requests that the use of Adverse Reliability Impact be revised as suggested below or it be deleted from the definition of Reliability Directive. NextEra does not agree with the use of Adverse Reliability Impact in the definition of “Reliability Directive” for the following reasons:</p> <ol style="list-style-type: none"> <li>1. This term Adverse Reliability Impact is ambiguous. In part, the term is ambiguous because it includes in its definition the term “instability,” which has lead to considerable misunderstanding and confusion in the industry. There are also differing views on what is (and is not) Cascading, because the definition is not sufficiently clear. For example, some believe instability and Cascading occur when an event affects multiple substations of one Transmission Operator, while others believe instability or Cascading only occur when the event affects more than one Transmission Operator’s system. As mentioned in response to item 4, above, Reliability Standards must be clear and consistently interpreted. It is not appropriate to issue a Standard that perpetuates the use of terms that lack consistent interpretation.</li> <li>2. While not perfect, the term Emergency is better understood in the industry, and it may include many or all of the instances of instability or Cascading intended to be captured by Adverse Reliability Impact. Consequently, it is not advisable to introduce Adverse Reliability Impact as a new term, when it is not clearly distinguishable from Emergency. NextEra is concerned that an unclear and imprecise term, such as Adverse Reliability Impact, does not promote reliability, and, such a term is particularly troublesome in the context of real time system operations. Therefore, for the reasons stated above, NextEra believes that the term Adverse Reliability Impact should be deleted from the definition of Reliability Directive. In the alternative, if Adverse Reliability Impact is not deleted from the definition of Reliability Directive in Reliability Standards COM-002-3 and IRO-001-3, NextEra</li> </ol>

Organization	Yes or No	Question 5 Comment
		<p>requests that Adverse Reliability Impact be revised to read:</p> <p><i>“an event or condition on the Bulk Electric System that may, or is leading to, Cascading over more than one Bulk Electric System transmission system.”</i></p>
<p><b>Response:</b> The RCSDT thanks you for your comment; however, the RCSDT believes the definition captures two independent conditions, anticipated and after or post event. The definition of Emergency implies situations where the event is anticipated or currently happening. Likewise, the definition of Adverse Reliability Impact clearly identifies as a potential or actual event in the phrase, “an event that results in.” Both conditions are important to the definition. The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” No change made.</p>		
Niagara Mohawk (dba National Grid)	No	<p>The "adverse reliability impact" definition is not clear, is this an actual event or contingency? The words imply it is an actual event, which is already covered in the "Directive" definition. If the intent is to apply directives to potential stability or cascading contingencies it should say so.</p>
<p><b>Response:</b> The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The pending definition covers the application to potential instability and cascading conditions. The RCSDT included the phrase “to address” in the proposed definition of “Reliability Directive” to account for (1) potential and (2) actual events leading to an Emergency or Adverse Reliability Impact.” No change made.</p>		
BGE	No	<p>BGE would prefer that the definition of Reliability Directive include the requirement to identify the fact that a Reliability Directive is being issued. See the following proposed definition:</p> <p><i>Reliability Directive: A communication initiated and identified as a Reliability Directive, by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse</i></p>

Organization	Yes or No	Question 5 Comment
		<i>Reliability Impact.</i>
<p><b>Response:</b> The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made.</p> <p>“R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”</p>		
Duke Energy	No	<p>-Since FERC has not yet approved the new definition of Adverse Reliability Impact, we believe the term “Adverse Reliability Impact” should be replaced by the words of the BOT-approved definition: “the impact of an event that results in Bulk Electric System instability or Cascading.”</p> <p>The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The RCSDT thanks you for your comment; however, by inserting the text of the currently adopted version of the Adverse Reliability Impact definition would create a loss of continuity in the intent of the pending definition. No change made.</p> <p>-Also, add the phrase “and the communication is identified as a reliability directive to the recipient” to the end of the definition of Reliability Directive. This will eliminate potential confusion regarding when a communication is a Reliability Directive, and when a communication is a routine instruction. Revising the definition in this manner may also eliminate the need Requirement R1 of COM-002-3.</p> <p>If R1 is retained, we suggest rewording as follows:</p> <p><i>“Each Reliability Coordinator, Transmission Operator, or Balancing Authority shall identify a Reliability Directive to the recipient when it issues a Reliability Directive</i></p>

Organization	Yes or No	Question 5 Comment
		<p><i>that requires an action or actions to be executed.”</i></p> <p>The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made.</p> <p>“R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”</p> <p>-Proposed reworded definition:</p> <p><i>“Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency or the impact of an event that results in Bulk Electric System instability or Cascading, and the communication is identified as a Reliability Directive to the recipient.”</i></p> <p>The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made.</p> <p>“R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”</p>

Organization	Yes or No	Question 5 Comment
<p><b>Response:</b> See response above.</p>		
<p>ReliabilityFirst</p>	<p>No</p>	<p>ReliabilityFirst believes the definition of “Reliability Directive” should be all inclusive and include “all” actions initiated by the Reliability Coordinator, Transmission Operator or Balancing Authority (not just Emergency or Adverse Reliability Impacts). Even though Emergency or Adverse Reliability Impacts are defined, during operations, it may become a gray area to whether or not it falls under the intent of a “Reliability Directive.”</p> <p>The RCSDT appreciates your comment about including all actions initiated by the BA, RC and TOP; however, the RCSDT has determined that the development of the Reliability Directive concept improves reliability by placing a heightened awareness on actions that are required to avoid an Adverse Reliability Impact. Additionally, the industry does not support the proposed suggestion above based on previous postings and comments. No change made.</p> <p>Furthermore, if the system falls under a condition that results in an Adverse Reliability Impact, it may be too late for a Reliability Coordinator, Transmission Operator or Balancing Authority to issue a Reliability Directive. ReliabilityFirst recommends the following for revision to the term “Reliability Directive”:</p> <p><i>Reliability Directive - A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where an action by the recipient is required.</i></p> <p>The RCSDT has determined that the development of the Reliability Directive concept as currently drafted, improves reliability by placing a heightened awareness on actions that are required to avoid an Adverse Reliability Impact. Additionally, the industry does not support the proposed suggestion above based on previous postings and comments. No change made.</p>
<p><b>Response:</b> See response above.</p>		

Organization	Yes or No	Question 5 Comment
Midwest Independent Transmission System Operator	No	<p>The proposed definition of Reliability Directive is unacceptable because the use of the defined terms “Emergency” and “Adverse Reliability Impact” results in an undefined, broadened scope of responsibility for Reliability Coordinators when coupled with the definition of the Bulk Electric System. This may lead to confusion/ambiguity for Reliability Coordinators that must be clarified to ensure compliance. Further, this broadened scope may mis-direct Reliability Coordinator’s attention and mitigation efforts to small-scale, localized issues that represent no true threat to the operation of the Interconnection.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment; however, the RCSDT believes the definition actually narrows the responsibility by framing the condition(s) within which it is appropriate for anticipated actions necessary to address an Emergency or Adverse Reliability Impact. The IRO standards require the Reliability Coordinator to respond to issues regardless of the scale of issues. No change made.</p>		
Texas Reliability Entity	No	<p>We oppose the definition of Reliability Directive as it is currently being proposed in this standard because three-part communication should not be required only <b>after</b> an Emergency or Adverse Reliability Impact actually occurs.</p> <p>In particular, we object to the removal of the word “expected” (or “anticipated”) from the definition, because Reliability Directives may be required before a situation escalates to an Emergency, in order to prevent the Emergency from occurring. This proposed change potentially undermines efforts required to avoid emergencies and events.</p> <p>We note that there are instances in other Reliability Standards where “anticipated” conditions require actions to be taken (e.g. TOP-001-1 R5 and EOP-002 R4), when clear, concise, and definitive communication, verbal or electronic, is required to avoid or mitigate an impending emergency.</p>
<p><b>Response:</b> The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The pending definition covers the</p>		

Organization	Yes or No	Question 5 Comment
<p>application to potential instability and cascading conditions. The RCSDT included the phrase “to address” in the proposed definition of “Reliability Directive” to account for (1) potential and (2) actual events leading to an Emergency or Adverse Reliability Impact.” No change made.</p>		
<p>New York Independent System Operator</p>	<p>No</p>	<p>It is not clear the distinction between an Emergency and ARI. We would like to confirm that Since ARI is the impact of an event that results in instability or cascading, that an ARI is a subset of an emergency?</p> <p>Or said differently is an ARI simply instability or cascading? Ultimately, if ARI is a subset of Emergency, then why do we need both in the requirement?</p>
<p><b>Response:</b> The RCSDT thanks you for your comment; however, the RCSDT believes the definition captures two independent conditions, anticipated and after or post event. The definition of Emergency implies situations where the event is anticipated or currently happening. Additionally, the term “Adverse Reliability Impact” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The pending definition covers the application to potential instability and cascading conditions. The RCSDT included the phrase “to address” in the proposed definition of “Reliability Directive” to account for (1) potential impacts of events and (2) actual events leading to an Emergency or Adverse Reliability Impact.” No change made.</p>		
<p>Oncor Electric Delivery</p>	<p>Affirmative</p>	<p>"Oncor requests clarity about what constitutes a “recipient.”</p> <p>For example, if a Transmission Grid Operator performing the functions of a Transmission Operator issues a Reliability Directive to its own field operations personnel to perform an action on behalf of the same entity, does the field operations personnel as the recipient become in affect a “Transmission Operator” subject to R2?"</p>
<p><b>Response:</b> The term “recipient” in this case is referring to entity-to-entity communication and is inferred by Requirement R2 naming the entities. No change made.</p>		
<p>Constellation Energy</p>	<p>Affirmative</p>	<p>As we commented on Project 2007-03 TOP-001-2, the definition of Reliability</p>

Organization	Yes or No	Question 5 Comment
Commodities Group		<p>Directive is an improvement but the definition must capture the identification concept that is reflected in the Requirement (R1).</p> <p>As a result, when Reliability Directive is used elsewhere, it would be clear that the communication must be identified as a Reliability Directive.</p> <p>We suggest the following revision to the definition and it should follow through to Project 2006-06 IRO-001-3 and Project 2007-03 TOP-001-2, eventually being added to the Reliability Standards Glossary of Terms.</p> <p><i>“A communication identified as a Reliability Directive by a Reliability Coordinator, Transmission Operator, or Balancing Authority to initiate action by the recipient to address an Emergency or Adverse Reliability Impact.”</i></p>
<p><b>Response:</b> The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). The definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made.</p> <p>“R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”</p>		
National Grid	Affirmative	<p>Delete reference to "adverse reliability impact" in R1. The "adverse reliability impact" definition is not clear, is this an actual event or contingency?</p> <p>The words imply it is an actual event which is already covered in the "Directive" definition. If the intent is to apply directives to potential stability or cascading contingencies it should say so.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment; however, the RCSDT believes the definition captures two independent conditions, anticipated and after or post event. The definition of Emergency implies situations where the event is anticipated or currently happening. Additionally, the term “Adverse Reliability Impact” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-</p>		



Organization	Yes or No	Question 5 Comment
<p>014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The pending definition covers the application to potential instability and cascading conditions. The RCSDT included the phrase “to address” in the proposed definition of “Reliability Directive” to account for (1) potential and (2) actual events leading to an Emergency or Adverse Reliability Impact.” No change made.</p>		
Wisconsin Public Service Corp.	Affirmative	<p>The Standards Drafting Team has provided a great deal of clarity regarding Reliability Directives, however we believe BES reliability would be further enhanced if Reliability Directives were still required to be issued in a clear, concise, and definitive manner. Under Emergency conditions, we feel this would enhance communications effectiveness and expedite parties taking necessary actions quickly.</p>
<p><b>Response:</b> The RCSDT believes the current form of the requirements accomplish this objective. If the issuer is not clear, concise and definitive, it would lead to the issuer having to repeat the process. It is incumbent and beneficial to the issuer to meet this performance without a specific requirement to instruct. Additionally, measuring clear, concise and definitive manner poses significant issues. No change made.</p>		
We Energies	Yes	<p>The definition is acceptable, but as used may imply that all Emergency communications must be Reliability Directives.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment; however, definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made.</p>		
Ingleside Cogeneration LP	Yes	<p>Ingleside Cogeneration agrees that it is important to clearly denote when a directive must be issued. In previous definitions, we believed that imprecise language made it difficult for the BA, RC, or TOP to determine if a gray area situation required a directive or not. With a more precise definition, it will eliminate second guessing by auditors that a directive was necessary because an outcome turned out poorly - even if an Emergency was not declared or an Adverse Reliability Impact did not occur.</p>
<p><b>Response:</b> Thank you for your comment.</p>		

Organization	Yes or No	Question 5 Comment
ERCOT ISO	Yes	The definition of Reliability Directive appropriately clarifies the importance of knowing the level of importance of any instructions being issued. If there is no room for variance from the specific action required, or if there is no time to further negotiate or discuss the action required, it is important that the instruction be identified as a Reliability Directive and for such instructions to be followed in a timely fashion. Normal operating instructions typically do not rise to this level of urgency and some variation from the words will not result in unmanageable reliability impacts. Also, there typically may be time for addressing the instructions in more than one way.
<b>Response:</b> Thank you for your comment.		
NIPSCO		The question of whether one is in a state of Emergency or Instability, or in an Abnormal Condition can be still be subjective; it may be difficult to provide evidence for an audit.
<b>Response:</b> The responsible entity determines “state of Emergency or instability” and acts accordingly. No change made.		
Pacific Northwest Generating Cooperative	Yes	
MRO NSRF	Yes	
City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Yes	
LG&E and KU Services Company	Yes	
Bonneville Power	Yes	

Organization	Yes or No	Question 5 Comment
Administration		
SPP Standards Review Group	Yes	
Dominion	Yes	
Western Electricity Coordinating Council	Yes	
Southwest Power Pool Regional Entity	Yes	
FirstEnergy	Yes	
MISO Standards Collaborators	Yes	
Florida Municipal Power Agency	Yes	
Global Engineering and Energy Solutions	Yes	
ACES Power Marketing Standards Collaborators	Yes	
Kansas City Power & Light	Yes	
Salt River Project	Yes	
San Diego Gas & Electric	Yes	

Organization	Yes or No	Question 5 Comment
Central Lincoln	Yes	
Shell Energy North America	Yes	
Xcel Energy	Yes	
Independent Electricity System Operator	Yes	
Liberty Electric Power LLC	Yes	
Oncor Electric Delivery Company LLC	Yes	
Consolidated Edison Co. of NY, Inc.	Yes	
City of Jacksonville Beach dba/ Beaches Energy Services	Yes	
Luminant Energy Company LLC	Yes	
Pepco Holdings Inc.	Yes	
Exelon	Yes	
Manitoba Hydro	Yes	
Orange and Rockland Utilities, Inc.	Yes	

Organization	Yes or No	Question 5 Comment
South Carolina Electric and Gas	Yes	
Georgia Transmission Corporation	Yes	
Nebraska Public Power District	Yes	
Georgia System Operations	Yes	
ISO New England	Yes	
City of Vero Beach	Yes	
NV Energy	Yes	
Hydro One Networks Inc.	Yes	
American Transmission Company, LLC	Yes	
Indiana Municipal Power Agency		No comment.

## 6. Do you have any other comment, not expressed in questions above, for the RC SDT?

**Summary Consideration:** This question yielded the most comments overall and many are duplicative of previous comments. For those duplicative comments, the RCSDT respectfully directs summary consideration of those comments to the above questions. Several commenters noted these standards are not “results-based” and this is mainly due to the project’s ongoing work. The standard(s), in a way, appear more results-based by not being prescriptive; however, the specific standards do not implement the results-based formatting. There were many comments about aligning the three standards to have the same implementation plan. The RCSDT agrees and aligned all three with the same implementation. Some comments questioned the need to have an authority requirement for the Reliability Coordinator in IRO-001-3, R1 because it appears to be granted under the ERO registration criteria. The ERO criteria does not provide for this authority. Additionally, IRO-001-3 does not limit the Reliability Coordinator’s authority to issuing only Reliability Directives. The Reliability Coordinator has the authority to direct, which could include Reliability Directives (a subset of direction or directing) is the theme carried out in each requirement. Some comments asked about direct, direction, and when an Emergency or Adverse Reliability Impact would be identified. The terms “direct” and “direction” are consistent with the intent of the standard in its authority and “identify” is upon recognition, which is a condition when the Reliability Coordinator would be acting or directing others to act. The requirements do not preclude the Reliability Coordinator from taking action for other situations, even if it is aware of situations beyond its area. A few comments concerned adding a time element to the requirements, such as, preventing events in Real-time; however, the assigned Time Horizons provide for this under Real-time Operations and Same Day Operations.

Comments noted a difference in “shall have” and “shall designate” within the requirements of COM-001-2. The intent of allowing an entity to “designate” allows the entity to designate the Alternative Interpersonal Communication capability providing greater flexibility in meeting the requirement. Additionally, there were comments about testing the Interpersonal Communication capability in addition to the Alternative Interpersonal Communication capability. The RCSDT intentionally omitted testing the Interpersonal Communication capability because routine use is sufficient to demonstrate functionality. The standard COM-001-2 measures have been updated to appropriately reflect the specific requirements and make the evidence examples clearer. There were several concerns about the designating a replacement Alternative Interpersonal Communication capability within two hours. The RCSDT notes the performance is to designate a replacement, not to accomplish the repairs. The reliability need is to designate what the Alternative Interpersonal Communication capability will be, should it be called upon. Commenters raised concerns about most of the VSLs in COM-001-2 being Severe. These VSLs are Severe because there are essential to reliability. By the construction of the requirement, VSLs are binary, which requires the VSLs to be Severe according to NERC VSL Guidelines. Some comments questioned the removal of requirement, R4. This requirement remains enforce until the approval of COM-003-1 under Project 2007-02.

Several commenters noted that COM-002-3 seems to be requiring the “how” to accomplish the communication coordination. The RCSDT emphasizes the requirements state the “what,” rather than “how.” In a basic sense, the “what” is highlighted by R1 by

identifying the communication as a Reliability Directive, next in R2 the recipient responds accordingly, and R3 the issuer confirms the communication. How the process is accomplished is up to the entity.

Some commenters were concerned about the measures and evidence. The measures are examples, and the entity is not limited to the examples provided; including letters of attestation, where appropriate. The RCSDT addressed other document errors, formatting issues, referencing, and mismatch issues raised in the comments. The Effective Date, Compliance, and Data Retention sections have been updated to the most current language used in standards through the standard review process.

Organization	Yes or No	Question 6 Comment
Alberta Electric System Operator	Abstain	IRO-001-3: The Alberta version of IRO-001 will outline limitations to the authority of the RC, that are required by Alberta legislation.
<p><b>Response:</b> The standard drafting team (SDT) has drafted requirements to address the purpose of the standard, repeated here: To establish the authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System. The requirements have been drafted within the context established by the NERC Functional Model V5, and describes interrelationships of the functional entities in accordance with the Functional Model V5. Please address any variations from this structure, which may be required by Alberta legislation, with NERC as the ERO. No change made.</p>		
City Utilities of Springfield, Missouri	Affirmative	City Utilities of Springfield, Missouri supports comments submitted by SPP.
<p><b>Response:</b> Thank you for your comment.</p>		
United Illuminating Co.	Affirmative	COM-001-2: UI votes Affirmative with the comment that R1 through R9 are requirements in the Planning Horizon not the Real Time Operations horizon. These requirements are scoped to the establishment of communication processes with other entities not with actions taken by operations.
<p><b>Response:</b> The RCSDT recognizes that, in most instances, the establishment of communications capability and the designation of Alternative Interpersonal Communications capability will have taken place at some time in the past (which could be the operations planning horizon for the present Real-time instance). However, the full reason for such action is to be sure that the communications capability is in place and functional during the Real-time Operations horizon for use in Real-time operating actions. Therefore, the</p>		

Organization	Yes or No	Question 6 Comment
<p>RCSDT has established the applicable time horizon to be the Real-Time Operations horizon. No change made.</p>		
<p>SERC Reliability Corporation</p>	<p>Affirmative</p>	<p>COM-002-3 Comments</p> <p>R2: We recommend that the following phrase (in quotes) be added to R2: Each Balancing Authority, Transmission Operator and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive "immediately upon receiving it."</p> <p>As written, there is no limit as to when the entity must repeat it (i.e. they could wait 2 hours) The Standard is not clear as to what each entity is to do when more than one entity receives a Reliability Directive at the same time (e.g. during a RC area teleconference call).</p> <p>For example, is a roll call of receiving entities expected to be held so that they individually can repeat, restate, rephrase or recapitulate the Reliability Directive followed by individual confirmation required in R3?</p>
<p><b>Response:</b> The requirement aims at being a performance-based requirement, and states a description of “what” communication must take place, but does not prescribe “how” the communication is to be made. Adding the suggested phrase “immediately upon receiving it” introduces the ambiguous term “immediately,” for which there is neither plain meaning nor simple explanation. What must happen is that the recipient must respond in such a way that the issuer may determine whether the message has been properly understood. The RCSDT concludes that the proposed language gives plain meaning. No change made.</p> <p>The question about whether a roll call of receiving entities is expected to be held is asking for prescription of “how” to accomplish what is required. The RCSDT recognizes that there is more than one way to accomplish the confirmation when more than one entity received a Reliability Directive at the same time. What is required is for the recipient to respond in such a way that the issuer may determine whether the message has been properly understood. One way for that to occur would be, as you suggest, for the entities to individually respond. Another way would be for a pre-established protocol or procedure (e.g., roll-call, all-call, etc.) to be in place and used in such cases. The RCSDT has determined that prescribing “how” to ensure that “what” is required has been accomplished is not required and that the individually adopted procedures or protocols could offer many different ways to ensure effectiveness. No change made. The RCSDT concept is that “All Call” compliance is related to having a document that explains how the entity responds. No change made.</p>		



Organization	Yes or No	Question 6 Comment
Alliant Energy Corp. Services, Inc.	Affirmative	COM-002-3: Alliant Energy recommends that the Effective Date be the first day of the second calendar quarter after applicable regulatory approval, to be the same as COM-001-2 and IRO-001-3. In that way all 3 standards would be effective at the same time, making implementation much smoother.
<p><b>Response:</b> Thank you for your comment. The RCSDT will adjust the standards to have the same implementation date.</p>		
Wisconsin Electric Power Co.	Affirmative	<p>COM-002-3: Since all the Requirements are related to Reliability Directives, is it implied that all “Emergency Communications” are Reliability Directives even if not designated as such per R1?</p> <p>-The M2 measure could be difficult for a recipient such as a Distribution Provider or Generator Operator. A recipient’s phone may not be recorded but an initiator’s always should. If a receiver refused to meet the R2 requirement, an initiator should have an alternative (i.e., repeat the directive and provide potential penalties if recipient refuses to comply).</p> <p>Should the initiator have responsibility for providing the entire 3-way evidence as M3 implies?</p>
<p><b>Response:</b> The RCSDT would like to highlight that communications is not a defined term in the NERC Glossary of Terms used in Reliability Standards, nor is it defined in this standard. Thus, the plain meaning of communications is intended. The RCSDT has not implied a defined term in the wording of the purpose statement of the standard, nor in the requirements themselves, that any communication is a Reliability Directive unless the issuing functional entity identifies the actions to be taken as a Reliability Directive. Therefore, not all communications during Emergencies will be Reliability Directives. No change made.</p> <p>COM-002, R2: The RCSDT included some examples of how to provide the evidence needed for Measure M2. The examples are not intended to be an all-inclusive list. The RCSDT does point out, though, that dated operator logs could provide such evidence. The RCSDT does not believe that the recipient has the alternative to refuse to perform, as required. However, the RCSDT does bring attention to standard IRO-001-3, which requires entities to comply with directions unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements. No change made.</p>		

Organization	Yes or No	Question 6 Comment
<p>COM-002 M3: The Measure is correct as written. The issuer only needs the evidence that it confirmed the response was accurate or reissued according to the requirement. Evidence does not necessarily mean the entity must have the entire three-way conversation captured (i.e., recording), but evidence the entity confirmed or reissued according to requirement. No change made.</p>		
<p>Wisconsin Electric Power Marketing</p>	<p>Affirmative</p>	<p>COM-002-3: Since all the Requirements are related to Reliability Directives, is it implied that all “Emergency Communications” are Reliability Directives even if not designated as such per R1.</p> <p>The M2 measure could be difficult for a recipient such as a Distribution Provider or Generator Operator. A recipient’s phone may not be recorded but an initiator’s always should. If a receiver refused to meet the R2 requirement, an initiator should have an alternative. i.e., repeat the directive and provide potential penalties if recipient refuses to comply. Should the initiator have responsibility for providing the entire 3-way evidence as M3 implies?</p>
<p><b>Response:</b> The RCSDT would like to highlight that communications is not a defined term in the Glossary of Terms used in NERC Reliability Standards, nor is it defined in this standard. Thus, the plain meaning of communications is intended. The RCSDT has not implied in the wording of the purpose statement of the standard, nor in the Requirements statements themselves, that any communication is a Reliability Directive unless the issuing functional entity identifies the actions to be taken as a Reliability Directive. No change made.</p> <p>COM-002, R2: The RCSDT included some examples of how to provide the evidence needed for measure M2. The examples are not intended to be an all-inclusive list. The RCSDT does point out, though, that dated operator logs could provide the evidence. The RCSDT does not believe that the recipient has the alternative to refuse to perform as required. No change made.</p> <p>COM-002 M3: The Measure is correct as written. The issuer only needs the evidence that it confirmed the response was accurate or reissued according to the requirement. Evidence does not necessarily mean the entity must have the entire three-way conversation captured (i.e., recording), but evidence the entity confirmed or reissued according to requirement. No change made.</p>		
<p>Southwest Transmission Cooperative, Inc.</p>	<p>Affirmative</p>	<p>COM-002-3: While COM-002-3 is well written to explain the three-part communications requirements and makes it perfectly clear when a Reliability Directive has been issued, the opening clause leaves the responsible entity open to second guessing on whether they should have issued a Reliability Directive. This</p>

Organization	Yes or No	Question 6 Comment
		<p>problem could be solved by changing the opening clause to “When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.”</p> <p>In the second bullet of Requirement R3, we suggest using “Restate” in place of “Reissue.” The responsible entity is not really reissuing the Reliability Directive. They are still in the act of trying to get the Reliability Directive issued and are simply re-communicating it because it was not understood.</p>
<p><b>Response:</b> The RCSDT believes the offered suggestion does not improve COM-002-3, R1. No change made.</p> <p>COM-002-3, R3: The communications described are not intended to be a once-through process. Effective communications, sometimes referred to as three-part or three-way, often may be effective only after numerous iterations. The RCSDT believes the likely first effort to clarify would be to re-issue the instructions just to determine whether the recipient simply “heard wrong.” Using the word re-state seems to imply that the wording is incorrect in some way or for some other reason needs to be said a different way. The RCSDT believes it is more likely that the issuer is attempting to bet the recipient to understand and therefore believes that reissue is more appropriate. No change made.</p>		
Public Utility District No. 1 of Okanogan County	Affirmative	IRO-001-3: Need to correct language in Data Retention section 1.3. references R3 R4 and M3 and M4. There is no R4 and M4.
<p><b>Response:</b> The RCSDT agrees and thanks you for your comment. The language has been changed to eliminate R4 and M4 references.</p>		
Sierra Pacific Power Co.	Affirmative	<p>IRO-001-3: R1 appears to be unnecessary due to the authority that is already inherent through the functional model.<sup>8</sup></p> <p>Further, the measure for R1 does not properly cover the requirement that the RC "have authority"; rather, it measures whether the RC exercised that authority.</p>

<sup>8</sup> NERC Functional Model Version 5, ([http://www.nerc.com/files/Functional\\_Model\\_V5\\_Final\\_2009Dec1.pdf](http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf))

Organization	Yes or No	Question 6 Comment
<p><b>Response:</b> The RCSDT agrees that the standard requirements language is consistent with the authority that is inherent in the Functional Model V5. However, the Functional Model V5 does not constitute enforceable requirements for entities to follow. Such requirements are established within the Reliability Standards. The Functional Model V5 provides good guidance for a consistent structure throughout the Reliability Standards. In addition, the Reliability Coordinator’s reliability certification is established through Regional Entities and the authority to act is measured. No change made.</p>		
<p>Platte River Power Authority; Portland General Electric Co.; U.S. Army Corps of Engineers</p>	<p>Affirmative</p>	<p>IRO-001-3: Requirement R1 of IRO-001-3, requiring the Reliability Coordinator to have the authority to act or direct actions, appears to be unnecessary because it seems that this authority is granted when the entity is certified as the Reliability Coordinator.</p> <p>Additionally, the associated Measure M1, as worded, does not provide evidence that the Reliability Coordinator has the authority to act or direct other to act, but rather provides evidence that the Reliability Coordinator acted or took action to direct others.</p>
<p><b>Response:</b> IRO-001-3, R1: The RCSDT agrees that the requirement is consistent with intended functions of a Reliability Coordinator when the entity is recognized as a Reliability Coordinator. The RCSDT has been informed by the ERO that registration criteria do not provide for certification of this authority In addition, the Reliability Coordinator’s reliability certification is established through Regional Entities and the authority to act is measured. No change made.</p>		
<p>National Grid</p>	<p>Negative</p>	<p>- Requiring RCs, TOPs and BAs to state an action as a "reliability directive" complicates communications during a time when response time and clarity are important. If those issuing a directive don't get a repeat back they just need to ask for one. The requirement just needs to define "what" is required not "how." This can be handled by procedures and training.</p> <p>COM-002-3, R1: The requirement states “what” must be done: the action(s) are to be identified as a Reliability Directive. The requirement does not establish “how” the action is to be done. The RCSDT agrees that, under conditions such as you describe, time may be of the essence. Much as in military operations, discussion time is over and action is required when the recipient understands an order has been given.</p>

Organization	Yes or No	Question 6 Comment
		<p>Discussion of disagreement or alternatives may occur later, if and as needed, but no more time can be consumed discussing the directions given. The RCSDT has not prescribed “how” these things must be done, and the RCSDT recognizes there is more than one way. The RCSDT has determined it is appropriate to place the responsibility on the recipient to give a response. The RCSDT agrees that the issuer may ask for a response if one has not been given, but the responsible entity to perform the action is the recipient. The RCSDT agrees that procedures and training are good practices appropriate for this process, but the standard requirements establish what must be done, not how personnel are prepared to do it. No change made.</p> <p>- Delete reference to "adverse reliability impact" from the "Directive" definition. The "adverse reliability impact" definition is not clear, is this an actual event or contingency?</p> <p>The words imply it is an actual event which is already covered in the "Directive" definition. If the intent is to apply directives to potential stability or cascading contingencies it should say so.</p> <p>The RCSDT notes that the term, “Adverse Reliability Impact” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The pending definition covers the application to potential instability and cascading conditions. The RCSDT included the phrase “to address” in the proposed definition of “Reliability Directive” to account for (1) potential and (2) actual events leading to an Emergency or Adverse Reliability Impact.” No change made.</p>
<p><b>Response:</b> See response above.</p>		
SERC Reliability Corporation	Negative	COM-001-2 Comments Definition of Alternative Interpersonal Communication: The proposed definition uses the term "medium."

Organization	Yes or No	Question 6 Comment
		<p>What is the scope of that? Telephony is a "medium", but there is wired, wireless, satellite, etc.</p> <p>Was "medium", intended to differentiate voice, paper, text, email, teletype, or something else? Does the qualifying term "same", when modifying infrastructure mean something like voice versus written?</p> <p>What about situations where the primary telephone system is Voice Over Internet Protocol (VOIP) and it is using the same computer network infrastructure as an email or messaging system. That is the "same infrastructure" but a different "medium."</p> <p>The RCSDT believes that prescribing a device or medium would limit an entity. Please refer to the definition of Interpersonal Communication and Alternative Interpersonal Communication. Medium: the plain meaning of the word medium in noun form is a vehicle for ideas, a means of conveying ideas or information. The RCSDT recognizes there are many differing technologies for accomplishing communications and it is not necessary to prescribe which to use. A common medium is telephony, and the commenter is correct that there are different technological forms of telephony. What is required is that there be a medium in place so that Interpersonal Communication capability exists. No change made.</p> <p>R1 and R2 - We suggest the drafting team look at Standard EOP-008, Requirements R3 and R8 and add appropriate language in Standard COM-001-2, to avoid instantaneous non-compliance for loss of Interpersonal Communications and/or Alternate Interpersonal Communications.</p> <p>The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made.</p> <p>R1 - In later requirements it is proposed that the entity "shall designate an." It is</p>

Organization	Yes or No	Question 6 Comment
		<p>suggested that for consistency and audit ability, this concept be used for R1, R3, R5, R7 and R8.</p> <p>The RCSDT believes the requirements achieve the desired intent of the standard. Each entity listed must “have” an Interpersonal Communication capability and for Alternative Interpersonal Communication capability able to “designate” the alternate. The team established these requirements to provide flexibility to the industry. No change made.</p> <p>In addition, the qualifier of "primary" should be used such that the requirements read:</p> <p><i>"shall have designated, primary Interpersonal Communications capability with the following entities:"</i></p> <p>Although it is appropriate that "Alternative" be capitalized since it is used in a defined term (i.e. Alternative Interpersonal Communication) that bounds acceptable alternative methods , we do not see the need to capital "primary."</p> <p>The term “Interpersonal Communication” is a defined term in this standard. As such, it has a different meaning than “Alternative Interpersonal Communication,” thus there should be no confusing of the two. In addition, the word “primary” purposely does not exist in the requirements since the RCSDT did not intend to create a requirement for redundancy. Redundancy continues to be a good practice, but it is not required by this standard. Only that some entities must have both an Interpersonal Communication capability and a designated Alternative Interpersonal Communication capability. No change made.</p> <p>R9 - The requirement is unclear if the required monthly test is a general functionality test or if there is the expectation of testing the designated Alternative Interpersonal Communications with all of the entities defined in the sub-requirements of R2, R4, and R6. There is no expectation of testing the primary Interpersonal Communications - is this intentional or an oversight?</p> <p>Although functional testing of this should be done as a normal course of business,</p>

Organization	Yes or No	Question 6 Comment
		<p>should an explicit test be required with each entity in the sub-requirements of R1, R3, R5, R7 and R8 to insure, for example, that all the phone numbers are correct?</p> <p>The RCSDT intends each Alternative Interpersonal Communication capability to be verified functional by testing. If an entity has only one such capability, then only one test would be required. You further ask whether the absence of required testing of the “primary” (word is not in the requirement) Interpersonal Communication capability is intentional. The RCSDT intentionally left it out because the communications capability is used routinely and the use is sufficient to demonstrate functionality. With respect to phone numbers, these are procedural matters to be addressed by each individual entity and by including phone numbers it would make the requirement prescriptive. The requirement is to test capability. No change made.</p> <p>R10 - The following scenario seems plausible: The Interpersonal Communications fails and is detected at 14:00 and gets fixed at 14:35. It lasted more than 30 minutes but is fixed. As written the requirement would require the responsible entity to notify entities identified in R1 through R6 by 15:00 (i.e. 60 minutes from detection) even though the problem no longer exists. Is that the expectation?</p> <p>Does COM-001 apply only to primary control centers or back-ups, per EOP-008, as well?</p> <p>Yes, the entity experiencing the failure is required by R10 to notify the entities as identified within the 60-minute time frame. The RCSDT believes these situations would be few in numbers and not overly burdensome to perform. No change made.</p> <p>The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. No change made.</p> <p>M9 reads “at least on a monthly basis.” We suggest that this be changed to “at least once per calendar month” as written in R9. This change should also be corrected in the VSLs.</p>



Organization	Yes or No	Question 6 Comment
		<p>The RCSDT agrees and has changed the language in COM-001-2, M9 to agree with the language in R9.</p> <p>M8 - We suggest removing the second “that” in the first sentence of the measure.</p> <p>COM-001-2, M8: The RCSDT agrees and the language in M8 has been changed to delete the additional “that”.</p> <p>M10 - We suggest this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6), therefore M10 should read:</p> <p><i>“Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.)”</i></p> <p>The RCSDT agrees and has changed the language in COM-001-2, M10 to include language consistent with the language in R10.</p> <p>M12 needs to be removed.</p> <p>COM-001-2, M12: The RCSDT agrees that the heading “M12” has no corresponding requirement and was overlooked in format clean-up. The “M12” heading has been removed.</p> <p>We question why the first paragraph of Section 1.3” Data Retention has been included in each of these three standards. We suggest that it should be removed from each standard.</p> <p>The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.</p>

Organization	Yes or No	Question 6 Comment
<p><b>Response:</b> See response above.</p>		
<p>Independent Electricity System Operator</p>	<p>Negative</p>	<p>COM-001-2:</p> <p>1. R1.2 and R2.2: The phrase “within the same Interconnection” is improper; it needs to be removed. RCs between two Interconnections still need to communicate with each other for reliability coordination (e.g. between Quebec and the other RCs in the NPCC region to curtail interchange transactions crossing Interconnection boundary). The SDT’s response that the phrase was added to address the ERCOT situation and citing that ERCOT does not need to communicate with other RCs leaves a reliability gap.</p> <p>Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinator’s from one interconnection to another. No change made.</p> <p>2. R3.5 and R4.3: The phrase “synchronously connected within the same Interconnection” is also improper; it needs to be removed. TOPs do communicate with other TOPs including those asynchronously connected and in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors).</p> <p>The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and have eliminated the phrase “within the same interconnection.”</p> <p>3. R4 and R6: not requiring an Alternative Interpersonal Communication capability between the BAs and the DP and GOP can result in a reliability gap. If Interpersonal Communication capability between the BAs and these entities is required to begin with to enable BAs to communicate with these entities (such as operating</p>

Organization	Yes or No	Question 6 Comment
		<p>instructions or Reliability Directives) to ensure reliable operations, then an alternative capability is also needed to ensure this objective is achieved when the primary capability fails.</p> <p>The RCSDT refers the Order No. 693 in Paragraph 508 to clarify the reason the DP and GOP are not required to have Alternative Interpersonal Communication and is as follows: “(1) expands the applicability to include Generator Operators and Distribution Providers and includes Requirements for their telecommunications facilities; (2) identifies specific requirements for telecommunications facilities for use in normal and emergency conditions that reflect the roles of the applicable entities and their impact on Reliable Operation and (3) includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions.” In addition, R11 requires the DP and GOP to consult with its BA and TOP to determine a mutually agreeable action for restoration. No change made.</p> <p>4. Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised.</p> <p>The RCSDT thanks you for your comment and has made conforming changes to make to COM-001-2, M3.</p>
<p><b>Response:</b> See response above.</p>		
<p>Wisconsin Electric Power Marketing; Wisconsin Electric Power Co.</p>	<p>Negative</p>	<p>COM-001-2: Although a great improvement over existing COM-001, and eliminates the data component see comments:</p> <ul style="list-style-type: none"> <li>-For R5.1 Can the solutions included to meet R1 be included, same R3.2 and R5.2, same R5.3 and R7.2, same R5.4 and R8.1.</li> <li>-For R5.2 Can the solutions included to meet R2 be included, same R4.2 and R6.2.</li> </ul> <p>COM-001-2, R5: In a word: Yes. The requirement is to have capability, and that capability does not have to be different from what the entity on the other end has. No change made.</p>

Organization	Yes or No	Question 6 Comment
		<p>-R9 a 2 hour response for a once a month test seems extreme, as would require a secondary Alternate Interpersonal Communications capability.</p> <p>-M9 is reasonable, but should include something about communication actual repair and or time estimates.</p> <p>COM-001-2, R9: The requirement is to “initiate action to repair or designate a replacement Alternative Interpersonal Communication capability...” within two hours. The RCSDT recognizes that many different contracts or other arrangements may exist to address repair. However, the RCSDT finds that entities should know what they have and how to initiate repair and those two hours to do so is reasonable. No change made.</p> <p>COM-001-2, M9: The requirement is to have evidence that either repair was initiated or an Alternative Interpersonal Communication capability was designated within two hours. The RCSDT understands that, in extreme cases, the entity may need to make its initial Alternative Interpersonal Communication capability its Interpersonal Communication capability and then designate another Alternative Interpersonal Communication capability, if the repair times are so long that to continue in that mode for that long would present a reliability risk. Such arrangements, if they exist at all, are very rare. No change made.</p> <p>-R10 The use of R1 through R6 implies notification of both Interpersonal Communications and Alternate Interpersonal Communications failures. Do you notify if you become aware after the link is back up if it was down for GT 30 minutes, and doesn’t address notifying when restored?</p> <p>COM-001-2, R10: The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements.</p> <p>Yes, there is no requirement to notify identified entities the Interpersonal Communication have been restored. No change made.</p>

Organization	Yes or No	Question 6 Comment
		<p>-R11 Implies that R8 and R9 are independent and redundant to R5.3, R5.4 and R3.3 and R3.4.</p> <p>Update M9 accordingly.</p> <p>COM-001-2, R11: The RCSDT believes you intended to refer to R7 and R8, rather than R8 and R9. The RCSDT does not believe that the language implies that the communications capability required by R7 and R8 are independent, but they may be. If the entity which is registered as a DP is also registered as a GOP, although unlikely, then the capability could be met by the same medium. Neither does the RCSDT believe that R11 implies that R7 and R8 are redundant to R3.3 and R3.4 or to R5.3 and R5.4. No change made.</p>
<p><b>Response:</b> See response above.</p>		
Tampa Electric Co.	Negative	<p>COM-001-2:</p> <p>By use of the term “any” in the phrase “a failure of any of its Interpersonal Communication” the standard will actually create a disincentive for redundant communications with DPs and GOPs due to compliance risk. It needs to be limited to primary Interpersonal Communications with its TOP and/or BA.</p>
<p><b>Response:</b> The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p>The term “Interpersonal Communication” is a defined term in this standard. As such, it has a different meaning than “Alternative Interpersonal Communication,” thus there should be no confusing of the two. In addition, the word “primary” purposely does not exist in the requirements since the RCSDT did not intend to create a requirement for redundancy. Redundancy continues to be a good practice, but it is not required by this standard. Only that some entities must have both an Interpersonal Communication capability and a designated Alternative Interpersonal Communication capability. No change made.</p>		
Cogentrix Energy, Inc.	Negative	<p>COM-001-2:</p>

Organization	Yes or No	Question 6 Comment
		<p>Definition of Alternative Interpersonal Communication: The proposed definition uses the term “medium.”</p> <p>What is the scope of that? Telephony is a “medium” but there is wired, wireless, satellite, etc. Was “medium” intended to differentiate voice, paper, text, email, teletype, or something else?</p> <p>Does the qualifying term “same” when modifying infrastructure mean something like voice versus written?</p> <p>What about situations where the primary telephone system is Voice Over Internet Protocol (VOIP) and it is using the same computer network infrastructure as an email or messaging system.</p> <p>That is the “same infrastructure” but a different “medium” R8 Revision:</p> <p>GOP cannot dictate to the BA or TOP what types of Interpersonal Communication will be used, but they can work with them to establish a common tool.</p> <p>COM-001-2, “Medium”: the plain meaning of the word medium in noun form is a vehicle for ideas, a means of conveying ideas or information. The RCSDT recognizes there are many differing technologies for accomplishing communications, and it is not necessary to prescribe which to use. A common medium is telephony, and the commenter is correct that there are different technological forms of telephony. What is required is that there be a medium in place so that Interpersonal Communication capability exists. Your comment poses compliance questions but does not suggest changes. No change made.</p> <p>COM-001-2, Definition of Alternative Interpersonal Communication: You ask whether the use of the word “same” as a modifier of infrastructure mean something like voice versus written? It could, but is not required to. The RCSDT intends the language to indicate that whatever causes the loss of the Interpersonal Communication capability should not be a common cause of failure of the Alternative Interpersonal Communication capability. Thus, one telephone number could serve as the Interpersonal Communication capability and another telephone</p>

Organization	Yes or No	Question 6 Comment
		<p>number could serve as the Alternative Interpersonal Communication capability, as long as whatever causes the failure of the Interpersonal Communication capability does not automatically cause the failure of the Alternative Interpersonal Communication capability. No change made.</p> <p>R8 Balloting:</p> <p>R8. Each Generator Operator shall have Interpersonal Communications capability with the following entities:</p> <p>R8.1 Balancing Authority</p> <p>R8.2 Transmission Operator</p> <p>R8 Suggestion:</p> <p><i>R8. Each Generator Operator shall coordinate with the BA and TOP to establish Interpersonal Communications capability as requested by the BA and TOP.</i></p> <p>The standard establishes requirement for communication capability appropriate to ensure reliability. There is no requirement for it to be different from the Interpersonal Communication capability that its Balancing Authority has with it, nor the Interpersonal Communication capability that its Transmission Operator has with it. Cooperation and coordination is always encouraged and is an excellent practice, but is not required by this standard. Thank you for your suggestion. No change made.</p>
<p><b>Response:</b> See response above.</p>		
Oncor Electric Delivery	Negative	<p>COM-001-2:</p> <p>Oncor takes the position that contacting all impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer as prescribed in R1 through R6 is not doable within the ERCOT interconnect for a Transmission Operator.</p>

Organization	Yes or No	Question 6 Comment
		<p>The standard establishes requirement for Interpersonal Communication capability between entities for reliability purposes. The RCSDT recognizes that there are many different organizational arrangements and structures within the North American continent. The standard establishes “what” is required, but does not prescribe “how” it must be done. No change made.</p> <p>Oncor takes the position that notification to the RC and BA only is sufficient and that those two entities have the operational functionality to contact within the prescribed time all affected Distribution Providers, Generator Operators, and other Transmission Operators.</p> <p>Oncor also takes the position adding the word “impacted” to R10 will clarify that notification needs to be made only to the entities that are affected by the failure of a communication path.</p> <p>This will also more align with the language in M10."</p> <p>Thank you for your suggestion. The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA.</p>
<p><b>Response:</b> See response above.</p>		
National Grid	Negative	<p>COM-001-2:</p> <p>Overly prescriptive, not results-based. R7 &amp; R8 are not necessary. Every entity at a minimum has a contact with a phone as their "Interpersonal Communications capability." Just need to require that every entity has a plan if they lose their primary communication channel ("Interpersonal Communications capability").</p>
<p><b>Response:</b> The standard establishes requirement for communication capability appropriate to ensure reliability. In addition, R7 and R8 are responsive to FERC Order No. 693. Entities may use the telephone cited in the example as their Interpersonal Communication</p>		



Organization	Yes or No	Question 6 Comment
<p>capability. Requirement R11 as modified addresses the loss of Interpersonal Communication capability. No change made.</p>		
<p>Lincoln Electric System</p>	<p>Negative</p>	<p>COM-001-2: Please clarify whether R10 is intended to address both Interpersonal and Alternative Interpersonal Communications or only Interpersonal Communication.</p> <p>Although R10 identifies only Interpersonal Communication within the requirement, the reference to Requirements R1-R6 appears to include Alternative Interpersonal Communication as well. LES is concerned that if an entity's Interpersonal Communication is fully functional but discovers a failure in its Alternative Interpersonal Communication, the entity would still be required to notify entities per R10.</p>
<p><b>Response:</b> The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than "R1 through R6," since the responsible entities are limited to the RC, the TOP, and the BA in these requirements.</p>		
<p>ISO New England, Inc.</p>	<p>Negative</p>	<p>COM-001-2: Please see comments submitted with the project... ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such "requirements" (i.e. capabilities) should be verified through an entity certification process.</p> <p>Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to have communications facilities (electronic or voice).</p>
<p><b>Response:</b> Although this is not a results-based standard, the RCSDT believes it is a significant improvement over the current COM-001 standard. The RCSDT will forward your comment to NERC staff for consideration.</p>		
<p>Commonwealth of Massachusetts Department of Public Utilities</p>	<p>Negative</p>	<p>COM-001-2: Primary concern here is with the phrase "within the same interconnection" which appears in R1.2 and R2.2. This removes any standard requirement for adjacent RCs that may not be in the same interconnection from communicating with each other. This constitutes a "gap" in reliability and is a</p>

Organization	Yes or No	Question 6 Comment
		concern.
<p><b>Response:</b> Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinator’s from one interconnection to another. No change made.</p>		
Detroit Edison Company	Negative	<p>COM-001-2:</p> <p>R9. I believe 2 hours is too short, suggest "within 24 hours."</p> <p>COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability, and then, if it decides to do so, designate another, if you may, “new” Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made.</p> <p>R11. "mutually agreeable time" creates issues. What if TO and BA have differing time frames?</p> <p>Which entity bears the violation if agreement cannot be reached?</p> <p>Alexander Eizans</p> <p>COM-001-2, R11, For, “mutually agreeable time,” the “what” is required is to consult and determine a mutually agreeable time and the “How” that is to be done is too prescriptive to be included within a standard because of the great number of possible scenarios, organizational arrangement, and sizes of entities involved. No change made.</p> <p>I am concerned with the evidence listed under the measures (see M6, M7 and M8).</p>

Organization	Yes or No	Question 6 Comment
		<p>Dated equipment specifications and installation documentation is to much. I know this is listed as "could include" but at one point could become "must include."</p> <p>Jeffrey DePriest</p> <p>COM-001-2, M6, M7, and M8, "could include" may some day become "must include": "What" is required is to provide evidence. A list, which could include but is not limited to various forms of evidence is presented for consideration, but the entity may, and is encouraged to do so when it is appropriate, provide other forms of equally appropriate evidence. No change made.</p> <p>R9 define "unsuccessful test."</p> <p>Is it a mechanical failure of equipment or failure of one or more entities to respond to the test?</p> <p>If mechanical failure, does the 2 hour window to initiate repairs mean notification to proper business unit or do repairs have to actually begin (crew investigating). If crews need to be on site 2 hours is too limiting.</p> <p>COM-001-2, R9, define "unsuccessful test": The RCSDT notes that your words are a paraphrase of the actual standard requirement language. In its simple form, a test is unsuccessful when the capability fails to perform as expected. The entity may have an elaborate contract in place with very specific technical specifications within which the capability is to perform. The test may be unsuccessful if it does not meet those technical specifications, although the intent of the standard is for the entities to be able to communicate, usually verbally, with one another so as to operate reliably. The standard does not prescribe the performance expectations for the capability apart from the expectation that communication capability is to exist. The RCSDT recognizes that there may be many variations of service, maintenance, and repair agreement implemented for these communication capabilities. Whatever the agreement provides for initiation of the response and repair is what is required. This standard cannot prescribe all the possible combinations or scenarios. No change made.</p>

Organization	Yes or No	Question 6 Comment
		<p>- R11. Mutual Agreeable time is vague.</p> <p>Barbara Holland</p> <p>COM-001-2, R11, “mutual agreeable time” is too vague: “What” is required is to consult and determine a mutually agreeable time. “How” that is to be done is too prescriptive to be included within a standard because of the great number of possible scenarios, organizational arrangement, and sizes of entities involved. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>Madison Gas and Electric Co.</p>	<p>Negative</p>	<p>COM-001-2:</p> <p>The definition of Interpersonal Communication is: “Any medium that allows two or more individuals to interact, consult, or exchange information.” Recommend that the word "any" be removed from Interpersonal Communication and recommend the new definition be "The primary (or designated) medium that allows two or more individuals to interact, consult, or exchange information."</p> <p>The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p>The term “Interpersonal Communication” is a defined term in this standard. As such, it has a different meaning than “Alternative Interpersonal Communication,” thus there should be no confusing of the two. In addition, the word “primary” purposely does not exist in the requirements since the RCSDT did not intend to create a requirement for redundancy. Redundancy continues to be a good practice, but it is not required by this standard. Only that some entities must have both an Interpersonal Communication capability and a designated Alternative Interpersonal Communication capability. No change made.</p>

Organization	Yes or No	Question 6 Comment
		<p>R11, Please note that the use of the word “any” as in “Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities...” will be viewed as meaning every Interpersonal Communication medium that an Entity has or uses.</p> <p>The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p>Recommend R11 be updated to read:</p> <p><i>“Each Distribution Provider and Generator Operator that experiences a failure of any of its primary (or defined) Interpersonal Communication capabilities with its Transmission Operator or Balancing Authority...”</i></p> <p>In that way it focuses it down to the communications issues with the TOP or BA.</p> <p>In lieu of “primary” the SDT could state “defined” as long as it is not meant to be “any.” The latter part of R11 states; “...shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.” This ambiguous statement does not support reliability. Consulting with a TOP or BA does not solve the problem of the lack of Interpersonal Communication capabilities. Recommend this to be “...shall consult with inform their Transmission Operator or Balancing Authority as applicable as to determine a mutually agreeable time to restore the status of the Interpersonal Communication capability.”</p> <p>Thus R11 is recommended to read as:</p> <p><i>“Each Distribution Provider and Generator Operator that experiences a failure of its primary (or designated) Interpersonal Communication with their Transmission Operator or Balancing Authority shall inform them, as applicable, as to the status of the Interpersonal Communication capability.”</i></p>

Organization	Yes or No	Question 6 Comment
		<p>This allows for situational awareness and supports the reliability of each system. Additionally, the RCSDT notes that the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>New York Independent System Operator</p>	<p>Negative</p>	<p>COM-001-2: The drafting team has complicated the requirements by having different requirements between RC/TOP/BA and other entities such as GOP/LSE/DP. The proposal is for redundancy to be required only between RC/TOP/BA. The requirement should be simplified to require all entities to have plans for loss of primary communication channels. This can include third parties as a communication channel.</p>
<p><b>Response:</b> The term “Interpersonal Communication” is a defined term in this standard. As such, it has a different meaning than “Alternative Interpersonal Communication,” thus there should be no confusing of the two. In addition, the word “primary” purposely does not exist in the requirements since the RCSDT did not intend to create a requirement for redundancy. Redundancy continues to be a good practice, but it is not required by this standard. Only that some entities must have both an Interpersonal Communication capability and a designated Alternative Interpersonal Communication capability. The DP and GOP are not required to have Alternative Interpersonal Communication; however, R11 addresses the loss of communication capability (plan). No change made.</p>		
<p>Public Utility District No. 1 of Lewis County</p>	<p>Negative</p>	<p>COM-001-2: This standard should be combined with COM-002.</p>
<p><b>Response:</b> The standard COM-001-2 is capability based (equipment) and COM-002-3 is communication and coordination based. Each fulfills independent concepts. No change made.</p>		
<p>Southwest Transmission</p>	<p>Negative</p>	<p>COM-001-2:</p>

Organization	Yes or No	Question 6 Comment
Cooperative, Inc.		<p>We believe that the VSLs could be written to provide more gradations. For example, if a Transmission Operator or Balancing Authority failed to have Interpersonal Communications capability with a Distribution Provider but had Interpersonal Communications capability with all other required entities, it has met the vast majority of the requirement. Since VSLs are a measure of how much the requirement was missed by the responsible entity, jumping to a Severe VSL does not seem to adequately capture that the responsible entity met the vast majority of the requirement. Requirements R4 and R6 even seem to recognize this by not including Distribution Provider in the list of entities to which the Transmission Operator or Balancing Authority are required to designate Alternate Interpersonal Communications capability.</p>
<p><b>Response:</b> The RCSDT has applied the VSL to the Severe column because not having Interpersonal Communication capability with any entity is detrimental to reliability. No change made.</p>		
Tennessee Valley Authority	Negative	<p>COM-001-2: We suggest the drafting team look at Standard EOP-008, Requirements R3 and R8 and add appropriate language in Standard COM-001-2, to avoid instantaneous non-compliance for loss of Interpersonal Communications and/or Alternate Interpersonal Communications (R1 and R2).</p>
<p><b>Response:</b> The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. No change made.</p> <p>This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made.</p>		
Southwest Transmission Cooperative, Inc.	Negative	<p>COM-001-2: We thank the drafting team for its efforts but believe there are still issues that need to be addressed. We thank the drafting team for clarifying that the intent of this</p>

Organization	Yes or No	Question 6 Comment
		<p>standard is not for data exchange in the response to comments.</p> <p>However, we do believe one additional change is necessary to make the intent absolutely clear. The purpose of statement of COM-001-2 still includes the phrase “to exchange Interconnection and operating information.” Since a standard must stand on its own, we believe it is necessary to remove that phrase from the purpose statement to avoid misinterpretations in the future. Auditors and enforcement personnel are not required to understand the development history when enforcing the standard. Furthermore, the purpose is really to enable communications between these functional entities.</p> <p>The SDT agrees and has made a conforming change to the purpose of COM-001.</p> <p>Requirement R11 does not fully address the issue of what is required by Distribution Providers and Generator Operators and introduces new issues.</p> <p>For, “mutually agreeable,” the “what” is required is to consult and determine a mutually agreeable time and the “how” that is to be done is too prescriptive to be included within a standard because of the great number of possible scenarios, organizational arrangement, and sizes of entities involved. No change made.</p> <p>First, while the standard is intended to clarify that the Distribution Provider and Generator Operator do not need backup communications capability, it simply does not. Distribution Providers and Generator Operators are required to have an Interpersonal Communications capability in Requirement R7 and R8 respectively. Unfortunately, the effectiveness of these requirements persists even when the Distribution Provider or Generator Operator experiences a failure of its Interpersonal Communications capability. When Requirement R11 applies, the Distribution Provider or Generator Operator will still be obligated to comply with Requirements R7 and R8 respectively and will, in fact, be in violation of these requirements because the Distribution Provider or Generator Operator no longer has the capability.</p> <p>The RCSDT thanks you for your comment. Requirements R7 and R8 have been revised to account for the failure of Interpersonal Communication capability. The</p>



Organization	Yes or No	Question 6 Comment
		<p>intent of R11 is to require the responsible entity to take action upon the failure of its Interpersonal Communication.</p> <p>Second, capability is used inconsistently between Requirement R7 and R11 which leads to confusion. In Requirement R7, it is singular while in Requirement R11 is plural. It needs to be clear that only the failure of the capability identified in R7 and R8 needs to be reported by the Distribution Provider and Generator Operator respectively.</p> <p>The RCSDT thanks you for your observation. Generally, the singular implies the plural or vice-versa. The RCSDT has corrected R10 and R11 to be consistent with the singular application.</p> <p>Third, if the requirements focused on communications devices rather than capabilities, they would come closer to communicating the intent. Requirement R11 would better complement Requirement R7 and R8 if the focus was on having a communication medium or device. A Generator Operator with an installed communications device or medium still has that device or medium even when it is not functioning properly and could still meet Requirements R7 and R8. However, they don't have the Interpersonal Communications capability if the device is not functioning properly.</p> <p>The RCSDT thanks you for your comment. Requirements R7 and R8 have been revised to account for the failure of Interpersonal Communication capability. The intent of R11 is to require the responsible entity to take action upon the failure of its Interpersonal Communication.</p> <p>We recommend striking "capability" from all of the requirements. It is not clear to us how this helps when a definition for Interpersonal Communications is written already and applies to a communication medium. Furthermore, we think it causes confusion and actually contradicts the intent of the standard. Because Requirements R1, R3, R5, R7 and R8 focus on capability, the responsible entity will be in violation anytime its medium that it uses for the primary capability does not function</p>

Organization	Yes or No	Question 6 Comment
		<p>properly. Whereas if the requirement stated that the responsible entity was to designate a primary communications medium, the responsible entity is not in violation if that medium is not functioning properly. It would be clear that Requirement R2, R4 and R6 are intended to be complementary.</p> <p>The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made.</p> <p>Furthermore, it is not clear why Requirements R1, R3, R5, R7 and R8 state that the responsible entity shall “have” when the companion Requirements R2, R4, and R6 state “designate.”</p> <p>Each entity listed must “have” an Interpersonal Communication capability and for Alternative Interpersonal Communication capability able to “designate” the alternate. The team established these requirements to provide flexibility to the industry. No change made.</p> <p>Since Requirement R10 deals with a failure of its Interpersonal Communications capabilities and not Alternate Interpersonal Communications capability, it should only refer to the entities in Requirements R1, R3, and R5. Currently, it includes R1 through R6.</p> <p>The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6,” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements.</p>
<p><b>Response:</b> See response above.</p>		
New York Independent	Negative	COM-002-3: The drafting team added a requirement to identify a Reliability Directive is being initiated during an emergency to track 3-part communication for compliance

Organization	Yes or No	Question 6 Comment
System Operator		<p>purposes. This will change and complicate the communication protocols between normal and emergency operations simply to simplify compliance assessments. The NYISO is asking for clarification that an entity may identify Reliability Directives as a category of communications to be communicated through procedures and training; and will not require a different communication protocol between normal and emergency operations. Affective communications can only be achieved through consistent processes for all conditions. Compliance assessments should be made on when we are in an emergency or not, and not on how the dialogue was initiated.</p>
<p><b>Response:</b> The RCSdT believes the standard allows for this condition, and the method of implementation is up to the entity. No change made.</p>		
Illinois Municipal Electric Agency	Negative	<p>Illinois Municipal Electric Agency supports and encourages SDT consideration of comments submitted by the SERC OC Standards Review Group.</p>
<p><b>Response:</b> Thank you for your comment. See response to SERC comments.</p>		
Wisconsin Public Service Corp.	Negative	<p>In COM-002-3, the Standards Drafting Team provided great clarity to the industry and also reduced risk to the BES, by clearly defining Reliability Directives and how the RC, TOP, and BA must utilize them. Unfortunately, they failed to maintain this level of clarity in IRO-001-3, where they state:</p> <p><i>R2. Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator’s direction unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i></p> <p><i>R3. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. [Violation Risk</i></p>

Organization	Yes or No	Question 6 Comment
		<p><i>Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i></p> <p>The use of “direction” and “directed” essentially makes any request equivalent to a Reliability Directive. In addition, IRO-001-3 as written is largely redundant of COM-002-3. Given this, we recommend that the Standards Drafting Team consider granting the RC authority to issue Reliability Directives by adding this requirement to COM-002-3 and then eliminate IRO-001-3.</p> <p>The RCSDT feels the use of direct and directed is consistent with the purpose and application of those terms in other standards. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>Wisconsin Electric Power Marketing; Wisconsin Electric Power Co.</p>	<p>Negative</p>	<p>IRO-001-03: Although a great improvement over existing IRO-001, see comments:</p> <ul style="list-style-type: none"> <li>-R2 needs to be clear that it is the Reliability Coordinator’s Reliability Directive that must be complied with not just any Reliability Coordinator’s direction as stated.</li> </ul> <p>The RCSDT notes that the intent of the standard is not intended to limit the RC authority to Reliability Directives. The Reliability Coordinator issuing the Reliability Directive is the one, which the recipient must comply. It is assumed that a BA or TOP has a relationship with one, and only one, RC for a given Balancing Area or Transmission Operator Area (some may have multiple, disconnected areas, that are subject to different RCs). No change made.</p> <ul style="list-style-type: none"> <li>-The M2 measure could be difficult, as the operator would have to have access to documents proving the safety, equipment, regulatory or statutory requirements, which may be the assessment of an individual applying the safety rule. Is the measure requiring a deposition of the individual to be performed for each instance?</li> </ul> <p>In the RCSDT’s opinion, the Measure M2 does not contemplate depositions. If an entity cannot comply with a Reliability Directive for one of the stated reasons, it should have documentation, such as an attestation, to support that stated reason</p>

Organization	Yes or No	Question 6 Comment
		<p>available during an audit. No change made.</p> <p>With an assumed data retention of 90 day (voice) or 12 month document retention, the deposition would be unlikely to be acquired prior to the retention period ending.</p> <p>Data retention is a significant issue when the data being recorded is voluminous, supporting a 90-day retention period. No change made.</p> <p>-R3 needs to be clear that it is the inability to perform the Reliability Coordinator’s Reliability Directive that must be communicated not just any “Reliability Coordinator’s as directed.”</p> <p>The RCSDT believes R3 contains the full communication set of “action or direction” and the subset, Reliability Directive, is included; therefore, the respective entity is still required to inform the RC. The RCSDT believes the requirement is clear in regards to Reliability Directives. No change made.</p> <p>-The Data Retention section does not align with the standard: The Reliability Coordinator shall retain its evidence for the most recent 90 calendar days for voice recordings or 12 months for documentation for Requirement R2, Measure M2.</p> <p>R2 and M2 apply to the Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider.</p> <p>There is no R4 and M4.</p> <p>Data retention related to IRO-001-2, R2/M2 was changed to agree with your suggestion. The changes were more involved – several sections were changed, including removing the reference to R4/M4.</p>
<p><b>Response:</b> See response above.</p>		
<p>SERC Reliability Corporation</p>	<p>Negative</p>	<p>IRO-001-3 Comments</p> <p>We recommend that where the verb "direct/directed" or noun "direction" is used in Purpose, R1, R2 and R3, that it be replaced with the verb "instruct/instructed" or</p>

Organization	Yes or No	Question 6 Comment
		<p>noun "instruction", as appropriate. This would help the industry avoid confusion often referred to as "big D" or "little d" directives. It is noted that the term "Reliability Directive" does that to a great degree but avoiding the verb/noun "direct/direction" would augment the difference.</p> <p>The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. No change made.</p> <p>R1 - At what point in time is "identified" referring to in "to prevent identified events or"? Is it referring to current or future events?</p> <p>The context of “identified” is when a set of system conditions is recognized that could lead to an Emergency or Adverse Reliability Impact, which may require action. See Standards IRO-008 and IRO-009. No change made.</p> <p>One might assume both since the "Time Horizon" is defined as Real-time Operations, Same Day Operations and Operations Planning, but the requirement may be enhanced if explicitly stated ("to prevent events identified in real-time or in the future or to mitigate the magnitude"). For clarity, the scope of the authority should be limited to the Reliability Coordinator Area (that result in an Emergency or Adverse Reliability Impacts within its Reliability Coordinator Area). As written, it implies the authority should extend outside its RC Area.</p> <p>R2 - We question the phrase, “physically implemented,” and recommend that the intent be clarified in the language.</p> <p>The RCSDT believes there may be conditions were an entity might not be able to physically implement the direction. For example, entities that do not have the right to access certain equipment or cannot manually operate a broken apparatus. We feel the proposed language achieves the intended purpose. No change made.</p> <p>We note the following comment and response posted under Consideration of Comments on Initial Ballot , ” Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25, ” March 7, 2011:</p>

Organization	Yes or No	Question 6 Comment
		<p><i>“IRO-001 R2, R3, and R4 have replaced “Directives with the word direction in lower case (while it appears that “Directives is a subset of “directions). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (e.g. Reliability Coordinator, market operator, etc) the staff at these entities is fulfilling.</i></p> <p><i>Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives.” This is the “direction in accordance with Requirement R2 stated in R3 and the “direction in accordance with Requirement R3 stated in R4. We believe the entity comments remain valid and the response provided by the SDT does not address all aspects of the concern.</i></p> <p>We suggest that the language be changed to “Reliability Directive consistent with COM-002.</p> <p>The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made.</p> <p>R3 - The requirement states the responsible entities shall “inform its RC when unable to perform as directed but it is unclear when the notification needs to take place. Although the term “as soon as practical may seem be un-measurable, as written now there is no time deadline to perform the notification” i.e. it could be 4 hours later after recognition.</p> <p>M2,” need to add the following words “compliance with, physically, unless which</p>

Organization	Yes or No	Question 6 Comment
		<p>were included in R2, therefore M2 should read,</p> <p><i>“Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator’s direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator direction. (R2)”</i></p> <p>The RCSDT thanks you for your comment and has added the word “physically” to the IRO-001-2 Measure M2.</p> <p>Section 1.3, the second bullet; need to add calendar to 12 calendar months</p> <p>The RCSDT appreciates your comments and conforming changes have been made to the Data Retention section.</p>
<p><b>Response:</b> See response above.</p>		
<p>Dominion Virginia Power; Dominion Resources, Inc.</p>	<p>Negative</p>	<p>IRO-001-3: Dominion does not support the use of “Reliability Coordinator’s direction” in IRO-001-3 and would prefer that the language be changed to “Reliability Directive” consistent with the use in COM-002-3.</p>
<p><b>Response:</b> The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” The RCSDT feels the use of direct and directed is consistent with the purpose and application of those terms in other standards. No</p>		



Organization	Yes or No	Question 6 Comment
change made.		
Constellation Energy Commodities Group	Negative	<p>IRO-001-3:</p> <p>IRO-001-3 uses the term ‘direct’ in its purpose statement, R1, R2 and R3. To avoid confusion with a Reliability Directive (both for auditors and entities), we suggest the following: To establish the authority of Reliability Coordinators to make requests of other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System.</p> <p><i>R1: Each Reliability Coordinator shall have the authority to act or request others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts.</i></p> <p><i>R2: Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator’s request unless compliance with the request cannot be physically implemented, or unless such actions would violate safety, equipment, regulatory or statutory requirements, or unless the TOP, BA, GOP or DP convey a business reason not to comply with the request but express that they will comply if a Reliability Directive is given.</i></p> <p><i>R3: Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as requested in accordance with Requirement R2.</i></p>
<p><b>Response:</b> This standard provides for the authority of the RC to act or direct actions, and not request. The RCS DT believes by using the word “request” make the requirement conditional and is not consistent with the purpose of the standard. No change made.</p>		
Tampa Electric Co.	Negative	<p>IRO-001-3:</p> <p>R1 VSL should have the phrase "exercise their authority" inserted between "to" and "take" in the first sentence. Otherwise it could be read that the RC would be in violation of the standard requirement for any event that resulted in an Adverse</p>

Organization	Yes or No	Question 6 Comment
		Reliability Impact whether he issued a Reliability Directive or not.
<p><b>Response:</b> Thank you for your comment. The RCSDT has added the additional clarifying language.</p>		
Independent Electricity System Operator	Negative	<p>IRO-001-3:                      The IESO is unable to support this standard as written since Data Retention Section does not reflect the revised requirements. For examples: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4.</p>
<p><b>Response:</b> The RCSDT agrees and has made conforming changes in Data Retention.</p>		
Southwest Transmission Cooperative, Inc.	Negative	<p>IRO-001-3:                      We thank the drafting team for their efforts but believe this standard needs additional work. We disagree with including “authority” in this standard. FERC Order 693a, paragraph 112, made it clear that the authority of a registered entity is established through the approval of the standards by FERC. Thus, a Reliability Coordinator gets its authority to issue Reliability Directives by having a requirement that states it must issue Reliability Directives approved by the Commission. Please change “shall have authority to act” in Requirement R1 back to “shall act.” Please also remove all other vestiges of authority from the standards including in the purpose, measures and VSLs. Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator “to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact.” Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and</p>

Organization	Yes or No	Question 6 Comment
		<p>trigger the use of three-part communications identified in COM-002-3.</p> <p>The RCSDT believes that other standards (i.e., IRO-009 - R3 &amp; R4, EOP-002 - R1 and R8) address the action of others; and if the term “authority” is omitted, creates a generic requirement. Such as what has been suggested puts the RC in a double jeopardy situation. No change made.</p> <p>The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made.</p> <p>COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: “When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact?</p> <p>Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent. For clarity and consistency, Requirement R2 and R3 should also be clear that the responsible entities will respond to the Reliability Coordinator’s Reliability Directives.</p> <p>The RCSDT notes that IRO-001-3 addresses direction, which may include a Reliability Directive. The responsible entity receiving the direction, at a minimum, must comply with the RC’s direction, unless the receiver cannot physically implement or unless such actions would violate safety, equipment, regulatory, or statutory requirements. The standard IRO-001-3 is not limited to only actions that are Reliability Directives. On the other hand, the standard COM-002-3 requires the BA, RC, and TOP to identify the communication as a Reliability Directive and to use three-part communication when actions are required to be executed as a Reliability Directive. No change made.</p> <p>Furthermore, this would make the standard consistent with how Reliability Directives are handled by the Transmission Operator in the draft TOP-001-2 standard proposed by the Real-Time Operations drafting team (Project 2007-03). We do not agree with</p>

Organization	Yes or No	Question 6 Comment
		<p>the need to include Distribution Provider in IRO-001-3. The Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. More likely, the Reliability Directive will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related.</p> <p>The RCSDT notes that IRO-001-3 is an authority standard, the DP may not likely receive a Reliability Directive from the RC; however, in the case they do, they are required to comply with the requirement. No change made.</p>
<p><b>Response:</b> See response above.</p>		
Northeast Utilities	Negative	NU contributed in and joins on the comments submitted by NPCC.
<p><b>Response:</b> Thank you for your comment.</p>		
MidAmerican Energy Co.	Negative	<p>COM-001-2:</p> <p>The definition of Interpersonal Communication is too broad and should be revised to read,</p> <p><i>"the primary defined communication system used to communicate between NERC defined reliability entities when operating the Bulk Electric System."</i></p> <p>Examples may include a telephone system as a primary system and an email system as an alternative system.</p> <p>R11 is too broad and should either be deleted or revised to read:</p> <p><i>"Each Distribution Provider and Generator Operator that experiences a failure of its defined primary Interpersonal Communication capabilities with its Transmission Operator or Balancing Authority..."</i></p> <p>The RCSDT deliberately avoided the use of primary and secondary mediums and elected to use communications capabilities. As such, R11 applies to Interpersonal Communication capabilities of the DP and GOP. The RCSDT has gone to great lengths</p>

Organization	Yes or No	Question 6 Comment
		<p>to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. Mutually agreeable implies that both parties are willing to accept the outcome. It doesn't mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. No change made.</p> <p>The use of the word "any" could end up applying to an intercom and not to a primary mode of communication such as telephone system or email system.</p> <p>The RCSDT appreciates your comment and has made clarifying changes by removing the phrase "any of" in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p>The latter part of R11 states; "...shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability." This ambiguous statement does not support reliability. Consulting with a TOP or BA does not solve the problem of the lack of Interpersonal Communication capabilities. This statement should be deleted or revised to read:</p> <p><i>"Each Distribution Provider and Generator Operator that experiences a failure of its defined primary Interpersonal Communication with their Transmission Operator or Balancing Authority shall notify the applicable TOP or BA as to the status of the Interpersonal Communication capability."</i></p> <p>The RCSDT believes non-compliance is not due solely to the failure of any Interpersonal Communication capability, but must be accompanied by a failure to consult with the applicable Transmission Operator or Balancing Authority to establish mutually agreeable action for restoration. No change made.</p>
<p><b>Response:</b> See response above.</p>		

Organization	Yes or No	Question 6 Comment
<p>SERC OC Standards Review Group</p>		<p>COM-001-2 Comments</p> <p>Definition of Alternative Interpersonal Communication:</p> <p>The proposed definition uses the term “medium.”</p> <p>What is the scope of that?</p> <p>Telephony is a “medium” but there is wired, wireless, satellite, etc. Was “medium” intended to differentiate voice, paper, text, email, teletype, or something else?</p> <p>Does the qualifying term “same” when modifying infrastructure mean something like voice versus written?</p> <p>What about situations where the primary telephone system is Voice Over Internet Protocol (VOIP) and it is using the same computer network infrastructure as an email or messaging system. That is the “same infrastructure” but a different “medium” R1 and R2 –</p> <p>The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made.</p> <p>We suggest the drafting team look at Standard EOP-008, Requirements R3 and R8 and add appropriate language in Standard COM-001-2, to avoid instantaneous non-compliance for loss of Interpersonal Communications and/or alternate Interpersonal communications.</p> <p>The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard.</p> <p>The RCSDT believes that prescribing a device or medium would limit an entity;</p>

Organization	Yes or No	Question 6 Comment
		<p>therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made.</p> <p>R1 - In later requirements it is proposed that the entity “...shall designate an...” It is suggested that for consistency and audit ability, this concept be used for R1, R3, R5, R7 and R8.</p> <p>In addition, the qualifier of “primary” should be used such that the requirements read:</p> <p><i>“... shall have designated, primary Interpersonal Communications capability with the following entities:”</i></p> <p>Although it is appropriate that “Alternative” be capitalized since it is used in a defined term (i.e. Alternative Interpersonal Communication”) that bounds acceptable alternative methods , we do not see the need to capital “primary.”</p> <p>Each entity listed must “have” an Interpersonal Communication capability and for Alternative Interpersonal Communication capability able to “designate” the alternate. The team established these requirements to provide flexibility to the industry. No change made.</p> <p>R9 - The requirement is unclear if the required monthly test is a general functionality test or if there is the expectation of testing the designated Alternative Interpersonal Communications with all of the entities defined in the sub-requirements of R2, R4, and R6.</p> <p>There is no expectation of testing the primary Interpersonal Communications - is this intentional or an oversight?</p> <p>Although functional testing of this should be done as a normal course of business, should an explicit test be required with each entity in the sub-requirements of R1,</p>

Organization	Yes or No	Question 6 Comment
		<p>R3, R5, R7 and R8 to insure, for example, that all the phone numbers are correct?</p> <p>COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is not to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability, and then, if it decides to do so, designate another, if you may, “new” Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made.</p> <p>R10 - The following scenario seems plausible:</p> <p>The Interpersonal Communications fails and is detected at 14:00 and gets fixed at 14:35. It lasted more than 30 minutes but is fixed. As written the requirement would require the responsible entity to notify entities identified in R1 through R6 by 15:00 (i.e. 60 minutes from detection) even though the problem no longer exists. Is that the expectation?</p> <p>The RCSDT proposes that upon detection of failure that continues at least 30 minutes, starts the 60-minute clock. The 30 minutes allows an entity time to restore or determine if they can restore its Interpersonal Communication capability before the clock starts. No change made.</p> <p>Does COM-001 apply only to primary control centers or back-ups, per EOP-008, as well?</p> <p>The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. No change made.</p> <p>The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the</p>



Organization	Yes or No	Question 6 Comment
		<p>flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made.</p> <p>M9 reads <i>“at least on a monthly basis.”</i> We suggest that this be changed to <i>“at least once per calendar month”</i> as written in R9. This change should also be corrected in the VSLs.</p> <p>The RCSDT agrees and the language in M9 has been changed to agree with the language in R9 and the VSL.</p> <p>M8 - We suggest removing the second <i>“that”</i> in the first sentence of the measure.</p> <p>COM-001-2, M8: The RCSDT agrees and the language in M8 has been changed to delete the additional <i>“that.”</i></p> <p>M10 - We suggest this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6), therefore M10 should read:</p> <p><i>“Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.)”</i></p> <p>The word <i>“impacted”</i> was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word <i>“impacted”</i> to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, <i>“R1 through R6”</i> to <i>“R1, R3, and R5,”</i> to clarify that it applies to the capabilities with the RC, the TOP and the BA.</p> <p>M12 needs to be removed.</p>

Organization	Yes or No	Question 6 Comment
		<p>The RCSDT appreciates your comment and has deleted Measure M12 that was left in error.</p> <p>We question why the first paragraph of Section 1.3 - Data Retention has been included in each of these three standards. We suggest that it should be removed from each standard.</p> <p>The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.</p> <p>COM-002-3 Comments</p> <p>R2 - We recommend that the following phrase (in quotes) be added to R2:</p> <p>Each Balancing Authority, Transmission Operator and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive “immediately upon receiving it.” As written, there is no limit as to when the entity must repeat it (i.e. they could wait 2 hours)The Standard is not clear as to what each entity is to do when more than one entity receives a Reliability Directive at the same time (e.g. during a RC area teleconference call). For example, is a roll call of receiving entities expected to be held so that they individually can repeat, restate, rephrase or recapitulate the Reliability Directive followed by individual confirmation required in R3?</p> <p>The requirement is aimed at being a performance-based requirement and states a description of “what” communication must take place, but does not prescribe “how” the communication is to be made. Adding the suggested phrase “immediately upon receiving it” introduces the ambiguous term “immediately,” for which there is neither plain meaning nor simple explanation. What must happen is that the recipient must respond in such a way that the issuer may determine whether the message has been properly understood. The RCSDT concludes that the proposed language gives plain meaning. No change made.</p> <p>IRO-001-3 Comments</p>

Organization	Yes or No	Question 6 Comment
		<p>We recommend that where the verb “direct/directed” or noun “direction” is used in Purpose, R1, R2 and R3, that it be replaced with the verb “instruct/instructed” or noun “instruction”, as appropriate. This would help the industry avoid confusion often referred to as “big D” or “little d” directives. It is noted that the term “Reliability Directive” does that to a great degree but avoiding the verb/noun “direct/direction” would augment the difference.</p> <p>The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. No change made.</p> <p>R1 - At what point in time is “identified” referring to in “...to prevent identified events or...?” Is it referring to current or future events? One might assume both since the “Time Horizon” is defined as Real-time Operations, Same Day Operations and Operations Planning, but the requirement may be enhanced if explicitly stated (“...to prevent events identified in real-time or in the future or to mitigate the magnitude...”).</p> <p>The context of “identified” is when a set of system conditions is recognized that could lead to an Emergency or Adverse Reliability Impact, which may require action. See standards IRO-008 and IRO-009. No change made.</p> <p>For clarity, the scope of the authority should be limited to the Reliability Coordinator Area (“...that result in an Emergency or Adverse Reliability Impacts within its Reliability Coordinator Area”). As written, it implies the authority should extend outside its RC Area.</p> <p>The RCSDT believes that limiting the scope to the RC’s area would be too limiting and not account for potential conditions where an adjacent RC may have lost its wide-area view and requests the assistance of another RC or vice-versa. No change made.</p> <p>R2 - We question the phrase “physically implemented” and recommend that the intent be clarified in the language.</p> <p>The RCSDT believes there may be conditions where an entity may not be able to physically implement the direction. For example, an entity that does not have the</p>

Organization	Yes or No	Question 6 Comment
		<p>right to access certain equipment or cannot manually operate a broken apparatus. We feel the proposed language achieves the intended purpose. No change made.</p> <p>We note the following comment and response posted under Consideration of Comments on Initial Ballot - Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25 - March 7, 2011:</p> <p><i>“IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (e.g., Reliability Coordinator, market operator, etc) the staff at these entities is fulfilling. Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives.” This is the “direction in accordance with Requirement R2” stated in R3 and the “direction in accordance with Requirement R3” stated in R4.”We believe the entity’s comments remain valid and the response provided by the SDT does not address all aspects of the concern.</i></p> <p>The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made.</p> <p>We suggest that the language be changed to “Reliability Directive” consistent with COM-002.</p> <p>R3 - The requirement states the responsible entities shall “inform” its RC when</p>

Organization	Yes or No	Question 6 Comment
		<p>unable to perform as directed but it is unclear when the notification needs to take place. Although the term “as soon as practical” may seem be un-measurable, as written now there is no time deadline to perform the notification - i.e. it could be 4 hours later after recognition.</p> <p>The proposed requirement uses the term “upon recognition.” No change made.</p> <p>M2 - need to add the following words “compliance with, physically, unless” which were included in R2, therefore M2 should read:</p> <p>The RCSDT thanks you for your comment and has added the word “physically” to the IRO-001-2, Measure M2.</p> <p><i>“Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator’s direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator’s direction”</i></p> <p>(R2) “Section 1.3, the second bullet; need to add calendar to 12 calendar months.” The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers.”</p> <p>The RCSDT appreciates your comments and conforming changes have been made to the Data Retention section.</p>

Organization	Yes or No	Question 6 Comment
<p><b>Response:</b> See response above.</p>		
<p>Pacific Northwest Generating Cooperative</p>		<p>The PNGC Comment Group believes COM-002-3, R2, lacks justification for applicability to a Distribution Provider (DP). RCs in the WECC region do not communicate reliability directives to DP only entities. Having this requirement apply to DPs seems to indicate that we will need 24/7 communications capability to record and respond to calls that will never come in order to satisfy the requirement with no improvement to reliability. The SDT’s response from the last round of comments:</p> <p>“It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive.” Nowhere is this expectation provided for in the written standard. If the issuer of a reliability directive has already called the DP, are they going to then re-issue the reliability directive after the DP calls them back?</p>
<p><b>Response:</b> In COM-002-3, the DP may or may not receive a Reliability Directive from the RC; however, in the case they do, they are required to comply with the requirement. The measures do not require recordings. Evidence may include things like dated operator logs. No change made.</p>		
<p>Northeast Power Coordinating Council</p>		<p>For COM-001:</p> <p>1. R1.2 and R2.2: The phrase “within the same Interconnection” is improper; it needs to be removed. RCs between two Interconnections still need to communicate with each other for reliability coordination (e.g. between Quebec and the other RCs in the NPCC region to coordinate reliability issues including curtailing interchange transactions crossing an Interconnection boundary). The SDT’s response to industry comments on the previous posting that the phrase was added to address the ERCOT situation (that ERCOT does not need to communicate with other RCs and that such coordination takes place between TOPs) leaves a reliability gap.</p> <p>Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal</p>

Organization	Yes or No	Question 6 Comment
		<p>Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinator’s from one interconnection to another. No change made.</p> <p>2. R3.5 and R4.3: The phrase “synchronously connected within the same Interconnection” is also improper; it needs to be removed. TOPs do communicate with other TOPs including those asynchronously connected and in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). The reason that was used in response to the above comments (coordination among TOPs for DC tie operation) contradicts with the inclusion of this phrase in R3.5 and R4.3.</p> <p>The RCSDT has made clarifying changes by adding Parts to R3 and R4 to address asynchronous connections between Transmission Operators and have eliminated the phrase “within the same interconnection.”</p> <p>COM-001-2, R3.5 and R4.3: Use of the phrase “within the same interconnection.” The RCSDT recognizes that operating activities occurring inside an interconnection that is not synchronously interconnected with another interconnection cannot cause immediate effects upon that interconnection. Any changes in flow across any asynchronous tie between those interconnections must take place through a coordinated interchange energy scheduling process, except for contingency loss the asynchronous ties. In the case of the latter, there is no other path which can be used to address the loss of the asynchronous tie, nor is any synchronous tie immediately affected. The standard does not require such involved RCs to have Interpersonal Communication capability, but does not preclude it. Any rearrangement of scheduled flows on other asynchronous ties must be done through a pre-existing interchange energy scheduling process. No change made.</p> <p>3. R4 and R6: Not requiring an Alternative Interpersonal Communication capability between the BAs and the DP and GOP can result in a reliability gap. If Interpersonal Communication capability between the BAs and these entities is required to begin</p>

Organization	Yes or No	Question 6 Comment
		<p>with to enable BAs to communicate with these entities (such as operating instructions or Reliability Directives) to ensure reliable operations, then an alternative capability is also needed to ensure this objective is achieved when the primary capability fails.</p> <p>The RCSDT refers the Order No. 693 in Paragraph 508 to clarify the reason the DP and GOP are not required to have Alternative Interpersonal Communication and is as follows: “(1) expands the applicability to include Generator Operators and Distribution Providers and includes Requirements for their telecommunications facilities; (2) identifies specific requirements for telecommunications facilities for use in normal and Emergency conditions that reflect the roles of the applicable entities and their impact on Reliable Operation and (3) includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions.” In addition, R11 requires the DP and GOP to consult with its BA and TOP to determine a mutually agreeable action for restoration. No change made.</p> <p>4. To preclude the possibility of problems arising from having different languages spoken between entities, COM-001-1.1 R4 should remain as it was or those ideas kept in the revised requirement. R4 read:</p> <p><i>“R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.”</i></p> <p>According to the proposed implementation plan for COM-001-2, R4 pertaining to the use of English will remain in effect upon the effective date of COM-001-3. This requirement is being revised and will be included in Standard COM-003-1, Operating Personnel Communications Protocols. COM-001-1.1, R4 will be retired at midnight the day before COM-003-1 becomes effective. No change made.</p>



Organization	Yes or No	Question 6 Comment
		<p>5. Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised.</p> <p>The RCSDT thanks you for your comment and has made conforming changes to make to Measure, M3.</p> <p>For IRO-001:</p> <p>The Data Retention Section does not reflect the revised requirements. As examples: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1.</p> <p>Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2.</p> <p>And, in the Data Retention Section, R4 and M4 are mentioned. However, there are only three requirements with their corresponding measures in the standard.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment and has made conforming changes to IRO-001-3.</p>		
MRO NSRF		<p>Has the SDT looked at combining COM-002-3 and IRO-001-3 into a single Standard? It would allow Entities a one stop shopping place to refer to issuing and receiving a Reliability Directive.</p> <p>The RCSDT understands some of the benefits with combining the standards; however, at this juncture, it would further delay the progress of the standards. No change made.</p> <p>The definition of Interpersonal Communication is:</p> <p>“Any medium that allows two or more individuals to interact, consult, or exchange information.” As stated in Question 4, the use of the word “any” will bring in mediums that are outside the scope of this Standard.</p> <p>The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying</p>

Organization	Yes or No	Question 6 Comment
		<p>change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p>The NSRF recommends the following:</p> <p>Interpersonal Communication: The primary (or designated) medium that allows two or more individuals to interact, consult, or exchange information.</p> <p>The RCSDT emphasizes the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made.</p> <p>In Standard COM-002-3 the MRO NSRF recommends that the Effective Date be the first day of the second calendar quarter after applicable regulatory approval, to be the same as COM-001-2 and IRO-001-3. In that way all 3 standards would be effective at the same time, making implementation much smoother.</p> <p>The RCSDT thanks you for your comment and has made conforming changes to adjust IRO-001 to be the same as COM-001 and COM-002.</p> <p>The below section will lead to entities hold evidence past the 12 month retention period. This ambiguous wording will force entities to hold data past the 12 month period as stated in the following paragraph, after the below sighting. Recommend that the first paragraph within 1.3 be deleted in its entirety.</p> <p>1.3. Data Retention The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.</p> <p>The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.</p>

Organization	Yes or No	Question 6 Comment
<p><b>Response:</b> See response above.</p>		
<p>CCG, CPG, CECD</p>		<p>Comments: IRO-001-3 uses the term ‘direct’ in its purpose statement, R1, R2 and R3. To avoid confusion with a Reliability Directive (both for auditors and entities), we suggest the following: To establish the authority of Reliability Coordinators to make requests of other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System.</p> <p>The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. No change made.</p> <p>R1: Each Reliability Coordinator shall have the authority to act or request others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts.</p> <p>The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. The RCSDT believes by using the word “request” make the requirement conditional and is not consistent with the purpose of the standard. No change made.</p> <p>R2: Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator’s request unless compliance with the request cannot be physically implemented, or unless such actions would violate safety, equipment, regulatory or statutory requirements, or unless the TOP, BA, GOP or DP convey a business reason not to comply with the request but express that they will comply if a Reliability Directive is given.</p> <p>The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. The RCSDT believes by using the word “request” make the requirement conditional and is not consistent with the purpose of the standard. No change made.</p> <p>R3: Each Transmission Operator, Balancing Authority, Generator Operator, and</p>

Organization	Yes or No	Question 6 Comment
		<p>Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as requested in accordance with Requirement R2.</p> <p>The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. The RCSDT believes by using the word “request” make the requirement conditional and is not consistent with the purpose of the standard. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>LG&amp;E and KU Services Company</p>		<p>COM-001-2</p> <p>Regarding COM-001-2 and proposed definitions, LG&amp;E and KU Services recommends changing the terms being defined from “Interpersonal Communications” and “Alternative Interpersonal Communication” to “Means for Interpersonal Communication” and “Alternative Means for Interpersonal Communication.” A communication is an exchange of information, not a medium. The medium is simply the means. LG&amp;E and KU Services Company further recommend that each requirement be rewritten with these new defined terms as appropriate and that the word “capabilities” currently following the defined terms be removed from each of the requirements.</p> <p>We suggest the definition for “Means for Interpersonal Communication” be: “A medium utilizing electromagnetic energy that allows two or more individuals to interact, consult or exchange information.”</p> <p>We suggest the definition for “Alternative Means for Interpersonal Communication” be: “Any Means for Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Means for Interpersonal Communications used for day-to-day operation.”</p> <p>The RCSDT thanks you for your comment; however, great lengths were taken in communicating mediums regarding IC and AIC and finds that adding “Means” to the</p>

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		<p>proposed terms being defined diminishes clarity of the definition. No change made.</p> <p>Finally, LG&amp;E and KU Services Company request clarification that the requirements to have in place Interpersonal Communications and Alternative Interpersonal Communications do not establish non-compliance for the unavailability of either medium provided the reporting requirements set forth in the standard are otherwise met.</p> <p>The RCSDT believes a condition of non-compliance will not be created if the entity meets all of the requirements for Interpersonal Communication and Alternative Interpersonal Communication capability. For example, the applicable entity has a failure of the IC and notifies the identified entities and begins using its AIC. No change made.</p> <p>All Proposed Standards LG&amp;E and KU Services Company suggest that the first paragraph in section 1.3 Data Retention be removed from all proposed standards. It states: ...For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit. While LG&amp;E and KU Services Company is confident that the SDT intended to clarify entities' data retention responsibilities, this paragraph could be clarified to indicate that it does not require that any additional evidence be retained and provided beyond that written in the standard's requirements.</p> <p>The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.</p>
<p><b>Response:</b> See response above.</p>		
<p>Bonneville Power Administration</p>		<p>BPA supports COM-001-2, COM-002-3 and IRO-001-3 as written and has no comments or concerns at this time.</p>

Organization	Yes or No	Question 6 Comment
<p><b>Response:</b> Thank you for your comment.</p>		
<p>SPP Standards Review Group</p>		<p>COM-001-2: Requirement 10 is too open ended as written.</p> <p>The measure, M10, indicates that only impacted entities need to be notified. The requirement should be changed to make it consistent with the measure. The requirement would then read: <i>“Each RC, TOP And BA shall notify impacted entities as identified...”</i></p> <p>Requirements 3 and 5 places the responsibility for establishing Interpersonal Communication capability on the TOP and BA. It is quite conceivable that a TOP or BA may not know all, or newly, registered DPs and GOPs in its respective area.</p> <p>The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5” to clarify that it applies to the capabilities with the RC, the TOP, and the BA.</p> <p>In Requirements 7 and 8, the DP and GOP, respectively, are in turn responsible for establishing Interpersonal Communication capability. The TOPs/BAs and the DPs/GOPs should not be responsible for this. The DPs and GOPs should be held accountable for requesting that capability of their TOP and BA.</p> <p>The standard establishes requirement for communication capability appropriate to ensure reliability. There is no requirement for it to be different from the Interpersonal Communication capability that its Balancing Authority has with it, nor the Interpersonal Communication capability that its Transmission Operator has with it. Cooperation and coordination is always encouraged and is an excellent practice, but is not required by this standard. Thank you for your suggestion. No change made.</p>

Organization	Yes or No	Question 6 Comment
		<p>Therefore, we suggest adding the following phrase at the end of Requirements 3.3, 3.4, 5.3 and 5.4 - ‘that has requested Interpersonal Communications capability.’ Then R3.3 would read:</p> <p><i>“Each Distribution Provider within its Transmission Operator Area that has requested Interpersonal Communications capability.”</i></p> <p>The SDT does not agree that these changes to R3.3, R3.4, R5.3 and R5.4 are necessary. The current R7 and R8 require the DP and the GOP to have this capability. It is not a request. No change made.</p> <p>COM-002-3:</p> <p>Requirement 2/Measure 2: There is an inconsistency between the requirement and the measure. The requirement allows the recipient to repeat, restate, rephrase or recapitulate the directive. Measure 1 only mentions repeating the directive.</p> <p>The RCSDT agrees that M2 needs to match the phrasing used in R2 and has made clarifying changes.</p>
<p><b>Response:</b> See response above.</p>		
<p>Dominion</p>		<p>COM-001-2; M9 reads <i>“at least on a monthly basis”</i>, Dominion suggests that this be changed to <i>“at least once per calendar month”</i> as written in R2.</p> <p>The RCSDT agrees and the language in M9 has been changed to agree with the language in COM-001-2, R9.</p> <p>M8 Dominion suggests removing the second <i>“that”</i> in the first sentence of the measure.</p> <p>COM-001-2, M8: The RCSDT agrees and the language in M8 has been changed to delete the additional <i>“that.”</i></p> <p>M10 Dominion suggests this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6),</p>

Organization	Yes or No	Question 6 Comment
		<p>therefore M10 should read:</p> <p><i>“Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.)”</i></p> <p>The RCSDT thanks you for your comment and has made conforming changes to make change “impacted” to “identified” entities.</p> <p>M12 needs to be removed.</p> <p>The RCSDT appreciates your comment and has deleted Measure M12 that was left in error.</p> <p>IRO-001-3;</p> <p>R2 - Dominion questions the phrase “physically implemented” and recommends that the intent be clarified in the language.</p> <p>The RCSDT believes there may be conditions were an entity may not be able to physically implement the direction. For example, an entity that does not have the right to access certain equipment or cannot manually operate a broken apparatus. We feel the proposed language achieves the intended purpose. No change made.</p> <p>Dominion notes the following comment and response posted under Consideration of Comments on Initial Ballot - Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25 - March 7, 2011:”</p> <p><i>IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use</i></p>



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		<p><i>“Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (e.g., Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling.</i></p> <p><i>Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives.” This is the “direction in accordance with Requirement R2” stated in R3 and the “direction in accordance with Requirement R3” stated in R4.”Dominion believes the entity’s comments remain valid and the response provided by the SDT does not address all aspects of the concern.</i></p> <p>Dominion suggests that the language be changed to “Reliability Directive” consistent with COM-002.</p> <p>The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made.</p> <p>M2 - need to add the following words “compliance with, physically, unless” which were included in R2, therefore M2 should read:</p> <p><i>“Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically</i></p>

Organization	Yes or No	Question 6 Comment
		<p><i>implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator’s direction. (R2)“</i></p> <p>The RCSDT thanks you for your comment and has added the word “physically” to the IRO-001-2 Measure M2.</p> <p>Section 1.3, the second bullet; need to add calendar to 12 calendar months</p> <p>The RCSDT appreciates your comments and conforming changes have been made to the Data Retention section.</p>
<p><b>Response:</b> See response above.</p>		
<p>FirstEnergy</p>		<p>Definition of Interpersonal Communications.</p> <p>We understand that the team does not want to be prescriptive as far as the specific types of communication mediums since we live in an age of many forms of communication. But in this case it may be helpful to give examples in the definition. An auditor may interpret Interpersonal Communication to strictly include voice-related and two-way conversations. Depending on the circumstances, other mediums may be adequate, such as blast calls or instant messaging. This should be clarified in the definition.</p> <p>COM-001-2.</p> <p>In R9, it should be clear that the 2-hour timeframe is for initiation of corrective action because mitigation may take much longer. We suggest the last sentence of R9 state: “If the test is unsuccessful, the responsible entity shall, within 2 hours, initiate action to repair or designate a replacement Alternative Interpersonal Communications capability.</p>

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		<p>COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability, and then, if it decides to do so, designate another, if you may, “new” Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made.</p> <p>In R10, the phrase “R1 through R6” should state “R1 through R8.”</p> <p>The RCSDT thanks you for your comment; alternatively, the RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6,” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements.</p> <p>COM-002-3</p> <p>In R2, the use of the term recapitulate may not be appropriate. This term means “to summarize” the directive. Three-part communication during emergency situations should assure that the essential details of the directives are understood and a summary may inadvertently leave out important information.</p> <p>The RCSDT carefully considered the use of the term “recapitulate,” and believes it correctly captures the intent. No change made.</p> <p>The effective date of COM-002-3 should be consistent with COM-001-2 and IRO-001-3 and state “the 1st calendar day of the 2nd calendar quarter.” It currently shows the “1st calendar quarter in the standard and implementation plan.</p> <p>The RCSDT thanks you for your comment and has made conforming changes to adjust IRO-001 to be the same as COM-001 and COM-002.</p> <p>IRO-001-3</p> <p>The third bullet under Data Retention addresses requirement R4 and measure M4</p>

Organization	Yes or No	Question 6 Comment
		<p>neither of which exist in the standard.</p> <p>The RCSDT thanks you for your comment and has made conforming changes.</p> <p>In R1, the word “and” is missing between Generator Operator and Distribution Provider.</p> <p>The RCSDT thanks you for your comment and has made conforming changes to IRO-001, R2.</p> <p>VSL for R2 - “N/A” should be removed from the High VSL - Furthermore, the VSL should include language for instances when the entity cannot meet the RC’s directive as afforded by R2.</p> <p>The RCSDT thanks you for your comment and has made conforming changes to IRO-001, R2 VSL.</p>
<p><b>Response:</b> See response above.</p>		
<p>MISO Standards Collaborators</p>		<p>The Data Retention Section in IRO-001 does not reflect the revised requirements. For example: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4.</p> <p>The RCSDT thanks you for your comment and has made conforming changes.</p> <p>Additional comments associated with COM-002</p> <p>We are concerned with the use of ‘shall’ in the measurement sections. ‘Shall’ statements should only be used in the Requirements, as these are the only enforceable items in the standard. The measures should not limit how we show compliance. If there are specific issues that the drafting team is proposing to be a requirement, they should be added to the requirements section of the standard.</p> <p>The RCSDT has checked the usage of “shall” in other standards and has found it to be</p>

Organization	Yes or No	Question 6 Comment
		<p>consistent with writing measures. The RCSDT notes the measures are examples and the entity is not limited to those examples. No change made.</p> <p>Measurement M1 should also allow entities to develop procedures that are distributed to and trained on in advance with recipients of directives that meet the requirements for the communication of what constitutes a Reliability Directive. The last sentence in the measurement should be revised to read:</p> <p><i>“Such evidence could include, but is not limited to, dated and time-stamped voice recordings, dated and time-stamped transcripts of voice recordings, or dated operator logs to show that it identified the action as a Reliability Directive to the recipient or approved procedures that identify what constitutes a Reliability Directive and when Reliability Directives are issued.”</i></p> <p>The RCSDT believes that M1 does not preclude an entity from developing, having or utilizing procedures as evidence to address Reliability Directives. No change made.</p> <p>(R1) The Data Retention section states; ‘For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.’</p> <p>It is unclear on how an entity would be expected to provide evidence beyond 3 months when requested if the data retention period and established procedures do not require the evidence to be retained.</p> <p>The SDT should provide examples of what other types of evidence could be expected or the phrase should be removed.</p> <p>The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.</p>
<p><b>Response:</b> See response above.</p>		

Organization	Yes or No	Question 6 Comment
<p>Florida Municipal Power Agency</p>		<p>In the definition of Interpersonal Communication, the use of the word “medium” is ambiguous. Suggestions for alternatives: “system”, “channel.”</p> <p>The RCSDT deliberately stayed away from the use of primary and secondary mediums, and prefers to use communications capabilities. Further, the RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. Mutually agreeable implies that both parties are willing to accept the outcome. It doesn’t mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. But what transpires in the consultation is a realization of what the situation is, what the impacts to reliability are and a determination of what is amicable to both parties. No change made.</p> <p>COM-001-2, R1 and R3, the phrase:</p> <p>“have Interpersonal Communications capabilities”, what if the communication system fails? Is that an immediate non-compliance (especially R3.3 and R3.4 which do not require a redundant system).</p> <p>Suggest using EOP-008 type of language to allow restoration of failed equipment without non-compliance.</p> <p>The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard.</p> <p>The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made.</p>

Organization	Yes or No	Question 6 Comment
		<p>COM-001-2, R9 - "Each ... shall test its Alternative Interpersonal Communications capability", suggest adding the phrase "to each entity for which Alternative Interpersonal Communications is required" to add clarity. In addition, the type of testing is unclear and ambiguous.</p> <p>The RCSDT proposes that R9 correctly identifies and provides clarity for the entities required to have Alternative Interpersonal Communication capability. No change made</p> <p>The is also ambiguity in the terms "direct", "directive", "direction" and "Reliability Directive." The SDT may want to consider using the terms "instruct" and "instruction" in place of "direct", "directive", "direction" to more clearly distinguish from a Reliability Directive.</p> <p>The RCSDT feels the use of "direct" and "directed" is consistent with the purpose and application of those terms in other standards. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>ACES Power Marketing Standards Collaborators</p>		<p>The following comments are regarding IRO-001-3.</p> <p>We disagree with including "authority" in this standard. FERC Order 693a, paragraph 112, made it clear that the authority of a registered entity is established through the approval of the standards by FERC. Thus, a Reliability Coordinator gets its authority to issue Reliability Directives by having a requirement that states it must issue Reliability Directives approved by the Commission. Please change "shall have authority to act" in Requirement R1 back to "shall act."</p> <p>Please also remove all other vestiges of authority from the standards including in the purpose, measures and VSLs.</p> <p>The RCSDT believes that other standards (i.e., IRO-009 - R3 &amp; R4, EOP-002 - R1 &amp; R8) address the action of others and if the term "authority" is omitted, creates a generic requirement such as what has been suggested puts the RC in a double jeopardy</p>

Organization	Yes or No	Question 6 Comment
		<p>situation. No change made.</p> <p>The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made.</p> <p>Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator “to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact.” Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and trigger the use of three-part communications identified in COM-002-3.</p> <p>The RCSDT views R1 as an authority requirement to direct others, which could include a subset of direction called, Reliability Directive. Requirement R2 is the response requirement for the recipient. The judgment the recipient is under is that the recipient must comply with the direction, unless the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. Requirement R3 is simply requires the recipient to inform the issuer of its inability to perform the direction. No change made.</p> <p>COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause:</p> <p>“When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.”</p> <p>What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact?</p> <p>Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent. For clarity and consistency, Requirement R2 and R3 should also be clear that the responsible entities will respond to the Reliability Coordinator’s Reliability Directives.</p>



Organization	Yes or No	Question 6 Comment
		<p>Furthermore, this would make the standard consistent with how Reliability Directives are handled by the Transmission Operator in the draft TOP-001-2 standard proposed by the Real-Time Operations drafting team (Project 2007-03).</p> <p>The RCSDT development of IRO-001-3 R1 states “...which could include issuing Reliability Directives...” and therefore does not preclude its use if it is determined by the RC to use it. There may be instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. No change made.</p> <p>The Data Retention section needs to be modified. The first bullet applies to the Electric Reliability Organization and Requirement R1 and Measure M1. The actual requirement and measure apply to the Reliability Coordinator. Furthermore, five calendar years exceeds the audit period of three years for a Reliability Coordinator.</p> <p>The RCSDT thanks you for your comment and has removed this bullet.</p> <p>The second bullet incorrectly applies to the Reliability Coordinator and Requirement R2 and Measure M2. Requirement R2 and Measurement M2 apply to Transmission Operators, Balancing Authorities, Generator Operators and Distribution Providers. The third bullet mentions Requirement R4 and Measurement M4.</p> <p>The RCSDT thanks you for your comment and has made conforming changes.</p> <p>There is no Requirement R4 and Measurement M4 in the standard.</p> <p>The RCSDT thanks you for your comment and has made conforming changes.</p> <p>The VSLs for Requirement R1 are not consistent with the requirement. The VSL states that it is for failure to act while the requirement compels the Reliability Coordinator to have the authority to act. This modifies the requirement which is not allowed under FERC VSL guidelines.</p> <p>The RCSDT thanks you for your comment and will correct the R1 VSL to have the phrase "exercise their authority" inserted between "to" and "take" in the first</p>

Organization	Yes or No	Question 6 Comment
		<p>sentence.</p> <p>The VSLs for Requirement R2 need to include the “unless” clause from the requirement. Otherwise, the VSL implies that the responsible entity violated the requirement for failing to follow the directive even if they could not for one of the reasons listed in the requirement. This again is not consistent with FERC guidelines that state VSLs cannot modify the requirement.</p> <p>The RCSDT did not include the “unless such actions would violate safety, equipment, regulatory or statutory requirements” portion of the requirement in the VSL because if an entity could not perform the directed action, there is no violation. No change made.</p> <p>The following comments pertain to COM-001-2.</p> <p>We recommend striking “capability” from all of the requirements. It is not clear to us how this helps when a definition for Interpersonal Communications is written already and applies to a communication medium. Furthermore, we think it causes confusion and actually contradicts the intent of the standard. Because Requirements R1, R3, R5, R7 and R8 focus on capability, the responsible entity will be in violation anytime its medium that it uses for the primary capability does not function properly. Whereas if the requirement stated that the responsible entity was to designate a primary communications medium, the responsible entity is not in violation if that medium is not functioning properly. It would be clear that Requirement R2, R4 and R6 are intended to be complementary.</p> <p>The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made.</p> <p>Furthermore, it is not clear why Requirements R1, R3, R5, R7 and R8 state that the</p>

Organization	Yes or No	Question 6 Comment
		<p>responsible entity shall “have” when the companion Requirements R2, R4, and R6 state “designate.”</p> <p>The RCSDT believes the requirements achieve the desired intent of the standard. Each entity listed must “have” an Interpersonal Communication capability and for Alternative Interpersonal Communication capability able to “designate” the alternate. The team established these requirements to provide flexibility to the industry. No change made.</p> <p>Since Requirement R10 deals with a failure of its Interpersonal Communications capabilities and not Alternate Interpersonal Communications capability, it should only refer to the entities in Requirements R1, R3, and R5. Currently, it includes R1 through R6.</p> <p>COM-001-2, R10: The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6,” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements.</p> <p>(COM-001 M1)</p> <p>We suggest changing “physical assets” to “demonstration of physical assets.” Since evidence is provided to the auditor and the auditor takes the evidence with them, providing them evidence that is a “physical asset” would be problematic. We believe that the VSLs could be written to provide more gradations. For example, if a Transmission Operator or Balancing Authority failed to have Interpersonal Communications capability with a Distribution Provider but had Interpersonal Communications capability with all other required entities, it has met the vast majority of the requirement. Since VSLs are a measure of how much the requirement was missed by the responsible entity, jumping to a Severe VSL does not seem to adequately capture that the responsible entity met the vast majority of the requirement. Requirements R4 and R6 even seem to recognize this by not including Distribution Provider in the list of entities to which the Transmission Operator or</p>

Organization	Yes or No	Question 6 Comment
		<p>Balancing Authority are required to designate Alternate Interpersonal Communications capability.</p> <p>The following comments pertain to COM-002-3.</p> <p>The RCSDT believes the Measures address the needed examples of evidence. No change made.</p> <p>While COM-002-3 is well written to explain the three-part communications requirements and makes it perfectly clear when Reliability Directive has been issued, the opening clause leaves the responsible entity open to second guessing on whether they should have issued a Reliability Directive. This problem could be solved by changing the opening clause to:</p> <p>“When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” In the second bullet of Requirement R3, we suggest using “Restate” in place of “Reissue.”</p> <p>The responsible entity is not really reissuing the Reliability Directive. They are still in the act of trying to get the Reliability Directive issued and are simply re-communicating it because it was not understood.</p>
<p><b>Response:</b> The RCSDT believe the offered suggestion does not improve COM-002-3, R1. No change made.</p>		
<p>Kansas City Power &amp; Light</p>		<p>R9 - considering the reliability of communication systems and System Operator attention may be on more important operational concerns, a 2-hour response to a problem with the alternative means of communication is over sensitive. Allowing for sometime in an operating shift would be more in line, such as 8 hours.</p> <p>COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability, and then, if it decides to do so, designate</p>

Organization	Yes or No	Question 6 Comment
		<p>another, if you may, “new” Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made.</p> <p>Violation Severity Levels for COM-001-2: The VSL’s for requirements R1-R8 and R11 do not recognize the efforts of Entities to meet the requirements. If an Entity failed to establish communications or alternative communications with 1 Entity out of 20 should that be Severe?</p> <p>The RCSDT believes the requirements are essential to reliable operations; however, the requirement is Severe more so because it is a pass-fail requirement, and by definition makes it Severe (binary requirement). No change made.</p> <p>Implementation Plan for COM-001-2: The implementation plan is too aggressive at completing in 6 months after regulatory approvals. Establishing agreements with other RC’s, TOP’s and BA’s for alternative “interpersonal communications” regarding the various types of communications available that meet these requirements will take more than 6 months. Recommend 12 months to allow Entities sufficient time to reach agreements and to establish the communications.</p> <p>The RCSDT believes that six months is adequate considering additional facilities should not have to be built to establish communications with the DP and GOP; similarly, compliance documentation should not impose significant work on the entities’ part. No change made.</p>
<p><b>Response:</b> See response above.</p>		
Southern Company		<p>We question why the first paragraph of Section 1.3 - Data Retention has been included in each of these three standards. We suggest that it should be removed from each standard.</p> <p>The RCSDT thanks you for your comments. The Data Retention language has been</p>

Organization	Yes or No	Question 6 Comment
		<p>updated to be consistent with the Standards Drafting Guidelines.</p> <p>We suggest the drafting team look at Standard EOP-008, Requirements R3 and R8 and add appropriate language in Standard COM-001-2, to avoid instantaneous non-compliance for loss of Interpersonal Communications and/or alternate Interpersonal communications (R1 and R2).</p> <p>The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard.</p> <p>The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made.</p> <p>COM-001-2 Dominion VP:</p> <p>COM-001-2; M9 reads “at least on a monthly basis”, Dominion suggests that this be changed to “at least once per calendar month” as written in R9. This change should also be corrected in the VSLs.</p> <p>The RCSDT agrees and the language in M9 has been changed to agree with the language in R9 and the R9 VSL.</p> <p>M8 - We suggest removing the second “that” in the first sentence of the measure.</p> <p>COM-001-2, M8: The RCSDT agrees and the language in M8 has been changed to delete the additional “that.”</p> <p>M10 - Dominion suggests this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6), therefore M10 should read:</p>

Organization	Yes or No	Question 6 Comment
		<p>“Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.)”</p> <p>The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA.</p> <p>M12 needs to be removed.</p> <p>The RCSDT thanks you for your comment and has made the deletion.</p> <p>Southern: Definition of Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communications used for day-to-day operation.</p> <p>Comments:</p> <p>-The proposed definition uses the term “medium.”</p> <p>What is the scope of that?</p> <p>Telephony is a “medium” but there is wired, wireless, satellite, etc. Was “medium” intended to differentiate voice, paper, text, email, teletype, or something else?</p> <p>-Similar to that last question - does the qualifying term “same” when modifying infrastructure mean something like voice versus written?</p> <p>What about situations where the primary telephone system is Voice Over Internet</p>

Organization	Yes or No	Question 6 Comment
		<p>Protocol (VOIP) and it is using the same computer network infrastructure as an email or messaging system. That is the “same infrastructure” but a different “medium”</p> <p>R1 Each Reliability Coordinator shall have Interpersonal Communications capability with the following entities: ...”</p> <p>The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made.</p> <p>Comments</p> <p>-In later requirements it is proposed that the entity “...shall designate an...” It is suggested that for consistency and auditability, this concept be used for R1, R3, R5, R7 and R8.</p> <p>Each entity listed must “have” an Interpersonal Communication capability and for Alternative Interpersonal Communication capability able to “designate” the alternate. The team established these requirements to provide flexibility to the industry. No change made.</p> <p>In addition, the qualifier of “primary” should be used such that the requirements read “... shall have designated, primary Interpersonal Communications capability with the following entities:” Although it is appropriate that “Alternative” be capitalized since it is used in a defined term (i.e. Alternative Interpersonal Communication”) that bounds acceptable alternative methods , we do not see the need to capital “primary.”</p> <p>The RCSDT emphasizes the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made.</p>



Organization	Yes or No	Question 6 Comment
		<p>R9 Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communications capability at least once per calendar month.</p> <p>Comments</p> <ul style="list-style-type: none"> <li>-The requirement is unclear if the required monthly test is a general functionality test or if there is the expectation of testing the designated Alternative Interpersonal Communications with all of the entities defined in the subrequirements of R2, R4, and R6.</li> <li>-There is no expectation of testing the primary Interpersonal Communications is this intentional or an oversight?</li> </ul> <p>Although functional testing of this should be done as a normal course of business, should an explicit test be required with each entity in the subrequirements of R1, R3, R5, R7 and R8 to insure, for example, that all the phone numbers are correct?</p> <p>The RCSDT intends each Alternative Interpersonal Communication capability to be verified functional by testing. If an entity has only one such capability, then only one test would be required. You further ask whether the absence of required testing of the “primary” (word is not in the requirement) Interpersonal Communication capability is intentional. The RCSDT intentionally left it out because the Communication capability is used routinely and the use is sufficient to demonstrate functionality. With respect to phone numbers, these are procedural matters to be addressed by each individual entity and by including phone numbers it would make the requirement prescriptive. The requirement is to test capability. No change made.</p> <p>R10 Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer.</p>

Organization	Yes or No	Question 6 Comment
		<p>Comments</p> <p>-The following scenario seems plausible: The Interpersonal Communications fails and is detected at 14:00 and gets fixed at 14:35. It lasted more than 30 minutes but is fixed. As written the requirement would require the responsible entity to notify entities identified in R1 through R6 by 15:00 (i.e. 60 minutes from detection) even though the problem no longer exists. Is that the expectation?</p> <p>The RCSDT proposes that upon detection of failure that continues at least 30 minutes, starts the 60-minute clock. The 30 minutes allows an entity time to restore or determine if it can restore its Interpersonal Communication capability before the clock starts. No change made.</p> <p>General Question</p> <p>-Does COM-001 apply only to primary control centers or back-ups, per EOP-008, as well?</p> <p>The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. No change made.</p> <p>COM-002-3 Southern</p> <p>R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient.</p> <p>Comment</p> <p>It is recommended that the requirement be clarified that the Reliability Directive be identified as such during its delivery. (e.g., "...shall identify the action as a Reliability Directive to the recipient during its delivery.")</p> <p>The RCSDT believes the suggestion is overly prescriptive and limits the ability for an</p>

Organization	Yes or No	Question 6 Comment
		<p>entity to meet the requirement. No change made.</p> <p>R2 Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive.</p> <p>Comment</p> <p>-It is recommended that the requirement be clarified that an entity receiving a Reliability Directive repeat, restate, rephrase or recapitulate it immediately upon receiving it. (e.g., "...shall repeat, restate, rephrase or recapitulate the Reliability Directive immediately upon receiving it."). As written, there is not limit as to when the entity must repeat it (i.e. they could wait 2 hours).</p> <p>The proposed requirement uses the term "upon recognition." No change made.</p> <p>General Question</p> <p>-The Standard is not clear as to what each entity is to do when more than one entity receives a Reliability Directive at the same time (e.g. during a RC area teleconference call) . Is, for example, a roll call of receiving entities expected to be held so that they individually can repeat, restate, rephrase or recapitulate the Reliability Directive followed by individual confirmation required in R3?</p> <p>The question about whether a roll call of receiving entities is expected to be held is asking for prescription of "how" to accomplish what is required. The RCSDT recognizes that there is more than one way to accomplish the confirmation when more than one entity received a Reliability Directive at the same time. What is required is for the recipient to respond in such a way that the issuer may determine whether the message has been properly understood. One way for that to occur would be, as you suggest, for the entities to individually respond. Another way would be for a pre-established protocol or procedure (e.g. roll-call, all-call, etc.) to be in place and used in such cases. The RCSDT has determined that prescribing "how" to ensure that "what" is required has been accomplished is not required and that the individually adopted procedures or protocols could offer many different ways to</p>

Organization	Yes or No	Question 6 Comment
		<p>ensure effectiveness. No change made. The RCSDT concept is that “All Call” compliance is related to having a document that explains how the entity responds. No change made.</p> <p>IRO-001-3 Dominion VP:</p> <p>R2 - Dominion questions the phrase “physically implemented” and recommends that the intent be clarified in the language.</p> <p>The RCSDT believes there may be conditions where an entity may not be able to physically implement the direction; for example, an entity that does not have the right to access certain equipment or cannot manually operate a broken apparatus. We feel the proposed language achieves the intended purpose. No change made.</p> <p>Dominion notes the following comment and response posted under Consideration of Comments on Initial Ballot - Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25 - March 7, 2011:</p> <p><i>“IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (e.g., Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling.</i></p> <p><i>Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives.” This is the</i></p>

Organization	Yes or No	Question 6 Comment
		<p><i>“direction in accordance with Requirement R2” stated in R3 and the “direction in accordance with Requirement R3” stated in R4.”Dominion believes the entity’s comments remain valid and the response provided by the RCSDT does not address all aspects of the concern. Dominion suggests that the language be changed to “Reliability Directive” consistent with COM-002.</i></p> <p>The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made.</p> <p>M2 - need to add the following words “compliance with, physically, unless” which were included in R2, therefore M2 should read:</p> <p><i>“Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator’s direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator’s direction.”</i></p> <p>The RCSDT thanks you for your comment and has added the word “physically” to the IRO-001-2 Measure, M2.</p> <p>(R2) “Section 1.3, the second bullet; need to add calendar to 12 calendar months Southern General recommendation</p> <p>The RCSDT appreciates your comments and conforming changes have been made to the Data Retention section.</p>

Organization	Yes or No	Question 6 Comment
		<p>-It is recommended that where the verb “direct/directed” or noun “direction” is used in Purpose, R1, R2 and R3, that it be replaced with the verb “instruct/instructed” or noun “instruction”, as appropriate. This would help the industry avoid confusion often referred to as “big D” or “little d” directives. It is noted that the term “Reliability Directive” does that to a great degree but avoiding the verb/noun “direct/direction” would augment the difference.</p> <p>The RCSDT feels the use of direct and directed is consistent with the purpose and application of those terms in other standards. No change made.</p> <p>R1 Each Reliability Coordinator shall have the authority to act or direct others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts.</p> <p>Comment</p> <p>-At what point in time is “identified” referring to in “...to prevent identified events or...” Is it referring to current or future events? One might assume both since the “Time Horizon” is defined as Real-time Operations, Same Day Operations and Operations Planning but the requirement may be enhanced if explicitly stated (“...to prevent events identified in real-time or in the future or to mitigate the magnitude...”).</p> <p>The context of “identified” is when a set of system conditions is recognized that could lead to an Emergency or Adverse Reliability Impact, which may require action. See standards IRO-008 and IRO-009. No change made.</p> <p>-For clarity, the scope of the authority should be limited to the Reliability Coordinator Area (“...that result in an Emergency or Adverse Reliability Impacts within its Reliability Coordinator Area”). As written, it implies the authority should extend outside its RC Area.</p> <p>The RCSDT believes that limiting the scope to the RC’s area would be too limiting and not account for potential conditions where an adjacent RC may have lost its wide-</p>

Organization	Yes or No	Question 6 Comment
		<p>area view and requests the assistance of another RC or vice-versa. No change made.</p> <p>R2 Editorial comment - The words “compliance with” are in a different font in the posted version.</p> <p>The RCSDT thanks you for your comment and has corrected the font in IRO-001, R2.</p> <p>R3 Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2.</p> <p>Comment</p> <p>The requirement states the responsible entities shall “inform” its RC when unable to perform as directed but it is unclear when the notification needs to take place. Although the term “as soon as practical” may seem be un-measurable, as written now there is no time deadline to perform the notification - i.e. it could be 4 hours later after recognition.</p> <p>The proposed requirement uses the term “upon recognition.” No change made.</p>
<p><b>Response:</b> See response above.</p>		
Central Lincoln		<p>As stated in our prior comments, we continue to have problems with COM-002, R2 and R3 as written. The SDT’s answer (“It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive”) addresses our concern perfectly, and we would agree with such an expectation. Unfortunately, the expressed expectation is not in the proposed standard or even in a proposed guideline for the standard.</p>
<p><b>Response:</b> The RCSDT believes this is a process or procedure question that should be determined by the entity in how it handles communication with the RC. The standard, as written does, not preclude the entity from having a procedure. No change made.</p>		

Organization	Yes or No	Question 6 Comment
<p>Entergy Services, Inc</p>		<p>Entergy does not agree with including the DP and GOP in this standard. However, if they are to be included and are required to have the communications capability indicated, they should be included in R10. Why would it be important for the TOP to notify the DP that their communications method has failed, but it is not important for the DP to notify the TOP when their communications method has failed? The distinction doesn't seem reasonable or meaningful.</p> <p>The RCSDT stresses that R11 grants the DP and GOP flexibility in determining, in conjunction with its TOP or BA, when its Interpersonal Communication capability must be restored. This would provide allowances for those entities, which have little or no impact on the reliability of the BES while not requiring them to obtain Alternative Interpersonal Communication capabilities. Making the proposed changes would eliminate this flexibility. Removing R11, takes away the RCSDT's effort to include those provisions in the standard. No change made.</p> <p>Additionally, in the draft of COM-002-3 requirement 2 contains the language that the recipient of the directive shall "repeat, restate, rephrase or recapitulate" the directive. Why are so many synonyms of repeat necessary? Repeat or restate should be sufficient to get the point across.</p> <p>The RCSDT used the additional words to facilitate complete understanding. No change.</p>
<p><b>Response:</b> See response above.</p>		
<p>Independent Electricity System Operator</p>		<p>(1) The proposed implementation plan conflicts with Ontario regulatory practice respecting the effective date of the standard. It is suggested that this conflict be removed by appending to the implementation plan wording, after "applicable regulatory approval" in the Effective Dates Section A5 on P. 4 of the draft standard COM-001, COM-002 and IRO-001, and on P. 2 of COM-001's Implementation Plan and P. 1 of COM-002's and IRO-001's Implementation Plans, to the following effect:", or as otherwise made effective pursuant to the laws applicable to such ERO</p>



Organization	Yes or No	Question 6 Comment
		<p>governmental authorities.”</p> <p>The RCSDT is uncertain where the conflict exists. The standard IRO-001 uses the term “after applicable” and the others “following applicable.” The RCSDT has updated the standards to use the most current effective date language.</p> <p>(2) COM-001: Measure M9: - “monthly basis.” Suggest changing “monthly basis” to “at least once per calendar month” to be consistent the wording in R9.</p> <p>The RCSDT thanks you for your comment and has made the conforming change in the COM-001, Measure M9.</p> <p>(3) IRO-001: Measures M1, M2, M3 - The types of evidence are listed in paragraph form. This is not consistent with presentation style in COM-001-2 Measures, where evidence is listed in bullet format. Suggest using bullet form for consistency.</p> <p>The RCSDT agrees and has made all the Measures bullet form in COM-001-2, but not in COM-002-3 and IRO-001-3.</p> <p>(4) IRO-001, Data Retention Section:</p> <p>i. The retention requirements do not reflect the revised requirements. For example: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4.</p> <p>Data retention related to IRO-001-2, R2/M2 was changed to agree with your suggestion. The changes were more involved – several sections were changed, including removing the reference to R4/M4.</p> <p>ii. Section 1.3, second paragraph: “The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider... shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of</p>

Organization	Yes or No	Question 6 Comment
		<p>time as part of an investigation:</p> <p>"The word "or" between Generator Operator and Distribution Provider should be changed to "and."</p> <p>The RCSDT thanks you for your comment and has made conforming changes.</p>
<p><b>Response:</b> See response above.</p>		
<p>Hydro-Quebec TransEnergie</p>		<p>For COM-001:</p> <p>R1.2 and R2.2: The phrase "within the same Interconnection" is improper; it needs to be removed. RCs between two Interconnections still need to communicate with each other for reliability coordination (e.g. between Quebec and the other RCs in the NPCC region to coordinate reliability issues including curtailing interchange transactions crossing an Interconnection boundary). The SDT's response to industry comments on the previous posting that the phrase was added to address the ERCOT situation (that ERCOT does not need to communicate with other RCs and that such coordination takes place between TOPs) leaves a reliability gap.</p> <p>Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinator's from one interconnection to another. No change made.</p> <p>2. R3.5 and R4.3: The phrase "synchronously connected within the same Interconnection" is also improper; it needs to be removed. TOPs do communicate with other TOPs including those asynchronously connected and in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). The reason that was used in response to the above comments (coordination among TOPs for DC tie operation) contradicts with the inclusion of this</p>

Organization	Yes or No	Question 6 Comment
		<p>phrase in R3.5 and R4.3.</p> <p>The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and have eliminated the phrase “within the same interconnection.”</p> <p>3. R4 and R6: Not requiring an Alternative Interpersonal Communication capability between the BAs and the DP and GOP can result in a reliability gap. If Interpersonal Communication capability between the BAs and these entities is required to begin with to enable BAs to communicate with these entities (such as operating instructions or Reliability Directives) to ensure reliable operations, then an alternative capability is also needed to ensure this objective is achieved when the primary capability fails.</p> <p>The RCSDT refers the Order No. 693 in Paragraph 508 to clarify the reason the DP and GOP are not required to have Alternative Interpersonal Communication and is as follows: “(1) expands the applicability to include Generator Operators and Distribution Providers and includes Requirements for their telecommunications facilities; (2) identifies specific requirements for telecommunications facilities for use in normal and emergency conditions that reflect the roles of the applicable entities and their impact on Reliable Operation and (3) includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions.” In addition, R11 requires the DP and GOP to consult with its BA and TOP to determine a mutually agreeable action for restoration. No change made.</p> <p>4. To preclude the possibility of problems arising from having different languages spoken between entities, COM-001-1.1 R4 should remain as it was or those ideas kept in the revised requirement. R4 read: “R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.” 5. Measure M3</p>

Organization	Yes or No	Question 6 Comment
		<p>does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised.</p> <p>According to the proposed implementation plan for COM-001-2, R4 pertaining to the use of English will remain in effect upon the effective date of COM-001-3. This requirement is being revised and will be included in Standard COM-003-1, Operating Personnel Communications Protocols. COM-001-1.1, R4 will be retired at midnight the day before COM-003-1 becomes effective. No change made.</p> <p>For IRO-001:</p> <p>The Data Retention Section does not reflect the revised requirements. As examples: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1.</p> <p>The RCSDT thanks you for your comment and has made conforming changes to the Data Retention section.</p> <p>Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2.</p> <p>The RCSDT has made conforming changes by correcting an error in the data retention section</p> <p>And, in the Data Retention Section, R4 and M4 are mentioned. However, there are only three requirements with their corresponding measures in the standard.</p> <p>The RCSDT has made conforming changes by correcting an error in the data retention section</p>
<p><b>Response:</b> See response above.</p>		
NIPSCO		<p>In IRO-001 R2 an "and" is missing after Generator Operator, and the comma should be removed.</p> <p>Why are there 3 different Effective Dates for this project, each standard being</p>

Organization	Yes or No	Question 6 Comment
		different? To simplify, can't they all be made identical?
<p><b>Response:</b> The RCSDT thanks you for your comment and has made conforming changes to IRO-001 R2 and the effective dates to the second quarter after regulatory approval.</p>		
<p>Oncor Electric Delivery Company LLC</p>		<p>For COM-001-2</p> <p>Oncor takes the position that contacting all impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer as prescribed in R1 through R6 is not doable within the ERCOT interconnect for a Transmission Operator.</p> <p>Oncor takes the position that notification only to the RC and BA is sufficient and that those two entities have the operational functionality to contact within the prescribed time all affected Distribution Providers, Generator Operators, and other Transmission Operators.</p> <p>The RCSDT proposes that upon detection of failure that continues at least 30 minutes, starts the 60-minute clock. The 30 minutes allows an entity time to restore or determine if they can restore Interpersonal Communication capability before the clock starts. No change made.</p> <p>R10 - Oncor takes the position that the word “impacted” added to R10 will clarify that notification only needs to be made to the entities that are effected by the failure of a communication path. This will also more align with the language in M10.</p> <p>The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA.</p> <p>For COM-002-3</p> <p>Oncor request clarity about what constitutes a “recipient.” For example, if a</p>

Organization	Yes or No	Question 6 Comment
		<p>Transmission Grid Operator performing the functions of a Transmission Operator issues a Reliability Directive to its own field operations personnel to perform an action on behalf of the same entity, does the field operations personnel as the recipient become in affect a “Transmission Operator” subject to R2?</p> <p>The term “recipient” in this case is referring to Functional entity to Functional entity communication. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>Consolidated Edison Co. of NY, Inc.</p>		<p>Regarding COM-002 Requirement R1, we recommend that this requirement be reworded as follows: “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall require that the Reliability Directive be communicated using three-part communications as described in Requirements R2 and R3 of this standard.”</p> <p>The reason for this recommended rewording are threefold:</p> <ol style="list-style-type: none"> <li>1. Good operating practice calls for use of three-part communications at all times. The recommended re-write encourages the use of the good operating practice of three-part communications at all times, but does not require it.</li> <li>2. It is not good operating practice to require that an additional (unnecessary) phrase be used during emergency situations. During emergency situations, it is best to use standard operating protocols so as to limit unnecessary burdens on operating personnel during critical and stressful times.</li> <li>3. By implementing the proposed new R1 requirement, it would effectively weaken the need for rigorous compliance with any and all directives issued by the RC’s, TO’s or BA’s.</li> </ol> <p>The RCSDT respectfully disagrees, the recipient needs clarity when a Reliability Directive is communicated. No change made.</p>

Organization	Yes or No	Question 6 Comment
		<p>Regarding IRO-001 Requirement R1, we recommend that the current requirement R3 be reinstated as the new requirement R1. That is, the new requirement R1 should read as follows: R1. The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes.</p> <p>We do not support any further dilution of Reliability Coordinator authority to enforce Reliability Directives through deletion of the 30-minute maximum response time period. The timely actions in response to any Reliability Coordinator issued Reliability Directives is an essential part of the process.</p> <p>The RCSDT believe these concerns are addressed in other performance-based standards (IRO-008 and IRO-009) that require action and contain timing requirement when addressing IROs. The omission of TSP, LSE, and PSE does not diminish reliability and brings the standard into conformity with COM-001 and COM-002. No change made.</p>
<p><b>Response:</b> See response above.</p>		
We Energies		<p>COM-001, Although a great improvement over existing COM-001, and eliminates the data component see comments:</p> <ul style="list-style-type: none"> <li>-For R5.1 Can the solutions included to meet R1 be included, same R3.2 and R5.2, same R5.3 and R7.2, same R5.4 and R8.1</li> <li>-For R5.2 Can the solutions included to meet R2 be included, same R4.2 and R6.2</li> </ul> <p>COM-001-2, R5: In a word: Yes. The requirement is to have capability and that capability does not have to be different than the entity on the other end has. No change made.</p>

Organization	Yes or No	Question 6 Comment
		<p>-R9 a 2 hour response for a once a month test seems extreme, as would require a secondary Alternate Interpersonal Communications capability</p> <p>-M9 is reasonable, but should include something about communication actual repair and or time estimates</p> <p>COM-001-2, R9: The requirement is to “initiate action to repair or designate a replacement Alternative Interpersonal Communication capability...” within two hours. The RCSDT recognizes that many different contracts or other arrangements may exist to address repair. However, the RCSDT finds that entities should know what they have and how to initiate repair and those two hours to do so is reasonable. No change made.</p> <p>COM-001-2, M9: The requirement is to have evidence that either repair was initiated or an Alternative Interpersonal Communication capability was designated within two hours. The RCSDT understands that, in extreme cases, the entity may need to make its initial Alternative Interpersonal Communication capability its Interpersonal Communication capability and then designate another Alternative Interpersonal Communication capability if the repair times are so long that to continue in that mode for that long would present a reliability risk. Such arrangements, if they exist at all, are very rare. No change made.</p> <p>-R10 The use of R1 through R6 implies notification of both Interpersonal Communications and Alternate Interpersonal Communications failures. Do you notify if you become aware after the link is back up if it was down for GT 30 minutes, and Doesn’t address notifying when restored?</p> <p>COM-001-2, R10: The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6,” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements.</p> <p>Yes, there is no requirement to notify identified entities the Interpersonal Communication have been restored.</p>



Organization	Yes or No	Question 6 Comment
		<p>-R11 Implies that R8 and R9 are independent and redundant to R5.3, R5.4 and R3.3 and R3.4.</p> <p>COM-001-2, R11: The RCSDT believes you intended to refer to R7 and R8, rather than R8 and R9. The RCSDT does not believe that the language implies that the communications capability required by R7 and R8 are independent, but they may be. If the entity which is registered as a DP is also registered as a GOP (probably unlikely), then the capability could be met by the same medium. Neither does the RCSDT believe that R11 implies that R7 and R8 are redundant to R3.3 and R3.4 or to R5.3 and R5.4. No change made.</p> <p>R11 is not clear on the purpose of the statement “determine a mutually agreeable time for restoration” this could be driven by forces outside the control any of the entities. I think” provide estimated restoration and actual restoration time and determine mutually agreeable alternative during outage” would be better.</p> <p>The RCSDT notes that R11 does not limit the sources of information used by the DP or GOP in establishing a mutually agreeable action for restoration of its Interpersonal Communication capability with its TOP or BA. That is precisely why R11 is written in this manner. This allows flexibility on the part of the TOP and BA in determining when the Interpersonal Communication capability must be restored. In situations where there is little or no impact to the reliability of the BES, some flexibility could be allowed without requiring the acquisition of Alternative Interpersonal Communication capability. No change made.</p> <p>Update M9 accordingly</p> <p>See comment above concerning R9.</p> <p>COM-002</p> <p>-Since all the Requirements are related to Reliability Directives, is it implied that all “Emergency Communications” are Reliability Directives even if not designated as such per R1.</p>

Organization	Yes or No	Question 6 Comment
		<p>The RCSDT would like to highlight that communications is not a defined term in the NERC Glossary of Terms used in Reliability Standards ,nor is it defined in this standard. Thus, the plain meaning of communications is intended. The RCSDT has not implied a defined term in the wording of the purpose statement of the standard, nor in the Requirements themselves, that any communication is a Reliability Directive unless the issuing functional entity identifies the actions to be taken as a Reliability Directive. Therefore, not all communications during Emergencies will be Reliability Directives. No change made.</p> <p>COM-002, R2: The RCSDT included some examples of how to provide the evidence needed for Measure M2. The examples are not intended to be an all-inclusive list. The RCSDT does point out, though, that dated operator logs could provide such evidence. The RCSDT does not believe that the recipient has the alternative to refuse to perform as required. However, the RCSDT does bring attention to standard IRO-001-3, which requires entities to comply with directions unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements. No change made.</p> <p>-The M2 measure could be difficult for a recipient such as a Distribution Provider or Generator Operator. A recipient’s phone may not be recorded but an initiator’s always should. If a receiver refused to meet the R2 requirement, an initiator should have an alternative. i.e., repeat the directive and provide potential penalties if recipient refuses to comply. Should the initiator have responsibility for providing the entire 3-way evidence as M3 implies?</p> <p>The RCSDT would like to highlight that communications is not a defined term in the NERC Glossary of Terms used in Reliability Standards nor is it defined in this standard. Thus, the plain meaning of communications is intended. The RCSDT has not implied a defined term in the wording of the purpose statement of the standard, nor in the Requirements themselves, that any communication is a Reliability Directive unless the issuing functional entity identifies the actions to be taken as a Reliability Directive. Therefore, not all communications during Emergencies will be</p>

Organization	Yes or No	Question 6 Comment
		<p>Reliability Directives. No change made.</p> <p>COM-002 M3: The Measure is correct as written. The issuer only needs the evidence that it confirmed the response was accurate or reissued according to the requirement. Evidence does not necessarily mean the entity must have the entire three-way conversation captured (i.e., recording), but evidence the entity confirmed or reissued according to requirement. No change made.</p> <p>IRO-001</p> <p>Although a great improvement over existing IRO-001, see comments:</p> <ul style="list-style-type: none"> <li>-R2 needs to be clear that it is the Reliability Coordinator’s Reliability Directive that must be complied with not just any Reliability Coordinator’s direction as stated.</li> <li>-The M2 measure could be difficult, as the operator would have to have access to documents proving the safety, equipment, regulatory or statutory requirements, which may be the assessment of an individual applying the safety rule.</li> </ul> <p>Is the measure requiring a deposition of the individual to be performed for each instance?</p> <p>The RCSDT notes that the intent of the standard is not intended to limit the RC authority to issue Reliability Directives. The Reliability Coordinator issuing the Reliability Directive is the one, which the recipient must comply. It is assumed that a BA or TOP has a relationship with one and only one RC for a given Balancing Area or Transmission Operator Area (some may have multiple, disconnected areas, that are subject to different RCs). Still need a way to communicate to mutually agree. No change made.</p> <p>With an assumed data retention of 90 day (voice) or 12 month document retention the deposition would be unlikely to be acquired prior to the retention period ending.</p> <p>Data retention is a significant issue when the data being recorded is voluminous, supporting a 90-day retention period. No change made.</p>

Organization	Yes or No	Question 6 Comment
		<p>-R3 needs to be clear that it is the inability to perform the Reliability Coordinator’s Reliability Directive that must be communicated not just any “Reliability Coordinator’s as directed.”</p> <p>The RCSDT believes there is a misunderstanding about IRO-001, R3. The requirement specifically says “direction” and is in alignment with Requirement R1. Please note a Reliability Directive is a subset of “direction” that the RC may perform in accordance with R1. No change made.</p> <p>-The Data Retention section does not align with the standard:</p> <p>The Reliability Coordinator shall retain its evidence for the most recent 90 calendar days for voice recordings or 12 months for documentation for Requirement R2, Measure M2.</p> <p>The RCSDT thanks you for your comment. The RC has been removed from the measure and replaced with the corresponding R2 responsible entities (BA, DP, GOP, and TOP).</p> <p>R2 and M2 apply to the Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider.</p> <p>There is no R4 and M4.</p> <p>The RCSDT thanks you for your comment and has made conforming changes.</p>
<p><b>Response:</b> See response above.</p>		
<p>City of Jacksonville Beach dba/ Beaches Energy Services</p>		<p>COM-001-2, R9 - "Each ... shall test its Alternative Interpersonal Communications capability." I would suggest adding the phrase "...to each entity for which Alternative Interpersonal Communications is required." to add clarity.</p>
<p><b>Response:</b> The RCSDT proposes that R9 correctly identifies and provides clarity for the entities required to have Alternative Interpersonal Communication capability. No change made.</p>		

Organization	Yes or No	Question 6 Comment
<p>Indiana Municipal Power Agency</p>		<p>For R2 in IRO-001-3, the requirement needs to have the entities comply with their Reliability Coordinator’s direction received in R1. Currently, requirement 2 directions are not linked back to R1 which means entities would have to comply with all Reliability Coordinator’s directions regardless if they are associated with R1.</p> <p>The RCSDT agrees with your comment and believes the requirements does not need a linkage. No change made.</p> <p>For R7 in COM-001-2, IMPA does not believe that every Distribution Provider needs to be included in requirement 7. IMPA recommends stating that requirement 7 only applies to Distribution Providers who own an UFLS or UFLS system.</p> <p>The expectation is that a Distribution Provider that is registered with NERC is obligated to comply. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>Luminant Energy Company LLC</p>		<p>IRO-001-3 R1 is not consistent with the direction taken in COM-002-3 which requires the Reliability Coordinator to identify Reliability Directive as such. The same approach should be taken with IRO-001-3 R1 so that the Reliability Coordinator is required to identify directions that are made to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts as such prior to or when issuing the directions. This extra specification is needed to eliminate any possible confusion in areas where the market operator and Reliability Coordinator are the same entity. In these areas, the Reliability Coordinator/market operator routinely gives directions to other entities that are not to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. Without the added clarification the receiving entity may not know the urgency of the situation and may not know to inform the Reliability Coordinator if they are unable to perform as required by R3.</p>

Organization	Yes or No	Question 6 Comment
<p><b>Response:</b> The RCSDT views R1 as an authority requirement to direct others, which could include a subset of direction called Reliability Directive. Requirement R2 is the response requirement for the recipient. The judgment the recipient is under is that the recipient must comply with the direction, unless the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. Requirement R3 simply requires the recipient to inform the issuer of its inability to perform the direction. No change made.</p>		
<p>NextEra Energy, Inc.</p>		<p>NextEra has the following additional comments.</p> <p>COM-002-3</p> <p>The purpose of COM-002-3 is:</p> <p>“To ensure Emergency communications between operating personnel are effective.”</p> <p>This stated purpose is not the same as the specific requirement that three-way communication is used for a Reliability Directive. Thus, NextEra requests that the purpose be revised to read as follows:</p> <p>“To ensure that when a Reliability Directive is given that the Reliability Directive is explicitly stated and three-way communication is used.”</p> <p>The majority of stakeholders did not raise any issues with the purposed statement, and the RCSDT believes the current purpose statement is adequate. No change made.</p> <p>Consolidation of COM-002-3 and IRO-001-3</p> <p>NextEra notes a continuing area of concern with the somewhat unsynchronized approach taken in the drafting process. Reliability Standards COM-002 and IRO-001 are now on version three, and still there is a somewhat unsynchronized approach being proposed. A clear and consolidated approach seems easily achievable with minimal effort. Thus, as proposed below, NextEra requests that COM-002-3 and IRO-001-3 be combined, which also would appear to allow for the retirement of certain requirements, such as TOP-001-1 R1-4.</p> <p>The standard TOP-001-1, R1 through R4 is under the purview of another team. No</p>

Organization	Yes or No	Question 6 Comment
		<p>change made.</p> <p>NextEra also is concerned that the current approach may have contributed to several significant misstatements in IRO-001-3, R1-3, which use the terms “direct,” “direction” and “directed,” instead of the term Reliability Directive as used in COM-002-3. COM-002-3 and IRO-001-3 indicate that three-way communication only is required when a Reliability Directive is issued.</p> <p>The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction,” No change made.</p> <p>This begs the question of what are the potentially other, lower classes of directives in IRO-001-3 R1-3?</p> <p>And why do they need to be followed with or without three-way communication?</p> <p>Reliability Directives are identified as such at the time they are issued so the recipient understands the magnitude of the action being directed. No change made.</p> <p>Thus, at a minimum, NextEra requests that the terms direct, direction and directed be deleted from IRO-001-3 R1-3, respectively, and that Reliability Directive be inserted. This change, and other proposed changes, are reflected in NextEra’s overall proposal to combine COM-002-3 and IRO-001-3 into one COM-002-3 standard: {Note: If the term Adverse Reliability Impact is revised as proposed by NextEra, then the term would not need to be stricken.</p> <p>The RCSDT understands some of the benefits with combining the standards; however, at this point, it would further delay the progress of the standards.</p> <p>The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made.</p> <p><i>R1. Each Reliability Coordinator shall have the authority to act and to issue a Reliability Directive to a Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider within its operating region to prevent identified events that may lead to, or to mitigate the magnitude or duration of, an Emergency.</i></p>

Organization	Yes or No	Question 6 Comment
		<p><i>[Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i></p> <p><i>R1.1 Each Transmission Operator shall have the authority to act or issue a Reliability Directive to a Balancing Authority, Generator Operator and Distribution Provider within its operating region to prevent identified events that may lead to, or to mitigate the magnitude or duration of, an Emergency. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i></p> <p><i>R1.2 Each Balancing Authority shall have the authority to act or issue a Reliability Directive to a Generator Operator and Distribution Provider within its balancing region to prevent identified events that may lead to, or to mitigate the magnitude or duration of, an Emergency. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i></p> <p><i>R2. When a Reliability Coordinator, Transmission Operator or Balancing Authority issues a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p><i>R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive. [Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p><i>R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall either [Violation Risk Factor: High][Time Horizon: Real-Time]:</i></p> <ul style="list-style-type: none"> <li>-Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or</li> <li>-Reissue the Reliability Directive to resolve any misunderstandings.</li> </ul>



Organization	Yes or No	Question 6 Comment
		<p><i>R4. Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator’s Reliability Directive, unless compliance with the Reliability Directive cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i></p> <p><i>R4.1 Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform a Reliability Directive in accordance with Requirement R4. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i></p> <p><i>R5. Each Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Transmission Operator’s Reliability Directive, unless compliance with the Reliability Directive cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i></p> <p><i>R5.1. Each Balancing Authority, Generator Operator, and Distribution Provider shall inform its Transmission Operator upon recognition of its inability to perform a Reliability Directive in accordance with Requirement R5. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i></p> <p><i>R6. Each Generator Operator or Distribution Provider shall comply with its Balancing Authority’s Reliability Directive, unless compliance with the Reliability Directive cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i></p> <p><i>R6.1. Each Generator Operator or Distribution Provider shall inform its Balancing Authority upon recognition of its inability to perform a Reliability Directive in</i></p>

Organization	Yes or No	Question 6 Comment
		<p><i>accordance with Requirement R6. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i></p> <p>Conclusion</p> <p>Given the importance of having clear and concise Reliability Standards on the issue of directives and three-way communication, until the above concerns raised by NextEra in items 4 through 6 are addressed, NextEra intends to continue to vote “no” on COM-001-2, COM-002-3 and IRO-001-3.</p> <p>The RCSDT thanks you for your comment and believes the revisions made to this set of standards is valuable to the industry and within the scope of the project. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>Manitoba Hydro</p>		<p>COM-001-2-Definition ‘Interpersonal Communication’ - for clarity, the definition should explicitly state that data exchange is not included.</p> <p>The standard COM-001 is for Interpersonal Communication capability, which facilitates the communication (i.e., “... to interact, consult, or exchange information.”) and not the exchange of data which is addressed in IRO-010. No change made.</p> <p>-R9 - for clarity, the wording ‘... within 2 hours’ should be replaced with ‘... within 2 hours of the unsuccessful test’. Conforming change required to M9 as well.</p> <p>The RCSDT proposes that R9 correctly identifies and provides clarity for the entities required to have Alternative Interpersonal Communication capability. No change made.</p> <p>-R10 - for clarity, the wording ‘... as identified in R1 through R6...’ should be replaced with ‘... with which it is required to have Interpersonal Communications capability or Alternative Interpersonal Communication capability...’.</p>

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		<p>The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6,” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements.</p> <p>-M6 - the term ‘Adjacent’ needs to be capitalized in the last sentence of the paragraph as ‘Adjacent Balancing Authority’ is a NERC defined term.</p> <p>The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made conforming measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.</p> <p>-M7 - ‘that’ in the first line is repeated</p> <p>The RCSDT thanks you for your comment and has made conforming changes to remove the additional word “that.”</p> <p>-M9 - the wording ‘on a monthly basis’ should be replaced with ‘once per calendar month’ to be consistent with the wording of the R9.</p> <p>The RCSDT agrees and the language in M9 has been changed to agree with the language in R9 and the R9 VSL.</p> <p>-M11 - the words ‘that experiences a failure of any of its Interpersonal Communications capabilities’ should be added after Operator to be consistent with the wording of the Requirement</p> <p>The RCSDT thanks you for your comment and has made the conforming changes to Measure M11.</p> <p>-Compliance</p> <p>- 1.3 bulleted sentences - the term ‘historical data’ should be removed. The term ‘evidence’ is sufficiently descriptive and is consistently used in other requirements</p> <p>The RCSDT thanks you for your comment and has made conforming changes to the Data Retention section.</p>

Organization	Yes or No	Question 6 Comment
		<p>-Data Retention</p> <p>(1.3) - The data retention requirements are too uncertain for two reasons. First, the requirement to “provide other evidence” if the evidence retention period specified is shorter than the time since the last audit introduces uncertainty because a responsible entity has no means of knowing if or when an audit may occur of the relevant standard.</p> <p>Secondly, it is unclear what ‘other evidence’, besides the specified logs, recordings and emails, an entity may be asked to provide to demonstrate it was compliant for the full time period since their last audit.</p> <p>The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.</p> <p>This comment also applies to COM-002-3 and IRO-001-3.</p> <p>-Data Retention (1.3) - COM-002-3 requires that voice recordings are kept for the most recent 3 calendar months but COM-001-2 requires that they be kept for the most recent 12 calendar months. Manitoba Hydro does not see the reliability benefit of storing voice recordings for longer than 3 months and suggests that voice recordings be removed as evidence for COM-001-2.</p> <p>The RCSDT thanks you for your comment and has provided a retention period of 90 days for voice recordings, if chosen by the entity, as a matter of media storage, and 12 months for all other evidence.</p> <p>Evidence of the availability of Interpersonal Communications and Alternative Interpersonal Communications can be demonstrated using the other forms of evidence listed.</p> <p>The RCSDT thanks you for your comment. The measures provide a significant listing of potential evidence, which allows for compliance flexibility. The measures are examples and the entity is not limited to those examples. No change made.</p>

Organization	Yes or No	Question 6 Comment
		<p>-VSLs (general comment)</p> <p>- for clarity, use for example R1.1 and R1.2 to refer to requirements instead of Part 1.1 and Part 1.2.</p> <p>The RCSDT thanks you for your comment and has made conforming changes to the Data Retention section.</p> <p>-VSLs R4 - a reference to R4.3 is missing</p> <p>The RCSDT thanks you for your comment and has made conforming changes to the VSL section.</p> <p>COM-002-3-Title</p> <p>- to capture the purpose and intent of the standard, the title should be changed to 'Emergency Communications'.</p> <p>The RCSDT believes the title adequately captures the standard's scope. No change made.</p> <p>-R2 - for clarity, the words 'back to the sender' should be added to the end of the sentence</p> <p>The RCSDT believes the current wording clearly identifies the issuer. No change made.</p> <p>-R3 - for clarity, the words 'to the recipient' should be added to both of the bulleted sentences after 'confirm' and 'reissue'. The words 'evident from the response' should be added to the end of the second bullet.</p> <p>The RCSDT believes the current wording is clear as to who is the recipient. No change made.</p> <p>-A question for the drafting team: has it been discussed whether there should be an additional requirement which indicates that the Reliability Coordinator, Transmission Operator and Balancing Authority shouldn't take any action in a Reliability Directive</p>

Organization	Yes or No	Question 6 Comment
		<p>until such time as it has been confirmed accurate by the sender?</p> <p>If so, does the team feel that it's a worthwhile requirement to consider?</p> <p>RCSDT believes having an additional requirement is unnecessary and would be overly prescriptive. No change made.</p> <p>-M2 - the words 'restated, rephrased or recapitulated' should be added after 'repeated' to be consistent with wording of the requirement.</p> <p>The RCSDT thanks you for your comment and has made conforming changes to the Measure, M2 in COM-002.</p> <p>-M3 - the words 'to show' should be deleted from the end of this paragraph.</p> <p>The RCSDT thanks you for your comment and has made conforming changes to the Measure, M3 in COM-002.</p> <p>IRO 001-3-Purpose</p> <p>- the words 'to the Bulk Electric System' already appear in the definitions of Emergency and Adverse Reliability Impact and do not need to be repeated here.</p> <p>The RCSDT thanks you for your comment and has made conforming changes to the Purpose in IRO-001.</p> <p>-Effective Date</p> <p>- the effective date should be changed to the 2nd calendar quarter following BOT approval in jurisdictions not requiring regulatory approval to be consistent with jurisdictions requiring regulatory approval.</p> <p>The RCSDT thanks you for your comment and has made conforming changes to make IRO-001 the same as COM-001 and COM-002.</p> <p>-General comment</p> <p>- There are repeated references to 'identified events'</p>

Organization	Yes or No	Question 6 Comment
		<p>- it is not clear what this is referring to.</p> <p>The context of “identified” is when a set of system conditions is recognized that could lead to an Emergency or Adverse Reliability Impact, which may require action. See standards IRO-008 and IRO-009. No change made.</p> <p>M1 - M1 refers to Adverse Reliability Impacts “within its Reliability Coordinator Area.” The requirement does not refer to ‘within its Reliability Coordinator Area’ - the wording in the measure and in the requirement should be consistent.</p> <p>The RCSDT thanks you for your comment and has made conforming changes to IRO-001, M1 to remove the phrase “within its Reliability Coordinator Area.”</p> <p>M2 - missing the word ‘physically’ when describing that a direction could not be implemented, should be consistent with the wording in the requirement.</p> <p>The RCSDT thanks you for your comment and has made conforming changes to make IRO-001 measure M2.</p> <p>Compliance</p> <p>- the entire section needs to be updated as it refers to requirements and measures that don’t exist.</p> <p>The RCSDT thanks you for your comment and has made conforming changes to make IRO-001 Compliance section 1.3 to remove the invalid references.</p> <p>-VSLs R2 - the reference to ‘fully comply’ is very vague. It is only a violation if the entity does not fall within the exception.</p> <p>The RCSDT thanks you for your comment and has made conforming changes to make IRO-001, R2, High VSL to be more consistent with the R2.</p> <p>- R2 VSL - For clarity, change “RC’s directive” to “Reliability Coordinator’s Reliability Directive.”</p> <p>The RCSDT thanks you for your comment and has made conforming changes to make</p>

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		IRO-001, VSL R2, High VSL.
<b>Response:</b> See response above.		
Great River Energy		<p>In IRO-001-3 "authority" should be removed and the verbiage returned to "shall act."</p> <p>The RCSDT believes that other standards (i.e., IRO-009, R3 &amp; R4 and EOP-002, R1 &amp; R8) address the action of others and if the term "authority" is omitted, creates a generic requirement such as what has been suggested puts the RC in a double jeopardy situation. No change made.</p> <p>In COM-002-3 R2 and in Applicability we suggest removing the Distribution Provider as the RC would not likely give a Reliability Directive to a Distribution Provider. The Reliability Directive would more likely come from the Transmission Operator to the Distribution Provider.</p> <p>The RCSDT believes that other standards (i.e., IRO-009 - R3 &amp; R4, EOP-002 - R1 &amp; R8) address the action of others and if the term "authority" is omitted, creates a generic requirement such as what has been suggested puts the RC in a double jeopardy situation. No change made.</p> <p>In COM-002-3 R3 we "replacing "Reissue" with "Restate." You are not technically reissuing the Reliability Directive.</p> <p>COM-002-3, R3: The communications described are not intended to be a once-through process. Effective communications, sometimes referred to as three-part or three-way, often may be effective only after numerous iterations. The RCSDT believes the likely first effort to clarify would be to re-issue the instructions just to determine whether the recipient simply "heard wrong." Using the word re-state seems to imply that the wording is incorrect in some way or for some other reason needs to be said a different way. The RCSDT believes it is more likely that the issuer is attempting to bet the recipient to understand and therefore believes that reissue is more appropriate. No change made.</p>



Organization	Yes or No	Question 6 Comment
<p><b>Response:</b> See response above.</p>		
<p>Orange and Rockland Utilities, Inc.</p>		<p>Regarding COM-002 Requirement R1, we recommend that this requirement be reworded as follows:</p> <p><i>“When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall require that the Reliability Directive be communicated using three-part communications as described in Requirements R2 and R3 of this standard.”</i></p> <p>The reason for this recommended rewording are threefold:</p> <ol style="list-style-type: none"> <li><i>1. Good operating practice calls for use of three-part communications at all times. The recommended re-write encourages the use of the good operating practice of three-part communications at all times, but does not require it.</i></li> <li><i>2. It is not good operating practice to require that an additional (unnecessary) phrase be used during emergency situations. During emergency situations, it is best to use standard operating protocols so as to limit unnecessary burdens on operating personnel during critical and stressful times.</i></li> <li><i>3. By implementing the proposed new R1 requirement, it would effectively weaken the need for rigorous compliance with any and all directives issued by the RC’s, TO’s or BA’s. Regarding IRO-001 Requirement R1, we recommend that the current requirement R3 be reinstated as the new requirement R1.</i></li> </ol> <p>That is, the new requirement R1 should read as follows:</p> <p><i>“R1. The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken</i></p>

Organization	Yes or No	Question 6 Comment
		<p><i>without delay, but no longer than 30 minutes.”</i></p> <p>We do not support any further dilution of Reliability Coordinator authority to enforce Reliability Directives through deletion of the 30 minute maximum response time period. The timely actions in response to any Reliability Coordinator issued Reliability Directives is an essential part of the process.</p>
<p><b>Response:</b> The RCSDT development of IRO-001-3 R1 states “...which could include issuing Reliability Directives...” and, therefore, does not preclude its use if it is determined by the RC to use it. There may be instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. No change made.</p>		
<p>Niagara Mohawk (dba National Grid)</p>		<p>COM-001-3</p> <p>- Some requirements are overly prescriptive and not results based.</p> <p>R7 &amp; R8 are not necessary. Every entity at a minimum has a contact with a phone as their "Interpersonal Communications capability." Just need to require that every entity has a plan if they lose their primary communication channel ("Interpersonal Communications capability").</p> <p>The standard establishes requirement for communication capability appropriate to ensure reliability. There is no requirement for it to be different from the Interpersonal Communication capability that its Balancing Authority has with it nor the Interpersonal Communication capability that its Transmission Operator has with it. Cooperation and coordination is always encouraged and is an excellent practice, but is not required by this standard. Thank you for your suggestion. No change made.</p> <p>COM-002-3</p> <p>- Requiring RCs, TOPs and BAs to state an action as a "reliability directive" complicates communications during a time when response time and clarity are important. If those issuing a directive don't get a repeat back they just need to ask for one. The requirement just needs to define "what" is required not "how." This</p>

Organization	Yes or No	Question 6 Comment
		<p>can be handled by procedures and training.</p> <p>The requirement is aimed at being a performance-based requirement and states a description of “what” communication must take place, but does not prescribe “how” the communication is to be made. Adding the suggested phrase “immediately upon receiving it” introduces the ambiguous term “immediately” for which there is neither plain meaning nor simple explanation. What must happen is that the recipient must respond in such a way that the issuer may determine whether the message has been properly understood. The RCSDT concludes that the proposed language gives plain meaning. No change made.</p> <p>- Delete reference to "adverse reliability impact" from the "Directive" definition. The "adverse reliability impact" definition is not clear, is this an actual event or contingency?</p> <p>The words imply it is an actual event which is already covered in the "Directive" definition. If the intent is to apply directives to potential stability or cascading contingencies it should say so.</p>
<p><b>Response:</b> The RCSDT thanks you for your comment; however, the RCSDT believes the definition captures two independent conditions, anticipated and after or post event. The definition of Emergency implies situations where the event is anticipated or currently happening. Likewise, the definition of Adverse Reliability Impact clearly identifies as a potential or actual event in the phrase, “an event that results in.” Both conditions are important to the definition. The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term. The term as it appears in the standard is the revised term is the NERC Board of Trustee adopted term: The impact of an event that results in Bulk Electric System instability or Cascading. No change made.</p>		
American Electric Power		<p>COM-001-02</p> <p>R9: A two hour limit to repair or designate a replacement Alternative Interpersonal Communications capability is overly aggressive.</p> <p>COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the</p>

Organization	Yes or No	Question 6 Comment
		<p>entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability, and then, if it decides to do so, designate another, if you may, “new” Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made.</p> <p>COM-002-03</p> <p>R1: Should this requirement also include references to a manual action?</p> <p>The RCSDT believes adding the word “manual” is unnecessary and overly prescriptive. No change made.</p> <p>COM-002-03</p> <p>R3:The text “to resolve any misunderstandings” is unnecessary and should be removed.</p> <p>The RCSDT believes this phrase is essential to the process of communications. No change made.</p> <p>COM-002-3 VSL’s:</p> <p>As we have stated on previous projects, all severity levels need to be commensurate with both:</p> <p>a) the degree by which the requirement was violated, and</p> <p>The RCSDT has followed the VSL Guidelines in properly assigning the VSL as binary. No change made.</p> <p>b) by the impact of the violation to the BES. In this case, a single VSL of “Severe” violates both principles.</p> <p>The RCSDT notes the Violation Risk Factors define the potential impact to the BES; whereas, the VSL is how badly an entity violated the requirement. No change made.</p>

Organization	Yes or No	Question 6 Comment
		<p>There needs to be more gradients across the severity levels, and the single VSL of “Severe” incorrectly makes the assumption that the impact to the BES was severe.</p> <p>The RCSDT has followed the VSL Guidelines in properly assigning the VSL as binary. No change made.</p> <p>IRO-001-3</p> <p>R1, R2, R3: Having this requirement apply to actions and/or directions (which may be different than Reliability Directives) may put the recipient in a position that they are judged on whether or not they acted on communication that was not a Reliability Directive.</p> <p>The RCSDT views R1 as an authority requirement to direct others, which could include a subset of direction called, Reliability Directive. Requirement R2 is the response requirement for the recipient. The judgment the recipient is under is that the recipient must comply with the direction, unless the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. Requirement R3 is simply requires the recipient to inform the issuer of its inability to perform the direction. No change made.</p> <p>The draft states that the purpose of this standard is “To establish the capability and authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System.” The key word used is “direct”, so communications that need to be acted upon should be Reliability Directives only. The addition of any non-defined term is in conflict with the definition and intent of the term Reliability Directive. This could potentially cause confusion, especially at critical times when communication is key.</p>
<p><b>Response:</b> See response above.</p>		
Georgia Transmission		The following comments are regarding IRO-001-3.

Organization	Yes or No	Question 6 Comment
Corporation		<p>Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator “to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact.” Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and trigger the use of three-part communications identified in COM-002-3.</p> <p>The RCSDT views R1 as an authority requirement to direct others, which could include a subset of direction called, Reliability Directive. Requirement R2 is the response requirement for the recipient. The judgment the recipient is under is that the recipient must comply with the direction, unless the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. Requirement R3 is simply requires the recipient to inform the issuer of its inability to perform the direction. No change made.</p> <p>COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause:</p> <p>“When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact?</p> <p>Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent.</p> <p>The RCSDT development of IRO-001-3 R1 states “...which could include issuing Reliability Directives...” and, therefore, does not preclude its use if it is determined by the RC to use it. There may be instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. No change made.</p> <p>It is recommended that the treatment of Reliability Directives shall be consistent</p>

Organization	Yes or No	Question 6 Comment
		<p>with those being developed for TOP-001-2 as proposed by the Real-Time Operations drafting team (Project 2007-03).</p> <p>The RCSDT is using the term in the same context in this standard as it is in TOP-001-2. No change made.</p> <p>As such, consider using the following language for R2: “Each TOP, BA, and GOP shall comply with each identified Reliability Directive issued and identified as such by its RC, unless such actions would violate safety, equipment, regulatory, or statutory requirements.”</p> <p>The RCSDT is addressing a directive (P487, Order 693) to include the DP in COM-001 and the RCSDT has included the DP in COM-002 and IRO-001 applicability because these standards are related to reliability communications. The RCSDT agrees with the point that communication will most likely be from the BA or TOP; however, the communications may come from the RC. No change made.</p> <p>Accordingly, please consider using the following language for R3:</p> <p>“Each TOP, BA, and GOP shall inform its RC of its inability to perform an identified Reliability Directive issued by that RC.” Again, we do not believe the DP would receive an identified Reliability Directive directly from the RC and the DP applicability should be removed from this standard. The DP is appropriately captured under COM-002 and TOP-001 with respect to Reliability Directives.</p> <p>Accordingly, NERC’s Reliability Functional Model V5 describes and identifies the DP’s relationships with other functional entities to TOP and BA with respect to Real Time.</p> <p>Real Time<sup>9</sup></p> <p>7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority.</p>

<sup>9</sup> NERC Functional Model Version 5, “Functional Entity – Distribution Provider,” pg 47, ([http://www.nerc.com/files/Functional\\_Model\\_V5\\_Final\\_2009Dec1.pdf](http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf))

Organization	Yes or No	Question 6 Comment
		<p>8. Implements system restoration plans as coordinated by the Transmission Operator.</p> <p>9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment.</p> <p>The following comments are regarding COM-001-2.</p> <p>With respect to the Functional Model V5, please see Page 31, “18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators.” No change made.</p> <p>The SDT should include an additional qualifier to Interpersonal Communications within the context of these requirements, for example (operational or dispatch center communications??). Technically, the air we breathe, as well as other mediums like “any” cell phone, fax lines, and/or email accounts would qualify under this proposed definition of Interpersonal Communication. Assuming at least one employed individual can speak, all entities could demonstrate compliance of this capability at all times, therefore, it is not clear the intent of these requirements are accurately being presented.</p> <p>The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p>It is recommended to include the use of “signed attestation letters” as examples of evidence under M4 and M11 and other measures as appropriate.</p> <p>The RCSDT proposes that R4 and R11 allow for compliance flexibility. A “signed attestation letter” is one form of evidence. The measures are examples and the entity is not limited to those examples. No change made.</p>



Organization	Yes or No	Question 6 Comment
<b>Response:</b> See response above.		
BGE		No comment.
<b>Response:</b> No comment provided.		
Nebraska Public Power District		<p>Comments: COM-001-2:</p> <p>Requirement 10 is too open ended as written. The measure, M10, indicates that only impacted entities need to be notified. The requirement should be changed to make it consistent with the measure. The requirement would then read ‘Each RC, TOP And BA shall notify impacted entities as identified...’Requirements 3 and 5 place the responsibility for establishing Interpersonal Communication capability on the TOP and BA. It is quite conceivable that a TOP or BA may not know all, or newly, registered DPs and GOPs in its respective area.</p> <p>The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA.</p> <p>In Requirements 7 and 8, the DP and GOP, respectively, are in turn responsible for establishing Interpersonal Communication capability. The TOPs/BAs and the DPs/GOPs should not be responsible for this. The DPs and GOPs should be held accountable for requesting that capability of their TOP and BA. Therefore, we suggest adding the following phrase at the end of Requirements 3.3, 3.4, 5.3 and 5.4 - ‘that has requested Interpersonal Communications capability.’</p> <p>Then R3.3 would read ‘Each Distribution Provider within its Transmission Operator Area that has requested Interpersonal Communications capability.’</p> <p>The standard establishes requirement for communication capability appropriate to</p>

Organization	Yes or No	Question 6 Comment
		<p>ensure reliability. There is no requirement for it to be different from the Interpersonal Communication capability that its Balancing Authority has with it nor the Interpersonal Communication capability that its Transmission Operator has with it. Cooperation and coordination is always encouraged and is an excellent practice, but is not required by this standard. Thank you for your suggestion. No change made.</p> <p>Requirement 9: could be construed to mean that the repair or replacement due to an unsuccessful test should be completed within 2 hours. In any case a rewording of the second sentence of Requirement 9 would make it clear and we would suggest the following:</p> <p>“ The responsible entity shall, within 2 hours of the unsuccessful test, provide notification to the proper authority in order to initiate repair or designate a replacement Alternative Interpersonal Communications capability. “</p> <p>COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability; and then, if it decides to do so, designate another, if you may, “new” Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made.</p> <p>COM-002-3:</p> <p>Requirement 2/Measure 2: There is an inconsistency between the requirement and the measure. The requirement allows the recipient to repeat, restate, rephrase or recapitulate the directive. Measure 1 [See M2] only mentions repeating the directive.</p> <p>The RCDST appreciates your observation. The phrases “restate, rephrase or</p>

Organization	Yes or No	Question 6 Comment
		<p>recapitulate,” have been added to Measure, M2.</p> <p>Requirement 3: The second bullet in Requirement 3 appears to require the reissuance of an entire Reliability Directive if only a single point in the directive is not correctly repeated, restated, rephrased or recapitulated. Is this what the SDT intended?</p> <p>Shouldn’t consideration be given for that portion of the directive that was communicated properly? Then only a new, revised directive containing the portion of the original directive that was misunderstood would need to be reissued.</p> <p>The RCSDT’s intention of the requirement is to confirm the communication is confirmed accurate and, if not, any misunderstanding is corrected. The requirement does not limit the entity to reissuing the entire Reliability Directive. So an entity is not precluded from only correcting the portion of the misunderstanding. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>Georgia System Operations</p>		<p>Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator “to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact.” Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and trigger the use of three-part communications identified in COM-002-3.</p> <p>COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: “When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact? Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and</p>

Organization	Yes or No	Question 6 Comment
		<p>COM-002-3 R1 inconsistent.</p> <p>The RCSDT development of IRO-001-3 R1 states “...which could include issuing Reliability Directives...” and, therefore, does not preclude its use if it is determined by the RC to use it. There may be instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. No change made.</p> <p>It is recommended that the treatment of Reliability Directives shall be consistent with those being developed for TOP-001-2 as proposed by the Real-Time Operations drafting team (Project 2007-03).</p> <p>The RCSDT is using the term in the same context in this standard as it is in TOP-001-2. No change made.</p> <p>As such, consider using the following language for R2: “Each TOP, BA, and GOP shall comply with each identified Reliability Directive issued and identified as such by its RC, unless such actions would violate safety, equipment, regulatory, or statutory requirements.”</p> <p>Accordingly, please consider using the following language for R3:</p> <p>“Each TOP, BA, and GOP shall inform its RC of its inability to perform an identified Reliability Directive issued by that RC.” Again, we do not believe the DP would receive an identified Reliability Directive directly from the RC and the DP applicability should be removed from this standard. The DP is appropriately captured under COM-002 and TOP-001 with respect to Reliability Directives.</p> <p>The RCSDT believes the latitude afforded in R2 and R3 allows for normal operational dialogue that may not require the use of Reliability Directive. The RC determines when Reliability Directive is applicable. No change made.</p> <p>With respect to the Functional Model V5, please see Page 31, “18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution</p>

Organization	Yes or No	Question 6 Comment
		<p>Providers, and Interchange Coordinators.” No change made.</p> <p>The RCSDT is addressing a directive (P487, Order 693) to include the DP in COM-001 and the RCSDT has included the DP in COM-002 and IRO-001 applicability because these standards are related to reliability communications. The RCSDT agrees with the point that communication will most likely be from the BA or TOP; however, the communications may come from the RC. No change made.</p> <p>Accordingly, NERC’s Reliability Functional Model V5 describes and identifies the DP’s relationships with other functional entities to TOP and BA with respect to Real Time. Real Time<sup>10</sup></p> <p>7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority.</p> <p>8. Implements system restoration plans as coordinated by the Transmission Operator.</p> <p>9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment.</p> <p>The following comments are regarding COM-001-2.</p> <p>With respect to the Functional Model V5, please see Page 31, “18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators.” No change made.</p> <p>The SDT should include an additional qualifier to Interpersonal Communications within the context of these requirements, for example (operational or dispatch center communications???)?. Technically, the air we breathe, as well as other mediums like “any” cell phone, fax lines, and/or email accounts would qualify under</p>

<sup>10</sup> NERC Functional Model Version 5, “Functional Entity – Distribution Provider,” pg 47, ([http://www.nerc.com/files/Functional\\_Model\\_V5\\_Final\\_2009Dec1.pdf](http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf))

Organization	Yes or No	Question 6 Comment
		<p>this proposed definition of Interpersonal Communication. Assuming at least one employed individual can speak, all entities could demonstrate compliance of this capability at all times, therefore, it is not clear the intent of these requirements are accurately being presented.</p> <p>The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.</p> <p>The RCSDT agrees with your assessment of “medium” and included the term to allow flexibility for an entity to communicate as they determine and demonstrate compliance. Two or more individuals are required for communication to occur where they interact, consult or exchange information. No change made.</p> <p>The RCSDT proposes that R4 allows for compliance flexibility. “Signed attestation letters” could qualify as “equivalent evidence” as stated in M4 and M11. No change made. It is recommended to include the use of “signed attestation letters” as examples of evidence under M4 and M11 and other measures as appropriate.</p> <p>The RCSDT proposes that R4 and R11 allow for compliance flexibility. A “signed attestation letter” is one form of evidence. The measures are examples and the entity is not limited to those examples. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>Ingleside Cogeneration LP</p>		<p>Ingleside Cogeneration LP is concerned that the entity-to-entity organization of the COM Standards is quickly being outdated by voice and video conferencing or one-to-many broadcasts. In addition, email may be a preferred mode of most communications to and from small Generator Operators.</p> <p>It is not clear that these technologies are precluded from consideration by COM-001 and COM-002 - which means that some auditors may believe that they are. This leads to inconsistent application of the compliance criteria, and may discourage the</p>

Organization	Yes or No	Question 6 Comment
		<p>use of some powerful technologies. It appears to us that some technical guidelines would be appropriate to help entities and auditors decide which are applicable under these Standards.</p>
<p><b>Response:</b> The RCSDT proposes that COM-001-2 and COM-002-3, as written, allows flexibility for an entity to communicate where two or more individuals are required for communication to occur and they interact, consult or exchange information. Compliance is contained in the measures and an entity must determine if their communication method can demonstrate compliance with the requirements. No change made.</p>		
<p>Duke Energy</p>		<p>- COM-001-2 does not specify how much time an entity is allowed to restore failed Interpersonal Communications capability or failed Alternative Interpersonal Communications capability.</p> <p>R1 through R6 require that the RC, TOP and BA have both. R7 and R8 require that DPs and GOPs have Interpersonal Communications capability. An auditor could find an entity non-compliant with these requirements upon failure of either capability.</p> <p>The RCSDT thanks you for your comment. Requirements R7 and R8 have been revised to account for the failure of Interpersonal Communication capability. The intent of R11 is to require the responsible entity to take action upon the failure of its Interpersonal Communication.</p> <p>R9, R10 and R11 specify actions to take upon failure, but do not relieve entities of responsibility under R1 through R8.</p> <p>The RCSDT believes non-compliance is not due solely to the failure of any Interpersonal Communication capability, but must be accompanied by a failure to consult with the applicable Transmission Operator or Balancing Authority to establish mutually agreeable action for restoration. No change made.</p> <p>-COM-001-2 R9, M9 and VSLs - M9 and VSLs should be revised to be consistent with wording of R9 phrase “at least once per calendar month.”</p> <p>The RCSDT agrees with your comments and has aligned M9 and the R9 VSL to the R9</p>

Organization	Yes or No	Question 6 Comment
		<p>to use “once each calendar month.”</p> <p>-COM-001-2 R10, M10 and VSLs - Clarity is needed regarding when the 60-minute clock starts. For example, suppose a failure is detected immediately upon occurrence of the failure. Does the 60-minute clock start immediately, or after the failure has lasted 30 minutes? When does the 60-minute clock start if a failure is detected and the entity is unsure when it occurred?</p> <p>The RCSDT proposes that upon detection of failure that continues at least 30 minutes, starts the 60-minute clock. The 30 minutes allows an entity time to restore or determine if it can restore its Interpersonal Communication capability before the clock starts. No change made.</p> <p>-COM-001-2 R10, M10 and VSLs - If the failure only lasts for 35 minutes, it appears that the RC, TOP or BA is still required to notify entities identified in R1 through R6. Is this the drafting team’s intent?</p> <p>Yes. The clock starts upon detection of failure of at least 30 minutes. No change made.</p> <p>-COM-001-2 R10, M10 and VSLs - Should be revised since the RC, TOP and BA are only required to have Alternative Interpersonal Communications capability with other RCs, TOPs and BAs per R2, R4 and R6.</p> <p>For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA.</p> <p>Suggested rewording for R10:</p> <p><i>“Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify entities with which it is required to have Alternative Interpersonal Communications capability as identified in R2, R4 and R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer.”</i></p>



Organization	Yes or No	Question 6 Comment
		<p>-COM-001-2 M11 and VSL - Replace the word “their” with the word “its.” The RCSDT agrees and has modified M11 and VSL, as you suggested.</p> <p>-COM-001-2 Data Retention - The way Data Retention is being enforced, this whole section could just be reduced to a blanket statement that an entity must be able to provide evidence that it has been in compliance since its last audit. The RCSDT has provided the Data Retention section consistent with the approved Standard Drafting Team Guidelines. No change made.</p> <p>-COM-002-3 R2, M2 and VSL - Replace “and” with “or.” The RCSDT agrees with your comment and modifies R2, M2, and VSL accordingly. Also, the phrase “repeat, restate, rephrase or recapitulate” seems excessive and may be intended to avoid a violation where an entity fails to repeat the Reliability Directive word for word. Suggested rewording: “Each Balancing Authority, Transmission Operator, Generator Operator or Distribution Provider that is the recipient of a Reliability Directive shall repeat the Reliability Directive back to the issuer with sufficient accuracy so that understanding can be confirmed.” The RCSDT believes the term suggested “sufficient accuracy” is subject to interpretation. The RCSDT proposes the terms to allow a recipient to convey the message back to the issuer without a word-for-word requirement as long as the issuer confirms the accuracy of the response or reissues it to resolve any misunderstanding. No change made.</p> <p>-COM-002-3 R3, M3 - Replace “and” with “or.” The RCSDT agrees with your comment and modifies R3, M3, and VSL accordingly.</p> <p>-IRO-001-3 - We believe that the Purpose and the Requirements of this standard should be focused solely on situations where the Reliability Coordinator issues Reliability Directives to prevent an Emergency or Adverse Reliability Impact.</p>

Organization	Yes or No	Question 6 Comment
		<p>The RCSDT development of IRO-001-3 R1 states “...which could include issuing Reliability Directives...” and, therefore, does not preclude its use if it is determined by the RC to use it. There may be instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. No change made.</p> <p>IRO-001-3 - The Purpose should be rewritten as follows: “To establish the authority of Reliability Coordinators to issue Reliability Directives to other entities to prevent an Emergency or the impact of an event that results in Bulk Electric System instability or Cascading.”</p> <p>The RCSDT appreciates the suggested rewording; however, the RCSDT development of the IRO-001-3 Purpose Statement allows for instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. The requirements of IRO-001-3 allow the RC to issue a Reliability Directive if they determine one should be issued. No change made.</p> <p>-IRO-001-3 - R1 should be rewritten as follows: “Each Reliability Coordinator shall have authority to act or to issue Reliability Directives to others, including but not limited to the Transmission Operator, Balancing Authority and Generator Operator within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or the impact of an event that results in Bulk Electric System instability or Cascading.”</p> <p>The RCSDT appreciates the suggested rewording; however, the Functional Model V5 addresses the scope of the RC function. No change made.</p> <p>-IRO-001-3 - R2 should be rewritten as follows:  <i>“Each Transmission Operator, Balancing Authority, Generator Operator or Distribution Provider shall comply with a Reliability Directive issued by the Reliability Coordinator unless the Reliability Directive cannot be physically implemented or unless such action would violate safety, equipment, regulatory, or statutory requirements.”</i></p>

Organization	Yes or No	Question 6 Comment
		<p>The RCSDT appreciates the suggested rewording; however, as written R2 allows for normal operational dialogue without having to invoke a Reliability Directive by the RC. No change made.</p> <p>-IRO-001-3 - R3 should be rewritten as follows: “Each Transmission Operator, Balancing Authority, Generator Operator or Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to comply with a Reliability Directive in accordance with Requirement R2.</p> <p>The RCSDT appreciates the suggested rewording; however, as written R2 allows for normal operational dialogue without having to invoke a Reliability Directive by the RC. No change made.</p> <p>-IRO-001-3 Measures and VSLs - Should be revised to conform with the above suggested revisions to requirements.</p>
<p><b>Response:</b> See response above.</p>		
ISO New England		none
ERCOT ISO		<p>Regarding COM-001-2:</p> <p>We are not clear on the time horizon of requirements for COM-001-2. Based upon the purpose statement, it appears that establishment would be ahead of real time. Wording in the requirements could be construed as maintaining at all times vs. establishing communications.</p> <p>The RCSDT proposes that compliance with requirements of the standard must be demonstrated. The Purpose Statement is not measured. No change made.</p> <p>The timeline for mandatory/effectiveness may not be acceptable to establish communications with DPs if hardware procurement/projects must take place.</p> <p>The RCSDT considered concerns about the implementation of the requirements by DP and GOPs and concluded the requirements are achievable within the</p>

Organization	Yes or No	Question 6 Comment
		<p>implementation period. No change made.</p> <p>Regarding IRO-001-3:</p> <p>We have some concern for the removal of LSE in particular from R2 and R3 from current IRO-001-2 for the ERCOT region. The ERCOT region has QSEs that manage Load Resources. There may be some QSEs that are not registered as a GOP that deploy Load Resources. Per the current LSE JRO, QSEs with Load Resources are registered as LSEs. Not requiring LSEs to deploy Load Resource directives could be perceived as a reliability gap created from the previous version to this version. PSEs could be removed as long as they fall under BA authority.</p> <p>The RCSDT believes the DP is the correct entity because the LSE does not own assets. The definition of LSE is, “The functional entity that secures energy and transmission service (and reliability related services) to serve the electrical demand and energy requirements of its end use customers.” In contrast, the definition of a DP is, “The functional entity that provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer. Additionally, the Functional Model V5 demonstrates this under the Reliability Coordinator, “18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators.” No change made.</p> <p>The Data Retention section should be corrected to match the new requirements numbers and elimination of the previous version R1 with ERO.</p> <p>The Version History mentions six requirements retired, but only details five.</p> <p>The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.</p>
<p><b>Response:</b> See response above.</p>		

Organization	Yes or No	Question 6 Comment
ReliabilityFirst		<p>Comments on COM-001-2</p> <p>1. Applicability Section</p> <p>a. RFC recommends adding the Generator Owner to the applicably section of the standard along with corresponding Requirements R8 and R11. ReliabilityFirst believes to maintain system reliability and based on certain business practices in effect, Generator Owners need to be required to have associated Interpersonal Communications with its Balancing Authority and Transmission Operator.</p> <p>The RCSDT considered this situation and have concluded Generator Owners do not operate facilities of the BES. Under the Functional Model V5 Generator Owners have these Relationships with Other Functional Entities. The following is an excerpt from the Functional Model V5 concerning the Generator Owner. No change made.</p> <ol style="list-style-type: none"> <li>1. Provides generator information to the Transmission Operator, Reliability Coordinator, Balancing Authority, Transmission Planner, and Resource Planner.</li> <li>2. Provides unit maintenance schedules and unit retirement plans to the Transmission Operator, Balancing Authority, Transmission Planner, and Resource Planner.</li> <li>3. Develops an interconnection agreement with Transmission Owner on a facility basis.</li> <li>4. Receives approval or denial of transmission service request from Transmission Service Provider.</li> <li>5. Provides reliability related services to Purchasing-Selling Entity pursuant to agreement.</li> <li>6. Reports the annual maintenance plan to the Reliability Coordinator, Balancing Authority and Transmission Operator.</li> <li>7. Revises the generation maintenance plans as requested by the Reliability Coordinator.</li> </ol>

Organization	Yes or No	Question 6 Comment
		<p>2. Requirement R7 and R8</p> <p>a. ReliabilityFirst seeks further clarity on why the Distribution Provider and Generator Operator are not required to designate an Alternative Interpersonal Communications capability?</p> <p>Requirements R7 and R8 require the Distribution Providers and Generator Operators to have Interpersonal Communications capability but there is not corresponding requirement to have an Alternative Interpersonal Communications capability.</p> <p>ReliabilityFirst recommends adding two new requirements for the Distribution Provider and Generator Operator to designate an Alternative Interpersonal Communications capability. This will be consistent with how Requirements R1 through R6 are set up.</p> <p>The standard establishes requirement for communication capability appropriate to ensure reliability. In addition, R7 and R8 are responsive to FERC Order No. 693. Entities may use the telephone cited in the example as their Interpersonal Communication capability. Requirement R11, as modified, addresses the loss of Interpersonal Communication capability. No change made.</p> <p>3. Requirement R9</p> <p>a. Assuming new requirements for the Distribution Provider and Generator Operator to designate an Alternative Interpersonal Communications capability (based on previous comment) are added to the standard, the Distribution Provider and Generator Operator will need to be added to Requirement R9 to test its Alternative Interpersonal Communications capability at least once per calendar month.</p> <p>The RCSDT thanks you for your comment and believes the DP and GOP only need Interpersonal Communication capability and it meets the respective FERC directive. No change made.</p> <p>4. Requirement R10</p> <p>a. Based on the ReliabilityFirst comment submitted for Question 4, ReliabilityFirst</p>

Organization	Yes or No	Question 6 Comment
		<p>believes the Distribution Provider and Generator Operator should be included in Requirement R10.</p> <p>The RCSDT proposes that DP and GOP are included in the requirement. “... shall notify entities...” as identified in R1 through R6. No change made.</p> <p>b. Since Interpersonal Communications capabilities is a very important piece of operating the BES in a reliable manner, ReliabilityFirst believes the timeframe in which an entity is required to notify the entities is too long. ReliabilityFirst recommends the following language for Requirement R10:</p> <p>i. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall notify entities as identified in Requirements R1 through R8 of a failure of its Interpersonal Communications capabilities that lasts 15 minutes or longer. The notification shall be made within 30 minutes of the detection of a failure.</p> <p>The RCSDT proposed the time frame to allow sufficient time for an entity to determine if IC could be restored. No change made.</p> <p>5. VSLs for Requirement R1 through R8</p> <p>a. ReliabilityFirst suggest gradating the VSLs for R1 through R8. Listed below is an example of how to gradate the VSL for R1. The same type of approach could be used for R2 through R8 as well.</p> <p>i. High VSL- the Reliability Coordinator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 1.1 or 1.2.</p> <p>ii. Severe VSL - The Reliability Coordinator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 1.1 and 1.2.</p> <p>The RCSDT has applied the VSL to the Severe column because not having Interpersonal Communication capability with any entity is detrimental to reliability.</p>

Organization	Yes or No	Question 6 Comment
		<p>No change made.</p> <p>6. VSL for Requirement R9</p> <p>a. For consistency with the requirement language, ReliabilityFirst recommends adding the words “at least on a monthly basis” to the Lower, Moderate and High VSLs and adding the words “if the test was unsuccessful” to the end of the Lower, Moderate and High VSLs.</p> <p>Listed below is an example of the Lower VSL.</p> <p>i. The responsible entity tested the Alternative Interpersonal Communications capability at least once per calendar month but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications in more than 2 hours and less than or equal to 4 hours if the test was unsuccessful.</p> <p>The RCSDT notes the requirement requires the entity to perform the test each month. If the test is not performed during each month, there is no other option for gradating the severity of the violation. No change made.</p> <p>7. VSL for Requirement R10</p> <p>a. ReliabilityFirst provided alternate language for R10 in the comments listed above. If the alternated language is not incorporated, ReliabilityFirst recommends the following language for the Lower VSL. Similar language could be used for the Moderate, High and Severe VSLs as well.</p> <p>i. The responsible entity failed to notify entities as identified in Requirements R1 through R6 more than 60 minutes but less than or equal to 70 minutes of the detection of a failure of its Interpersonal Communications capabilities.</p> <p>b. If the alternate language for R10, in the comments listed above, is incorporated, ReliabilityFirst recommends the following language for the Lower VSL. Similar language could be used for the Moderate, High and Severe VSLs as well.</p> <p>i. The responsible entity failed to notify entities as identified in Requirements R1</p>



Organization	Yes or No	Question 6 Comment
		<p>through R6 more than 30 minutes but less than or equal to 740 minutes of the detection of a failure of its Interpersonal Communications capabilities</p> <p>c. For Moderate VSL (the VSL after the OR statement), ReliabilityFirst recommends using a percentage rather than the “least one, but not all” statement. For example, if there is say 100 impacted entities and the applicable entity only notify 1, they would only fall under the Moderate. In another scenario there is say 100 impacted entities and the applicable entity only notified 99, they would also fall under the Moderate as well. The use of percentages will help even this out.</p> <p>The RCSDT made conforming changes to the VSLs to address a number of comments and changes to the requirements.</p> <p>8. VSL for Requirement R11</p> <p>a. For consistency with the requirement language, ReliabilityFirst recommends the following language:</p> <p>i. The responsible entity that experiences a failure of any of its Interpersonal Communication capabilities failed to consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.</p> <p>Comments on COM-002-3</p> <p>The RCSDT has made conforming changes to the VSLs due to comments received about the R11.</p> <p>1. Requirement R1</p> <p>a. Based on ReliabilityFirst suggested change to the definition of “Reliability Directive” as noted in Question 5, ReliabilityFirst recommends deleting Requirement R1. Based on the suggested definition, any communication initiated, where an action by the recipient is required, is considered a “Reliability Directive.” Thus, there would no longer be a need for responsible entity to identify the action as a</p>

Organization	Yes or No	Question 6 Comment
		<p>“Reliability Directive” to the recipient.</p> <p>In coordination with the RTOSDT work on the TOP family of standards, the RCSDT does not propose that the Reliability Directive definition contain a requirement for action to be taken. Therefore, R1 is retained as a requirement for the “action” to be taken. No change made.</p> <p>2. VSL for Requirement R3</p> <p>a. For consistency with the requirement language, ReliabilityFirst recommends the following language:</p> <p>The RCSDT has followed the VSL Guidelines in properly assigning the VSL as binary. No change made.</p> <p><i>i. The responsible entity issued a Reliability Directive, but failed to confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate.</i></p> <p>Comments on IRO-001-3</p> <p>1. Requirement R1</p> <p>a. ReliabilityFirst seeks further clarity on why Requirement R1 only requires the Reliability Coordinator to have the “authority to act” rather than requiring the Reliability Coordinator to actually “take action” to prevent identified events that result in an Emergency or Adverse Reliability Impacts. Having the “authority to act” does not inherently require the Reliability Coordinator to take action, if appropriate.</p> <p>The RCSDT proposes that R1 reflects the Purpose of IRO-001-3. No change made.</p> <p>b. ReliabilityFirst seeks further clarity on the language “to prevent identified events.” If the event was already identified, how can the Reliability Coordinator act to prevent it? ReliabilityFirst recommends adding the word “potential” in between the words “prevent” and “identified.”</p> <p>The context of “identified” is when a set of system conditions is recognized that</p>

Organization	Yes or No	Question 6 Comment
		<p>could lead to an Emergency or Adverse Reliability Impact, which may require action. See standards IRO-008 and IRO-009. No change made.</p> <p>2. Requirement R3</p> <p>a. There is no time qualifier specified in Requirement R3 dealing with the timeframe in which the applicable entity has to inform its Reliability Coordinator of its inability to perform as directed in accordance with Requirement R2. Without a time qualifier, Requirement R3 is open ended and could cause issues if the applicable entity does not inform its Reliability Coordinator upon recognition of its inability to perform as directed in a timely manner. ReliabilityFirst recommends the following language for Requirement R3:</p> <p><i>i. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator within 30 minutes upon recognition of its inability to perform as directed in accordance with Requirement R2.</i></p> <p>The RCSDT proposes the term “upon recognition of its inability to perform” does not require a time limit. No change made.</p> <p>The Measure M3, has been updated to include the phrase “upon recognition of its inability” to be consistent with R3.</p> <p>3. VSL for Requirement R1</p> <p>a. Requirement R1 requires the Reliability Coordinator to “...have the authority to act” - and the VSL does not reflect this language. ReliabilityFirst had questioned why Requirement R1, does not specifically require the RC to take action or direct actions in a comment submitted under Requirement R1. If the SDT does not change the language in Requirement R1, ReliabilityFirst recommends the following language:</p> <p><i>i. The Reliability Coordinator failed to have the authority to take action or direct actions, to prevent an identified event that resulted in an Adverse Reliability Impact.</i></p> <p>The RCSDT made conforming changes to the VSL.</p>

Organization	Yes or No	Question 6 Comment
		<p>4. VSL for Requirement R2</p> <p>a. For the High VSL, the words “fully comply” are ambiguous and open to interpretation. ReliabilityFirst recommends only having a Severe VSL.</p> <p>b. The Severe VSL states “directive” while Requirement R2 states “direction.” To be consistent, ReliabilityFirst recommends the following language:</p> <p><i>i. “The Responsible Entity failed to comply with its Reliability Coordinator’s direction”</i></p> <p>The RCSDT thanks you for your comment and has made conforming changes to the VSL.</p>
<p><b>Response:</b> See response above.</p>		
<p>City of Vero Beach</p>		<p>In the definition of Interpersonal Communication, the use of the word “medium” is ambiguous. Suggestions for alternatives: “system”, “channel.”</p> <p>The RCSDT proposes the term “medium” to allow entities flexibility on how they communicate and meet compliance with the requirements. No change made.</p> <p>COM-001-2, R1 and R3, the phrase: “have Interpersonal Communications capabilities”, what if the communication system fails?</p> <p>The RCSDT proposes that AIC is in force at that time. No change made.</p> <p>Is that an immediate non-compliance (especially R3.3 and R3.4 which do not require a redundant system). Suggest using EOP-008 type of language to allow restoration of failed equipment without non-compliance.</p> <p>The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. No change made.</p> <p>The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the</p>

Organization	Yes or No	Question 6 Comment
		<p>flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made.</p> <p>COM-001-2, R9 - "Each ... shall test its Alternative Interpersonal Communications capability", suggest adding the phrase "to each entity for which Alternative Interpersonal Communications is required" to add clarity. In addition, the type of testing is unclear and ambiguous.</p> <p>The RCSDT proposes that R9 correctly identifies and provides clarity for the entities required to have Alternative Interpersonal Communication capability. No change made.</p> <p>The is also ambiguity in the terms "direct", "directive", "direction" and "Reliability Directive." The SDT may want to consider using the terms "instruct" and "instruction" in place of "direct," "directive," or "direction" to more clearly distinguish from a Reliability Directive.</p> <p>The RCSDT feels the use of direct and directed is consistent with the purpose and application of those terms in other standards and is consistent with previous postings. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>NV Energy</p>		<p>The meaning of R9 is open to some interpretation. It states that if the monthly test is unsuccessful, the entity shall "initiate action to repair or designate a replacement" AIC within 2 hours. The meaning of this is unclear in several ways:</p> <p>First, does "initiate action" apply to the remainder of the sentence or just to the "repair" option?</p> <p>Second, what constitutes initiation of action?</p> <p>Is it the intent of the SDT that the alternate interpersonal communications be</p>

Organization	Yes or No	Question 6 Comment
		<p>restored within a 2-hour limit?</p> <p>If so, the words do not clearly state that, and it seems an impossible task to ensure no more than 2-hr outage to an alternate communications medium. I am voting affirmative under the interpretation that one must only "initiate" the repair or "initiate" the designation of a replacement option within this tight 2-hour limit.</p>
<p><b>Response:</b> The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability; and then, if it decides to do so, designate another, if you may, "new" Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made.</p>		
<p>Midwest Independent Transmission System Operator</p>		<p>COM-001-2, R2 and R6:</p> <p>MISO requests clarification as to whether the designation of Interpersonal Communications and Alternative Interpersonal Communications methods by Responsible Entities must be formally documented and/or agreed upon with those entities with which communications capability must be established.</p> <p>The RCSDT has provided flexibility to the responsible entity with regard to implementation and compliance. Please note that Interpersonal Communication is a "shall have" and Alternative Interpersonal Communication capability is "designate." Please refer to the Measures for suitable evidence, which may be used to support compliance with the requirement. No change made.</p> <p>COM-001-2, R9:</p> <p>MISO suggests that the designation of Alternative Interpersonal Communications methods should not require formal documentation and may be agreed upon (when necessary) informally with those entities with which communications capability must be established in the event of an unsuccessful test of its Alternative Interpersonal</p>

Organization	Yes or No	Question 6 Comment
		<p>Communications capability.</p> <p>The RCSDT has provided flexibility to the responsible entity with regard to implementation and compliance. Please note that Interpersonal Communication is a “shall have” and Alternative Interpersonal Communication capability is “designate.” Please refer to the Measures for suitable evidence, which may be used to support compliance with the requirement. No change made.</p> <p>COM-001-2, Requirement R10:</p> <p>MISO requests clarification as to whether “impacted entities” refers to those entities with which the Responsible Entity must have Interpersonal Communications and Alternative Interpersonal Communications capability.</p> <p>Further, MISO requests clarification as to whether the notification required by R10 must be made using the Alternative Interpersonal Communications method selected by the Responsible Entity.</p> <p>The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA.</p> <p>With respect to the method used by the Responsible Entity, the standard does not provide the “how” or any prescriptive method for accomplishing the requirement. No change made.</p> <p>COM-002-3, R1 - R3:</p> <p>MISO respectfully submits that, while it appreciates the distinction in responsibilities proposed in the new COM-002-3 and acknowledges that such distinction is beneficial, these requirements increase compliance risk and potential penalty liability without attendant benefit to the reliability of the Bulk Electric System. MISO respectfully suggests that Requirements 2 and 3 be converted into sub-requirements</p>

Organization	Yes or No	Question 6 Comment
		<p>as follows:</p> <p><i>R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p><i>R1.1. When the Reliability Coordinator, Transmission Operator or Balancing Authority identifies a stated action as a Reliability Directive, the receiving Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall repeat, restate, rephrase or recapitulate the Reliability Directive to the issuing Reliability Coordinator, Transmission Operator or Balancing Authority. [Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p><i>R1.2. When the Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive receives a response from the receiving Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider, it shall then either [Violation Risk Factor: High][Time Horizon: Real-Time]:</i></p> <ul style="list-style-type: none"> <li>-Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or</li> <li>-Reissue the Reliability Directive to resolve any misunderstandings.</li> </ul> <p>The RCSDT contends the requirements in the proposed standard have been constructed in accordance with standard development guidelines to have only one performance per requirement. The suggested change places three independent actions within one requirement. No change made.</p>
<p><b>Response:</b> See response above.</p>		
Texas Reliability Entity		<p>(1) There are numerous errors in the Mapping Document in referencing the current version of the standard and requirement. Specifically, referencing IRO-001-2 where it appears that the document should reference standard IRO-001-3. In addition, the</p>



Organization	Yes or No	Question 6 Comment
		<p>notes on page 2 of COM-002-3 are incorrect.</p> <p>The RCSDT thanks you for your comments and has made conforming corrections.</p> <p>(2) In the VRF/VSL Justification document, there are numerous errors in referring to standard versions and requirements.</p> <p>The RCSDT thanks you for your comments and has made conforming corrections.</p> <p>(3) In IRO-001-3, R1 - What is an “identified event,” and who “identifies” an event that requires compliance with this requirement R1? An RC may choose not to “identify” an event, such as a limit violation, and run the risk of causing or exacerbating an emergency. If the RC does not “identify” the event, it may become an actual event and then fall within the standard.</p> <p>The context of “identified” is when a set of system conditions are recognized that could lead to an Emergency or Adverse Reliability Impact, which may require action. See standards IRO-008 and IRO-009. The RC named in R1 is the entity that identifies the even that requires compliance. No change made.</p> <p>(4) In the VSL for IRO-001-3, R1, there should be language in the VSL to capture the term “Emergency,” which was added in the Requirement. The High VSL for R2 needs to be fixed.</p> <p>The RCSDT thanks you for your comments and has made conforming corrections. The “N/A” in R2 of COM-002-3 was removed.</p> <p>(5) In IRO-001-3, R1, remove the “s” in the phrase “Adverse Reliability Impacts.”</p> <p>The RCSDT thanks you for your comments and has made conforming corrections.</p> <p>(6) Referring to the Implementation Plan for IRO-001 - There is a different list in the Implementation Plan (R2, R4, R5, R6, R7, R9) than the Revision History of the Standard (R2, R4, R5, R6, R8). Where is the retirement of R1 shown?</p> <p>The RCSDT thanks you for your comments and has made conforming corrections.</p> <p>(7) Referring to COM-001-2: Measure 7, the word “that” is inadvertently repeated in</p>

Organization	Yes or No	Question 6 Comment
		<p>the first sentence.</p> <p>COM-001-2, M8: The RCSDT agrees and the language in Measure M8 has been changed to delete the additional “that.”</p> <p>(8) In COM-001-2, Measure 9, is “at least on a monthly basis” to be interpreted differently than “at least once per calendar month” as stated in the requirement?</p> <p>The RCSDT thanks you for your comments and has made conforming corrections to Measure M9 and the R9 VSL.</p> <p>(9) In COM-001-2, there is a “Measure 12” bullet that should be removed.</p> <p>The RCSDT thanks you for your comments and has made conforming corrections.</p> <p>(10) Referring to COM-002-3: Electronic directives (which may be issued over many different types of electronic communication channels) are increasingly necessary to manage the modern, dynamic Bulk Power System (generation and transmission) on a real-time basis. The effective use of electronic directives is undermined by this proposed Standard in its current form. This draft standard, in conjunction with other standards that refer to directives, appears to require that directives (at least Reliability Directives) be given verbally. The failure of the NERC standards to address electronic directives may cause significant manpower issues for BAs with large portfolios of generation to manage.</p> <p>The RCSDT proposes that COM-001-2 and COM-002-3, as written, allows flexibility for an entity to communicate where two or more individuals are required for communication to occur and they interact, consult or exchange information. Compliance is contained in the Measures and an entity must determine if its communication method can demonstrate compliance with the requirements. No change made.</p> <p>(11) In the VSL for COM-001-2 R4, a reference to Part 4.3 should be added.</p> <p>The RCSDT thanks you for your comments and has made conforming corrections.</p>

Organization	Yes or No	Question 6 Comment
		<p>(12) In IRO-001-3, Part 1.3 Data Retention, the reference in the first bullet to “Electric reliability Organization” is incorrect. We think it should say “Reliability Coordinator” instead.</p> <p>The other references to entities and to Requirements in this Part 1.3 also appear to be incorrect and need to be updated and corrected.</p> <p>The RCSDT thanks you for your comment and has made conforming changes.</p> <p>(13) Referring to COM-001-2, the prior version of this standard included Requirement R5: “Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities.” This Requirement has been removed from the present draft of COM-001-2.</p> <p>The RCSDT removed this requirement because it did not have a reliability benefit. No change made.</p> <p>The mapping document seems to suggest that this Requirement was moved to EOP-008, but it is not there. We are concerned that removal of this Requirement will result in a reduction in the level of BES reliability and introduce a potential reliability gap.</p> <p>As stated in the Implementation Plan, the RCSDT proposes retiring COM-001-1, R5 as it is redundant with EOP-008-0, R1 as well as replacement EOP-008-1, R1. No change made.</p>
<p><b>Response:</b> See response above.</p>		
<p>Hydro One Networks Inc.</p>		<p>(1) The proposed implementation plan conflicts with Ontario regulatory practice respecting the effective date of the standard. It is suggested that this conflict be removed by appending to the implementation plan wording, after “applicable regulatory approval” in the Effective Dates Section A5 on P. 4 of the draft standard</p>

Organization	Yes or No	Question 6 Comment
		<p>COM-001, COM-002 and IRO-001, and on P. 2 of COM-001’s Implementation Plan and P. 1 of COM-002’s and IRO-001’s Implementation Plans, to the following effect:”, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.”</p> <p>The RCSDT is uncertain where the conflict exists. The standard IRO-001 uses the term “after applicable” and the others “following applicable.” The RCSDT has updated the standards to use the most current effective date language.</p> <p>(2) COM-001: Measure M9: - “monthly basis.” Suggest changing “monthly basis” to “at least once per calendar month” to be consistent the wording in R9.</p> <p>The RCSDT thanks you for your comment and has made conforming changes the Measure M9 and the R9 VSL.</p> <p>(3) IRO-001: Measures M1, M2, M3 - The types of evidence are listed in paragraph form. This is not consistent with presentation style in COM-001-2 Measures, where evidence is listed in bullet format. Suggest using bullet form for consistency.</p> <p>The RCSDT appreciates your comments and has made all the Measures bullet form in COM-001-2, but not in COM-002-3 and IRO-001-3.</p> <p>(4) IRO-001, Data Retention Section:</p> <p>i. The retention requirements do not reflect the revised requirements. For example: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4.</p> <p>ii. Section 1.3, second paragraph:</p> <p>“The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider... shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to</p>

Organization	Yes or No	Question 6 Comment
		<p>retain specific evidence for a longer period of time as part of an investigation.”</p> <p>The word “or” between Generator Operator and Distribution Provider should be changed to “and.”</p> <p>The RCSDT thanks you for your comment and has made conforming changes to the Data Retention section.</p>
<p><b>Response:</b> See response above.</p>		
<p>New York Independent System Operator</p>		<p>COM-001</p> <p>The drafting team has complicated the requirements by having different requirements between RC/TOP/BA and other entities such as GOP/LSE/DP. The proposal is for redundancy to be required only between RC/TOP/BA. The requirement should be simplified to require all identified entities to have plans for loss of primary communication channels. This could include third parties as a communication channel.</p> <p>The RCSDT refers the Order No. 693 in Paragraph 508 to clarify the reason the DP and GOP are not required to have Alternative Interpersonal Communication and is as follows: “(1) expands the applicability to include Generator Operators and Distribution Providers and includes Requirements for their telecommunications facilities; (2) identifies specific requirements for telecommunications facilities for use in normal and emergency conditions that reflect the roles of the applicable entities and their impact on Reliable Operation and (3) includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions.” In addition, R11 requires the DP and GOP to consult with its BA and TOP to determine a mutually agreeable action for restoration. No change made.</p> <p>COM-002</p> <p>The drafting team added a requirement to identify a Reliability Directive is being initiated during an emergency to track 3-part communication for compliance</p>

Organization	Yes or No	Question 6 Comment
		<p>purposes. This will change and complicate the communication protocols between normal and emergency operations simply to simplify compliance assessments. The NYISO is asking for clarification that an entity may identify Reliability Directives as a category of communications to be communicated through procedures and training; and will not require a different communication protocol between normal and emergency operations. Affective communications can only be achieved through consistent processes for all conditions. Compliance assessments should be made on when we are in an emergency or not, and not on how the dialogue was initiated.</p> <p>The RCSDT believes the standard allows for this condition, and the method of implementation is up to the entity. No change made.</p>
<p><b>Response:</b> See response above.</p>		

END OF REPORT

### **Standard Development Roadmap**

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

#### **Development Steps Completed:**

1. Draft SAR Version 1 posted January 15, 2007.
2. Draft SAR Version 1 Comment Period ended February 14, 2007.
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007.
4. Draft Version 2 SAR comment period ended April 17, 2007.
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 18, 2010.
11. Fourth posting of revised standards on January 25, 2011 with comment period closed on March 7, 2011.
12. Initial ballot conducted February 25 through March 7, 2011.
13. Draft version 5 of the standard and response to comments March 7, 2011 – January 9, 2012.
14. Fifth posting of revised standards on January 9, 2012 with comment period closed on February 9, 2012.
15. Successive ballot conducted January 30 through February 9, 2011.
16. Draft version 6 of the standard and response to comments February 9, 2011 – June 5, 2012.
17. Sixth posting of revised standard on June 7, 2012 with comment period closed on July 6, 2012.
18. Successive ballot conducted June 27 through July 6, 2012.

**Proposed Action Plan and Description of Current Draft:**

The SDT began working on revisions to the standards in August 2007. The current posting contain revisions based on stakeholder comments on the initial ballot. The team is posting for a successive ballot.

**Future Development Plan:**

<b>Anticipated Actions</b>	<b>Anticipated Date</b>
1. Post standards for a successive ballot.	January-February 2012
2. Respond to comments on successive ballot.	March - April 2012
3. Standard posted for second successive ballot.	June 2012
4. Standard posted for recirculation ballot.	September 2012
5. Standard to be sent to BOT for approval.	November 2012
6. Standard filed with regulatory authorities.	January 2013



### **Definitions of Terms Used in Standard**

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

The RC SDT proposes the following new definitions:

**Interpersonal Communication:** Any medium that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.

## A. Introduction

### 1. Title: Communications

2. Number: COM-001-2

3. Purpose: To establish Interpersonal Communication capabilities necessary to maintain reliability.

### 4. Applicability:

4.1. Transmission Operator

4.2. Balancing Authority

4.3. Reliability Coordinator

4.4. Distribution Provider

4.5. Generator Operator

5. Effective Date: The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

## B. Requirements

**R1.** Each Reliability Coordinator shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator experiences a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply):  
*[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*

1.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.

1.2. Each adjacent Reliability Coordinator within the same Interconnection.

**R2.** Each Reliability Coordinator shall designate an Alternative Interpersonal Communication capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*

2.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.

2.2. Each adjacent Reliability Coordinator within the same Interconnection.

**R3.** Each Transmission Operator shall have Interpersonal Communication capability with the following entities (unless the Transmission Operator experiences a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply):  
*[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*

3.1. Its Reliability Coordinator.

3.2. Each Balancing Authority within its Transmission Operator Area.

- 3.3. Each Distribution Provider within its Transmission Operator Area.
  - 3.4. Each Generator Operator within its Transmission Operator Area.
  - 3.5. Each adjacent Transmission Operator synchronously connected.
  - 3.6. Each adjacent Transmission Operator asynchronously connected.
- R4.** Each Transmission Operator shall designate an Alternative Interpersonal Communication capability with the following entities: [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]
- 4.1. Its Reliability Coordinator.
  - 4.2. Each Balancing Authority within its Transmission Operator Area.
  - 4.3. Each adjacent Transmission Operator synchronously connected.
  - 4.4. Each adjacent Transmission Operator asynchronously connected.
- R5.** Each Balancing Authority shall have Interpersonal Communication capability with the following entities (unless the Balancing Authority experiences a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]
- 5.1. Its Reliability Coordinator.
  - 5.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area.
  - 5.3. Each Distribution Provider within its Balancing Authority Area.
  - 5.4. Each Generator Operator that operates Facilities within its Balancing Authority Area.
  - 5.5. Each adjacent Balancing Authority.
- R6.** Each Balancing Authority shall designate an Alternative Interpersonal Communication capability with the following entities: [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]
- 6.1. Its Reliability Coordinator.
  - 6.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area.
  - 6.3. Each adjacent Balancing Authority.
- R7.** Each Distribution Provider shall have Interpersonal Communication capability with the following entities (unless the Distribution Provider experiences a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply): [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]
- 7.1. Its Balancing Authority.
  - 7.2. Its Transmission Operator.
- R8.** Each Generator Operator shall have Interpersonal Communication capability with the following entities (unless the Generator Operator experiences a failure of its

Interpersonal Communication capability in which case Requirement R11 shall apply):  
*[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*

**8.1.** Its Balancing Authority.

**8.2.** Its Transmission Operator.

**R9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communication capability at least once each calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communication capability within 2 hours. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations, Same-day Operations]*

**R10.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1, R3, and R5 within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*

**R11.** Each Distribution Provider and Generator Operator that experiences a failure of its Interpersonal Communication capability shall consult each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of its Interpersonal Communication capability. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*

### **C. Measures**

**M1.** Each Reliability Coordinator shall have and provide upon request evidence that it has Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R1.)

**M2.** Each Reliability Coordinator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R2.)

- M3.** Each Transmission Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority, Distribution Provider, and Generator Operator within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously and synchronously connected, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communication. (R3.)
- M4.** Each Transmission Operator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously and synchronously connected, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R4.)
- M5.** Each Balancing Authority shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator and Generator Operator that operates Facilities within its Balancing Authority Area, each Distribution Provider within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R5.)
- M6.** Each Balancing Authority shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator that operates Facilities within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R6.)
- M7.** Each Distribution Provider shall have and provide upon request evidence that that it has Interpersonal Communication capability with its Transmission Operator and its Balancing Authority, which could include, but is not limited to:

- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R7.)
- M8.** Each Generator Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Balancing Authority and its Transmission Operator, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R8.)
- M9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it tested, at least once each calendar month, its Alternative Interpersonal Communication capability designated in Requirements R2, R4, or R6. If the test was unsuccessful, the entity shall have and provide upon request evidence that it initiated action to repair or designated a replacement Alternative Interpersonal Communication capability within 2 hours. Evidence could include, but is not limited to dated and time-stamped: test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R9.)
- M10.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it notified entities as identified in Requirements R1, R3, and R5 within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasted 30 minutes or longer. Evidence could include, but is not limited to dated and time-stamped: test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R10.)
- M11.** Each Distribution Provider and Generator Operator that experienced a failure of its Interpersonal Communication capability shall have and provide upon request evidence that it consulted with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine mutually agreeable action to restore the Interpersonal Communication capability. Evidence could include, but is not limited to dated: operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R11.)

## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance Enforcement Authority**

The Regional Entity shall serve as the Compliance Enforcement Authority (CEA) unless the applicable entity is owned, operated, or controlled by the Regional Entity. In such cases, the ERO or a Regional Entity approved by FERC or other applicable governmental authority shall serve as the CEA.

#### **1.2. Compliance Monitoring and Enforcement Processes**

Compliance Audit  
Self-Certification  
Spot Checking  
Compliance Investigation  
Self-Reporting  
Complaint

### **1.3. Data Retention**

The Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator shall retain evidence of Requirements R1, R2, R9, and R10, Measures M1, M2, M9, and M10 for the most recent twelve calendar months.
- The Transmission Operator shall retain evidence of Requirements R3, R4, R9, and R10, Measures M3, M4, M9, and M10 for the most recent twelve calendar months.
- The Balancing Authority shall retain evidence of Requirements R5, R6, R9, and R10, Measures M5, M6, M9, and M10 for the most recent twelve calendar months.
- The Distribution Provider shall retain evidence of Requirements R7 and R11, Measures M7 and M11 for the most recent twelve calendar months.
- The Generator Operator shall retain evidence of Requirements R8 and R11, Measures M8 and M11 for the most recent twelve calendar months.

If a Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, or Generator Operator is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

### **1.4. Additional Compliance Information**

None.

**2. Violation Severity Levels**

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	The Reliability Coordinator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Reliability Coordinator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R2	N/A	N/A	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R2, Parts 2.1 or 2.2.	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R2, Parts 2.1 or 2.2.
R3	N/A	N/A	The Transmission Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Transmission Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R4	N/A	N/A	The Transmission Operator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.	The Transmission Operator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.



R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R5	N/A	N/A	The Balancing Authority failed to have Interpersonal Communication capability with one of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Balancing Authority failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R6	N/A	N/A	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.
R7	N/A	N/A	The Distribution Provider failed to have Interpersonal Communication capability with one of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Distribution Provider failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R8</b>	N/A	N/A	The Generator Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Generator Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.
<b>R9</b>	The Reliability Coordinator, Transmission Operator, and Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 2 hours and less than or equal to 4 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, and Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 4 hours and less than or equal to 6 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, and Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 6 hours and less than or equal to 8 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, and Balancing Authority failed to test the Alternative Interpersonal Communication capability once each calendar month.  OR The Reliability Coordinator, Transmission Operator, and Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 8 hours upon an unsuccessful test.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R10</b>	The Reliability Coordinator, Transmission Operator, and Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its Interpersonal Communication capability in more than 60 minutes but less than or equal to 70 minutes.	The Reliability Coordinator, Transmission Operator, and Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its Interpersonal Communication capability in more than 70 minutes but less than or equal to 80 minutes.	The Reliability Coordinator, Transmission Operator, and Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its Interpersonal Communication capability in more than 80 minutes but less than or equal to 90 minutes.	The Reliability Coordinator, Transmission Operator, and Balancing Authority failed to notify the identified entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its Interpersonal Communication capability in more than 90 minutes.
<b>R11</b>	N/A	N/A	N/A	The Distribution Provider or Generator Operator that experienced a failure of its Interpersonal Communication capability failed to consult with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of the Interpersonal Communication capability.

**E. Regional Differences**

None identified.

**F. Associated Documents****Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
2	TBD	Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Replaced R1 with R1-R8; R2 replaced by R9; R3 included within new R1; R4 remains enforce pending Project 2007-02; R5 redundant with EOP-008-0, retiring R5 as redundant with EOP-008-0, R1; retiring R6, relates to ERO procedures; R10 & R11, new.	Revised

## Standard Development Roadmap

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

### Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007.
2. Draft SAR Version 1 Comment Period ended February 14, 2007.
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007.
4. Draft Version 2 SAR comment period ended April 17, 2007.
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version ~~2 of 2~~ standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 18, 2010.
11. Fourth posting of revised standards on January 25, 2011 with comment period closed on March 7, 2011.
- ~~11.~~ 12. Initial ~~ballot~~ Ballot conducted February 25 through March 7, 2011.
13. Draft version 5 of the standard and response to comments March 7, 2011 – January 9, 2012.
14. Fifth posting of revised standards on January 9, 2012 with comment period closed on February 9, 2012.
15. Successive ballot conducted January 30 through February 9, 2011.
16. Draft version 6 of the standard and response to comments February 9, 2011 – June 5, 2012.
17. Sixth posting of revised standard on June 7, 2012 with comment period closed on July 6, 2012.
18. Successive ballot conducted June 27 through July 6, 2012.

**Proposed Action Plan and Description of Current Draft:**

The SDT began working on revisions to the standards in August 2007. The current posting ~~contains~~ contains revisions based on stakeholder comments on the initial ballot. The team is posting for a successive ballot.

**Future Development Plan:**

Anticipated Actions	Anticipated Date
1. Post <del>standards</del> <u>Standards</u> for a successive ballot.	January-February 2012
2. Respond to comments on <del>successive</del> <u>Successive</u> ballot.	March - April 2012
<u>3. Standard posted for second successive ballot.</u>	<u>June 2012</u>
<u>3-4. Standard</u> <del>Standards</del> posted for recirculation ballot.	<u>September</u> <del>May</del> 2012
<u>4-5. Standard</u> <del>Standards</del> to be sent to BOT for approval.	<u>November</u> <del>June</del> 2012
<u>5-6. Standard</u> <del>Standards</del> filed with regulatory authorities.	<u>January 2013</u> <del>August 2012</del>

### Definitions of Terms Used in Standard

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

The RC SDT proposes the following new definitions:

**Interpersonal Communication:** Any medium that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal ~~Communication~~Communications used for day-to-day operation.

## A. Introduction

1. **Title:** Communications
2. **Number:** COM-001-2
3. **Purpose:** To establish Interpersonal Communication capabilities ~~for the exchange of Interconnection and operating information~~ necessary to maintain reliability.
4. **Applicability:**
  - 4.1. Transmission Operator
  - 4.2. Balancing Authority
  - 4.3. Reliability Coordinator
  - 4.4. Distribution Provider
  - 4.5. Generator Operator
5. **Effective Date:** The first day of the second calendar quarter ~~beyond the date that this standard is approved by~~ following applicable regulatory ~~authorities, approval~~— or in those jurisdictions where ~~no~~ regulatory approval is ~~not~~ required, the ~~standard becomes effective on the~~ first day of the first calendar quarter ~~beyond the date this standard is approved by the NERC following~~ Board of Trustees, ~~or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities, adoption.~~

## B. Requirements

- ~~R1.~~ Each Reliability Coordinator shall have Interpersonal ~~Communication~~ **Communications** capability with the following entities ~~(unless the : [Violation Risk Factor: High][Time Horizon: Real-time Operations])~~
- ~~R1.1.~~ All Transmission Operators and Balancing Authorities within its Reliability Coordinator ~~experiences a failure of its Area.~~
- ~~R1.2.~~ Adjacent Reliability Coordinators within the same Interconnection.
- ~~R2.R1.~~ Each Reliability Coordinator shall designate an Alternative Interpersonal ~~Communication~~ **Communications** capability ~~in which case Requirement R10 shall apply): with the following entities: [Violation Risk Factor: High][Time Horizon: Real-time Operations]~~
- ~~R2.1.R1.1.~~ All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.
- ~~R2.2.R1.2.~~ Each adjacent ~~Adjacent~~ Reliability ~~Coordinator~~ **Coordinators** within the same Interconnection.
- ~~R3.R2.~~ Each ~~Reliability Coordinator~~ **Transmission Operator** shall ~~designate an Alternative~~ **have** Interpersonal ~~Communication~~ **Communications** capability with the following entities: ~~[Violation Risk Factor: High][Time Horizon: Real-time Operations]~~



- 2.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.
- 2.2. Each adjacent Reliability Coordinator within the same Interconnection.
- R3.** Each Transmission Operator shall have Interpersonal Communication capability with the following entities (unless the Transmission Operator experiences a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): [Violation Risk Factor: High] [Time Horizon: Real-time Operations]
  - R3.1.** 3.1. Its Reliability Coordinator.
  - R3.2.** 3.2. Each Balancing Authority within its Transmission Operator Area.
  - R3.3.** 3.3. Each Distribution Provider within its Transmission Operator Area.
  - R3.4.** 3.4. Each Generator Operator within its Transmission Operator Area.
  - R3.5.** 3.5. ~~Each adjacent~~ ~~Adjacent~~ Transmission ~~Operator~~ ~~Operators~~ synchronously connected ~~within the same Interconnection.~~
  - 3.6. Each adjacent Transmission Operator asynchronously connected.
- R4.** Each Transmission Operator shall designate an Alternative Interpersonal ~~Communication~~ ~~Communications~~ capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
  - R4.1.** 4.1. Its Reliability Coordinator.
  - R4.2.** 4.2. Each Balancing Authority within its Transmission Operator Area.
  - R4.3.** 4.3. ~~Each adjacent~~ ~~Adjacent~~ Transmission ~~Operator~~ ~~Operators~~ synchronously connected ~~within the same Interconnection.~~
  - 4.4. Each adjacent Transmission Operator asynchronously connected.
- R5.** Each Balancing Authority shall have Interpersonal ~~Communication~~ ~~Communications~~ capability with the following entities (unless the Balancing Authority experiences a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
  - R5.1.** Its Reliability Coordinator.
  - R5.2.** Each Transmission Operator that operates Facilities within its Balancing Authority Area.
  - R5.3.** Each Distribution Provider within its Balancing Authority Area.
  - R5.4.** Each Generator Operator that operates Facilities within its Balancing Authority Area.
  - R5.5.** ~~Each adjacent~~ ~~Adjacent~~ Balancing ~~Authority~~ ~~Authorities.~~
- R6.** Each Balancing Authority shall designate an Alternative Interpersonal ~~Communication~~ ~~Communications~~ capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
  - R6.1.** Its Reliability Coordinator.

- R6.2.** Each Transmission Operator that operates Facilities within its Balancing Authority Area.
- R6.3.** ~~Each adjacent~~ Adjacent Balancing ~~Authority~~ Authorities.
- R7.** Each Distribution Provider shall have Interpersonal ~~Communication~~ Communications capability with the following entities ~~(unless the Distribution Provider experiences a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply):~~ *÷ [Violation Risk Factor: High] [~~H~~] Time Horizon: Real-time Operations]*
- 7.1.** ~~Its Balancing Authority.~~
- R7.1.** ~~7.2.~~ Its Transmission Operator.
- R7.2.** ~~Its Balancing Authority.~~
- R8.** Each Generator Operator shall have Interpersonal ~~Communication~~ Communications capability with the following entities ~~(unless the Generator Operator experiences a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply):~~ *÷ [Violation Risk Factor: High] [~~H~~] Time Horizon: Real-time Operations]*
- R8.1.** ~~8.1.~~ Its Balancing Authority.
- R8.2.** ~~8.2.~~ Its Transmission Operator.
- R9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal ~~Communication~~ Communications capability at least once ~~each~~per calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or designate a replacement Alternative Interpersonal ~~Communication~~ Communications capability within 2 hours. *[Violation Risk Factor: Medium][Time Horizon: Real-time ~~Operations, Same-day~~ Operations]*
- R10.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1, ~~R3, and R5 through R6~~ within 60 minutes of the detection of a failure of its Interpersonal ~~Communication~~ ~~capability~~ Communications capabilities that lasts 30 minutes or longer. *[Violation Risk Factor: Medium] [~~H~~] Time Horizon: Real-time Operations]*
- R11.** Each Distribution Provider and Generator Operator that experiences a failure of ~~any of~~ its Interpersonal Communication ~~capability~~ capabilities shall consult ~~each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator~~with their Transmission Operator, ~~or Balancing Authority as applicable~~ to determine a mutually agreeable ~~action~~time for the restoration of ~~its~~ Interpersonal Communication capability. *[Violation Risk Factor: Medium] [~~H~~] Time Horizon: Real-time Operations]*

### C. Measures

- M1.** Each Reliability Coordinator shall have and provide upon request evidence that it has Interpersonal ~~Communication~~ Communications capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with ~~each~~ adjacent Reliability ~~Coordinator~~ Coordinators within the same Interconnection, ~~which, Evidence~~ could include, but is not limited to:

- physical assets, or
- ~~dated~~ evidence, such as, equipment specifications and installation documentation,
- ~~dated~~ test records,
- ~~dated~~ operator logs,
- ~~dated and time-stamped~~ voice recordings, ~~or dated and time-stamped~~ transcripts of voice recordings, or
- electronic communications,
- ~~or equivalent evidence.~~ (R1.)

**M2.** Each Reliability Coordinator shall have and provide upon request evidence that it designated an Alternative Interpersonal ~~Communication~~Communications capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability ~~Coordinator~~Coordinators within the same Interconnection, ~~which, Evidence~~ could include, but is not limited to:

- physical assets, or
- ~~dated~~ evidence, such as, equipment specifications and installation documentation,
- ~~dated~~ test records,
- ~~dated~~ operator logs,
- ~~dated and time-stamped~~ voice recordings, ~~or dated and time-stamped~~ transcripts of voice recordings, or
- electronic communications,
- ~~or equivalent evidence.~~ (R2.)

**M3.** Each Transmission Operator shall have and provide upon request evidence that it has Interpersonal ~~Communication~~Communications capability with its Reliability Coordinator, ~~and within its Transmission Operator Area~~ each Balancing Authority, Distribution Provider, and Generator Operator within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously and synchronously connected, which, Evidence could include, but is not limited to:

- physical assets, or
- ~~dated~~ evidence, such as, equipment specifications and installation documentation,
- ~~dated~~ test records,
- ~~dated~~ operator logs,
- ~~dated and time-stamped~~ voice recordings, ~~or dated and time-stamped~~ transcripts of voice recordings, or

- ~~electronic communication~~~~communications~~
- ~~or equivalent evidence.~~ (R3.)

M4. Each Transmission Operator shall have and provide upon request evidence that it designated an Alternative Interpersonal ~~Communication~~~~Communications~~ capability with its Reliability Coordinator, ~~and with~~ each Balancing Authority within its Transmission Operator Area, and ~~each~~ adjacent Transmission ~~Operator asynchronously and Operators~~ synchronously connected, ~~which within the same Interconnection.~~ Evidence could include, but is not limited to:

- physical assets, ~~or~~
- ~~dated~~ evidence, such as, equipment specifications and installation documentation,
- ~~dated~~ test records,
- ~~dated~~ operator logs,
- ~~dated and time stamped~~ voice recordings, ~~or dated and time stamped~~ transcripts of voice recordings, ~~or~~
- ~~electronic communications.~~
- ~~or equivalent evidence.~~ (R4.)

M5. Each Balancing Authority shall have and provide upon request evidence that it has Interpersonal ~~Communication~~~~Communications~~ capability with its Reliability Coordinator, each Transmission ~~Operator and Generator~~ Operator that operates Facilities within its Balancing Authority Area, each Distribution Provider within its Balancing Authority Area, ~~each Generator Operator that operates Facilities within its Balancing Authority Area,~~ and each adjacent Balancing Authority, ~~which.~~ Evidence could include, but is not limited to:

- physical assets, ~~or~~
- ~~dated~~ evidence, such as, equipment specifications and installation documentation,
- ~~dated~~ test records,
- ~~dated~~ operator logs,
- ~~dated and time stamped~~ voice recordings, ~~or dated and time stamped~~ transcripts of voice recordings, ~~or~~
- ~~electronic communications.~~
- ~~or equivalent evidence.~~ (R5.)

M6. Each Balancing Authority shall have and provide upon request evidence that it designated an Alternative Interpersonal ~~Communication~~~~Communications~~ capability with its Reliability Coordinator, each Transmission Operator that operates Facilities within its Balancing Authority Area, and ~~each~~ adjacent Balancing ~~Authority,~~ ~~which Authorities.~~ Evidence could include, but is not limited to:

- physical assets, or
- ~~dated~~ evidence, such as, equipment specifications and installation documentation,
- ~~dated~~ test records,
- ~~dated~~ operator logs,
- ~~dated and time-stamped~~ voice recordings, ~~or dated and time-stamped~~ transcripts of voice recordings, or
- ~~electronic communications.~~
- ~~or equivalent evidence (R6.)~~

**M7.** Each Distribution Provider shall have and provide upon request evidence that that it has Interpersonal ~~Communication~~Communications capability with its Transmission Operator and its Balancing Authority, ~~which~~ ~~Evidence~~ could include, but is not limited to:

- physical assets, or
- ~~dated~~ evidence, such as, equipment specifications and installation documentation,
- ~~dated~~ test records,
- ~~dated~~ operator logs,
- ~~dated and time-stamped~~ voice recordings, ~~or dated and time-stamped~~ transcripts of voice recordings, or
- ~~electronic communications.~~
- ~~or equivalent evidence (R7.)~~

**M8.** Each Generator Operator shall have and provide upon request evidence that ~~that~~ it has Interpersonal ~~Communication~~Communications capability with its Balancing Authority and its Transmission Operator, ~~which~~ ~~Evidence~~ could include, but is not limited to:

- physical assets, or
- ~~dated~~ evidence, such as, equipment specifications and installation documentation,
- ~~dated~~ test records,
- ~~dated~~ operator logs,
- ~~dated and time-stamped~~ voice recordings, ~~or dated and time-stamped~~ transcripts of voice recordings, or
- ~~electronic communications.~~
- ~~or equivalent evidence (R8.)~~

- M9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it tested, at least once each calendar month~~on a monthly basis~~, its Alternative Interpersonal Communication capability~~Communications capabilities~~ designated in Requirements R2, R4, or R6. If the test was unsuccessful, the entity shall have and provide upon request evidence that it initiated action to repair or designated a replacement Alternative Interpersonal Communication~~Communications~~ capability within 2 hours. Evidence could include, but is not limited to dated and time-stamped: test records, ~~dated~~ operator logs, ~~dated~~ voice recordings, ~~or dated~~ transcripts of voice recordings, or electronic communications, ~~or equivalent evidence~~. (R9.)
- M10.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it notified ~~impacted~~ entities as identified in Requirements R1, R3, and R5 within 60 minutes of the detection of a failure of its Interpersonal Communication capability~~Communications capabilities~~ that lasted 30 minutes or longer. Evidence could include, but is not limited to dated and time-stamped: test records, operator logs, ~~dated~~ voice recordings, ~~or dated~~ transcripts of voice recordings, or electronic communications, ~~or equivalent evidence~~. (R10.)
- M11.** Each Distribution Provider and Generator Operator that experienced a failure of its Interpersonal Communication capability shall have and provide upon request evidence that it consulted with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator~~their Transmission Operator, or Balancing Authority as applicable~~ to determine a mutually agreeable action~~time~~ to restore the Interpersonal Communication capability. Evidence could include, but is not limited to dated: operator logs, ~~dated~~ voice recordings, ~~or dated~~ transcripts of voice recordings, or electronic communications, ~~or equivalent evidence~~. (R11.)

~~**M12.**~~

**D. Compliance**

**1. Compliance Monitoring Process**

**1.1. Compliance Enforcement Authority**

~~The For entities that do not work for the~~ Regional Entity, ~~the Regional Entity~~ shall serve as the Compliance Enforcement Authority (CEA) ~~unless the applicable entity is owned, operated, or controlled by the-~~

~~For Reliability Coordinators that work for their~~ Regional Entity. In such cases, the ERO or a Regional Entity approved by ~~the ERO and~~ FERC or other applicable governmental ~~authority~~authorities shall serve as the CEA, Compliance Enforcement Authority.

**1.2. Compliance Monitoring and Enforcement Processes**

Compliance Audit

Self-Certification

Spot Checking  
Compliance ~~Violation~~ Investigation  
Self-Reporting  
Complaint

### 1.3. Data Retention

~~The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.~~

The Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o ~~The Each~~ Reliability Coordinator shall ~~retain~~ keep the most recent twelve months of historical data (evidence of) ~~for~~ Requirements R1, R2, R9, and R10, Measures M1, M2, M9, and M10 for the most recent twelve calendar months.
- o ~~The Each~~ Transmission Operator shall ~~retain~~ keep the most recent twelve months of historical data (evidence of) ~~for~~ Requirements R3, R4, R9, and R10, Measures M3, M4, M9, and M10 for the most recent twelve calendar months.
- o ~~The Each~~ Balancing Authority shall ~~retain~~ keep the most recent twelve months of historical data (evidence of) ~~for~~ Requirements R5, R6, R9, and R10, Measures M5, M6, M9, and M10 for the most recent twelve calendar months.
- o ~~The Each~~ Distribution Provider shall ~~retain~~ keep the most recent twelve months of historical data (evidence of) ~~for~~ Requirements R7 and R11, Measures M7 and M11 for the most recent twelve calendar months.
- o ~~The Each~~ Generator Operator shall ~~retain~~ keep the most recent twelve months of historical data (evidence of) ~~for~~ Requirements R8 and R11, Measures M8 and M11 for the most recent twelve calendar months.

If a Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, or Generator Operator is found non-compliant ~~with a requirement~~, it shall keep information related to the ~~non-compliance~~ non-compliance until mitigation is complete and approved ~~the Compliance Enforcement Authority finds it compliant~~ or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

**1.4. Additional Compliance Information**

~~None.~~





2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	<u>The Reliability Coordinator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u> N/A	The Reliability Coordinator failed to have Interpersonal <del>Communication</del> <del>Communications</del> capability with <del>two</del> <del>one</del> or more of the entities listed in <u>Requirement R1</u> , Parts 1.1 or 1.2, <u>except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>
R2	N/A	N/A	<u>The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R2, Parts 2.1 or 2.2.</u> N/A	The Reliability Coordinator failed to designate Alternative Interpersonal <del>Communication</del> <del>Communications</del> capability with <del>two</del> <del>one</del> or more of the entities listed in <u>Requirement R2</u> , Parts 2.1 or 2.2.
R3	N/A	N/A	<u>The Transmission Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u> N/A	The Transmission Operator failed to have Interpersonal <del>Communication</del> <del>Communications</del> capability with <del>two</del> <del>one</del> or more of the entities listed in <u>Requirement R3</u> , Parts 3.1, 3.2, 3.3, 3.4, <u>3.5</u> , or <u>3.6</u> , <u>except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R4	N/A	N/A	<u>The Transmission Operator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.</u> N/A	The Transmission Operator failed to designate Alternative Interpersonal <u>CommunicationCommunications</u> capability with <del>two</del> <u>one</u> or more of the entities listed in <u>Requirement R4</u> , Parts 4.1, <u>4.2, 4.3,</u> or <u>4.4</u> .
R5	N/A	N/A	<u>The Balancing Authority failed to have Interpersonal Communication capability with one of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u> N/A	The Balancing Authority failed to have Interpersonal <u>CommunicationCommunications</u> capability with <del>two</del> <u>one</u> or more of the entities listed in <u>Requirement R5</u> , Parts 5.1, 5.2, 5.3, 5.4, or 5.5, <u>except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>
R6	N/A	N/A	<u>The Balancing Authority failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.</u> N/A	The Balancing Authority failed to designate Alternative Interpersonal <u>CommunicationCommunications</u> capability with <del>two</del> <u>one</u> or more of the entities listed in <u>Requirement R6</u> , Parts 6.1, 6.2, or 6.3.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R7	N/A	N/A	<p><u>The Distribution Provider failed to have Interpersonal Communication capability with one of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>N/A</p>	<p>The Distribution Provider failed to have Interpersonal <u>CommunicationCommunications</u> capability with <del>two</del>one or more of the entities listed in <u>Requirement R7</u>, Parts 7.1 or 7.2, <u>except when the Distribution Provider experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u></p>
R8	N/A	N/A	<p><u>The Generator Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>N/A</p>	<p>The Generator Operator failed to have Interpersonal <u>CommunicationCommunications</u> capability with <del>two</del>one or more of the entities listed in <u>Requirement R8</u>, Parts 8.1 or 8.2, <u>except when a Generator Operator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u></p>

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R9	<p>The <u>Reliability Coordinator, Transmission Operator, and Balancing Authority</u><del>responsible entity</del> tested the Alternative Interpersonal <u>Communication</u><del>Communications</del> capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal <u>Communication</u><del>Communications</del> in more than 2 hours and less than or equal to 4 hours <u>upon an unsuccessful test.</u></p>	<p>The <u>Reliability Coordinator, Transmission Operator, and Balancing Authority</u><del>responsible entity</del> tested the Alternative Interpersonal <u>Communication</u><del>Communications</del> capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal <u>Communication</u><del>Communications</del> in more than 4 hours and less than or equal to 6 hours <u>upon an unsuccessful test.</u></p>	<p>The <u>Reliability Coordinator, Transmission Operator, and Balancing Authority</u><del>responsible entity</del> tested the Alternative Interpersonal <u>Communication</u><del>Communications</del> capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal <u>Communication</u><del>Communications</del> in more than 6 hours and less than or equal to 8 hours <u>upon an unsuccessful test.</u></p>	<p>The <u>Reliability Coordinator, Transmission Operator, and Balancing Authority</u><del>responsible entity</del> failed to test the Alternative Interpersonal <u>Communication</u><del>Communications</del> capability <u>once each calendar month</u><del>on at least a monthly basis.</del></p> <p>OR</p> <p>The <u>Reliability Coordinator, Transmission Operator, and Balancing Authority</u><del>responsible entity</del> tested the Alternative Interpersonal <u>Communication</u><del>Communications</del> capability <u>and identified a problem</u> but <u>failed to</u><del>didn't</del> initiate action to repair or designate a replacement Alternative Interpersonal <u>Communication</u><del>Communications</del> in more than 8 hours <u>upon an unsuccessful test.</u></p>

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R10	<p>The <u>Reliability Coordinator, Transmission Operator, and Balancing Authority</u> responsible entity failed to notify the <del>impacted</del> entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its <u>Interpersonal Communication capability</u> in more than 60 minutes but less than or equal to 70 minutes.</p>	<p>The <u>Reliability Coordinator, Transmission Operator, and Balancing Authority</u> responsible entity failed to notify the <del>impacted</del> entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its <u>Interpersonal Communication capability</u> in more than 70 minutes but less than or equal to 80 minutes.</p> <p><del>OR</del></p> <p>The responsible entity notified at least one, but not all, impacted entities of the failure of its <u>Interpersonal Communications capabilities</u> within 60 minutes.</p>	<p>The <u>Reliability Coordinator, Transmission Operator, and Balancing Authority</u> responsible entity failed to notify the <del>impacted</del> entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its <u>Interpersonal Communication capability</u> in more than 80 minutes but less than or equal to 90 minutes.</p>	<p>The <u>Reliability Coordinator, Transmission Operator, and Balancing Authority</u> responsible entity failed to notify the <del>identified</del> impacted entities identified in Requirements R1, R3, and R5 upon the detection in more than 90 minutes.</p> <p><del>OR</del></p> <p>The responsible entity failed to notify any impacted entities of the failure of its <u>Interpersonal Communication capability</u> in more than 90 minutes. <u>Communications capabilities</u>.</p>

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R11	N/A	N/A	N/A	<p>The <u>Distribution Provider or Generator Operator that experienced a failure of its Interpersonal Communication capability</u> <del>responsible entity</del> failed to consult with <u>each entity affected by the failure, their Transmission Operator or Balancing Authority</u> as identified in Requirement R7 for a <u>Distribution Provider or Requirement R8 for a Generator Operator, applicable</u> to determine a mutually agreeable <u>action for the restoration of time to restore</u> the Interpersonal Communication capability.</p>





**E. Regional Differences**

None identified.

**F. Associated Documents****Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
2	TBD	<u>Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Replaced R1 with R1-R8; R2 replaced by R9; R3 included within new R1; R4 remains enforce pending Project 2007-02; R5 redundant with EOP-008-0, retiring R5 as redundant with EOP-008-0, R1; retiring R6, relates to ERO procedures; R10 &amp; R11, new.</u> <del>Revised per SAR for Project 2006-06, RC SDT</del>	Revised

# Implementation Plan and Mapping Document

## COM-001-2 Communications

### Requested Approval

The RC SDT requests the approval of COM-001-2 – Communications and two new NERC Glossary terms.

### Requested Retirement

The RC SDT request the retirement of standard COM-001-1.1, Requirements R1, R2, R3, R5, R6 and the associated sub-requirements, except Requirement R4. This Requirement R4 is being revised for inclusion in Standard COM-003-1, Operating Personnel Communications Protocols and will be retired when COM-003-1 becomes effective.

### Prerequisite Approvals

None.

### Defined Terms in the NERC Glossary

The RC SDT proposes the following new definitions:

**Interpersonal Communication:** Any medium that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.

### Conforming Changes to Requirements in Already Approved Standards

The RC SDT proposes retiring COM-001-1.1, Requirement R5 as it is redundant with EOP-008-0, Requirement R1 as well as EOP-008-1, Requirement R1.

### Revisions to Approved Standards and Definitions

The RCSDT revised the COM-001-1 standard and is proposing retiring four Requirements (R1, R4, R5, and R6). The COM-001-1 standard, Requirement R1 is proposed to be replaced with COM-001-2, Requirements R1, R2, R3, R4, R5, R6, R7, and R8 to achieve clarity to which entities were required to have to reliable communications. Requirement R2 in COM-001-1 will become Requirement R9 in COM-001-2. Requirement R3 in COM-001-1 has been included within Requirement R1 of COM-001-2. Requirement R4 will remain enforceable until its revision is included in COM-003-1 that is being developed under Project 2007-02 – Operating Personnel Communication Protocols. Requirement R5 in COM-001-1 is redundant with EOP-008-0, Requirement R1 and EOP-008-1, Requirement R1 and will be retired upon the effective date of COM-001-2. The COM-001-1 standard, Requirement R6 will be retired as it is an ERO procedural requirement and does not impact reliability. Changes were made to

eliminate redundancies between standards (existing and proposed), to align with the ERO Rules of Procedure and to address known issues and certain directives in FERC Order 693.

### Applicable Entities

- Reliability Coordinator
- Balancing Authority
- Transmission Operator
- Generator Operator
- Distribution Provider

### Effective Date

The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

### New or Revised Standards

COM-001-2                    In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees adoption.

### Standard for Retirement

COM-001-1.1,            Midnight of the day immediately prior to the Effective Date of COM-001-2 in the  
Requirements            particular Jurisdiction in which the new standard is becoming effective. Note:  
R1, R2, R3, R5,            Requirement R4 will remain effective until its inclusion in the standard COM-003-1  
and R6                      currently under development.

### Implementation Plan for Definitions

**Interpersonal Communication** – Entities shall use this definition when implementing the standard COM-001-2, which uses this defined term.

**Alternative Interpersonal Communication** – Entities shall use this definition when implementing the standard COM-001-2, which uses this defined term.

## Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard becomes effective. If the drafting team is recommending the retirement or revision of a requirement, that text is [blue](#).

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1.1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></p>	<p><b>COM-001-2</b></p> <p><b>R1.</b> Each Reliability Coordinator shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator experiences a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i></p> <p><b>R1.1.</b> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R1.2.</b> Each adjacent Reliability Coordinator within the same Interconnection.</p> <p><b>R2.</b> Each Reliability Coordinator shall designate an Alternative Interpersonal Communication capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R2.1.</b> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R2.2.</b> Each adjacent Reliability Coordinator within the same Interconnection.</p> <p><b>R3.</b> Each Transmission Operator shall have Interpersonal Communication capability with the following entities (unless the Transmission Operator experiences a failure of its Interpersonal</p>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p>Communication capability in which case Requirement R10 shall apply): <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R3.1.</b> Its Reliability Coordinator.</p> <p><b>R3.2.</b> Each Balancing Authority within its Transmission Operator Area.</p> <p><b>R3.3.</b> Each Distribution Provider within its Transmission Operator Area.</p> <p><b>R3.4.</b> Each Generator Operator within its Transmission Operator Area.</p> <p><b>R3.5.</b> Each adjacent Transmission Operator synchronously connected.</p> <p><b>R3.6.</b> Each adjacent Transmission Operator asynchronously connected.</p> <p><b>R4.</b> Each Transmission Operator shall designate an Alternative Interpersonal Communication capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R4.1.</b> Its Reliability Coordinator.</p> <p><b>R4.2.</b> Each Balancing Authority within its Transmission Operator Area.</p> <p><b>R4.3.</b> Each adjacent Transmission Operator synchronously connected.</p> <p><b>R4.4.</b> Each adjacent Transmission Operator asynchronously</p>

Already Approved Standard	Proposed Replacement Requirement(s)
	connected.
<p><b>Notes:</b> The requirements were made clearer as to which capabilities specific entities were required to have to reliable communications.</p>	
Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1.1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <ul style="list-style-type: none"> <li><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></li> <li><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></li> <li><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></li> <li><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></li> </ul>	<p><b>COM-001-2</b></p> <p><b>R5.</b> Each Balancing Authority shall have Interpersonal Communication capability with the following entities (unless the Balancing Authority experiences a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <ul style="list-style-type: none"> <li><b>R5.1.</b> Its Reliability Coordinator.</li> <li><b>R5.2.</b> Each Transmission Operator that operates Facilities within its Balancing Authority Area.</li> <li><b>R5.3.</b> Each Distribution Provider within its Balancing Authority Area.</li> <li><b>R5.4.</b> Each Generator Operator that operates Facilities within its Balancing Authority Area.</li> <li><b>R5.5.</b> Each adjacent Balancing Authority.</li> </ul> <p><b>R6.</b> Each Balancing Authority shall designate an Alternative Interpersonal Communication capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <ul style="list-style-type: none"> <li><b>R6.1.</b> Its Reliability Coordinator.</li> </ul>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p><b>R6.2.</b> Each Transmission Operator that operates Facilities within its Balancing Authority Area.</p> <p><b>R6.3.</b> Each adjacent Balancing Authority.</p> <p><b>R7.</b> Each Distribution Provider shall have Interpersonal Communication capability with the following entities (unless the Distribution Provider experiences a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply): <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R7.1.</b> Its Transmission Operator.</p> <p><b>R7.2.</b> Its Balancing Authority.</p> <p><b>R8.</b> Each <b>Generator Operator</b> shall have Interpersonal Communication capability with the following entities (unless the Generator Operator experiences a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply): <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R8.1.</b> Its Balancing Authority.</p> <p><b>R8.2.</b> Its Transmission Operator.</p>
<p><b>Notes:</b> The requirements we made clearer as to which capabilities specific entities were required to have for reliable interpersonal communications. Requirements R7 and R8 were created to address the FERC directive (Order No. 693, P508) to “(1) expand the applicability to include generator operators and distribution providers and includes Requirements for their telecommunications facilities;”</p>	
COM-001-1.1	COM-001-2

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>R2.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications. <i>[Violation Risk Factor: Medium]</i></p>	<p><b>R9.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communication capability at least once each calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communication capability within 2 hours. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b></p>	
<p><b>COM-001-1.1</b></p> <p><b>R3.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>COM-001-2</b></p> <p><b>R1.</b> Each Reliability Coordinator shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator experiences a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <ul style="list-style-type: none"> <li><b>R1.1.</b> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</li> <li><b>R1.2.</b> Each adjacent Reliability Coordinator within the same Interconnection.</li> </ul>
<p><b>Notes:</b></p>	
<p><b>COM-001-1.1</b></p> <p><b>R4.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use</p>	<p><b>None - retire</b></p>



Already Approved Standard	Proposed Replacement Requirement(s)
<p>English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. <i>[Violation Risk Factor: Medium]</i></p>	<ul style="list-style-type: none"> <li>▪ This requirement is being vetted by the OPCPSDT in Project 2007-02 – Operating Personnel Communication Protocols (COM-003-1). This requirement and measure will be removed from COM-001-1.1 upon the effective date of COM-003-1.</li> </ul>
<p><b>Notes:</b></p>	
<p><b>COM-001-1.1</b></p> <p><b>R5.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>EOP-008-0</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements:</p> <ul style="list-style-type: none"> <li><b>R1.1.</b> The contingency plan shall not rely on data or voice communication from the primary control facility to be viable.</li> <li><b>R1.2.</b> The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules.</li> <li><b>R1.3.</b> The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities.</li> <li><b>R1.4.</b> The plan shall include procedures and responsibilities for</li> </ul>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p>maintaining basic voice communication capabilities with other areas.</p> <p><b>R1.5.</b> The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.</p> <p><b>R1.6.</b> The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans.</p> <p><b>R1.7.</b> The plan shall be reviewed and updated annually.</p> <p><b>R1.8.</b> Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.</p> <p><b>EOP-008-1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have a current Operating Plan describing the manner in which it continues to meet its functional obligations with regard to the reliable operations of the BES in the event that its primary control center functionality is lost. This Operating Plan for backup functionality shall include the following, at a minimum: [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]</p> <p><b>1.1.</b> The location and method of implementation for providing backup functionality for the time it takes to restore the primary control center functionality.</p> <p><b>1.2.</b> A summary description of the elements required to support the backup functionality. These elements shall include, at a</p>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p>minimum:</p> <ul style="list-style-type: none"> <li><b>1.2.1.</b> Tools and applications to ensure that System Operators have situational awareness of the BES.</li> <li><b>1.2.2.</b> Data communications.</li> <li><b>1.2.3.</b> Voice communications.</li> <li><b>1.2.4.</b> Power source(s).</li> <li><b>1.2.5.</b> Physical and cyber security.</li> <li><b>1.3.</b> An Operating Process for keeping the backup functionality consistent with the primary control center.</li> <li><b>1.4.</b> Operating Procedures, including decision authority, for use in determining when to implement the Operating Plan for backup functionality.</li> <li><b>1.5.</b> A transition period between the loss of primary control center functionality and the time to fully implement the backup functionality that is less than or equal to two hours.</li> <li><b>1.6.</b> An Operating Process describing the actions to be taken during the transition period between the loss of primary control center functionality and the time to fully implement backup functionality elements identified in Requirement R1, Part 1.2. The Operating Process shall include at a minimum: <ul style="list-style-type: none"> <li><b>1.6.1.</b> A list of all entities to notify when there is a change in operating locations.</li> <li><b>1.6.2.</b> Actions to manage the risk to the BES during the transition from primary to backup functionality as well as</li> </ul> </li> </ul>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p>during outages of the primary or backup functionality.</p> <p><b>1.6.3.</b> Identification of the roles for personnel involved during the initiation and implementation of the Operating Plan for backup functionality.</p>
<p><b>Notes:</b> The RC SDT proposes retiring COM-001-1.1, Requirement R5 as it is redundant with EOP-008-0, Requirement R1 as well as EOP-008-1 Requirement R1.</p>	
<p><b>COM-001-1</b></p> <p><b>R6.</b> Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, “NERCNet Security Policy.” <i>[Violation Risk Factor: Lower]</i></p>	<p><b>None – retire</b></p>
<p><b>Notes:</b> The RC SDT is recommending that R6 be retired. This is an ERO procedural issue and should not be in a reliability standard. It should be included in the ERO Rules of Procedure.</p>	
<p><b>None</b></p>	<p><b>New Requirement</b></p> <p><b>R11.</b> Each Distribution Provider and Generator Operator that experiences a failure of its Interpersonal Communication capability shall consult each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of its Interpersonal Communication capability. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b></p>	

**Functions that Must Comply with the Requirements in the Standards**

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Purchasing Selling Entity	Transmission Operator	Transmission Service Provider	Load Serving Entity	Generator Operator	Distribution Provider
COM-001-2 Communications	X	X		X	X		X	X

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## Implementation Plan and Mapping Document for COM-001-2 – Communications

### Approvals Requested Approval

The RC SDT requests the approval of COM-001-2 – Communications and two new NERC Glossary terms.

### Requested Retirement

The RC SDT request the retirement of standard COM-001-1.1, Requirements R1, R2, R3, R5, R6 and the associated sub-requirements, except Requirement R4. This Requirement R4 is being revised for inclusion in Standard COM-003-1, Operating Personnel Communications Protocols and will be retired when COM-003-1 becomes effective.

### Prerequisite Approvals

- None.

### Defined Terms in the NERC Glossary

The RC SDT proposes the following new definitions:

**Interpersonal Communication:** Any medium that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication ~~Communications~~ used for day-to-day operation.

### Conforming Changes to Requirements in Already Approved Standards

The RC SDT proposes retiring COM-001-1.1, Requirement R5 as it is redundant with EOP-008-0, Requirement R1 as well as EOP-008-1, Requirement R1.

- ~~None.~~

## Revisions to Approved Standards and Definitions

The RCSDT revised the COM-001-1 standard and is proposing retiring four ~~Requirements~~ requirements (R1, R4, R5, and R6). ~~The~~ COM-001-1 ~~standard, Requirement~~ requirement R1 is proposed to be replaced with COM-001-2, ~~Requirements~~ requirements R1, R2, R3, R4, R5, R6, R7, and R8 to achieve clarity to which entities were required to have to reliable communications. Requirement R2 in COM-001-1 will become ~~Requirement~~ requirement R9 in COM-001-2. Requirement R3 in COM-001-1 has been included within ~~Requirement~~ R1 of COM-001-2. Requirement R4 will remain enforceable until its ~~revision is included in~~ inclusion into COM-003-1 that is being ~~developed~~ revised under Project 2007-02 – Operating Personnel Communication Protocols. ~~and becomes mandatory and enforceable.~~ Requirement R5 in COM-001-1 is redundant with EOP-008-0, ~~Requirement~~ R1 and EOP-008-1, ~~Requirement~~ R1 and will be retired upon the effective date of COM-001-2. ~~The~~ COM-001-1 ~~standard, Requirement;~~ requirement R6 will be retired as it is an ERO procedural requirement and does not impact reliability. Changes were made to eliminate redundancies between standards (existing and proposed), to align with the ERO Rules of Procedure and to address ~~known~~ issues ~~and certain directives~~ in FERC Order 693.

### Applicable Entities

- Reliability Coordinator
- Balancing Authority
- Transmission Operator
- Generator Operator
- Distribution Provider

### Effective ~~Date~~ Dates

The first day of the second calendar quarter ~~beyond the date that this standard is approved by~~ following applicable regulatory ~~authorities, approval~~— or in those jurisdictions where ~~no~~ regulatory approval is ~~not~~ required, the ~~standard becomes effective on the~~ first day of the first calendar quarter ~~beyond the date this standard is approved by the NERC~~ following Board of Trustees, ~~or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.~~ adoption.

### New or Revised Standards

#### COM-001-2

In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees adoption.

### Standard for Retirement

COM-001-1.1, Requirements R1, R2, R3, R5, and R6      Midnight of the day immediately prior to the Effective Date of COM-001-2 in the particular Jurisdiction in which the new standard is becoming effective. Note: Requirement R4 will remain effective until its inclusion in the standard COM-003-1 currently under development.

### Implementation Plan for Definitions

**Interpersonal Communication** – Entities shall use this definition when implementing the standard COM-001-2, which uses this defined term.

**Alternative Interpersonal Communication** – Entities shall use this definition when implementing the standard COM-001-2, which uses this defined term.





## Retirements

~~COM-001-1.1 will be retired at midnight the day before COM-001-2 becomes effective with the exception of Requirement R4. This requirement is being revised and will be included in Standard COM-003-1, Operating Personnel Communications Protocols. COM-001-1.1, Requirement R4 will be retired at midnight the day before COM-003-1 becomes effective.~~

## Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard becomes effective. ~~is implemented~~. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
<p><del>■ COM-001-1.1</del></p> <p><del><b>R1.</b>— Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of interconnection and operating information. <i>[Violation Risk Factor: High]</i></del></p> <p><del><b>R1.1.</b>— Internally. <i>[Violation Risk Factor: High]</i></del></p> <p><del><b>R1.2.</b>— Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></del></p> <p><del><b>R1.3.</b>— With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></del></p> <p><del><b>R1.4.</b>— Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></del></p>	<p><b>COM-001-2</b></p> <p><b>R1.</b>— Each Reliability Coordinator shall have Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R1.1.</b>— All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R1.2.</b>— Adjacent Reliability Coordinators within the same Interconnection.</p> <p><b>R2.</b>— Each Reliability Coordinator shall designate an Alternative Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R2.1.</b>— All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R2.2.</b>— Adjacent Reliability Coordinators within the same Interconnection.</p> <p><b>R3.</b>— Each Transmission Operator shall have Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p>

**Implementation Plan and Mapping Document for COM-001-2 Communications**

	<p><del><b>R3.1.</b>— Its Reliability Coordinator.</del></p> <p><del><b>R3.2.</b>— Each Balancing Authority within its Transmission Operator Area.</del></p> <p><del><b>R3.3.</b>— Each Distribution Provider within its Transmission Operator Area.</del></p> <p><del><b>R3.4.</b>— Each Generator Operator within its Transmission Operator Area.</del></p> <p><del><b>R3.5.</b>— Adjacent Transmission Operators synchronously connected within the same Interconnection.</del></p> <p><del><b>R4.</b>— Each Transmission Operator shall designate an Alternative Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></del></p> <p><del><b>R4.1.</b>— Its Reliability Coordinator.</del></p> <p><del><b>R4.2.</b>— Each Balancing Authority within its Transmission Operator Area.</del></p> <p><del><b>R4.3.</b>— Adjacent Balancing Authorities.</del></p>
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- ~~**Notes:** The requirements were made clearer as to which capabilities specific entities were required to have to reliable communications.~~

<b>Already Approved Standard</b>	<b>Proposed Replacement Requirement(s)</b>

- ~~**COM-001-1.1**~~

<p><del><b>R1.</b>— Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></del></p> <p><del><b>R1.1.</b>— Internally. <i>[Violation Risk Factor: High]</i></del></p> <p><del><b>R1.2.</b>— Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></del></p> <p><del><b>R1.3.</b>— With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></del></p> <p><del><b>R1.4.</b>— Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></del></p>	<p><del><b>COM-001-2</b></del></p> <p><del><b>R5.</b>— Each Balancing Authority shall have Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></del></p> <p><del><b>R5.1.</b>— Its Reliability Coordinator.</del></p> <p><del><b>R5.2.</b>— Each Transmission Operator that operates Facilities within its Balancing Authority Area</del></p> <p><del><b>R5.3.</b>— Each Distribution Provider within its Balancing Authority Area</del></p> <p><del><b>R5.4.</b>— Each Generator Operator that operates Facilities within its Balancing Authority Area</del></p> <p><del><b>R5.5.</b>— Adjacent Balancing Authorities.</del></p> <p><del><b>R6.</b>— Each Balancing Authority shall designate an Alternative Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></del></p> <p><del><b>R6.1.</b>— Its Reliability Coordinator.</del></p> <p><del><b>R6.2.</b>— Each Transmission Operator that operates Facilities within its Balancing Authority Area).</del></p> <p><del><b>R6.3.</b>— Adjacent Balancing Authorities.</del></p> <p><del><b>R7.</b>— Each Distribution Provider shall have Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></del></p> <p><del><b>R7.1.</b>— Its Transmission Operator.</del></p> <p><del><b>R7.2.</b>— Its Balancing Authority.</del></p>
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	<p><del>R8.</del> Each Generator Operator shall have Interpersonal Communications capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><del>R8.1.</del> Its Balancing Authority.</p> <p><del>R8.2.</del> Its Transmission Operator.</p>
<p><del>Notes:</del> The requirements we made clearer as to which capabilities specific entities were required to have for reliable interpersonal communications. R7 and R8 were created to address the FERC directive to “expands the applicability to include generator operators and distribution providers and includes Requirements for their telecommunications facilities”</p>	
Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1.1</b></p> <p><u>R1.</u> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall <u>provide adequate manage, alarm, test and reliable/</u>or actively monitor vital telecommunications facilities. <del>Special attention shall be given to emergency telecommunications facilities and equipment not used for the exchange of Interconnection and operating information: routine communications.</del> <i>[Violation Risk Factor: High]</i></p> <p><u>R1.1.</u> Internally. <i>[Violation Risk Factor: High]</i></p> <p><u>R1.2.</u> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p>	<p><b>COM-001-2</b></p> <p><del>R9.</del> Each Reliability Coordinator, <del>Transmission Operator, and Balancing Authority</del> shall <u>have, on at least a monthly basis, test its Alternative Interpersonal Communication</u>Communications capability <u>with</u>. <del>If the following entities (unless test is unsuccessful, the Reliability Coordinator experiences entity shall initiate action to repair or designate a failure of its replacement Alternative Interpersonal Communication</del>Communications capability <u>in which case Requirement R10 shall apply): within 2 hours.</u> <i>[Violation Risk Factor: High] [Medium][Time Horizon: Real-time Operations]</i></p> <p><u>R1.4.</u> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><u>R1.5.</u> Each adjacent Reliability Coordinator within</p>

<p><u>R1.3.</u> <u>With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. [Violation Risk Factor: High]</u></p> <p><u>R2.R1.</u> <u>Where applicable, these facilities shall be redundant and diversely routed. [Violation Risk Factor: HighMedium]</u></p>	<p><u>the same Interconnection.</u></p> <p><u>R2.</u> <u>Each Reliability Coordinator shall designate an Alternative Interpersonal Communication capability with the following entities: [Violation Risk Factor: High][Time Horizon: Real-time Operations]</u></p> <p><u>R2.1.</u> <u>All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</u></p> <p><u>R2.2.</u> <u>Each adjacent Reliability Coordinator within the same Interconnection.</u></p> <p><u>R3.</u> <u>Each Transmission Operator shall have Interpersonal Communication capability with the following entities (unless the Transmission Operator experiences a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): [Violation Risk Factor: High][Time Horizon: Real-time Operations]</u></p> <p><u>R3.1.</u> <u>Its Reliability Coordinator.</u></p> <p><u>R3.2.</u> <u>Each Balancing Authority within its Transmission Operator Area.</u></p> <p><u>R3.3.</u> <u>Each Distribution Provider within its Transmission Operator Area.</u></p> <p><u>R3.4.</u> <u>Each Generator Operator within its Transmission Operator Area.</u></p> <p><u>R3.5.</u> <u>Each adjacent Transmission Operator synchronously connected.</u></p> <p><u>R3.6.</u> <u>Each adjacent Transmission Operator asynchronously connected.</u></p>
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**Implementation Plan and Mapping Document for COM-001-2 Communications**

	<p><b><u>R4.</u></b> Each Transmission Operator shall designate an <u>Alternative Interpersonal Communication capability with the following entities: [Violation Risk Factor: High][Time Horizon: Real-time Operations]</u></p> <p><b><u>R4.1.</u></b> <u>Its Reliability Coordinator.</u></p> <p><b><u>R4.2.</u></b> <u>Each Balancing Authority within its Transmission Operator Area.</u></p> <p><b><u>R4.3.</u></b> <u>Each adjacent Transmission Operator synchronously connected.</u></p> <p><u>Each adjacent Transmission Operator asynchronously connected.</u></p>
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**Notes:** The requirements were made clearer as to which capabilities specific entities were required to have to reliable communications.

<u>Already Approved Standard</u>	<u>Proposed Replacement Requirement(s)</u>
<p><b><u>COM-001-1.1</u></b></p> <p><b><u>R2.</u></b> <u>Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: [Violation Risk Factor: High]</u></p> <p style="padding-left: 40px;"><b><u>R2.1.</u></b> <u>Internally. [Violation Risk Factor: High]</u></p> <p style="padding-left: 40px;"><b><u>R2.2.</u></b> <u>Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. [Violation Risk</u></p>	<p><b><u>COM-001-2</u></b></p> <p><b><u>R5.</u></b> <u>Each Balancing Authority shall have Interpersonal Communication capability with the following entities (unless the Balancing Authority experiences a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): [Violation Risk Factor: High][Time Horizon: Real-time Operations]</u></p> <p><b><u>R5.1.</u></b> <u>Its Reliability Coordinator.</u></p> <p><b><u>R5.2.</u></b> <u>Each Transmission Operator that operates Facilities within its Balancing Authority Area.</u></p> <p><b><u>R5.3.</u></b> <u>Each Distribution Provider within its Balancing</u></p>



<p><u>Factor: High]</u></p> <p><u>R2.3. With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. [Violation Risk Factor: High]</u></p> <p><u>R2.4. Where applicable, these facilities shall be redundant and diversely routed. [Violation Risk Factor: High]</u></p>	<p><u>Authority Area.</u></p> <p><u>R5.4. Each Generator Operator that operates Facilities within its Balancing Authority Area.</u></p> <p><u>R5.5. Each adjacent Balancing Authority.</u></p> <p><u>R6. Each Balancing Authority shall designate an Alternative Interpersonal Communication capability with the following entities: [Violation Risk Factor: High][Time Horizon: Real-time Operations]</u></p> <p><u>R6.1. Its Reliability Coordinator.</u></p> <p><u>R6.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area.</u></p> <p><u>R6.3. Each adjacent Balancing Authority.</u></p> <p><u>R7. Each Distribution Provider shall have Interpersonal Communication capability with the following entities (unless the Distribution Provider experiences a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply): [Violation Risk Factor: High][Time Horizon: Real-time Operations]</u></p> <p><u>R7.1. Its Transmission Operator.</u></p> <p><u>R7.2. Its Balancing Authority.</u></p> <p><u>R8. Each Generator Operator shall have Interpersonal Communication capability with the following entities (unless the Generator Operator experiences a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply): [Violation Risk Factor: High][Time Horizon: Real-time Operations]</u></p> <p><u>R8.1. Its Balancing Authority.</u></p>
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**Implementation Plan and Mapping Document for COM-001-2 Communications**

<b><u>R8.2. Its Transmission Operator.</u></b>	
<b><u>Notes:</u></b> The requirements we made clearer as to which capabilities specific entities were required to have for reliable interpersonal communications. Requirements R7 and R8 were created to address the FERC directive (Order No. 693, P508) to “(1) expand the applicability to include generator operators and distribution providers and includes Requirements for their telecommunications facilities;”	
<p><b><u>COM-001-1.1</u></b></p> <p><b><u>R3.</u></b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications. <i>[Violation Risk Factor: Medium]</i></p>	<p><b><u>COM-001-2</u></b></p> <p><b><u>R10.</u></b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communication capability at least once each calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communication capability within 2 hours. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>

**Notes:**

<b>Already Approved Standard</b>	<b>Proposed Replacement Requirement(s)</b>
<p><b>COM-001-1.1</b></p> <p><b><del>R3.</del></b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>COM-001-2</b></p> <p><b>R1.</b> Each Reliability Coordinator, <del>Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator</del> shall <u>have Interpersonal Communication capability with the following</u> <del>notify impacted entities</del> <u>(unless the Reliability Coordinator experiences within 60 minutes of the detection of a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply):</u> <del>Communications capabilities that lasts 30 minutes or</del></p>

Implementation Plan and Mapping Document for COM-001-2 Communications

	<p><del>longer.</del> [Violation Risk Factor: <u>HighMedium</u>][Time Horizon: Real-time Operations]</p> <p><u>R1.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</u></p> <p><u>Each adjacent Reliability Coordinator within the same Interconnection.</u></p>
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Notes:

<b>Already Approved Standard</b>	<b>Proposed Replacement Requirement(s)</b>
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<p><b>COM-001-1.1</b></p> <p><b>R4.</b>—Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. [Violation Risk Factor: <u>Medium</u>]</p>	<p><b>None - retire</b></p> <ul style="list-style-type: none"> <li>This requirement is being vetted by the OPCPSDT in <u>Project 2007-02 – Operating Personnel Communication Protocols (COM-003-1).</u> This requirement and measure will be removed from COM-001-1.1 upon the effective date of COM-003-1.</li> </ul>
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Notes:

<b>Already Approved Standard</b>	<b>Proposed Replacement Requirement(s)</b>
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**COM-001-1.1**

**R5.R4.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities. *[Violation Risk Factor: Lower]*

**EOP-008-0**

- R1.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements:
- R1.1.** The contingency plan shall not rely on data or voice communication from the primary control facility to be viable.
  - R1.2.** The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules.
  - R1.3.** The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities.
  - R1.4.** The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas.
  - R1.5.** The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.
  - R1.6.** The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans.

	<p><b>R1.7.</b> -The plan shall be reviewed and updated annually.</p> <p><b>R1.8.</b> -Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.</p> <p>EOP-008-1</p> <p>R1. -Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have a current Operating Plan describing the manner in which it continues to meet its functional obligations with regard to the reliable operations of the BES in the event that its primary control center functionality is lost. This Operating Plan for backup functionality shall include the following, at a minimum: [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]</p> <p>1.1. -The location and method of implementation for providing backup functionality for the time it takes to restore the primary control center functionality.</p> <p>1.2. -A summary description of the elements required to support the backup functionality. These elements shall include, at a minimum:</p> <ul style="list-style-type: none"><li>1.2.1. -Tools and applications to ensure that System Operators have situational awareness of the BES.</li><li>1.2.2. Data communications.</li><li>1.2.3. Voice communications.</li><li>1.2.4. Power source(s).</li><li>1.2.5. Physical and cyber security.</li></ul> <p>1.3. -An Operating Process for keeping the backup</p>
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**Implementation Plan and Mapping Document for COM-001-2 Communications**

	<p>functionality consistent with the primary control center.</p> <p>1.4. _____-Operating Procedures, including decision authority, for use in determining when to implement the Operating Plan for backup functionality.</p> <p>1.5. _____-A transition period between the loss of primary control center functionality and the time to fully implement the backup functionality that is less than or equal to two hours.</p> <p>1.6. _____-An Operating Process describing the actions to be taken during the transition period between the loss of primary control center functionality and the time to fully implement backup functionality elements identified in Requirement R1, Part 1.2. The Operating Process shall include at a minimum:</p> <p>1.6.1.-A list of all entities to notify when there is a change in operating locations.</p> <p>1.6.2.-Actions to manage the risk to the BES during the transition from primary to backup functionality as well as during outages of the primary or backup functionality.</p> <p>1.6.3.-Identification of the roles for personnel involved during the initiation and implementation of the Operating Plan for backup functionality.</p>
<p><b>Notes:</b> The RC SDT proposes retiring COM-001-1.1, Requirement R5 as it is redundant with EOP-008-0, Requirement R1 as well as EOP-008-1 Requirement R1R1 which replaces it.</p>	
<p><b>Already Approved Standard</b></p>	<p><b>Proposed Replacement Requirement(s)</b></p>
<p><b>COM-001-1</b></p>	

**Implementation Plan and Mapping Document for COM-001-2 Communications**

<p><b>R6.</b>—Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, “NERCNet Security Policy.” <i>[Violation Risk Factor: <u>Lower</u>]</i></p>	<p><b>None</b> <del>—</del> retire</p>
<p><b>Notes:</b> The RC SDT is recommending that R6 be retired. This is an ERO procedural issue and should not be in a reliability standard. It should be included in the ERO Rules of Procedure.</p>	
<p><b>Already Approved Standard</b></p>	<p><b>Proposed Replacement Requirement(s)</b></p>
<p><b>None</b></p>	<p><b>New Requirement</b></p> <p><b>R11.</b> _____—Each Distribution Provider and Generator Operator that experiences a failure of <del>any of</del> its Interpersonal Communication <del>capability</del><del>capabilities</del> shall consult <u>each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator with their Transmission Operator, or Balancing Authority as applicable</u> to determine a mutually agreeable <del>action for time to restore</del> the <u>restoration of its</u> Interpersonal Communication capability. <i>[Violation Risk Factor: <u>Medium</u>][Time Horizon: <u>Real-time Operations</u>]</i></p>
<p><b>Notes:</b></p>	

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Purchasing Selling Entity	Transmission Operator	Transmission Service Provider	Load Serving Entity	Generator Operator	Distribution Provider
COM-001-2 <u>Communications</u> <del>Communications</del>	X	X		X	X		X	X



# Unofficial Comment Form

## Reliability Coordination (Project 2006-06)

Please **DO NOT** use this form to submit comments. Please use the [electronic comment form](#) to submit comments on the first formal posting for Project 2006-06—Reliability Coordination. The electronic comment form must be completed by **July 6, 2012**.

[2006-06 Project Page](#)

If you have questions please contact Scott Barfield-McGinnis at [scott.barfield@nerc.net](mailto:scott.barfield@nerc.net) or by telephone at 404-446-9689.

### Background

The RCSDT has revised the COM-001-2 standard based on stakeholder comments received during the successive ballot, formal comment period and quality review of the standard.

The two proposed definitions remain the same, except letter “s” on “Communications” the definition of Alternative Interpersonal Communication to make it singular. The RCSDT has addressed comments on the Purpose statement to align it with the intent of requiring entities to have communication capability. The effective date language was updated to reflect the current guidelines for standards.

**Purpose:** To establish Interpersonal Communication capabilities necessary to maintain reliability.

Several commenters had suggestions for improvements to the language in the requirements. The RCSDT addressed the use of “Adjacent...” starting requirements and giving the appearance of a defined glossary term by rephrasing the occurrence with “Each adjacent...” Other corrections include using the singular rather than plural for clarity.

Several commenters raised concerns about the use of “...synchronously connected within the same interconnection.” To address this, the RCSDT shortened the two requirements using this phrase to “...synchronously connected” and added an a corresponding additional requirement to each to address DC connections. See the following Requirement Parts below:

- 3.5. Each adjacent Transmission Operator synchronously connected. (Revised)
- 3.6. Each adjacent Transmission Operator asynchronously connected. (New)
- 4.3. Each adjacent Transmission Operator synchronously connected. (Revised)
- 4.4. Each adjacent Transmission Operator asynchronously connected. (New)

Some commenters had concerns about conditions of non-compliance if the entity’s Interpersonal Communication capability failed. To address this concern, the RCSDT added conforming language to Requirements R1, R3, R5, R7 and R8 that bridges the potential gap in non-compliance for a failed Interpersonal Communication capability. The VSLs were updated to reflect this change.

Requirement R10 was revised to remove R1-R6 and more accurately use R1, R3, and R5. Requirement R11 was revised the phrase “mutually agreeable time” to remove the word “time” and replace it with “action.” The Measures M10 and M11 were also corrected. Additionally, the bullets in Measures M1-M8 were cleaned up for clarity. All of the examples of evidence in the Measures were reformatted and cleaned up to more accurately reflect the scope of each requirement.

Based on comments received, the Compliance Section 1.1, Compliance Enforcement Authority, was updated to reflect the current guidelines for standards. Additionally, Section 1.3, Data Retention, was updated to reflect the current guidelines for standards and the bulleted items reformatted for clarity.

The VSLs were updated to make singular, note the applicable Requirement number, and to add the Parts 3.6 and 4.4 due to being added to the requirements, R3 and R4. Additionally, the RCSDT added High VSLs for Requirements R1 through R8 to conform with VSL Guidelines. Requirements R1 through R8 are not binary only.

**You do not have to answer all questions. Enter all comments in Simple Text Format.**

1. The RCSDT has revised the parts of Requirements R1, R2, R3, R4, R5, and R6 of COM-001-2 that began only with "Adjacent..." to begin with "Each adjacent..." to avoid the appearance of creating a defined glossary phrase. Do you agree with the changes? If not, please explain in the comment area below.

Yes

No

Comments:

2. The RCSDT has revised parts of two requirements (Parts 3.5 and 4.3) in COM-001-2 and added two additional parts (Parts 3.6 and 3.4) to address concerns about the phrase "synchronously connected within the same Interconnection." Do you agree these changes address concerns where entities might only be adjacent across an Interconnection for where connected by a Direct Current (DC) tie? If not, please explain in the comment area below.

Yes

No

Comments:

3. The RCSDT made minor changes and reformatted the evidence examples in the Measures of COM-001-2 for greater clarity. Do you agree with these revisions? If not, please explain in the comment area below.

Yes

No

Comments:

4. Do you have any other comments on COM-001-2, not expressed in questions above, for the RCSDT?

Comments:

**A. Introduction**

- 1. Title:** **Telecommunications**
- 2. Number:** COM-001-1.1
- 3. Purpose:** Each Reliability Coordinator, Transmission Operator and Balancing Authority needs adequate and reliable telecommunications facilities internally and with others for the exchange of Interconnection and operating information necessary to maintain reliability.
- 4. Applicability**
  - 4.1.** Transmission Operators.
  - 4.2.** Balancing Authorities.
  - 4.3.** Reliability Coordinators.
  - 4.4.** NERCNet User Organizations.
- 5. Effective Date:** May 13, 2009

**B. Requirements**

- R1.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information:
  - R1.1.** Internally.
  - R1.2.** Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities.
  - R1.3.** With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability.
  - R1.4.** Where applicable, these facilities shall be redundant and diversely routed.
- R2.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.
- R3.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas.
- R4.** Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.
- R5.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities.
- R6.** Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, “NERCNet Security Policy.”

**C. Measures**

- M1.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to communication facility test-procedure documents, records of testing, and maintenance records for communication facilities or equivalent that will be used to confirm that it manages, alarms, tests and/or actively monitors vital telecommunications facilities. (Requirement 2 part 1)
- M2.** The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine compliance to Requirement 4.
- M3.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request its current operating instructions and procedures, either electronic or hard copy that will be used to confirm that it meets Requirement 5.
- M4.** The NERCnet User Organization shall have and provide upon request evidence that could include, but is not limited to documented procedures, operator logs, voice recordings or transcripts of voice recordings, electronic communications, etc that will be used to determine if it adhered to the (User Accountability and Compliance) requirements in Attachment 1-COM-001. (Requirement 6)

**D. Compliance**

**1. Compliance Monitoring Process**

**1.1. Compliance Monitoring Responsibility**

NERC shall be responsible for compliance monitoring of the Regional Reliability Organizations

Regional Reliability Organizations shall be responsible for compliance monitoring of all other entities

**1.2. Compliance Monitoring and Reset Time Frame**

One or more of the following methods will be used to assess compliance:

- Self-certification (Conducted annually with submission according to schedule.)
- Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)
- Periodic Audit (Conducted once every three years according to schedule.)
- Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 calendar days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)

The Performance-Reset Period shall be 12 months from the last finding of non-compliance.

**1.3. Data Retention**

For Measure 1 each Reliability Coordinator, Transmission Operator, Balancing Authority shall keep evidence of compliance for the previous two calendar years plus the current year.

For Measure 2 each Reliability Coordinator, Transmission Operator, and Balancing Authority shall keep 90 days of historical data (evidence).

For Measure 3, each Reliability Coordinator, Transmission Operator, Balancing Authority shall have its current operating instructions and procedures to confirm that it meets Requirement 5.

For Measure 4, each Reliability Coordinator, Transmission Operator, Balancing Authority and NERCnet User Organization shall keep 90 days of historical data (evidence).

If an entity is found non-compliant the entity shall keep information related to the noncompliance until found compliant or for two years plus the current year, whichever is longer.

Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor.

The Compliance Monitor shall keep the last periodic audit report and all requested and submitted subsequent compliance records.

**1.4. Additional Compliance Information**

Attachment 1 — COM-001 — NERCnet Security Policy

**2. Levels of Non-Compliance for Transmission Operator, Balancing Authority or Reliability Coordinator**

**2.1. Level 1:** Not applicable.

**2.2. Level 2:** Not applicable.

**2.3. Level 3:** There shall be a separate Level 3 non-compliance, for every one of the following requirements that is in violation:

**2.3.1** The Transmission Operator, Balancing Authority or Reliability Coordinator used a language other than English without agreement as specified in R4.

**2.3.2** There are no written operating instructions and procedures to enable continued operation of the system during the loss of telecommunication facilities as specified in R5.

**2.4. Level 4:** Telecommunication systems are not actively monitored, tested, managed or alarmed as specified in R2.

**3. Levels of Non-Compliance — NERCnet User Organization**

**3.1. Level 1:** Not applicable.

**3.2. Level 2:** Not applicable.

**3.3. Level 3:** Not applicable.

**3.4. Level 4:** Did not adhere to the requirements in Attachment 1-COM-001, NERCnet Security Policy.

**E. Regional Differences**

None Identified.

**Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata

## Standard COM-001-1.1 — Telecommunications

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1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
1.1	October 29, 2008	BOT adopted errata changes; updated version number to “1.1”	Errata

**Attachment 1 — COM-001 — NERCnet Security Policy**

**Policy Statement**

The purpose of this NERCnet Security Policy is to establish responsibilities and minimum requirements for the protection of information assets, computer systems and facilities of NERC and other users of the NERC frame relay network known as “NERCnet.” The goal of this policy is to prevent misuse and loss of assets.

For the purpose of this document, information assets shall be defined as processed or unprocessed data using the NERCnet Telecommunications Facilities including network documentation. This policy shall also apply as appropriate to employees and agents of other corporations or organizations that may be directly or indirectly granted access to information associated with NERCnet.

The objectives of the NERCnet Security Policy are:

- To ensure that NERCnet information assets are adequately protected on a cost-effective basis and to a level that allows NERC to fulfill its mission.
- To establish connectivity guidelines for a minimum level of security for the network.
- To provide a mandate to all Users of NERCnet to properly handle and protect the information that they have access to in order for NERC to be able to properly conduct its business and provide services to its customers.

**NERC’s Security Mission Statement**

NERC recognizes its dependency on data, information, and the computer systems used to facilitate effective operation of its business and fulfillment of its mission. NERC also recognizes the value of the information maintained and provided to its members and others authorized to have access to NERCnet. It is, therefore, essential that this data, information, and computer systems, and the manual and technical infrastructure that supports it, are secure from destruction, corruption, unauthorized access, and accidental or deliberate breach of confidentiality.

**Implementation and Responsibilities**

This section identifies the various roles and responsibilities related to the protection of NERCnet resources.

**NERCnet User Organizations**

Users of NERCnet who have received authorization from NERC to access the NERC network are considered users of NERCnet resources. To be granted access, users shall complete a User Application Form and submit this form to the NERC Telecommunications Manager.

**Responsibilities**

It is the responsibility of NERCnet User Organizations to:

- Use NERCnet facilities for NERC-authorized business purposes only.
- Comply with the NERCnet security policies, standards, and guidelines, as well as any procedures specified by the data owner.
- Prevent unauthorized disclosure of the data.
- Report security exposures, misuse, or non-compliance situations via Reliability Coordinator Information System or the NERC Telecommunications Manager.
- Protect the confidentiality of all user IDs and passwords.
- Maintain the data they own.
- Maintain documentation identifying the users who are granted access to NERCnet data or applications.
- Authorize users within their organizations to access NERCnet data and applications.



- Advise staff on NERCnet Security Policy.
- Ensure that all NERCnet users understand their obligation to protect these assets.
- Conduct self-assessments for compliance.

**User Accountability and Compliance**

All users of NERCnet shall be familiar and ensure compliance with the policies in this document.

Violations of the NERCnet Security Policy shall include, but not be limited to any act that:

- Exposes NERC or any user of NERCnet to actual or potential monetary loss through the compromise of data security or damage.
- Involves the disclosure of trade secrets, intellectual property, confidential information or the unauthorized use of data.

Involves the use of data for illicit purposes, which may include violation of any law, regulation or reporting requirement of any law enforcement or government body.

# Violation Risk Factor and Violation Severity Level Justifications

## COM-001-2 - Communications

### Violation Risk Factor and Violation Severity Level Justifications

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in: COM-001-2 – Communications

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Reliability Coordination Standard Drafting Team (SDT) applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSL for the requirements under this project.

#### **NERC Criteria – Violation Risk Factors**

##### ***High Risk Requirement***

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

##### ***Medium Risk Requirement***

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

***Lower Risk Requirement***

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

**FERC Violation Risk Factor Guidelines**

The SDT also considered consistency with the FERC Violation Risk Factor Guidelines for setting VRFs:<sup>1</sup>

***Guideline 1 – Consistency with the Conclusions of the Final Blackout Report***

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:<sup>2</sup>

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities

<sup>1</sup> North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh'g and compliance filing, 120 FERC ¶ 61,145 (2007) (“VRF Rehearing Order”).

<sup>2</sup> Id. at footnote 15.

- Appropriate use of transmission loading relief

***Guideline 2 – Consistency within a Reliability Standard***

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

***Guideline 3 – Consistency among Reliability Standards***

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

***Guideline 4 – Consistency with NERC’s Definition of the Violation Risk Factor Level***

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC’s definition of that risk level.

***Guideline 5 – Treatment of Requirements that Co-mingle More Than One Obligation***

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC’s VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC’s Reliability Standards and implies that these requirements should be assigned a “High” VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

There are eleven requirements in the standard. None of the eleven requirements were assigned a “Lower” VRF. Requirements R1-R8 are assigned a “High” VRF while the other three requirements are assigned a “Medium” VRF.

**NERC Criteria – Violation Severity Levels**

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance, and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
<p>Missing a minor element (or a small percentage) of the required performance</p> <p>The performance or product measured has significant value as it almost meets the full intent of the requirement.</p>	<p>Missing at least one significant element (or a moderate percentage) of the required performance.</p> <p>The performance or product measured still has significant value in meeting the intent of the requirement.</p>	<p>Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component.</p> <p>The performance or product has limited value in meeting the intent of the requirement.</p>	<p>Missing most or all of the significant elements (or a significant percentage) of the required performance.</p> <p>The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.</p>

**FERC Order of Violation Severity Levels**

FERC’s VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in the standard meet the FERC Guidelines for assessing VSLs:

***Guideline 1 – Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance***

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

***Guideline 2 – Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties***

A violation of a “binary” type requirement must be a “Severe” VSL.

Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

***Guideline 3 – Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement***

VSLs should not expand on what is required in the requirement.

***Guideline 4 – Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations***

... unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

**VRF and VSL Justifications**

VRF Justifications – COM-001-2, R1-R6	
Proposed VRF	High
NERC VRF Discussion	
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report: N/A
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: Each requirement specifies which functional entities that are required to have Interpersonal Communication capability and Alternative Interpersonal Communication capability. The VRFs for each requirement are consistent with each other and are only applied at the Requirement level.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: These requirements are facility requirements that provide communications capability between functional entities. There are no similar facility requirements in the standards. The approved VRF for COM-001-1.1, R1 (which proposed R1-R6 replaces) is High and therefore the proposed VRF for R1-R6 is consistent.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to have Interpersonal Communication capability and Alternative Interpersonal Communication capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the Bulk Power System and could lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
FERC VRF G5	Guideline 5- Treatment of Requirements that Co-mingle More than One

<b>VRF Justifications – COM-001-2, R1-R6</b>	
<b>Proposed VRF</b>	<b>High</b>
Discussion	Obligation: Each of the six requirements, R1-R6, contains only one objective; therefore, only one VRF was assigned.

<b>Proposed VSLs for COM-001-2, R1-R6</b>				
<b>R#</b>	<b>Lower</b>	<b>Moderate</b>	<b>High</b>	<b>Severe</b>
R1	N/A	N/A	The Reliability Coordinator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Reliability Coordinator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R2	N/A	N/A	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R2, Parts 2.1 or 2.2.	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R2, Parts 2.1 or 2.2.
R3	N/A	N/A	The Transmission Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Transmission Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R4	N/A	N/A	The Transmission Operator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.	The Transmission Operator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.
R5	N/A	N/A	The Balancing Authority failed to have Interpersonal Communication	The Balancing Authority failed to have Interpersonal Communication

			capability with one of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.	capability with two or more of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R6	N/A	N/A	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.

**VSL Justifications – COM-001-2, R1-R6**

NERC VSL Guidelines	Meets NERC’s VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The proposed requirement is a revision of COM-001-1.1, R1 and its sub-requirements. Each sub-requirement was separated out into a new stand-alone requirement. The VSLs for the approved sub-requirements are binary and this is reflected in the proposed VSLs.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties  Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent  Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 2a: N/A  Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.



Requirement	
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

<b>VRF Justifications – COM-001-2, R7</b>	
<b>Proposed VRF</b>	<b>High</b>
NERC VRF Discussion	
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report: N/A
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF is assigned, so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, Requirement R7 is an analog to Parts 3.3 and 5.3 and they have the same VRF (High).
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to have Interpersonal Communication capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the Bulk Power System and could lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation: The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R7				
R#	Lower	Moderate	High	Severe
R7	N/A	N/A	The Distribution Provider failed to have Interpersonal Communication capability with one of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Distribution Provider failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.
VSL Justifications – COM-001-2, R7				
NERC VSL Guidelines			Meets NERC’s VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance			The proposed requirement is a revision of COM-001-1.1, R1 and its sub-requirements. Each sub-requirement was separated out into a new stand-alone requirement. The VSLs for the approved sub-requirements are binary and this is reflected in the proposed VSLs.	
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties  Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent  Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language			Guideline 2a: N/A  Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	
FERC VSL G3			The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent	

Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

VRF Justifications – COM-001-2, R8	
Proposed VRF	High
NERC VRF Discussion	
FERC VRF G1 Discussion	
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, Requirement R8 is an analog to Parts 3.4 and 5.4 and they have the same VRF (High).
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to have Interpersonal Communication capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the Bulk Power System and could lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:

VRF Justifications – COM-001-2, R8	
<b>Proposed VRF</b>	<b>High</b>
	The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R8				
R#	Lower	Moderate	High	Severe
R8	N/A	N/A	The Generator Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Generator Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.

VSL Justifications – COM-001-2, R8	
NERC VSL Guidelines	Meets NERC’s VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The most comparable VSLs for a similar requirement are for the proposed analog requirement and its parts COM-001-2, Part 3.4 and Part 5.4. This requirement specifies the two-way nature of entities having Interpersonal Communications capability. In other words, if one entity is required to have Interpersonal Communications capability with another entity, then the reciprocal should also be required or the onus would be exclusively on one entity. Since Requirement R3 and R5 are assigned binary VSLs, it appropriate for Requirement R7 to also be assigned a binary VSL.
FERC VSL G2 Violation Severity Level Assignments Should Ensure	Guideline 2a: N/A

<p>Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2b:</p> <p>The proposed VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSLs use the same terminology as used in the associated requirement, and are, therefore, consistent with the requirement.</p>
<p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSLs are based on a single violation and not cumulative violations.</p>

VRF Justifications – COM-001-2, R9	
Proposed VRF	Medium
NERC VRF Discussion	
FERC VRF G1 Discussion	
FERC VRF G2 Discussion	<p>Guideline 2- Consistency within a Reliability Standard:</p> <p>The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.</p>
FERC VRF G3	<p>Guideline 3- Consistency among Reliability Standards:</p>

VRF Justifications – COM-001-2, R9	
Proposed VRF	Medium
Discussion	COM-001-2, Requirement R9 is a requirement for entities to test their Alternative Interpersonal Communication capability and to take restorative action should the test fail and is a replacement requirement for COM-001-1.1, R2, which has an approved VRF of Medium.
FERC VRF G4 Discussion	COM-001-2, Requirement R9 is a requirement for entities to test their Alternative Interpersonal Communication capability and to take restorative action should the test fail. The act of testing in and of itself is not likely to “directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures...” Therefore, this requirement is assigned a Medium VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:  The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R9				
R#	Lower	Moderate	High	Severe
R9	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to test the Alternative Interpersonal Communication capability once each calendar month.  OR

	Alternative Interpersonal Communication in more than 2 hours and less than or equal to 4 hours upon an unsuccessful test.	Alternative Interpersonal Communication in more than 4 hours and less than or equal to 6 hours upon an unsuccessful test.	Alternative Interpersonal Communication in more than 6 hours and less than or equal to 8 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 8 hours upon an unsuccessful test.
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**VSL Justifications – COM-001-2, R9**

NERC VSL Guidelines	Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The proposed requirement is a new and there are no comparable VSLs.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous	Guideline 2a: N/A Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.

Language	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

VRF Justifications – COM-001-2, R10	
Proposed VRF	Medium
NERC VRF Discussion	
FERC VRF G1 Discussion	
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, Requirement R10 is a new requirement that was assigned a Medium VRF. When evaluating the VRF to be assigned to this requirement, the SDT took into account that this requirement is a notification item, not an actual action that has a direct impact on the Bulk Power System. Therefore, the simple act of failing to notify another entity of the failure of Interpersonal Communication capability, while it may impair the entity’s ability to communicate, does not, in itself, lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a Medium VRF.



<b>VRF Justifications – COM-001-2, R10</b>	
<b>Proposed VRF</b>	<b>Medium</b>
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: COM-001-2, Requirement R10 mandates that entities notify entities of a failure of Interpersonal Communications capability. Bulk Power System instability, separation, or cascading failures are not likely to occur due to a failure to notify another entity of the failure. Therefore, this requirement is assigned a Medium VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:  The requirement contains only one objective; therefore, only one VRF was assigned.

<b>Proposed VSLs for COM-001-2, R10</b>				
<b>R#</b>	<b>Lower</b>	<b>Moderate</b>	<b>High</b>	<b>Severe</b>
R10	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its Interpersonal Communication capability in more than 60 minutes but less than or equal to 70 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its Interpersonal Communication capability in more than 70 minutes but less than or equal to 80 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its Interpersonal Communication capability in more than 80 minutes but less than or equal to 90 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the identified entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its Interpersonal Communication capability in more than 90 minutes.
<b>VSL Justifications – COM-001-2, R10</b>				

NERC VSL Guidelines	Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The proposed requirement is new and there are no comparable VSLs.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties  Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent  Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 2a: N/A  Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

<b>VRF Justifications – COM-001-2, R11</b>	
<b>Proposed VRF</b>	<b>Medium</b>
NERC VRF	

<b>VRF Justifications – COM-001-2, R11</b>	
<b>Proposed VRF</b>	<b>Medium</b>
Discussion	
FERC VRF G1 Discussion	
FERC VRF G2 Discussion	<p>Guideline 2- Consistency within a Reliability Standard:</p> <p>The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.</p>
FERC VRF G3 Discussion	<p>Guideline 3- Consistency among Reliability Standards:</p> <p>COM-001-2, Requirement R11 is a new requirement that was assigned a Medium VRF. When evaluating the VRF to be assigned to this requirement, the SDT took into account that this requirement is a consultation item, not an actual action that has a direct impact on the Bulk Power System. Therefore, the simple act of failing to consult with another entity on the failure of Interpersonal Communications capability and its restoration, while it may impair the entity’s ability communicate, does not, in itself, lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a Medium VRF.</p>
FERC VRF G4 Discussion	<p>Guideline 4- Consistency with NERC Definitions of VRFs:</p> <p>COM-001-2, Requirement R11 mandates that entities consult with other entities regarding restoration of Interpersonal Communication capability. Bulk Power System instability, separation, or cascading failures are not likely to occur due to a failure to consult with another entity on restoration times. Therefore, this requirement is assigned a Medium VRF.</p>
FERC VRF G5 Discussion	<p>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</p> <p>The requirement contains only one objective; therefore, only one VRF was assigned.</p>

**Proposed VSLs for COM-001-2, R11**

R#	Lower	Moderate	High	Severe
R11	N/A	N/A	N/A	The Distribution Provider or Generator Operator failed to consult with its Transmission Operator and Balancing Authority to determine a mutually agreeable action for the restoration of the Interpersonal Communication capability.
<b>VSL Justifications – COM-001-2, R11</b>				
NERC VSL Guidelines			Meets NERC’s VSL guidelines. This is a binary requirement and the VSL is severe.	
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance			The proposed requirement is new and there are no comparable existing VSLs.	
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language			Guideline 2a: N/A Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement			The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	

FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.
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## Violation Risk Factor and Violation Severity Level

### Justifications ~~Assignments~~

## COM-001-2 - Communications

### Violation Risk Factor and Violation Severity Level Justifications

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in: COM-001-2 – Communications

~~COM-001-2 – Telecommunications~~

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

### Justification for Assignment of Violation Risk Factors in COM-001-2

The Reliability Coordination Standard Drafting Team (SDT) applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSL for the requirements under this project.~~in COM-001-2:~~

### NERC Criteria – Violation Risk Factors

#### ***High Risk Requirement***

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

#### ***Medium Risk Requirement***

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk

electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

### ***Lower Risk Requirement***

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

### **FERC Violation Risk Factor Guidelines**

The SDT also considered consistency with the FERC Violation Risk Factor Guidelines for setting VRFs:<sup>1,2</sup>

#### **Guideline (1 ~~→~~) — Consistency with the Conclusions of the Final Blackout Report**

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

— In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System.<sup>3,4</sup>

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange

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<sup>1</sup> [North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh'g and compliance filing, 120 FERC ¶ 61,145 \(2007\) \(“VRF Rehearing Order”\).](#)

<sup>2</sup> [North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh'g and compliance filing, 120 FERC ¶ 61,145 \(2007\) \(“VRF Rehearing Order”\).](#)

<sup>3</sup> [Id. at footnote 15.](#)

<sup>4</sup> [Id. at footnote 15.](#)

- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief.

**Guideline (2) — Consistency within a Reliability Standard**

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

**Guideline (3) — Consistency among Reliability Standards**

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

**Guideline (4) — Consistency with NERC’s Definition of the Violation Risk Factor Level**

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC’s definition of that risk level.

**Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation**

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC’s VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC’s Reliability Standards and implies that these requirements should be assigned a “High” VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

**VRF for COM-001-2:**

There are eleven requirements in the standard COM-001-2. None of the eleven requirements were assigned a “Lower” VRF. Requirements R1-R8 are assigned a “High” VRF while the other three requirements are assigned a “Medium” VRF.



## NERC Criteria – Violation Severity Levels

### Violation Severity Levels (VSLs) define the degree to which compliance with VRF for COM-001-2, Requirements R1-R6:

- ~~● FERC’s Guideline 2 — Consistency within a requirement was not achieved Reliability Standard. Each requirement must specifies which functional entities that are required to have at least one VSL. While it is preferable to have four VSLs Interpersonal Communications capability and Alternative Interpersonal Communications capability. The VRFs for each requirement, some are consistent with each other and are only applied at the Requirement level.~~
- ~~● FERC’s Guideline 3 — Consistency among Reliability Standards. These requirements do not have multiple “degrees” of noncompliant performance, and may have are facility requirements that provide communications capability between functional entities. There are no similar facility requirements in the standards. The approved VRF for COM-001-1.1, R1 (which proposed R1-R6 replaces) is High and therefore the proposed VRF for R1-R6 is consistent.~~
- ~~● FERC’s Guideline 4 — Consistency with NERC’s Definition of a VRF. Failure to have Interpersonal Communications capability and Alternative Interpersonal Communications capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the bulk power system and could lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.~~
- ~~● FERC’s Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. COM-001-2, Requirements R1-R6 contain only one objective, therefore only one, two, or three VSLs. VRF was assigned.~~

### VRF for COM-001-2, Requirement R7:

- ~~● FERC’s Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.~~
- ~~● FERC’s Guideline 3 — Consistency among Reliability Standards. COM-001-2, Requirement R7 is an analog to Parts 3.3 and 5.3 and they have the same VRF (High).~~
- ~~● FERC’s Guideline 4 — Consistency with NERC’s Definition of a VRF. Failure to have Interpersonal Communications capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the bulk power system and could lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement was assigned a High VRF.~~

- ~~FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. COM-001-2, Requirement R7 addresses a single objective and has a single VRF.~~

**VRF for COM-001-2, Requirement R8:**

- ~~FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.~~
- ~~FERC's Guideline 3 — Consistency among Reliability Standards. COM-001-2, Requirement R8 is an analog to Parts 3.4 and 5.4 and they have the same VRF (High).~~
- ~~FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to have Interpersonal Communications capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the bulk power system and could lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement was assigned a High VRF.~~
- ~~FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. COM-001-2, Requirement R8 addresses a single objective and has a single VRF.~~

**VRF for COM-001-2, Requirement R9:**

- ~~FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.~~
- ~~FERC's Guideline 3 — Consistency among Reliability Standards. COM-001-2, Requirement R9 is a requirement for entities to test their Alternative Interpersonal Communications capability and to take restorative action should the test fail and is a replacement requirement for COM-001-1.1, R2, which has an approved VRF of Medium.~~
- ~~FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. COM-001-2, Requirement R9 is a requirement for entities to test their Alternative Interpersonal Communications capability and to take restorative action should the test fail. The act of testing in and of itself is not likely to “directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium-risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures...” Therefore, this requirement was assigned a Medium VRF.~~
- ~~FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. COM-001-2, Requirement R9 addresses a single objective and has a single VRF.~~

**VRF for COM-001-2, Requirement R10:**

- ~~FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.~~
- ~~FERC's Guideline 3 — Consistency among Reliability Standards. COM-001-2, Requirement R10 is a new requirement that was assigned a Medium VRF. When evaluating the VRF to be assigned to this requirement, the SDT took into account that this requirement~~

~~is a notification item, not an actual action that has a direct impact on the bulk power system. Therefore, the simple act of failing to notify another entity of the failure of Interpersonal Communications capability, while it may impair the entity's ability communicate, does not, in itself, lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement was assigned a Medium VRF.~~

- ~~● FERC's Guideline 4—Consistency with NERC's Definition of a VRF. COM-001-2, Requirement R10 mandates that entities notify entities of a failure of Interpersonal Communications capability. Bulk power system instability, separation, or cascading failures are not likely to occur due to a failure to notify another entity of the failure. Therefore, this requirement was assigned a Medium VRF.~~
- ~~● FERC's Guideline 5—Treatment of Requirements that Co-mingle More Than One Objective. TOP-001-2, Requirement R10 addresses a single objective and has a single VRF.~~

#### **VRF for COM-001-2, Requirement R11:**

- ~~● FERC's Guideline 2—Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.~~
- ~~● FERC's Guideline 3—Consistency among Reliability Standards. COM-001-2, Requirement R11 is a new requirement that was assigned a Medium VRF. When evaluating the VRF to be assigned to this requirement, the SDT took into account that this requirement is a consultation item, not an actual action that has a direct impact on the bulk power system. Therefore, the simple act of failing to consult with another entity on the failure of Interpersonal Communications capability and its restoration, while it may impair the entity's ability communicate, does not, in itself, lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement was assigned a Medium VRF.~~
- ~~● FERC's Guideline 4—Consistency with NERC's Definition of a VRF. COM-001-2, Requirement R11 mandates that entities consult with other entities regarding restoration of Interpersonal Communications capability. Bulk power system instability, separation, or cascading failures are not likely to occur due to a failure to consult with another entity on restoration times. Therefore, this requirement was assigned a Medium VRF.~~
- ~~● FERC's Guideline 5—Treatment of Requirements that Co-mingle More Than One Objective. TOP-001-2, Requirement R11 addresses a single objective and has a single VRF.~~

**Justification for Assignment of Violation severity levels should be Severity Levels for COM-001-2**

~~In developing the VSLs for the TOP standard, the SDT anticipated the evidence that would be reviewed during an audit, and developed its VSLs based on the guidelines shown in the table below none compliance an auditor may find during a typical audit. The SDT based its assignment of VSLs on the following NERC criteria:~~

Lower	Moderate	High	Severe
Missing a minor element (or a small percentage) of the required performance The performance or product measured has significant value as it almost meets the full intent of the requirement.	Missing at least one significant element (or a moderate percentage) of the required performance. The performance or product measured still has significant value in meeting the intent of the requirement.	Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component. The performance or product has limited value in meeting the intent of the requirement.	Missing most or all of the significant elements (or a significant percentage) of the required performance. The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.

**FERC Order of Violation Severity Levels**

FERC’s VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in ~~the standard TOP xxx x~~ meet the FERC Guidelines for assessing VSLs:

**Guideline 1 ~~–~~: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance**

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

**Guideline 2 ~~–~~: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties**

A violation of a “binary” type requirement must be a “Severe” VSL.

Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

**Guideline 3 ~~–~~ Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement**

VSLs should not expand on what is required in the requirement.

**Guideline 4 ~~–~~ Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations**

. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

**VRF and VSL Justifications**

VSLs for COM-001-2 Requirements R1 through R6:

<u>VRF Justifications – COM-001-2, R1-R6</u>	
<u>Proposed VRF</u>	<u>High</u>
<u>NERC VRF Discussion</u>	
<u>FERC VRF G1 Discussion</u>	<u>Guideline 1- Consistency w/ Blackout Report:</u> <u>N/A</u>
<u>FERC VRF G2 Discussion</u> <b>R#</b>	<u>2- Consistency within a Reliability Standard:</u> <u>Each requirement specifies which functional entities that are required to have Interpersonal Communication capability and Alternative Interpersonal Communication capability. The VRFs for each requirement are consistent with each other and are only applied at the Requirement level. Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</u>
<u>FERC VRF G3 Discussion</u> <b>R1-R6.</b>	<u>Guideline 3- Consistency among Reliability Standards:</u> <u>These requirements are facility requirements that provide communications capability between functional entities. There are no similar facility requirements in the standards. The approved VRF for COM-001-1.1, R1 (which proposed R1-R6 replaces) is High and therefore the proposed VRF for R1-R6 is consistent. The proposed requirement is a revision of COM-001-1.1, R1 and its</u>

<u>VRF Justifications – COM-001-2, R1-R6</u>	
<u>Proposed VRF</u>	<u>High</u>
	<del>subrequirements. Each subrequirement was separated out into a new stand-alone requirement. The VSLs for the approved subrequirements are binary and this is reflected in the proposed VSLs.</del>
<u>FERC VRF G4 Discussion</u>	<u>Guideline 4- Consistency with NERC Definitions of VRFs:</u> <u>Failure to have Interpersonal Communication capability and Alternative Interpersonal Communication capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the Bulk Power System and could lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.</u>
<u>FERC VRF G5 Discussion</u>	<u>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</u> <u>Each of the six requirements, R1-R6, contains only one objective; therefore, only one VRF was assigned.</u>

VSLs for COM-001-2 Requirement R7:

Proposed VSLs for COM-001-2, R1-R6				
R#	Lower	Moderate	High	Severe
<u>R1</u>	<u>N/A</u>	<u>N/A</u>	The Reliability Coordinator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Reliability Coordinator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.
<u>R2</u>	<u>N/A</u>	<u>N/A</u>	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R2,	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in



			<u>Parts 2.1 or 2.2.</u>	<u>Requirement R2, Parts 2.1 or 2.2.</u>
<u>R3</u>	<u>N/A</u>	<u>N/A</u>	<u>The Transmission Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>	<u>The Transmission Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>
<u>R4</u>	<u>N/A</u>	<u>N/A</u>	<u>The Transmission Operator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.</u>	<u>The Transmission Operator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.</u>

<u>R5</u>	<u>N/A</u>	<u>N/A</u>	<u>The Balancing Authority failed to have Interpersonal Communication capability with one of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>	<u>The Balancing Authority failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>
<u>R6</u>	<u>N/A</u>	<u>N/A</u>	<u>The Balancing Authority failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.</u>	<u>The Balancing Authority failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.</u>
<b><u>VSL Justifications – COM-001-2, R1-R6</u></b>				
<u>NERC VSL Guidelines</u>			Meets NERC’s VSL guidelines - Severe:	

	<p>The performance or product measured does not substantively meet the intent of the requirement.</p>
<p><u>FERC VSL G1</u>  <u>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</u></p>	<p><u>The proposed requirement is a revision of COM-001-1.1, R1 and its sub-requirements. Each sub-requirement was separated out into a new stand-alone requirement. The VSLs for the approved sub-requirements are binary and this is reflected in the proposed VSLs.</u></p>
<p><u>FERC VSL G2</u></p> <p><u>Guideline-2</u></p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p style="text-align: right;"><u>2a:3</u></p> <p><u>N/A</u></p> <p><u>Guideline 2b:</u>  <del>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</del></p> <p><u>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</u></p>

<p><del>The proposed VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</del><u>FERC VSL G3</u></p> <p><u>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</u></p>		<p>The proposed <u>VSL</u> <del>uses</del><u>VSLs use</u> the same terminology as used in the associated requirement, and <del>is</del><u>are</u>, therefore, consistent with the requirement.</p>
<p><u>FERC VSL G4</u></p> <p><u>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</u></p>	<p><u>The VSL is based on a single violation and not cumulative violations.</u></p>	

**VSLs for COM-001-2 Requirement R8:**

<u>VRF Justifications – COM-001-2, R7</u>	
<u>Proposed VRF</u>	<u>High</u>
<u>NERC VRF Discussion</u>	
<u>FERC VRF G1 Discussion</u>	<u>Guideline 1- Consistency w/ Blackout Report:</u> <u>N/A</u>
<u>FERC VRF G2 Discussion</u>	<u>Guideline 2- Consistency within a Reliability Standard:</u> <u>The requirement has no sub-requirements; only one VRF is assigned, so there is no conflict.</u>
<u>FERC VRF G3 Discussion</u> <sup>R#</sup>	<u>3- Consistency among Reliability Standards:</u> <u>4</u> <u>COM-001-2, Requirement R7 is an analog to Parts 3.3 and 5.3 and they have the same VRF (High). Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</u>
<u>FERC VRF G4 Discussion</u> <sup>R8</sup>	<u>Guideline 4- Consistency with NERC Definitions of VRFs:</u> <u>Failure to have Interpersonal Communication capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the Bulk Power System and could lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF. The most comparable VSLs for a similar requirement are for the</u>

VRF Justifications – COM-001-2, R7

<u>Proposed VRF</u>	<u>High</u>
	<del>proposed analog requirement and its parts COM-001-2, Part 3.4 and Part 5.4. This requirement specifies the two-way nature of entities having Interpersonal Communications capability. In other words, if one entity is required to have Interpersonal Communications capability with another entity, then the reciprocal should also be required or the onus would be exclusively on one entity. Since Requirement 3 and Requirement 5 are assigned binary VSLs, it appropriate for Requirement 7 to also be assigned a binary VSL.</del>
<u>FERC VRF G5 Discussion</u>	<u>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</u> <u>The requirement contains only one objective; therefore, only one VRF was assigned.</u>

**VSLs for COM-001-2 Requirement R9:**

<b>Proposed VSLs for COM-001-2, R7</b>				
<b>R#</b>	<b>Lower</b>	<b>Moderate</b>	<b>High</b>	<b>Severe</b>
<u>R7</u>	<u>N/A</u>	<u>N/A</u>	<u>The Distribution Provider failed to have Interpersonal Communication capability with one of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>	<u>The Distribution Provider failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>
<b>VSL Justifications – COM-001-2, R7</b>				
<u>NERC VSL Guidelines</u>			Meets NERC’s VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	

<p><u>FERC VSL G1</u>  <u>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</u></p>	<p><u>The proposed requirement is a revision of COM-001-1.1, R1 and its sub-requirements. Each sub-requirement was separated out into a new stand-alone requirement. The VSLs for the approved sub-requirements are binary and this is reflected in the proposed VSLs.</u></p>
<p><u>FERC VSL G2</u></p> <p><u>Guideline-2</u></p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p style="text-align: right;"><u>2a:3</u></p> <p><u>N/A</u></p> <p><u>Guideline 2b:</u>  <u>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations. Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</u></p>
<p><u>FERC VSL G3</u>  <u>Violation Severity Level Assignment Should Be Consistent with the</u></p>	<p>The proposed VSL uses the same terminology as used in the associated requirement,</p>



<p><u>Corresponding Requirement</u> <del>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</del></p>		<p>and is, therefore, consistent with the requirement.</p>
<p><u>FERC VSL G4</u> <u>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</u></p>	<p><u>The VSL is based on a single violation and not cumulative violations.</u></p>	

**VSLs for COM-001-2 Requirement R10:**

<u>VRF Justifications – COM-001-2, R8</u>	
<u>Proposed VRF</u>	<u>High</u>
<u>NERC VRF Discussion</u>	
<u>FERC VRF G1 Discussion</u>	
<u>FERC VRF G2 Discussion</u>	<u>Guideline 2- Consistency within a Reliability Standard:</u> <u>The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.</u>
<u>FERC VRF G3 Discussion</u> <u>R#</u>	<u>3- 2</u> <u>Violation Severity Level Assignments Should Ensure Uniformity and among Reliability Standards;in the Determination of Penalties</u> <u>COM-001-2, Requirement R8 is an analog to Parts 3.4 and 5.4 and they have the same VRF (High).Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</u> <u>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</u>
<u>FERC VRF G4 Discussion</u> <u>R10:</u>	<u>Guideline 4- Consistency with NERC Definitions of VRFs:</u> <u>Failure to have Interpersonal Communication capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the Bulk Power System and could lead to Bulk Power System</u>

VRF Justifications – COM-001-2, R8

<u>Proposed VRF</u>	<u>High</u>
	<p><u>instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF. The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</u></p>
<p><u>FERC VRF G5 Discussion</u></p>	<p><u>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</u></p> <p><u>The requirement contains only one objective; therefore, only one VRF was assigned.</u></p>

**VSLs for COM-001-2 Requirement R11:**

<u>Proposed VSLs for COM-001-2, R8</u>				
<u>R#</u>	<u>Lower</u>	<u>Moderate</u>	<u>High</u>	<u>Severe</u>
<u>R8</u>	<u>N/A</u>	<u>N/A</u>	<u>The Generator Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>	<u>The Generator Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>
<u>VSL Justifications – COM-001-2, R8</u>				
<u>NERC VSL Guidelines</u>			<u>Meets NERC’s VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.</u>	
<u>FERC VSL G1</u>			<u>The most comparable VSLs for a similar requirement are for the proposed</u>	

<p><u>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</u></p>	<p><u>analog requirement and its parts COM-001-2, Part 3.4 and Part 5.4. This requirement specifies the two-way nature of entities having Interpersonal Communications capability.</u> In other words, if one entity is required to have Interpersonal Communications capability with another entity, then the reciprocal should also be required or the onus would be exclusively on one entity. <u>Since Requirement R3 and R5 are assigned binary VSLs, it appropriate for Requirement R7 to also be assigned a binary VSL.</u></p>
<p><u>FERC VSL G2</u></p> <p><u>Guideline-2</u></p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p><u>2a:3</u></p> <p><u>N/A</u></p> <p><u>Guideline 2b:</u></p> <p><u>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</u></p> <p><u>The proposed VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar</u></p>

		<u>penalties for similar violations.</u>
<u>FERC VSL G3</u> <u>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</u> <del>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</del>		The proposed <u>VSLs</u> <del>use VSL</del> uses the same terminology as used in the associated requirement, and <u>are</u> is, therefore, consistent with the requirement.
<u>FERC VSL G4</u> <u>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</u>	<u>The VSLs are based on a single violation and not cumulative violations.</u>	

<u>VRF Justifications – COM-001-2, R9</u>	
<u>Proposed VRF</u>	<u>Medium</u>
<u>NERC VRF Discussion</u>	
<u>FERC VRF G1</u>	

<u>VRF Justifications – COM-001-2, R9</u>	
<u>Proposed VRF</u>	<u>Medium</u>
<u>Discussion</u>	
<u>FERC VRF G2 Discussion</u>	<u>Guideline 2- Consistency within a Reliability Standard:</u> <u>The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.</u>
<u>FERC VRF G3 Discussion</u>	<u>Guideline 3- Consistency among Reliability Standards:</u> <u>COM-001-2, Requirement R9 is a requirement for entities to test their Alternative Interpersonal Communication capability and to take restorative action should the test fail and is a replacement requirement for COM-001-1.1, R2, which has an approved VRF of Medium.</u>
<u>FERC VRF G4 Discussion</u>	<u>COM-001-2, Requirement R9 is a requirement for entities to test their Alternative Interpersonal Communication capability and to take restorative action should the test fail. The act of testing in and of itself is not likely to “directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures...” Therefore, this requirement is assigned a Medium VRF.</u>
<u>FERC VRF G5 Discussion</u>	<u>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</u> <u>The requirement contains only one objective; therefore, only one VRF was</u>

VRF Justifications – COM-001-2, R9

<u>Proposed VRF</u>	<u>Medium</u>
	<u>assigned.</u>

Proposed VSLs for COM-001-2, R9

<u>R#</u>	<u>Lower</u>	<u>Moderate</u>	<u>High</u>	<u>Severe</u>
<u>R9</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 2 hours and less than or</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 4 hours and less than or</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 6 hours and less than or</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to test the Alternative Interpersonal Communication capability once each calendar month.  OR The Reliability Coordinator, Transmission Operator, or Balancing Authority</u>



	<u>equal to 4 hours upon an unsuccessful test.</u>	<u>equal to 6 hours upon an unsuccessful test.</u>	<u>equal to 8 hours upon an unsuccessful test.</u>	<u>tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 8 hours upon an unsuccessful test.</u>
<u>VSL Justifications – COM-001-2, R9</u>				
<u>NERC VSL Guidelines</u>		<u>Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.</u>		
<u>FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</u>		<u>The proposed requirement is a new and there are no comparable VSLs.</u>		
<u>FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the</u>		<u>Guideline 2a: N/A</u>		

<p><u>Determination of Penalties</u></p> <p><u>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</u></p> <p><u>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</u></p>	<p><u>Guideline 2b:</u></p> <p><u>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</u></p>
<p><u>FERC VSL G3</u></p> <p><u>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</u></p>	<p><u>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</u></p>
<p><u>FERC VSL G4</u></p> <p><u>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</u></p>	<p><u>The VSL is based on a single violation and not cumulative violations.</u></p>

<p><u>VRF Justifications – COM-001-2, R10</u></p>	
<p><u>Proposed VRF</u></p>	<p><u>Medium</u></p>
<p><u>NERC VRF Discussion</u></p>	

<u>VRF Justifications – COM-001-2, R10</u>	
<u>Proposed VRF</u>	<u>Medium</u>
<u>FERC VRF G1 Discussion</u>	
<u>FERC VRF G2 Discussion</u>	<u>Guideline 2- Consistency within a Reliability Standard:</u> <u>The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.</u>
<u>FERC VRF G3 Discussion</u>	<u>Guideline 3- Consistency among Reliability Standards:</u> <u>COM-001-2, Requirement R10 is a new requirement that was assigned a Medium VRF. When evaluating the VRF to be assigned to this requirement, the SDT took into account that this requirement is a notification item, not an actual action that has a direct impact on the Bulk Power System. Therefore, the simple act of failing to notify another entity of the failure of Interpersonal Communication capability, while it may impair the entity's ability to communicate, does not, in itself, lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a Medium VRF.</u>
<u>FERC VRF G4 Discussion</u>	<u>Guideline 4- Consistency with NERC Definitions of VRFs:</u> <u>COM-001-2, Requirement R10 mandates that entities notify entities of a failure of Interpersonal Communications capability. Bulk Power System instability, separation, or cascading failures are not likely to occur due to a failure to notify another entity of the failure. Therefore, this requirement is assigned a Medium VRF.</u>

VRF Justifications – COM-001-2, R10

<u>Proposed VRF</u>	<u>Medium</u>
<u>FERC VRF G5 Discussion</u>	<u>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</u> <u>The requirement contains only one objective; therefore, only one VRF was assigned.</u>

Proposed VSLs for COM-001-2, R10

<u>R#</u>	<u>Lower</u>	<u>Moderate</u>	<u>High</u>	<u>Severe</u>
<u>R10</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its Interpersonal Communication capability in more than 60 minutes</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its Interpersonal Communication capability in more than 70 minutes but less than or equal to</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its Interpersonal Communication capability in more than 80 minutes</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the identified entities in Requirements R1, R3, and R5 upon the detection of a failure of its Interpersonal Communication capability in more</u>

	<u>but less than or equal to 70 minutes.</u>	<u>80 minutes.</u>	<u>but less than or equal to 90 minutes.</u>	<u>than 90 minutes.</u>
<b><u>VSL Justifications – COM-001-2, R10</u></b>				
<u>NERC VSL Guidelines</u>		<u>Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.</u>		
<u>FERC VSL G1</u> <u>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</u>		<u>The proposed requirement is new and there are no comparable VSLs.</u>		
<u>FERC VSL G2</u> <u>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</u> <u>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</u> <u>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</u>		<u>Guideline 2a:</u> <u>N/A</u> <u>Guideline 2b:</u> <u>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</u>		
<u>FERC VSL G3</u> <u>Violation Severity Level Assignment Should</u>		<u>The proposed VSL uses the same terminology as used in the associated requirement, and is,</u>		

<u>Be Consistent with the Corresponding Requirement</u>	<u>therefore, consistent with the requirement.</u>
<u>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</u>	<u>The VSL is based on a single violation and not cumulative violations.</u>

**VRF Justifications – COM-001-2, R11**

<b><u>Proposed VRF</u></b>	<b><u>Medium</u></b>
<u>NERC VRF Discussion</u>	
<u>FERC VRF G1 Discussion</u>	
<u>FERC VRF G2 Discussion</u>	<u>Guideline 2- Consistency within a Reliability Standard:</u> <u>The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.</u>
<u>FERC VRF G3 Discussion</u>	<u>Guideline 3- Consistency among Reliability Standards:</u> <u>COM-001-2, Requirement R11 is a new requirement that was assigned a Medium VRF. When evaluating the VRF to be assigned to this requirement,</u>

VRF Justifications – COM-001-2, R11

<u>Proposed VRF</u>	<u>Medium</u>
	<p><u>the SDT took into account that this requirement is a consultation item, not an actual action that has a direct impact on the Bulk Power System. Therefore, the simple act of failing to consult with another entity on the failure of Interpersonal Communications capability and its restoration, while it may impair the entity’s ability communicate, does not, in itself, lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a Medium VRF.</u></p>
<p><u>FERC VRF G4 Discussion</u></p>	<p><u>Guideline 4- Consistency with NERC Definitions of VRFs:</u>  <u>COM-001-2, Requirement R11 mandates that entities consult with other entities regarding restoration of Interpersonal Communication capability. Bulk Power System instability, separation, or cascading failures are not likely to occur due to a failure to consult with another entity on restoration times. Therefore, this requirement is assigned a Medium VRF.</u></p>
<p><u>FERC VRF G5 Discussion</u></p>	<p><u>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</u>  <u>The requirement contains only one objective; therefore, only one VRF was assigned.</u></p>

Proposed VSLs for COM-001-2, R11

<u>R#</u>	<u>Lower</u>	<u>Moderate</u>	<u>High</u>	<u>Severe</u>
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<u>R11</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Distribution Provider or Generator Operator failed to consult with its Transmission Operator and Balancing Authority to determine a mutually agreeable action for the restoration of the Interpersonal Communication capability.</u>
<u>VSL Justifications – COM-001-2, R11</u>				
<u>NERC VSL Guidelines</u>			<u>Meets NERC’s VSL guidelines. This is a binary requirement and the VSL is severe.</u>	
<u>FERC VSL G1</u> <u>Violation Severity Level</u> <u>Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</u>			<u>The proposed requirement is new and there are no comparable existing VSLs.</u>	
<u>FERC VSL G2</u> <u>Violation Severity Level</u> <u>Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</u> <u>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not</u>			<u>Guideline 2a:</u> <u>N/A</u> <u>Guideline 2b:</u> <u>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</u>	



<p><u>Consistent</u> <u>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</u></p>	
<p><u>FERC VSL G3</u> <u>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</u></p>	<p><u>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</u></p>
<p><u>FERC VSL G4</u> <u>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</u></p>	<p><u>The VSL is based on a single violation and not cumulative violations.</u></p>

## Standards Announcement

### Project 2006-06 Reliability Coordination

Ballot Window Extended for COM-001-2 – Successive Ballot and Non-Binding Poll

#### Extended

The ballot window for the successive ballot of COM-001-2 and a non-binding poll of the associated VRF/VSLs will be **extended one day at a time until a quorum is achieved**.

#### **Instructions**

Members of the ballot pools associated with this project may log in and submit their vote for the Standards and opinion in the non-binding polls of the associated VRFs and VSLs by clicking [here](#).

#### **Next Steps**

The drafting team will consider all comments received for COM-001-2 during the formal comment and ballot period and, if needed, make revisions to the standard. If the comments do not show the need for significant revisions, the standard will proceed to a recirculation ballot.

#### **Background**

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measureable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to the scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standard IRO-003-2.

Additional information is available on the [project page](#).

#### **Standards Development Process**

The [Standards Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact Monica Benson,  
Standards Process Administrator, at [monica.benson@nerc.net](mailto:monica.benson@nerc.net) or at 404-446-2560.*

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## Standards Announcement Project 2006-06 Reliability Coordination

Ballot Windows Open through 8 p.m. Friday, July 6, 2012

Successive and Non-Binding Poll: COM-001-2

Recirculation and Non-Binding Polls: COM-002-3 and IRO-001-3

### Now Available

A successive ballot for COM-001-2 and a non-binding poll of the associated VRF/VSLs and recirculation ballots for COM-002-3 and IRO-001-3 and non-binding polls for the associated VRF/VSLs are open through **8 p.m. Eastern on Friday, July 6, 2012.**

### **Instructions**

Members of the ballot pools associated with this project may log in and submit their vote for the Standards and opinion in the non-binding polls of the associated VRFs and VSLs by clicking [here](#).

Voters can submit their comments via the [electronic comment form](#).

### **Next Steps**

The drafting team will consider all comments received for COM-001-2 during the formal comment and ballot period and, if needed, make revisions to the standard. If the comments do not show the need for significant revisions, the standard will proceed to a recirculation ballot.

### **Background**

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measureable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to the scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standard IRO-003-2.

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## Standards Announcement Project 2006-06 Reliability Coordination

Formal Comment Period: June 7-July 6, 2012

Upcoming: June 27 – July 6, 2012  
Successive and Non-Binding Poll: COM-001-2  
Recirculation and Non-Binding Polls: COM-002-3 and IRO-001-3

### [Now Available](#)

A formal comment period for **COM-001-2 – Communications** is open through **8 p.m. Eastern on Friday, July 6, 2012**. In response to industry comments, the Drafting Team made substantive changes to COM-001-2 – Communications requiring an additional comment period and successive ballot. The Drafting Team made minor changes to the VSLs but did not make substantive changes to **COM-002-3 – Communication and Coordination** and **IRO-001-3 – Reliability Coordination – Responsibilities and Authorities** requirements which passed the previous successive ballots.

### Instructions for Commenting

A formal comment period for COM-001-2 is open through **8 p.m. Eastern on Friday, July 6, 2012**. Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Monica Benson at [monica.benson@nerc.net](mailto:monica.benson@nerc.net). An off-line, unofficial copy of the comment form is posted on the [project page](#).

Commenters and voters **must** submit comments through the [electronic comment form](#). Due to modifications to NERC's balloting software, voters are no longer able to submit comments via the balloting software.

### Next Steps

A successive ballot for COM-001-2 and a non-binding poll of the associated VRF/VSLs and recirculation ballots for COM-002-3 and IRO-001-3 and non-binding polls for the associated VRF/VSLs will be conducted on Wednesday, June 27 through 8 p.m. Eastern on Friday, July 6, 2012.

### Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measureable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization

Request (PER-004 and PRC-001) were moved to other projects due to the scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standard IRO-003-2. Additional information is available on the [project page](#).

The Project 2006-06 standards are an important part of the ERO's strategic goal to develop technically sufficient standards with requirements that provide clear and unambiguous performance expectations and reliability benefits.

### Standards Development Process

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## Standards Announcement Project 2006-06 Reliability Coordination

Formal Comment Period: June 7-July 6, 2012

Upcoming: June 27 – July 6, 2012  
Successive and Non-Binding Poll: COM-001-2  
Recirculation and Non-Binding Polls: COM-002-3 and IRO-001-3

### Now Available

A formal comment period for **COM-001-2 – Communications** is open through **8 p.m. Eastern on Friday, July 6, 2012**. In response to industry comments, the Drafting Team made substantive changes to COM-001-2 – Communications requiring an additional comment period and successive ballot. The Drafting Team made minor changes to the VSLs but did not make substantive changes to **COM-002-3 – Communication and Coordination** and **IRO-001-3 – Reliability Coordination – Responsibilities and Authorities** requirements which passed the previous successive ballots.

### Instructions for Commenting

A formal comment period for COM-001-2 is open through **8 p.m. Eastern on Friday, July 6, 2012**. Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Monica Benson at [monica.benson@nerc.net](mailto:monica.benson@nerc.net). An off-line, unofficial copy of the comment form is posted on the [project page](#).

Commenters and voters **must** submit comments through the [electronic comment form](#). Due to modifications to NERC's balloting software, voters are no longer able to submit comments via the balloting software.

### Next Steps

A successive ballot for COM-001-2 and a non-binding poll of the associated VRF/VSLs and recirculation ballots for COM-002-3 and IRO-001-3 and non-binding polls for the associated VRF/VSLs will be conducted on Wednesday, June 27 through 8 p.m. Eastern on Friday, July 6, 2012.

### Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measureable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization



Request (PER-004 and PRC-001) were moved to other projects due to the scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standard IRO-003-2. Additional information is available on the [project page](#).

The Project 2006-06 standards are an important part of the ERO's strategic goal to develop technically sufficient standards with requirements that provide clear and unambiguous performance expectations and reliability benefits.

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## Standards Announcement Project 2006-06 Reliability Coordination

### Successive, Recirculation and Non-Binding Poll Results

#### [Now Available](#)

A successive ballot for **COM-001-2 – Communications** and a non-binding poll of the associated VRF/VSLs and recirculation ballots for **COM-002-3 – Communication and Coordination** and **IRO-001-3 – Reliability Coordination – Responsibilities and Authorities** and non-binding polls for the associated VRF/VSLs concluded on Friday, July 6, 2012.

Voting statistics for each ballot are listed below, and the [Ballots Results](#) page provides a link to the detailed results.

Standard	Approval	Non-binding Poll Results
COM-001-2 (Successive)	Quorum: 75.37% Approval: 72.16%	Quorum: 75.37% Supportive Opinions: 73.71%
COM-002-3 (Recirculation)	Quorum: 85.34% Approval: 81.71%	Quorum: 84.16% Supportive Opinions: 79.16%
IRO-001-3 (Recirculation)	Quorum: 85.04% Approval: 81.72%	Quorum: 83.87 % Supportive Opinions: 86.91%

#### Next Steps

The drafting team is considering all comments submitted for COM-001-2, and based on the comments will determine whether to make additional changes. If the drafting team determines that no substantive changes to the standard are required, the team will submit the standard and associated documents for a recirculation ballot. If the drafting team makes substantive changes to the standard, the team will submit its consideration of comments, along with the revised standard and associated documents, for a quality review prior to posting for another successive ballot.

COM-002-3 – Communication and Coordination and IRO-001-3 – Reliability Coordination – Responsibilities and Authorities will be presented to the NERC Board of Trustees for adoption and subsequently filed with regulatory authorities. The VRFs and VSLs for both standards (unchanged from

those included in the versions of the standards posted for recirculation ballot) will be presented to the board for approval.

### **Background**

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to the scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standard IRO-003-2.

Additional information is available on the [project page](#).

### **Standards Development Process**

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### Ballot Results

<b>Ballot Name:</b>	Project 2006-06 Successive Ballot COM-001-2
<b>Ballot Period:</b>	6/27/2012 - 7/9/2012
<b>Ballot Type:</b>	Initial
<b>Total # Votes:</b>	257
<b>Total Ballot Pool:</b>	341
<b>Quorum:</b>	<b>75.37 % The Quorum has been reached</b>
<b>Weighted Segment Vote:</b>	72.16 %
<b>Ballot Results:</b>	<b>The drafting team will review comments received.</b>

### Summary of Ballot Results

Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Abstain # Votes	No Vote
			# Votes	Fraction	# Votes	Fraction		
1 - Segment 1.	88	1	43	0.754	14	0.246	11	20
2 - Segment 2.	11	0.8	5	0.5	3	0.3	2	1
3 - Segment 3.	85	1	31	0.554	25	0.446	5	24
4 - Segment 4.	24	1	13	0.765	4	0.235	1	6
5 - Segment 5.	69	1	33	0.767	10	0.233	7	19
6 - Segment 6.	44	1	24	0.8	6	0.2	4	10
7 - Segment 7.	0	0	0	0	0	0	0	0
8 - Segment 8.	8	0.7	4	0.4	3	0.3	0	1
9 - Segment 9.	4	0.3	3	0.3	0	0	0	1
10 - Segment 10.	8	0.6	5	0.5	1	0.1	0	2
<b>Totals</b>	<b>341</b>	<b>7.4</b>	<b>161</b>	<b>5.34</b>	<b>66</b>	<b>2.06</b>	<b>30</b>	<b>84</b>

### Individual Ballot Pool Results

Segment	Organization	Member	Ballot	Comments
1	Allegheny Power	Rodney Phillips		
1	Ameren Services	Kirit Shah	Affirmative	
1	American Electric Power	Paul B. Johnson	Negative	
1	American Transmission Company, LLC	Andrew Z Puztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith		
1	Avista Corp.	Scott J Kinney	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Abstain	
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	
1	Beaches Energy Services	Joseph S Stonecipher	Abstain	

1	Bonneville Power Administration	Donald S. Watkins	Affirmative
1	Central Maine Power Company	Kevin L Howes	Affirmative
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative
1	City of Vero Beach	Randall McCamish	
1	City Water, Light & Power of Springfield	Shaun Anders	
1	Clark Public Utilities	Jack Stamper	Affirmative
1	Cleco Power LLC	Danny McDaniel	Affirmative
1	Colorado Springs Utilities	Paul Morland	Negative
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Abstain
1	Dayton Power & Light Co.	Hertzel Shamash	
1	Dominion Virginia Power	Michael S Crowley	Affirmative
1	Duke Energy Carolina	Douglas E. Hils	Negative
1	East Kentucky Power Coop.	George S. Carruba	Negative
1	Empire District Electric Co.	Ralph F Meyer	Affirmative
1	Entergy Corporation	George R. Bartlett	
1	FirstEnergy Energy Delivery	Robert Martinko	Affirmative
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative
1	Great River Energy	Gordon Pietsch	Affirmative
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon	Negative
1	Hydro One Networks, Inc.	Ajay Garg	Negative
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Affirmative
1	Idaho Power Company	Ronald D. Schellberg	
1	International Transmission Company Holdings Corp	Michael Moltane	Negative
1	Kansas City Power & Light Co.	Michael Gammon	Negative
1	Keys Energy Services	Stan T. Rzad	
1	Lake Worth Utilities	Walt Gill	
1	Lakeland Electric	Larry E Watt	Affirmative
1	Lee County Electric Cooperative	John W Delucca	Affirmative
1	Long Island Power Authority	Robert Ganley	Affirmative
1	Manitoba Hydro	Joe D Petaski	Negative
1	MEAG Power	Danny Dees	Affirmative
1	MidAmerican Energy Co.	Terry Harbour	Affirmative
1	Minnkota Power Coop. Inc.	Richard Burt	Abstain
1	National Grid	Saurabh Saksena	
1	Nebraska Public Power District	Richard L. Koch	
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Affirmative
1	New York Power Authority	Arnold J. Schuff	
1	Northeast Utilities	David Boguslawski	Abstain
1	Northern Indiana Public Service Co.	Kevin M Largura	
1	NorthWestern Energy	John Canavan	Affirmative
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Affirmative
1	Omaha Public Power District	Doug Peterchuck	Affirmative
1	Oncor Electric Delivery	Michael T. Quinn	Negative
1	Orlando Utilities Commission	Brad Chase	Affirmative
1	Otter Tail Power Company	Daryl Hanson	Affirmative
1	PacifiCorp	Colt Norrish	
1	PECO Energy	Ronald Schloendorn	Affirmative
1	Platte River Power Authority	John C. Collins	Affirmative
1	Portland General Electric Co.	Frank F Afranji	Affirmative
1	Potomac Electric Power Co.	David Thorne	Affirmative
1	PowerSouth Energy Cooperative	Larry D Avery	Abstain
1	PPL Electric Utilities Corp.	Brenda L Truhe	Abstain
1	Public Service Company of New Mexico	Laurie Williams	Affirmative
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Negative
1	Public Utility District No. 1 of Okanogan County	Dale Duncel	Abstain
1	Puget Sound Energy, Inc.	Catherine Koch	
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative
1	Salt River Project	Robert Kondziolka	Affirmative
1	Santee Cooper	Terry L Blackwell	Affirmative
1	SCE&G	Henry Delk, Jr.	
1	Seattle City Light	Pawel Krupa	Affirmative
1	Sierra Pacific Power Co.	Rich Salgo	Abstain
1	South Texas Electric Cooperative	Richard McLeon	
1	Southern California Edison Co.	Dana Cabbell	

1	Southern Company Services, Inc.	Robert A. Schaffeld	Affirmative
1	Southern Illinois Power Coop.	William Hutchison	Negative
1	Southwest Transmission Cooperative, Inc.	James Jones	Negative
1	Southwestern Power Administration	Gary W Cox	Abstain
1	Sunflower Electric Power Corporation	Noman Lee Williams	
1	Tampa Electric Co.	Beth Young	
1	Tennessee Valley Authority	Larry Akens	Affirmative
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative
1	Tucson Electric Power Co.	John Tolo	Affirmative
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative
1	Westar Energy	Allen Klassen	Negative
1	Western Area Power Administration	Brandy A Dunn	Affirmative
1	Western Farmers Electric Coop.	Forrest Brock	Abstain
1	Xcel Energy, Inc.	Gregory L Pieper	Affirmative
2	Alberta Electric System Operator	Mark B Thompson	Abstain
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative
2	California ISO	Gregory Van Pelt	Affirmative
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative
2	Independent Electricity System Operator	Kim Warren	Negative
2	ISO New England, Inc.	Kathleen Goodman	Negative
2	Midwest ISO, Inc.	Jason L Marshall	
2	New Brunswick System Operator	Alden Briggs	Negative
2	New York Independent System Operator	Gregory Campoli	Abstain
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative
2	Southwest Power Pool	Charles H. Yeung	Affirmative
3	Alabama Power Company	Richard J. Mandes	Affirmative
3	Allegheny Power	Bob Reeping	
3	Anaheim Public Utilities Dept.	Kelly Nguyen	
3	APS	Steven Norris	Affirmative
3	Atlantic City Electric Company	James V. Petrella	
3	BC Hydro and Power Authority	Pat G. Harrington	
3	Blachly-Lane Electric Co-op	Bud Tracy	Negative
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Negative
3	Central Lincoln PUD	Steve Alexanderson	Negative
3	City of Bartow, Florida	Matt Culverhouse	
3	City of Clewiston	Lynne Mila	
3	City of Farmington	Linda R Jacobson	Affirmative
3	City of Garland	Ronnie C Hoeinghaus	
3	City of Green Cove Springs	Gregg R Griffin	
3	City of Leesburg	Phil Janik	
3	City of Redding	Bill Hughes	Affirmative
3	Clearwater Power Co.	Dave Hagen	Negative
3	Cleco Corporation	Michelle A Corley	Affirmative
3	ComEd	Bruce Krawczyk	Affirmative
3	Consolidated Edison Co. of New York	Peter T Yost	Abstain
3	Constellation Energy	CJ Ingersoll	Abstain
3	Consumers Energy	David A. Lapinski	Abstain
3	Consumers Power Inc.	Roman Gillen	Negative
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Negative
3	Cowlitz County PUD	Russell A Noble	
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative
3	Detroit Edison Company	Kent Kujala	Negative
3	Dominion Resources Services	Michael F. Gildea	Affirmative
3	Douglas Electric Cooperative	Dave Sabala	Negative
3	Duke Energy Carolina	Henry Ernst-Jr	Negative
3	East Kentucky Power Coop.	Sally Witt	
3	Entergy	Joel T Plessinger	Affirmative
3	Fall River Rural Electric Cooperative	Bryan Case	Negative
3	FirstEnergy Solutions	Kevin Query	Affirmative
3	Georgia Power Company	Anthony L Wilson	Affirmative
3	Georgia System Operations Corporation	Scott S. Barfield-McGinnis	Affirmative
3	Great River Energy	Sam Kokkinen	Affirmative
3	Hydro One Networks, Inc.	David Kiguel	Negative
3	Idaho Power Company	Shaun Jensen	

3	JEA	Garry Baker	Affirmative
3	Kansas City Power & Light Co.	Charles Locke	Negative
3	Kissimmee Utility Authority	Gregory D Woessner	Negative
3	Lakeland Electric	Mace D Hunter	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Negative
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Negative
3	Lincoln Electric System	Bruce Merrill	
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative
3	Lost River Electric Cooperative	Richard Reynolds	Negative
3	Louisville Gas and Electric Co.	Charles A. Freibert	Negative
3	Manitoba Hydro	Greg C. Parent	Negative
3	MidAmerican Energy Co.	Thomas C. Mielnik	
3	Mississippi Power	Don Horsley	Affirmative
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative
3	Muscatine Power & Water	John S Bos	Affirmative
3	Nebraska Public Power District	Tony Eddleman	Negative
3	New York Power Authority	Marilyn Brown	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative
3	Northern Lights Inc.	Jon Shelby	Negative
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Negative
3	Orange and Rockland Utilities, Inc.	David Burke	Abstain
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative
3	PacifiCorp	John Apperson	
3	Platte River Power Authority	Terry L Baker	Affirmative
3	Potomac Electric Power Co.	Robert Reuter	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Negative
3	Public Utility District No. 2 of Grant County	Greg Lange	
3	Raft River Rural Electric Cooperative	Heber Carpenter	Negative
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative
3	Salmon River Electric Cooperative	Ken Dizes	Abstain
3	Salt River Project	John T. Underhill	Affirmative
3	San Diego Gas & Electric	Scott Peterson	
3	Santee Cooper	Zack Dusenbury	
3	Seattle City Light	Dana Wheelock	Affirmative
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative
3	Southern California Edison Co.	David Schiada	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative
3	Tampa Electric Co.	Ronald L Donahey	
3	Tennessee Valley Authority	Ian S Grant	Affirmative
3	Umatilla Electric Cooperative	Steve Eldrige	Negative
3	West Oregon Electric Cooperative, Inc.	Marc M Farmer	Negative
3	Wisconsin Electric Power Marketing	James R Keller	Affirmative
3	Wisconsin Public Service Corp.	Gregory J Le Grave	
3	Xcel Energy, Inc.	Michael Ibold	Affirmative
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative
4	American Municipal Power - Ohio	Kevin Koloini	Negative
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative
4	Central Lincoln PUD	Shamus J Gamache	Negative
4	City of Clewiston	Kevin McCarthy	
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative
4	Consumers Energy	David Frank Ronk	Abstain
4	Cowlitz County PUD	Rick Syring	
4	Florida Municipal Power Agency	Frank Gaffney	
4	Fort Pierce Utilities Authority	Thomas W. Richards	
4	Georgia System Operations Corporation	Guy Andrews	Affirmative
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Negative
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative
4	Seattle City Light	Hao Li	Affirmative
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative

4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Tallahassee Electric	Allan Morales	Negative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Affirmative	
5	AEP Service Corp.	Brock Ondayko	Negative	
5	AES Corporation	Leo Bernier	Negative	
5	Amerenue	Sam Dwyer	Affirmative	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Avista Corp.	Edward F. Groce	Affirmative	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	City of Grand Island	Jeff Mead	Abstain	
5	City of Redding	Paul A. Cummings	Affirmative	
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick		
5	City of Tallahassee	Alan Gale		
5	Cleco Power	Stephanie Huffman	Affirmative	
5	Cogentrix Energy, Inc.	Mike D Hirst	Abstain	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Abstain	
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Abstain	
5	Consumers Energy	James B Lewis		
5	Cowlitz County PUD	Bob Essex		
5	CPS Energy	Robert B Stevens		
5	Detroit Edison Company	Christy Wicke		
5	Dominion Resources, Inc.	Mike Garton	Affirmative	
5	Duke Energy	Dale Q Goodwine	Negative	
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	Electric Power Supply Association	John R Cashin		
5	Entergy Corporation	Stanley M Jaskot		
5	Exelon Nuclear	Michael Korchynsky	Affirmative	
5	ExxonMobil Research and Engineering	Martin Kaufman		
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann		
5	Great River Energy	Preston L Walsh	Affirmative	
5	Green Country Energy	Greg Froehling		
5	Indeck Energy Services, Inc.	Rex A Roehl		
5	Kansas City Power & Light Co.	Scott Heidtbrink		
5	Kissimmee Utility Authority	Mike Blough	Negative	
5	Lakeland Electric	James M Howard	Affirmative	
5	Liberty Electric Power LLC	Daniel Duff	Negative	
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative	
5	Luminant Generation Company LLC	Mike Laney	Affirmative	
5	Manitoba Hydro	S N Fernando	Negative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Affirmative	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider	Affirmative	
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Negative	
5	New York Power Authority	Gerald Mannarino		
5	Occidental Chemical	Michelle R DAntuono	Negative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard Kinan		
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Pete Ungerman		
5	Portland General Electric Co.	Gary L Tingley	Affirmative	
5	PPL Generation LLC	Annette M Bannon	Abstain	
5	Public Service Enterprise Group Incorporated	Dominick Grasso	Negative	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative	
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative	
5	Salt River Project	Glen Reeves		
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Affirmative	



5	Tenaska, Inc.	Scott M. Helyer	Abstain
5	Tennessee Valley Authority	David Thompson	Affirmative
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative
5	US Power Generating Company	Bohdan M Dackow	
5	Wisconsin Electric Power Co.	Linda Horn	Affirmative
5	Wisconsin Public Service Corp.	Leonard Rentmeester	
6	AEP Marketing	Edward P. Cox	Negative
6	Ameren Energy Marketing Co.	Jennifer Richardson	Affirmative
6	Arizona Public Service Co.	Justin Thompson	Affirmative
6	Black Hills Power	andrew heinle	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative
6	City of Austin dba Austin Energy	Lisa L Martin	Affirmative
6	Cleco Power LLC	Robert Hirschak	Affirmative
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Abstain
6	Constellation Energy Commodities Group	Brenda L Powell	Affirmative
6	Dominion Resources, Inc.	Louis S. Slade	Affirmative
6	Duke Energy Carolina	Walter Yeager	Negative
6	Entergy Services, Inc.	Terri F Benoit	
6	Exelon Power Team	Pulin Shah	Abstain
6	FirstEnergy Solutions	Mark S Travaglianti	Affirmative
6	Florida Municipal Power Agency	Richard L. Montgomery	
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative
6	Great River Energy	Donna Stephenson	
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative
6	Lakeland Electric	Paul Shipps	Affirmative
6	Lincoln Electric System	Eric Ruskamp	Affirmative
6	Manitoba Hydro	Daniel Prowse	Negative
6	MidAmerican Energy Co.	Dennis Kimm	Abstain
6	Muscatine Power & Water	Brandy D Olson	
6	New York Power Authority	William Palazzo	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative
6	Omaha Public Power District	David Ried	Affirmative
6	PacifiCorp	Scott L Smith	Affirmative
6	Platte River Power Authority	Carol Ballantine	Affirmative
6	PPL EnergyPlus LLC	Mark A Heimbach	Abstain
6	Progress Energy	John T Sturgeon	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Negative
6	Sacramento Municipal Utility District	Claire Warshaw	Affirmative
6	Salt River Project	Steven J Hulet	Affirmative
6	Santee Cooper	Suzanne Ritter	
6	Seattle City Light	Dennis Sismaet	Affirmative
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative
6	Shell Energy North America (US), L.P.	Paul Kerr	Affirmative
6	South California Edison Company	Lujuanna Medina	Affirmative
6	Tacoma Public Utilities	Michael C Hill	Affirmative
6	Tampa Electric Co.	Benjamin F Smith II	
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative
6	Xcel Energy, Inc.	David F. Lemmons	
8		Roger C Zaklukiewicz	Affirmative
8		Edward C Stein	Affirmative
8		James A Maenner	Negative
8	JDRJC Associates	Jim Cyrulewski	Affirmative
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Negative
8	Power Energy Group LLC	Peggy Abbadini	
8	Utility Services, Inc.	Brian Evans-Mongeon	Negative
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative
9	National Association of Regulatory Utility Commissioners	Diane J. Barney	Affirmative
9	Oregon Public Utility Commission	Jerome Murray	Affirmative
9	Snohomish County PUD No. 1	William Moojen	
10	Florida Reliability Coordinating Council	Linda Campbell	
10	Midwest Reliability Organization	James D Burley	



10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	
10	SERC Reliability Corporation	Carter B Edge	Affirmative	
10	Texas Reliability Entity	Larry D. Grimm	Negative	
10	Western Electricity Coordinating Council	Louise McCarren	Affirmative	

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 Washington Office: 1120 G Street, N.W. : Suite 990 : Washington, DC 20005-3801

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# Non-binding Poll Results

COM-001-2

Non-binding Poll Results				
<b>Non-binding Poll Name:</b>	Project 2006-06 Non-binding Poll COM-001-2			
<b>Poll Period:</b>	6/27/2012 - 7/10/2012			
<b>Total # Opinions:</b>	257			
<b>Total Ballot Pool:</b>	341			
<b>Summary Results:</b>	75.37% of those who registered to participate provided an opinion or an abstention; 73.71% of those who provided an opinion indicated support for the VRFs and VSLs.			
Individual Ballot Pool Results				
Segment	Organization	Member	Opinions	Comments
1	Allegheny Power	Rodney Phillips		
1	Ameren Services	Kirit Shah	Abstain	
1	American Electric Power	Paul B. Johnson	Abstain	
1	American Transmission Company, LLC	Andrew Z Puztai	Abstain	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Avista Corp.	Scott J Kinney	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Abstain	
1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher	Abstain	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Central Maine Power Company	Kevin L Howes	Affirmative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City of Vero Beach	Randall McCamish		
1	City Water, Light & Power of Springfield	Shaun Anders		
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Abstain	
1	Colorado Springs Utilities	Paul Morland	Negative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Abstain	
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Dominion Virginia Power	Michael S Crowley	Abstain	
1	Duke Energy Carolina	Douglas E. Hills	Negative	
1	East Kentucky Power Coop.	George S. Carruba	Negative	
1	Empire District Electric Co.	Ralph F Meyer	Affirmative	
1	Entergy Corporation	George R. Bartlett		
1	FirstEnergy Energy Delivery	Robert Martinko		
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative	
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon	Negative	

1	Hydro One Networks, Inc.	Ajay Garg	Abstain	
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Affirmative	
1	Idaho Power Company	Ronald D. Schellberg		
1	International Transmission Company Holdings Corp	Michael Moltane	Abstain	
1	Kansas City Power & Light Co.	Michael Gammon	Negative	
1	Keys Energy Services	Stan T. Rzad		
1	Lake Worth Utilities	Walt Gill		
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca	Affirmative	
1	Long Island Power Authority	Robert Ganley	Affirmative	
1	Manitoba Hydro	Joe D Petaski	Affirmative	
1	MEAG Power	Danny Dees	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	
1	Minnkota Power Coop. Inc.	Richard Burt	Abstain	
1	National Grid	Saurabh Saksena		
1	Nebraska Public Power District	Richard L. Koch		
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Abstain	
1	New York Power Authority	Arnold J. Schuff	Affirmative	
1	Northeast Utilities	David Boguslawski	Abstain	
1	Northern Indiana Public Service Co.	Kevin M Largura		
1	NorthWestern Energy	John Canavan	Affirmative	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Affirmative	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Michael T. Quinn	Negative	
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson	Affirmative	
1	PacifiCorp	Colt Norrish		
1	PECO Energy	Ronald Schloendorn	Affirmative	
1	Platte River Power Authority	John C. Collins	Abstain	
1	Portland General Electric Co.	Frank F Afranji	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Abstain	
1	PowerSouth Energy Cooperative	Larry D Avery	Negative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Abstain	
1	Public Service Company of New Mexico	Laurie Williams	Affirmative	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Abstain	
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Abstain	
1	Puget Sound Energy, Inc.	Catherine Koch		
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Abstain	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell	Affirmative	
1	SCE&G	Henry Delk, Jr.		
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Sierra Pacific Power Co.	Rich Salgo	Abstain	
1	South Texas Electric Cooperative	Richard McLeon		

1	Southern California Edison Co.	Dana Cabbell		
1	Southern Company Services, Inc.	Robert A. Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison	Negative	
1	Southwest Transmission Cooperative, Inc.	James Jones	Negative	
1	Southwestern Power Administration	Gary W Cox	Abstain	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	
1	Tampa Electric Co.	Beth Young		
1	Tennessee Valley Authority	Larry Akens		
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo	Affirmative	
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Abstain	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Western Farmers Electric Coop.	Forrest Brock	Abstain	
1	Xcel Energy, Inc.	Gregory L Pieper		
2	Alberta Electric System Operator	Mark B Thompson		
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Gregory Van Pelt	Affirmative	
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	
2	Independent Electricity System Operator	Kim Warren	Negative	
2	ISO New England, Inc.	Kathleen Goodman	Abstain	
2	Midwest ISO, Inc.	Jason L Marshall		
2	New Brunswick System Operator	Alden Briggs	Abstain	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool	Charles H. Yeung	Affirmative	
3	Alabama Power Company	Richard J. Mandes	Affirmative	
3	Allegheny Power	Bob Reeping		
3	Anaheim Public Utilities Dept.	Kelly Nguyen		
3	APS	Steven Norris	Affirmative	
3	Atlantic City Electric Company	James V. Petrella		
3	BC Hydro and Power Authority	Pat G. Harrington		
3	Blachly-Lane Electric Co-op	Bud Tracy	Negative	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Negative	
3	Central Lincoln PUD	Steve Alexanderson	Negative	
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila		
3	City of Farmington	Linda R Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoeinghaus	Negative	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	
3	City of Leesburg	Phil Janik		
3	City of Redding	Bill Hughes	Affirmative	
3	Clearwater Power Co.	Dave Hagen	Negative	
3	Cleco Corporation	Michelle A Corley	Abstain	
3	ComEd	Bruce Krawczyk	Affirmative	

3	Consolidated Edison Co. of New York	Peter T Yost	Abstain	
3	Constellation Energy	CJ Ingersoll	Abstain	
3	Consumers Energy	David A. Lapinski		
3	Consumers Power Inc.	Roman Gillen	Affirmative	
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Negative	
3	Cowlitz County PUD	Russell A Noble		
3	Delmarva Power & Light Co.	Michael R. Mayer	Abstain	
3	Detroit Edison Company	Kent Kujala	Negative	
3	Dominion Resources Services	Michael F. Gildea		
3	Douglas Electric Cooperative	Dave Sabala	Negative	
3	Duke Energy Carolina	Henry Ernst-Jr	Negative	
3	East Kentucky Power Coop.	Sally Witt		
3	Entergy	Joel T Plessinger	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Negative	
3	FirstEnergy Solutions	Kevin Querry		
3	Georgia Power Company	Anthony L Wilson	Affirmative	
3	Georgia System Operations Corporation	Scott S. Barfield-McGinnis	Affirmative	
3	Great River Energy	Sam Kokkinen	Affirmative	
3	Hydro One Networks, Inc.	David Kiguel	Abstain	
3	Idaho Power Company	Shaun Jensen		
3	JEA	Garry Baker	Affirmative	
3	Kansas City Power & Light Co.	Charles Locke	Negative	
3	Kissimmee Utility Authority	Gregory D Woessner	Negative	
3	Lakeland Electric	Mace D Hunter	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Negative	
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Negative	
3	Lincoln Electric System	Bruce Merrill		
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Lost River Electric Cooperative	Richard Reynolds	Negative	
3	Louisville Gas and Electric Co.	Charles A. Freibert		
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Abstain	
3	Mississippi Power	Don Horsley	Affirmative	
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Affirmative	
3	Nebraska Public Power District	Tony Eddleman	Abstain	
3	New York Power Authority	Marilyn Brown	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby	Negative	
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Affirmative	
3	Orange and Rockland Utilities, Inc.	David Burke	Abstain	
3	Orlando Utilities Commission	Ballard K Mutters	Abstain	
3	PacifiCorp	John Apperson		
3	Platte River Power Authority	Terry L Baker	Abstain	

3	Potomac Electric Power Co.	Robert Reuter		
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Abstain	
3	Public Utility District No. 2 of Grant County	Greg Lange		
3	Raft River Rural Electric Cooperative	Heber Carpenter	Negative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Abstain	
3	Salmon River Electric Cooperative	Ken Dizes	Negative	
3	Salt River Project	John T. Underhill	Affirmative	
3	San Diego Gas & Electric	Scott Peterson		
3	Santee Cooper	Zack Dusenbury		
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Southern California Edison Co.	David Schiada		
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey		
3	Tennessee Valley Authority	Ian S Grant	Abstain	
3	Umatilla Electric Cooperative	Steve Eldrige	Negative	
3	West Oregon Electric Cooperative, Inc.	Marc M Farmer	Negative	
3	Wisconsin Electric Power Marketing	James R Keller	Abstain	
3	Wisconsin Public Service Corp.	Gregory J Le Grave		
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power - Ohio	Kevin Koloini	Negative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Negative	
4	City of Clewiston	Kevin McCarthy		
4	City of New Smyrna Beach Utilities Commission	Timothy Beyrle		
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	
4	Consumers Energy	David Frank Ronk	Abstain	
4	Cowlitz County PUD	Rick Syring		
4	Florida Municipal Power Agency	Frank Gaffney		
4	Fort Pierce Utilities Authority	Thomas W. Richards		
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Madison Gas and Electric Co.	Joseph DePoorter	Abstain	
4	Ohio Edison Company	Douglas Hohlbaugh		
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Affirmative	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Abstain	
4	Sacramento Municipal Utility District	Mike Ramirez	Abstain	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Tallahassee Electric	Allan Morales	Negative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Affirmative	

5	AEP Service Corp.	Brock Ondayko	Abstain	
5	AES Corporation	Leo Bernier	Negative	
5	Amerenue	Sam Dwyer	Abstain	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Avista Corp.	Edward F. Groce	Affirmative	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	City of Grand Island	Jeff Mead	Abstain	
5	City of Redding	Paul A. Cummings	Affirmative	
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick		
5	City of Tallahassee	Alan Gale		
5	Cleco Power	Stephanie Huffman	Abstain	
5	Cogentrix Energy, Inc.	Mike D Hirst	Abstain	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Abstain	
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Abstain	
5	Consumers Energy	James B Lewis		
5	Cowlitz County PUD	Bob Essex		
5	CPS Energy	Robert B Stevens		
5	Detroit Edison Company	Christy Wicke	Negative	
5	Dominion Resources, Inc.	Mike Garton	Abstain	
5	Duke Energy	Dale Q Goodwine	Negative	
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	Electric Power Supply Association	John R Cashin	Abstain	
5	Entergy Corporation	Stanley M Jaskot		
5	Exelon Nuclear	Michael Korchynsky	Affirmative	
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative	
5	FirstEnergy Solutions	Kenneth Dresner		
5	Florida Municipal Power Agency	David Schumann		
5	Great River Energy	Preston L Walsh	Affirmative	
5	Green Country Energy	Greg Froehling		
5	Indeck Energy Services, Inc.	Rex A Roehl		
5	Kansas City Power & Light Co.	Scott Heidtbrink		
5	Kissimmee Utility Authority	Mike Blough	Negative	
5	Lakeland Electric	James M Howard	Abstain	
5	Liberty Electric Power LLC	Daniel Duff	Negative	
5	Lincoln Electric System	Dennis Florum	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative	
5	Luminant Generation Company LLC	Mike Laney	Affirmative	
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider	Affirmative	
5	Muscatine Power & Water	Mike Avesing	Affirmative	



5	Nebraska Public Power District	Don Schmit	Negative	
5	New York Power Authority	Gerald Mannarino	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Negative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard Kinass		
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Pete Ungerman		
5	Portland General Electric Co.	Gary L Tingley		
5	PPL Generation LLC	Annette M Bannon	Abstain	
5	Public Service Enterprise Group Incorporated	Dominick Grasso	Abstain	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative	
5	Sacramento Municipal Utility District	Bethany Hunter	Abstain	
5	Salt River Project	Glen Reeves		
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Affirmative	
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Affirmative	
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	US Power Generating Company	Bohdan M Dackow		
5	Wisconsin Electric Power Co.	Linda Horn	Abstain	
5	Wisconsin Public Service Corp.	Leonard Rentmeester		
6	AEP Marketing	Edward P. Cox	Abstain	
6	Ameren Energy Marketing Co.	Jennifer Richardson	Abstain	
6	Arizona Public Service Co.	Justin Thompson	Affirmative	
6	Black Hills Power	andrew heinle		
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Affirmative	
6	Cleco Power LLC	Robert Hirschak	Abstain	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Abstain	
6	Constellation Energy Commodities Group	Brenda Powell		
6	Dominion Resources, Inc.	Louis S. Slade	Abstain	
6	Duke Energy Carolina	Walter Yeager	Negative	
6	Entergy Services, Inc.	Terri F Benoit		
6	Exelon Power Team	Pulin Shah	Abstain	
6	FirstEnergy Solutions	Mark S Travaglianti		
6	Florida Municipal Power Agency	Richard L. Montgomery		
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	
6	Lakeland Electric	Paul Shipps	Affirmative	

6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Manitoba Hydro	Daniel Prowse	Affirmative	
6	MidAmerican Energy Co.	Dennis Kimm	Abstain	
6	Muscatine Power & Water	Brandy D Olson		
6	New York Power Authority	William Palazzo	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	Omaha Public Power District	David Ried	Affirmative	
6	PacifiCorp	Scott L Smith	Abstain	
6	Platte River Power Authority	Carol Ballantine	Abstain	
6	PPL EnergyPlus LLC	Mark A Heimbach		
6	Progress Energy	John T Sturgeon		
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Abstain	
6	Sacramento Municipal Utility District	Claire Warshaw	Abstain	
6	Salt River Project	Steven J Hulet	Affirmative	
6	Santee Cooper	Suzanne Ritter		
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Shell Energy North America (US), L.P.	Paul Kerr	Affirmative	
6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons		
8		James A Maenner	Affirmative	
8		Roger C Zaklukiewicz	Abstain	
8		Edward C Stein	Affirmative	
8	JDRJC Associates	Jim Cyrulewski	Affirmative	
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Affirmative	
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon	Abstain	
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J Barney		
9	Oregon Public Utility Commission	Jerome Murray	Abstain	
9	Snohomish County PUD No. 1	William Moojen		
10	Florida Reliability Coordinating Council	Linda Campbell	Abstain	
10	Midwest Reliability Organization	James D Burley		
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	
10	SERC Reliability Corporation	Carter B Edge	Abstain	
10	Texas Reliability Entity	Larry D. Grimm	Abstain	
10	Western Electricity Coordinating Council	Louise McCarren	Affirmative	

- Name (25 Responses)
- Organization (25 Responses)
- Group Name (16 Responses)
- Lead Contact (16 Responses)
- Question 1 (32 Responses)
- Question 1 Comments (41 Responses)
- Question 2 (31 Responses)
- Question 2 Comments (41 Responses)
- Question 3 (30 Responses)
- Question 3 Comments (41 Responses)
- Question 4 (0 Responses)
- Question 4 Comments (41 Responses)

Individual
Alice Ireland
Xcel Energy
Yes
Yes
Yes
Individual
Thad Ness
American Electric Power
Yes
Yes
The definition of Alternative Interpersonal Communication is "Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation." Does the Alternative Interpersonal Communication have to be a different technology? For example, if a satellite phone is used, but it calls the same land-line on the other end, does this qualify as Alternative Interpersonal Communication? How does a TOP notify a DP of a failure in its Interpersonal Communications capability per R10, if it there is no Alternative Interpersonal Communication required? Within Requirement 10, the entities to be notified should not reference R1, R3, and R5 but should instead reference R2, R4, and R6 respectively. This change is necessary because the requirements we are referring to are those that have Alternative Interpersonnel Communications. You cannot expect notification to entities where an Alternative Interpersonnel Communication does not exist.
Group
Arizona Public Service Company
Janet Smith, Regulatory Affairs Supervisor
Yes
Yes
Yes

None
Group
FirstEnergy
Sam Ciccone
Yes
Yes
Yes
FE supports COM-001-2 and has no further comments. PLEASE NOTE: THE FOLLOWING COMMENTS RELATE TO COM-002-3 AND IRO-001-3 SINCE WE WERE NOT ABLE TO PROVIDE COMMENTS ON THE RECIRCULATION BALLOT AND WANTED TO EXPLAIN OUR REASONS FOR NOT SUPPORTING THOSE STANDARDS: Although we believe the team made significant improvements to the standard, and would support a 3-part communication standard, we believe the introduction of both COM-002-2 which utilizes Reliability Directives and COM-003-1 which utilizes Operating Communications cause confusion for system operators and may in fact be detrimental to reliability. We do not support two standards on three-part communication. We suggest, as we have in the past, that the subject of three-part communication be addressed in a single standard, and that the requirements be developed for simplicity. The industry is, and has been, using three-part communication for decades and although we agree it should be more consistently practiced and standardized, the required communications protocols should be simple while meeting the goal of BES reliability. Introducing complicated requirements and standards that have different definitions such as Reliability Directive and Operating Communication may cause the operator to hesitate when issuing directives in real-time and every second counts when a potential system emergency must be mitigated. Therefore, FE does not support the creation of both COM-003-1 nor the revisions to COM-002-2 and IRO-001-3 which introduce the "Reliability Directive" term and ask NERC to reevaluate the need to have two separate standards for three-part communication.
Group
PacifiCorp
Sandra Shaffer
No
No
PacifiCorp does not understand the RCSDT's rationale for creating separate sub-requirements for adjacent Transmission Operators that are synchronously and asynchronously connected, in both R3.5/R3.6 and R4.3/R4.4. PacifiCorp recommends the following singular sub-requirement for both R3 and R4: "Each adjacent Transmission Operator (whether synchronously or asynchronously connected)."
Yes
N/A
Individual
John Seelke
Public Service Enterprise Group
Yes
Yes
Yes
Change R11 and replace "experiences a failure" with "detects a failure" because one may have a

failure, but if it's undetected for some period of time because no communications are taking place, it's unclear when one actually "experienced a failure." We note that R10 uses the terminology "detection of a failure." Using consistent terminology in R10 and R11 would result in less confusion for compliance because there would not be an issue as to whether a difference was intended by the SDT between "experiences" and "detects" in the two requirements.

Individual

David Thorne

Pepco Holdings Inc

Yes

Yes

Yes

Individual

Karen Webb

City of Tallahassee (TAL)

Yes

Yes

Yes

For Measure 7, the first line duplicates the word "that".

TAL has no comments on COM-001-2. However, for COM-002-3, under Data Retention, the second bullet requires the BA, TOP, GOP, and DP to retain evidence for R1, M1; however, R1 is not applicable to the GOP or DP. This should read R2, M2. Also, there is room for debate on the clarity of the VSLs for R3. Specifically, the use of the word "accurately" could be interpreted to mean "verbatim" in cases where varying verbiage results in the same understanding and action between the parties, and therefore no re-issuance of the directive is required in the eyes of the issuer.

Individual

Andrew Gallo

City of Austin dba Austin Energy

Yes

Yes

(1) Both instances of "Reliability Coordinator" in the VSLs for R3 should be "Transmission Operator" to match the language of the standard. (2) Both instances of "Reliability Coordinator" in the VSLs for R5 should be "Balancing Authority" to match the language of the standard. (3) In the VSLs for R9 and R10 the use of "and" seems incorrect. Austin Energy suggests the following revisions for all VSL levels (only the Lower VSL shown for simplicity and revised words suggested in capital letters): R9, Lower VSL: "The Reliability Coordinator, Transmission Operator, OR Balancing Authority..." R10, Lower VSL: "The Reliability Coordinator, Transmission Operator, OR Balancing Authority failed to notify the entities identified in Requirements R1, R3, OR R5, RESPECTIVELY, upon the detection ..."

Individual

Kasia Mihalchuk

Manitoba Hydro

Yes

Yes

Yes

Manitoba Hydro would like additional clarification added to the definition of interpersonal communication. The definition should explicitly state that interpersonal communication does not data links (e.g. the ICCP data link). Also, does interpersonal communication include emails? Under the Effective Date Section, the effective date language has a few issues in its drafting. It would be clearer to use the word 'following' as opposed to the word 'beyond' (and this would also be more consistent with the drafting of similar sections in other standards). The words 'the standard becomes effective' in the third line are not needed. The words 'made pursuant to the laws applicable to such ERO governmental authorities' may not be appropriate. It's not the laws applicable to the governmental authorities that are relevant, but the laws applicable to the entity itself. We would suggest wording like 'or as otherwise made effective pursuant to the laws applicable to the Balancing Authority'. Also, ERO is not defined. R11 and M11 – would suggest replacing 'action' with 'plan of action' or 'action plan' M3 and M4 – the word 'and' between asynchronously and synchronously should more appropriately be 'or' M10 – the semi colon after stamped should be deleted Compliance Section – Compliance Enforcement Authority is defined as CEA, but then both the acronym and the entire term is later used in the document. Should either not define, or use acronym consistently.

Individual

Steve Alexanderson P.E.

Central Lincoln

Prior Central Lincoln Comment 1)The new requirement presents us with a paradoxical situation. The communication has failed, so we must consult; yet consultation requires communication. We note that the SDT used the word "any", implying that multiple communication paths are required. The reality of the situation at Central Lincoln, due to our remote location, is that a single back hoe incident at the right location can take out all of our of our communication capability (including the terrestrial portion of the cellular networks) with our BA/TO; making this requirement impossible to meet for this circumstance using our present capabilities. Prior RCSDT Response 1) The RCSDT appreciates your comment and has made clarifying changes by removing the phrase "any of" in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. Furthermore, R11 addresses the direction given in Order 693 that DP and GOP entities do not necessarily need to have Alternative Interpersonal Communication capability. The requirement allows flexibility in "consult with" by not naming the method. If all communications are out, then the DP or GOP may have to meet the requirement by an in-person consultation. New Central Lincoln Response 1) Thank you for the changes made. We realize that in-person consultation is an option, but find it not too hard to imagine the same event that disrupts communications might also block roads. We don't believe entities should be found non-compliant and sanctioned for events beyond their control. Prior Central Lincoln Comment 2) We also note that no time limit was indicated. Most interruptions are brief, and fixed before consultation could reasonably take place. CEAs will be finding entities non-compliant for quickly fixing problems at their end without first consulting to ensure the restoration time was agreeable. To avoid non-compliance, entities will be forced to delay repairs while they investigate alternative communication paths for consultation purposes. We fail to see how such an outcome improves reliability. Prior RCSDT Response 2) The DP and GOP are only required to have Interpersonal Communication capability. If the DP or GOP restores its Interpersonal Communication capability before it could reasonably contact the affected entity by another method, there is no failure to comply. The DP or GOP could then consult with the affected entity to determine a mutually agreeable action. In this case, the RCSDT believes the "action" would then be the entities acknowledging the failure and the repair; therefore, no mutually agreeable action is needed. The RCSDT recognizes there is no way to account for all the various circumstances in a failure. To comply, the DP and GOP are still required to consult the entity which the failure affected regardless of whether the Interpersonal Communication capability was restored or is still failed. No change made. New Central Lincoln Response 2) If consultation after restoration is acceptable, we

suggest that this be made clear in the requirement. Presently it is not at all clear, and there is no accompanying guidance document to suggest so. We also remain unclear what reliability benefit would result from such a consultation following restoration. While accounting for all the various failures might be impossible, we would like to see a few of the more common ones discussed in a guidance document. Prior Central Lincoln Comment 3) The new requirement is one sided, requiring the DP and GOP to consult with no corresponding requirement for the TO or BA to have personnel available for such a consultation. Consultation failure or failure to mutually agree due to actions or inactions on the part of the TO or BA should not result in an enforcement action against the DP or GOP, yet that is how the requirement is written. Prior RCSDT Response 3) The RCSDT notes that once the failure has been detected, the responsible entity must make the consultation with the BA or TOP; that relieves the compliance burden. While the RCSDT understands your concern about single points of failure, the question becomes should this relieve the DP or GOP of the requirement for having Interpersonal Communication capabilities. No change made. New Central Lincoln Response 3) The requirement remains one-sided. If a consultation effort fails due to actions or inactions taken by the BA/TO, the DP or GOP is the only entity that can be found non-compliant. Prior Central Lincoln Comment 4) The new requirement fails to add any "clarity" to the other requirements, and we don't see that the stakeholders thought there was a problem with DP/GOP obligation clarity. Instead, it adds new obligations with no justification for how they enhance reliability. We suggest removing the requirement. Prior RCSDT Response 4) Based on the RCSDT's understanding of the comments received on the previous posting, the industry desired additional clarity on specifically what communication capabilities the DP and GOP were required to have. There was confusion that the standard did not specifically say that the DP and GOP were required to have Alternative Interpersonal Communication capabilities. R11 clarifies that a DP and GOP are not required to have Alternative Interpersonal Communication capability if the DP or GOP consult with their TOP or BA, whichever is applicable in the given situation, and they mutually agree that the restoration action does not adversely impact the reliability of the BES. No change made. New Central Lincoln Response 4) We disagree that R11 clarifies anything regarding Alternative Interpersonal Communication capabilities; the requirement says nothing on the matter. If other requirements remain unclear, we suggest they be clarified within those requirements. We ask that R11 be removed. Alternatively we suggest that a plan for communication failure be developed by the affected entities prior to a failure, applicable to both the BA/TO and DP/GOP. Prior Central Lincoln Comment 5) As stated in our prior comments, we continue to have problems with COM-002, R2 and R3 as written. The SDT's answer ("It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive") addresses our concern perfectly, and we would agree with such an expectation. Unfortunately, the expressed expectation is not in the proposed standard or even in a proposed guideline for the standard. Prior RCSDT Response 5) The RCSDT believes this is a process or procedure question that should be determined by the entity in how it handles communication with the RC. The standard, as written does, not preclude the entity from having a procedure. No change made. New Central Lincoln Response 5) We agree that this is a procedure issue, but disagree that the procedure lies with the entity receiving the Reliability Directive. The SDT's words inside the quotation marks above state it is the issuer of the Directive that should request a return call. Procedures like this, in order to ensure the Directive gets to the party who understands it and can take the needed action, are the responsibility of the issuer. If reliability is at risk, it is little to ask that issuers of Reliability Directives be required to attempt to reach the proper party prior to identifying, delivering the directive, and asking for repetition.

Individual
Michelle D'Antuono
Ingleside Cogeneration LP (Occidental Chemical in the ballot body)
Yes
Ingleside Cogeneration LP agrees that the modification removes all doubt that a glossary definition is inferred. We support all clarifications of this kind.
Yes
No
Ingleside Cogeneration LP would like to see the project team include references to intermediaries which act as a single point of contact between GOPs and BAs/TOPs. This is a very common and

necessaray communications hierarchy – as it is just not possible for the BA/TOP to otherwise coordinate the actions of multiple GOPs. We believe that it is appropriate that GOP must retain evidence that Interpersonal Communication capability is maintained up to the intermediary – but the BA or TOP must be responsible for the remainder of the link. This accountability matches the most common contractual arrangements where both the BA/TOP and the GOP have signed agreements with the intermediary.

Ingleside Cogeneration LP generally agrees with the modifications that the SDT has made to COM-001-2. However, we cannot vote to accept the standard unless requirement R10 is modified to include a minimum communications outage duration before consultation with the BA or TOP is necessary. This is similar to R10, which allows an outage to extend up to 30 minutes – thus avoiding the need for a notification that an insignificant interruption in service took place. The following language could be added to R11 as shown in the brackets below: R11. Each Distribution Provider and Generator Operator that experiences a failure of its Interpersonal Communication capability [that lasts 30 minutes or longer] shall consult each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of its Interpersonal Communication capability.

Group

SERC OC Standards Review Group

Gerald Beckerle

Yes

Yes

Yes

Yes

The SERC OC SRG would like to thank the Standard Drafting Team for their service. “The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers.”

Individual

Laura Lee

Duke Energy

Yes

Yes

Yes

Distribution Providers and Generator Operators have significant responsibilities that require reliable means of communications with other entities, such as implementing load shedding and adjusting real and reactive power. The requirements for the Distribution Provider and Generator Operator should therefore be consistent with those for the Reliability Coordinator, Transmission Operator and Balancing Authority, namely, they should be required to designate Alternative Interpersonal Communication capability, to test this capability and to notify appropriate entities when its Interpersonal Communication capability has failed. The definition of Interpersonal Communication should also be expanded to clearly include the drafting team’s intent that the capability is NOT for the exchange of data.

Group

Bonneville Power Administration

Chris Higgins



BPA thanks you for the opportunity to comment on Project 2006-06, COM-001-2 and has no comments or concerns at this time.
Group
Luminant
Brenda Hampton
Yes
Yes
Yes
Individual
Don Jones
Texas Reliability Entity
Yes
“Adjacent Balancing Authority” is a defined term in the NERC Glossary, and use of the non-defined term “adjacent Balancing Authority” in this draft will cause confusion. Exactly what difference is intended by using the lower-case “a” instead of the defined term?
No
The proposed revision to include Transmission Operators asynchronously connected (Parts 3.5 and 4.4) is an appropriate revision to the Standard. The Reliability Coordinator responsibilities for communications with a Reliability Coordinator across an asynchronous connection do not appear to be addressed in this revision. Did the RCSDT have a particular reason not to address the RC issue? We believe each RC should have Interpersonal Communication capability with all neighboring RCs regardless of Interconnection boundaries, the type of connection, or whether a connection exists.
Yes
In the Measures for R3 and R4 (M3 and M4), should the phrase “each adjacent Transmission Operator asynchronously AND synchronously connected” be changed to “each adjacent Transmission Operator asynchronously OR synchronously connected”? In the VSLs for R3 it appears that “Reliability Coordinator” should be “Transmission Operator”. In the VSLs for R5 it appears that “Reliability Coordinator” should be “Balancing Authority”. In the Severe VSL for R10 the phrase “failed to notify the identified entities identified” should probably be “failed to notify the entities identified”.
Group
Western Electricity Coordinating Council
Steve Rueckert
Yes
Yes
Yes
Group
Dominion
Connie Lowe
Yes

Yes
Yes
<p>Dominion has no additional comments on COM-001-2, but does have the below comments on IRO-001-3: Dominion believes that our previous comment remains valid and the response provided by the SDT does not address all aspects of our concerns. Dominion suggests that the language of 'direction' be changed to 'Reliability Directive' to remain consistent with COM-002. Another alternative would be as written below; IRO-001-3 uses the term 'direct' in its purpose statement, R1, R2 and R3. To avoid confusion with a Reliability Directive (both for auditors and entities), we suggest the following: To establish the authority of Reliability Coordinators to make requests of other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System. R1: Each Reliability Coordinator shall have the authority to act or request others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. R2: Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator's request unless compliance with the request cannot be physically implemented, or unless such actions would violate safety, equipment, regulatory or statutory requirements, or unless the TOP, BA, GOP or DP convey a business reason not to comply with the request but express that they will comply if a Reliability Directive is given. R3: Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as requested in accordance with Requirement R2." Or we could cite Southwest Transmission Cooperative, Inc. comments which read "COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: "When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive." What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact? Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent. For clarity and consistency, IRO-001-3 Requirement R2 and R3 should also be clear that the responsible entities will respond to the Reliability Coordinator's Reliability Directives.</p>
Individual
John Brockhan
CenterPoint Energy Houston Electric, LLC
Yes
Yes
Yes
<p>1. For R10, there can be a large number of entities to notify for an Interpersonal Communication failure. During normal operations, 60 minutes can be enough time to make all the notifications. However, during emergency or adverse conditions, 60 minutes may not be sufficient. Thus, at the end of R10, the following should be added: "unless certain adverse conditions (e.g. severe weather, multiple events) prevent the completion of notification within the 60 minutes." 2. For R11, the change from "mutually agreeable time" to "mutually agreeable action" is not an improvement. It should not be the concern of the other entities how (what action) the capability is restored, only that it is restored and that the entity with the failure can be reached in the interim. Thus, we suggest the following: "to determine a mutually agreeable alternative until Interpersonal Communication capability is restored."</p>
Individual
Michael Falvo
Independent Electricity System Operator
Yes

Notwithstanding our opposition to R1.2.
Yes
Yes
Notwithstanding our opposition to R1.2.
<p>1. COM-001 We continue to disagree with R1.2, the phrase “within the same Interconnection” is troublesome. RCs between two Interconnections still need to communicate with each other for reliability coordination (e.g. between Quebec and the other RCs in the NPCC region to curtail interchange transactions crossing Interconnection boundary). The SDT’s previous response that the phrase was added to address the ERCOT situation and citing that ERCOT does not need to communicate with other RCs leaves a reliability gap. The SDT’s latest response that R1 as written does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others is inconsistent with the basic principle for having a reliability standard. A standard should stipulate the requirements based on what is needed to ensure reliability, not on what is not precluded. If there is a reliability need for RCs across Interconnection boundary to coordination operations, then Interpersonal Communication shall be provided. If we apply the SDT’s philosophy (that the standard does not preclude...), then one can argue that the standard does not need to stipulate a requirement to have Interpersonal Communication as without such a requirement, the standard does not preclude any operating entities to have it. Finally, we would reiterate the fact that RCs between asynchronously interconnected systems do communicate, e.g. between Quebec and its neighbor RCs. We are also aware that RCs in the Western Interconnection and those in the Eastern Interconnection do communicate as needed to coordinate TLR for transactions crossing Interconnection boundary.</p> <p>2. The follow comments address data retention for COM-002-3: a. The first bullet in Section D1.3 stipulates that “The Reliability Coordinator, Transmission Operator, and Balancing Authority shall retain evidence of Requirement R1 and R3, Measure M1 and M2 for the most recent 3 calendar months.” We believe M2 should be M3. b. The second bullet: “The Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall retain evidence of Requirement R1, Measure M1 for the most recent 3 calendar months.” We believe R1 and M1 should read R2 and M2 since DP is only responsible for meeting R2. c. Section 2 “Violation Severity Levels” : R# R2 Severe includes the Balancing Authority as one of the listed entities; however this is inconsistent with R2 / M2 which do not include the Balancing Authority. To be consistent with R2 / M2, the Balancing Authority should be removed from VSL R# R2. While these can be regarded as typos, and do not contribute to a show-stopper vote for some, we urge the SDT and the Standards Committee to pay closer attention to the accuracy of all elements in the standard.</p> <p>3. IRO-001-3: o Section 1.3 Data Retention (second bullet) states: ♣ The Operator, Balancing Authority, Generator Operator, or Distribution Provider shall retain for Requirements R2 and R3, Measures M2 and M3 shall retain voice recordings for the most recent 90 calendar days or documentation for the most recent 12 calendar months. • The statement above appears to be missing “Transmission” before the word Operator. • The statement above repeats “shall retain” and the highlighted instance is not required. • The statement above states “or” Distribution provider, implying that one entity needs to retain evidence. Starting the sentence with “Each” rather than “The” and replacing “or” with “and” may provide clarity. The same would apply to the introduction sentence prior to the bullets. COM-002-3 section D. Compliance 1.3 Data Retention provides an example of the suggested format. ♣ Here is an example of the revised sentence: “Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall retain voice recordings for the most recent 90 calendar days or documentation for the most recent 12 calendar months, for Requirements R2 and R3, Measures M2 and M3”.</p>
Group
Detroit Edison
Kent Kujala
Defining Interpersonal Communication as “Any medium that allows two or more individuals to interact, consult, or exchange information” will also include all Alternative Interpersonal Communications since “Any medium” is all inclusive. Consider replacing the definition of Interpersonal

Communication with the following: Primary Interpersonal Communication: The normal communication medium that two or more individuals use to interact, consult, or exchange information relating to day-to-day operations. Consider replacing the definition of Alternative Interpersonal Communication with the following: Alternative Interpersonal Communication: Any communication medium that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as the designated Primary Interpersonal Communication. R1, R3, R5, R7, R8 should require entities to designate Primary Interpersonal Communication. R10 and R11 should address failures to designated Primary and Alternate Interpersonal Communication. R9 in all VSL levels the phrase "failed to initiate action to repair" or designate a replacement is subject to interpretation. Does "initiate action" include notification to the proper party to investigate and repair or does it require repairs to begin within specified times as listed in severity levels?

Individual

Steve Alexanderson P.E.

Central Lincoln

Prior Central Lincoln Comment 1) The new requirement presents us with a paradoxical situation. The communication has failed, so we must consult; yet consultation requires communication. We note that the SDT used the word "any", implying that multiple communication paths are required. The reality of the situation at Central Lincoln, due to our remote location, is that a single back hoe incident at the right location can take out all of our of our communication capability (including the terrestrial portion of the cellular networks) with our BA/TO; making this requirement impossible to meet for this circumstance using our present capabilities. Prior RCSDT Response 1) The RCSDT appreciates your comment and has made clarifying changes by removing the phrase "any of" in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. Furthermore, R11 addresses the direction given in Order 693 that DP and GOP entities do not necessarily need to have Alternative Interpersonal Communication capability. The requirement allows flexibility in "consult with" by not naming the method. If all communications are out, then the DP or GOP may have to meet the requirement by an in-person consultation. New Central Lincoln Response 1) Thank you for the changes made. We realize that in-person consultation is an option, but find it not too hard to imagine the same event that disrupts communications might also block roads. We don't believe entities should be found non-compliant and sanctioned for events beyond their control. Prior Central Lincoln Comment 2) We also note that no time limit was indicated. Most interruptions are brief, and fixed before consultation could reasonably take place. CEAs will be finding entities non-compliant for quickly fixing problems at their end without first consulting to ensure the restoration time was agreeable. To avoid non-compliance, entities will be forced to delay repairs while they investigate alternative communication paths for consultation purposes. We fail to see how such an outcome improves reliability. Prior RCSDT Response 2) The DP and GOP are only required to have Interpersonal Communication capability. If the DP or GOP restores its Interpersonal Communication capability before it could reasonably contact the affected entity by another method, there is no failure to comply. The DP or GOP could then consult with the affected entity to determine a mutually agreeable action. In this case, the RCSDT believes the "action" would then be the entities acknowledging the failure and the repair; therefore, no mutually agreeable action is needed. The RCSDT recognizes there is no way to account for all the various circumstances in a failure. To comply, the DP and GOP are still required to consult the entity which the failure affected regardless of whether the Interpersonal Communication capability was restored or is still failed. No change made. New Central Lincoln Response 2) If consultation after restoration is acceptable, we suggest that this be made clear in the requirement. Presently it is not at all clear, and there is no accompanying guidance document to suggest so. We also remain unclear what reliability benefit would result from such a consultation following restoration. While accounting for all the various failures might be impossible, we would like to see a few of the more common ones discussed in a guidance document. Prior Central Lincoln Comment 3) The new requirement is one sided, requiring the DP and GOP to consult with no corresponding requirement for the TO or BA to have personnel available for such a consultation. Consultation failure or failure to mutually agree due to actions or inactions on the part of the TO or BA should not result in an enforcement action against the DP or GOP, yet that is how the requirement is written. Prior RCSDT Response 3) The RCSDT notes that once

the failure has been detected, the responsible entity must make the consultation with the BA or TOP; that relieves the compliance burden. While the RCSDT understands your concern about single points of failure, the question becomes should this relieve the DP or GOP of the requirement for having Interpersonal Communication capabilities. No change made. New Central Lincoln Response 3) The requirement remains one-sided. If a consultation effort fails due to actions or inactions taken by the BA/TO, the DP or GOP is the only entity that can be found non-compliant. Prior Central Lincoln Comment 4) The new requirement fails to add any "clarity" to the other requirements, and we don't see that the stakeholders thought there was a problem with DP/GOP obligation clarity. Instead, it adds new obligations with no justification for how they enhance reliability. We suggest removing the requirement. Prior RCSDT Response 4) Based on the RCSDT's understanding of the comments received on the previous posting, the industry desired additional clarity on specifically what communication capabilities the DP and GOP were required to have. There was confusion that the standard did not specifically say that the DP and GOP were required to have Alternative Interpersonal Communication capabilities. R11 clarifies that a DP and GOP are not required to have Alternative Interpersonal Communication capability if the DP or GOP consult with their TOP or BA, whichever is applicable in the given situation, and they mutually agree that the restoration action does not adversely impact the reliability of the BES. No change made. New Central Lincoln Response 4) We disagree that R11 clarifies anything regarding Alternative Interpersonal Communication capabilities; the requirement says nothing on the matter. If other requirements remain unclear, we suggest they be clarified within those requirements. We ask that R11 be removed. Alternatively we suggest that a plan for communication failure be developed by the affected entities prior to a failure, applicable to both the BA/TO and DP/GOP. Prior Central Lincoln Comment 5) As stated in our prior comments, we continue to have problems with COM-002, R2 and R3 as written. The SDT's answer ("It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive") addresses our concern perfectly, and we would agree with such an expectation. Unfortunately, the expressed expectation is not in the proposed standard or even in a proposed guideline for the standard. Prior RCSDT Response 5) The RCSDT believes this is a process or procedure question that should be determined by the entity in how it handles communication with the RC. The standard, as written does, not preclude the entity from having a procedure. No change made. New Central Lincoln Response 5) We agree that this is a procedure issue, but disagree that the procedure lies with the entity receiving the Reliability Directive. The SDT's words inside the quotation marks above state it is the issuer of the Directive that should request a return call. Procedures like this, in order to ensure the Directive gets to the party who understands it and can take the needed action, are the responsibility of the issuer. If reliability is at risk, it is little to ask that issuers of Reliability Directives be required to attempt to reach the proper party prior to identifying, delivering the directive, and asking for repetition.

Group

SPP Standards Review Group

Robert Rhodes

Yes

Yes

Yes

There are a couple of cut & paste errors in the VSLs for R3 and R5. In R3, Reliability Coordinator in the High and Severe VSLs should be replaced with Transmission Operator. In R5, Reliability Coordinator in the High and Severe VSLs should be replaced with Balancing Authority.

Individual

Andrew Z. Pusztai

American Transmission Company

Yes

Yes

Yes
Individual
Daniel Duff
Liberty Electric Power
Yes
Yes
Yes
R11 remains an issue even with the revision. The purpose of R11 should be to inform the BA and TO of a loss of interpersonal communications capability so that the BA or TO can react effectively to grid conditions in an emergency. The methods of repair for generator telephone and data lines are properly the business decisions of the generator, and there is no benefit to the reliability of the BES if a standard requires a generator to attempt to gain consensus from the BA and TO on his repair actions. Taking the time to discuss a "mutually agreed action" will delay the start of repairs, and lengthen the time of a communications outage as generators first must discuss the issue with the BA and TO instead of initiating the action on their own and informing those entities of the failure. Further, failure to follow a mutually agreed action plan could become a topic of exploration for audit staff. As telecommunications repairs are generally not in the scope of expertise of electrical generators, this places the entities at the mercy of contractor repair schedules, making following any mutually agreed action problematic. Further, there is no duration trigger on R11, as opposed to the RC/TO/BA requirement in R10. This forces the generator to inform the listed entities even of losses of capability which last a handful of seconds. If a small generator has a single line into the control room, and the control room operator is on the phone to the TOP, does he then have to inform the TO and BA at the end of the call that they would have received a busy signal? If the operator knocks the phone from the cradle, is the requirement to inform triggered? In a strict reading of the language, it would be. Suggested rewrite of R11: " Upon discovery of an unresolved loss of interpersonal communications which has the potential to last more than 15 minutes, the GOP shall inform the entities listed in R8 of the status of interpersonal communications. The GOP shall initiate the process to restore the interpersonal communications, and inform the entities listed in R8 of the restoration of communications when repairs are complete. "
Group
MRO NSRF
WILL SMITH
Yes
Yes
Yes
: The NSRF understands the importance of Interpersonal Communications and Alternate Interpersonal Communications and always having the ability to communicate with others. The NSRF questions why per R9 (and similar time requirement per R10) that when testing the Alternate Interpersonal Communications is unsuccessful, why there is a two hour time limit to initiate an action, repair, or designate a replacement. Project 2012-08.1 defines "Reliable Operation" means operating the Elements of the Bulk Power System within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or Cascading failures of such system will not occur as a result of a sudden disturbance, including a Cyber Security Incident, or unanticipated failure of system Elements. The loss of an Alternate Interpersonal Communication will not

immediately impact the Reliable Operations of the BPS. Recommend that this not be contained within the Standard as entity's will view this as a Good Utility Practice. R10 The NSRF recommends that "applicable" be inserted between "...notify entities..." . This will assure that RC's will inform per R1, TOP's will inform per R3 and BA's will inform per R5. This will assure that an interpretation is not require as in Interpretation 2010-INT-01, TOP-006.

Group

Northeast Power Coordinating Council

Guy Zito

Yes

No

If 3.5 and 4.3 were made to read: "Each connected adjacent Transmission Operator." then 3.6 and 4.4 (not 3.4 as indicated in the question) would not be required. If 3.6 and 4.4 are to be kept, then the wording of 3.6 and 4.4 should be made to read: "Each adjacent Transmission Operator asynchronously connected through a DC tie." Systems cannot be asynchronously connected.

Yes

Group

LG&E and KU Services

Brent.Ingebrigtsen

Regarding COM-001-2 and proposed definitions, LG&E and KU Services recommends changing the terms being defined from "Interpersonal Communications" and "Alternative Interpersonal Communication" to "Means for Interpersonal Communication" and "Alternative Means for Interpersonal Communication." A communication is an exchange of information, not a medium. The medium is simply the means. LG&E and KU Services Company further recommend that each requirement be rewritten with these new defined terms as appropriate and that the word "capabilities" currently following the defined terms be removed from each of the requirements. We suggest the definition for "Means for Interpersonal Communication" be: "A medium utilizing electromagnetic energy that allows two or more individuals to interact, consult or exchange information." We suggest the definition for "Alternative Means for Interpersonal Communication" be: "Any Means for Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Means for Interpersonal Communications used for day-to-day operation." Regarding R1 through R10, , it is unclear what "shall have Interpersonal Communications capability" means. That could mean that the responsible entity simply has to have an IC capability that is different from our designated AIC capability (as R1 through R8 suggest). That could also mean, differently, that the responsible entity has to designate an IC capability (as R10 suggests). It is also unclear whether the IC capability can change, e.g. from email to land line. There is nothing in the Standard that makes this clear. Regarding R11, as written it is unclear who would be responsible for non-compliance if the consulting entities did not "determine a mutually agreeable action for the restoration of its Interpersonal Communication capability."

Individual

Chris Mattson

Tacoma Power

Yes

Yes

This seems excessive. It should be sufficient to say "each adjacent TOP" regardless of whether they are connected synchronously or via a DC tie.

Yes

R9 – The Standard requires that when there is a failure to a primary or alternate communication system that action is initiated within 2 hours of the communication failure. It is not clear what the term “action” means. Tacoma requests clarification for what “actions” are intended by the standard. R10 – Interpersonal Communication is defined as “any medium that allows two or more individuals to interact, consult, or exchange information”. As it is written, R10 requires an entity to contact another entity “within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer”. This contact may not be possible in a situation where there is “a failure of Interpersonal Communication capability”. R11 - The lack of a time line in R11 seems inconsistent with the time line requirements in R9 and R10. If there is a communication failure affecting the GO and DP then the standard only requires that they agree on an action to restore communication but does not assign a timeline.
Group
Colorado Springs Utilities
Jennifer Eckels
No
Adjacent is still an ambiguous term. Does the SDT mean to refer to entities which share an interface/tie-line; entities which have geographically abutting service territories or Areas; entities within the same geographical region but not necessarily “touching”; etc.? Is this the same as or different from “neighboring,” and what is the meaning of that term? Perhaps this term deserves a glossary entry.
No
See previous comment on “adjacent”.
No
See the comment on “evidence” included in the comment section of question 4.
CSU appreciates the work the SDT has put into this standard, along with the others in this project and the opportunity to comment. We agree with the goal to encourage consistent communications and availability of robust & redundant communication paths. CSU appreciates that the SDT appears to have tried to write some flexibility into this standard. As written, however, this draft of COM-001-2 in its entirety seems to us unwieldy and unmanageable. It appears each entity may choose its own ‘primary’ and Alternate “Interpersonal Communication” capabilities. Entity A may select email as its ‘primary’ capability, while Entity B might not select that among either ‘primary’ or “Alternate,” and may not pay any attention on the real-time desk to email (only the designated “Alternate” requires testing). Also, DOs & GOs are not expected to maintain a backup (“Alternate”) communications capability. It is unclear how those entities can then comply with R11 if their one and only interpersonal communication capability has failed. Sufficient evidence includes “physical assets.” Does that mean we can point to the phone on the desk and the email program on the desktop PC and we’re compliant? Are photographs of physical assets sufficient evidence to submit for the pre-audit questionnaire? There is no requirement for the communications capabilities to be either diverse or redundant. If both our capabilities, in the end, rely on the POTS/PSTN system, is that acceptable?
Individual
Patrick Brown
Essential Power, LLC
It is unclear what we are trying to accomplish in R11. If the intent is to coordinate the restoration of communications, then there should be an additional requirement that the GOP have a Communications Recovery Plan, and R11 should focus on the coordination and implementation of that Plan. If the intent is to maintain continuous communications, then there should be an additional requirement for the GOP to maintain an Alternative Interpersonal Communications capability, and R11 should focus on the coordination and implementation of that capability.
Individual
Maggy Powell



Exelon Corporation and its affiliates
The definition of Interpersonal Communication requires further clarification. The use of the term "Any medium" opens the definition up to broad interpretation. It's not clear whether the definition means to apply to the point of communication owned, managed, and operated by the entity, or the total communications pathway? For example if entity A's phone system is working fine, but Entity B is experiencing trouble, does Entity A have a compliance concern if Entity B experiences a communication breakdown on their end of the medium? Please provide greater insight on the intended compliance obligation and consider the following revision to the definition: Interpersonal Communication: Any medium, owned, managed, or operated by the applicable entity, that allows two or more individuals to interact, consult, or exchange information. R9 provides ambiguous instruction for the resolution process surrounding tests and failures of Alternative Interpersonal Communication capability. Please confirm whether the intent of the requirement is to initiate repairs within two hours, or to effect repairs within two hours, with the alternate option being to designate a replacement Alternative Interpersonal Communication if repairs cannot be completed within two hours. R10 has similar ambiguity, referencing a 60 minute notification timeframe requirement upon the detection of a failure lasting 30 minutes or longer. Please confirm the intended start of the requirement notification. Does the clock for notification begins at the point of failure, at the point of discovery, or at the point that the failure is discovered to have been effective for 30 minutes or greater? Thank you for the opportunity to comment.
Individual
Jay Campbell
NV Energy
No
If "Adjacent", a capitalized word, must be in the Definitions section merely because it's capitalized, what about "Each"? Other sentences have capitalized words, such as "If", "Its" and "All". If "Adjacent" is in the Definitions merely because it's capitalized, please also add "If", "Its" and "All".
No
What difference does a synchronous or asynchronous connection make? Do not both have a reliability impact on the two entities on either side? Since there is a reliability impact, regardless of connection type, a separate Requirement is superfluous.
Yes
Individual
Darryl Curtis
Oncor Electric Delivery Company LLC
Yes
Yes
Yes
Oncor takes the position that the premise of R3 does not provide a reliability enhancement but may in effect; increase the risk to reliability by placing notification requirements on the Transmission Operator that could best be managed by the Reliability Coordinator. In fact, Oncor takes the position that as a Transmission Operator, it is being placed into the position of having to continually validate the registration status of every entity that may be registered as a Distribution Provider, Transmission Operator, and Generator Operator within its Transmission Operator Area. Oncor takes the position that since each of these entities are in the applicability section of the standard, the Distribution Provider, Transmission Operator, and Generator Operator should be responsible for seeking

Interpersonal Communication capability with the Transmission Operator and the Transmission Operator should then reciprocate Interpersonal Communication capability in response to their initial request. This eliminates an unnecessary compliance obligation of the Transmission Operator to manage "who is" and "who is not" registered as a Generator Operator, Distribution Provider or Transmission Operator. Oncor recommends the following change to the standard language Remove 3.3 & 3.4 because R7 and R8 already cover the GO and DP seeking Interpersonal Communication capability with the Transmission Operator. Oncor also takes the position that the Reliability Coordinator (RC) is in the best position and not the Transmission Operator to make extensive notifications on a broad basis in the event of a failure of its Interpersonal Communication. In accordance with that position, the Transmission Operator should make a single notification to the RC, and the RC would then make the notification to all impacted entities in the event of the failure of the Transmission Operator's Interpersonal Communication. Oncor proposes the following language for R10 "R10. Each Transmission Operator shall notify the Reliability Coordinator and the Balancing Authority within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer. After notification by any Transmission Operator, the Reliability Coordinator shall immediately notify entities as identified in Requirements R1, R3, and R5 of any Transmission Operator's detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer Each Reliability Coordinator and Balancing Authority shall notify entities as identified in Requirements R1, R3, and R5 within 60 minutes of the detection of a failure of its own Interpersonal Communication capability that lasts 30 minutes or longer."

Individual  
 Greg Travis  
 Idaho Power Company  
 Yes  
 Yes  
 Yes

Individual  
 Marie Knox  
 MISO  
 No  
 While MISO disagrees with the modifications to COM-001-1 proposed in COM-001-2 generally, it does not disagree with the clarity provided in the proposed addition of "Each" in front of "Adjacent".  
 No  
 While MISO disagrees with the modifications to COM-001-1 proposed in COM-001-2 generally, it does not disagree with the proposed removal of "within the same interconnection" .  
 No

While MISO appreciates the SDT's modifications to Measure M10 since the last draft, the Measure remains ambiguous as to which parties should be contacted when an entity experiences a failure of its Interpersonal Communication capability that lasts 30 minutes or longer. MISO respectfully submits the following changes for Measure 10: "Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it notified the entities as identified in Requirements R1, R3, and R5, as applicable, within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasted 30 minutes or longer. Evidence could include, but is not limited to dated and time-stamped: test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R10.)"

MISO respectfully submits that the subject matter of COM-001-1 is better addressed through an official NERC certification – that is, by having NERC certify that a registered entity has the appropriate communications facilities – than through a formal Reliability Standard. Furthermore, the Reliability Standards surrounding communications should be performance based and specifically targeted toward testing, maintenance, and implementation of corrective actions when an issue arises or is

otherwise detected. As a result of narrowing the focus of these standards, enforcement would then be tailored toward a Registered Entity's failure to take such actions when necessary, a direct benefit and correlation to enhancement of the reliability of the BES. Under the currently proposed approach, the lack of a communication medium or a finding that a communication medium is "inadequate" or does not otherwise qualify under the standard would result in a non-compliance. Finally, MISO respectfully submits that: • Distribution Providers (DPs) and Generator Operators (GOPs) should have alternate communication media as well. • If an alternate communication tool is tested once a month, there is no need to address deficiencies within two hours; six hours is sufficient in such instances. • The standard should acknowledge that if more than two independent communication mechanisms are available, the VRF/VSL associated with missing a timing requirement is minimal. The SDT should require reporting times of failed mediums for GOP and DP similar to that for RC/BA/TOP.

Individual

Scott Berry

Indiana Municipal Power Agency

IMPA does not like the wording in R11 that states "mutually agreeable action for the restoration of its Interpersonal Communication capability." IMPA sees that entities will have to prove that the action taken by entities was "mutually agreeable" to the parties involved which will be very problematic. IMP believes as long as the entities who owns the equipment is taking steps to get it back into service that is all that should be required by any requirement of this standard.

Group

ACES Power Marketing Standards Collaborators

Jason Marshall

Yes

Yes

No

We continue to believe that use of "physical assets" instead of "demonstration of physical assets" is problematic. Auditors must be able to take evidence with them and they could not take the physical assets. They could, however, take notes they record from demonstration of the physical assets with them. While we understand that the auditors will understand they can't take the "physical assets", it does not change the fact that the listing "physical assets" as evidence is technically not correct.

(1) The definition of Alternative Interpersonal Communication needs further refinement. As it is written, the primary Interpersonal Communication that is used to satisfy R1, R3, and R5 is also an Alternative Interpersonal Communication. This primary Interpersonal Communication established in R1, R3, and R5 meet all of the requirements of Alternative Interpersonal Communication. It is a Interpersonal Communication and it is capable of replacing the Interpersonal Communication used as the Alternative Interpersonal Communication (which by definition is an Interpersonal Communication) in R2, R4, and R6. Thus, each Interpersonal Communication used in R1, R3, and R5 really are an Interpersonal Communication and Alternative Interpersonal Communication. One solution may be to add a third definition: Primary Interpersonal Communication. It would essentially be an Interpersonal Communication that is designated as primary or the normal communication system. Then Alternative Interpersonal Communication would be defined based on the ability of the Interpersonal Communication to substitute for the Primary. R1, R3, and R5 would need to be changed to refer to the Primary Interpersonal Communication. Another option might be to simply stick with the two existing definitions and use "primary" in R1, R3, and R5. Regardless of the option selected, "another" needs to be added before the second use of Interpersonal Communication for absolute clarity. (2) We appreciate that the drafting team added another VSL for requirements R1 through R8, however, we believe additional levels should be populated. For example, if a Transmission Operator or Balancing Authority failed to have Interpersonal Communications capability with a Distribution Provider but had Interpersonal Communications capability with all other required entities, it has met the vast majority

of the requirement. Since VSLs are a measure of how much the requirement was missed by the responsible entity, a Lower VSL seems most appropriate for failing to have Interpersonal Communication capability with a DP. (3) It seems odd to change the effective date language from what NERC has consistently used throughout the standards. "Following" was replaced with "beyond the date this standard is approved". For consistency with the rest of NERC standards, we recommend changing it back to the original language. (4) We appreciate the changes to R1, R3, R5, R7 and R8 that attempt to clarify that a failure of the primary Interpersonal Communication capability is not a violation of these requirements. However, we believe these requirements will never be approved by the Commission. As they are written, they literally say that R1, R3, R5, R7, and R8 apply when the responsible entity has Interpersonal Communication capability and they don't apply when you don't have the capability but rather other requirements apply. This means R1, R3, R5, R7 and R8 could never be violated which begs the question why are they even needed. Because Commission approval is unlikely for these requirements, we continue to believe the best solution is to focus the requirements on having a communication medium rather than capability. If "capability" were struck from all of the requirements, the requirements would then focus on a communication medium as defined in Interpersonal Communication and Alternative Interpersonal Communication. This solution would still keep the requirements technology neutral since a medium could be any communication system or device and actually provide more flexibility in the requirements. Because the requirements would focus on having a medium in place rather than a capability, failure of the medium would not automatically translate into a violation which means the problematic "unless [responsible entity] experiences a failure of its Interpersonal Communication capability ..." language could be dropped. Dropping this language would improve the likelihood that the Commission would approve the standard. (5) The VRF for R7 should be Medium. Failure for the DP to have Interpersonal Communication with its BA or TOP does not meet the basic requirement of a High VRF. A High VRF requires that violation of the requirement would "directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures." We cannot fathom any situation where failure of a BA and TOP being able to communicate would directly lead to or cause instability, separation, or cascading. It could, however, lead to the inability to know the electrical state of part of the transmission system. This fits the Medium VRF definition. Furthermore, the fact that R4 and R6 do not include DP in the list of functional entities for a TOP and BA to have Alternative Interpersonal Communication further supports a Medium VRF. (6) In Measure M11, we believe entity affected should be replaced with its TOP and BA. This makes the measure clearer and easier to read without the need to refer back to the requirement. (7) We disagree with the data retention period. Because voice recordings are mentioned in the measures as one type of evidence for demonstrating compliance to the requirements, the data retention period should not exceed 90 days. Many companies do not store voice recordings longer than this. To compel a responsible entity to store voice recordings for longer should be justified. We do not see this justification. (8) We continue to believe that the DP should not be included in this standard. However, we recognize that the drafting team is attempting to address a FERC directive. An equally efficient and effective alternative would be to leave the responsibility to the BA and TOP. Parts 3.3 and 5.3 require the TOP and BA respectively to have Interpersonal Communication capability with the DP. This will be required whether the standard applies to DP or not based on the Commission directive because the Commission expressed concern about the BA and TOP having communications with the DP during an emergency such as a blackstart event. Because DPs will have to follow directives from the RC, TOP, and BA per IRO-001-3, it is in the best interest of the DP to cooperate with assisting the BA and TOP in establishing this capability. Thus, Parts 3.3 and 5.3 could be relied on exclusively for establishing this Interpersonal Communication Capability without adding unnecessary additional compliance burden on the DP that does not support reliability.

Individual

Kathleen Goodman

ISO New England Inc

No

The ISO-NE continues to believe that these a certification types of requirements and that they do not belong in a standard.

No

The ISO-NE continues to believe that these a certification types of requirements and that they do not

belong in a standard.

The ISO-NE continues to believe that these a certification types of requirements and that they do not belong in a standard. ISO-NE believes that the requirement to have a medium to communicate should be required to be certified. When you are operating as a registered entity, the requirements should be performance based such as taking corrective actions and if you fail to communicate for any reason you will be found non-compliance. The lack of a communication medium should not be a defense for non compliance of the performance based standards. The SDT should require reporting times of failed mediums for GOP and DP similar to that for RC/BA/TOP.

Group

ISO/RTO Standards Review Committee

Gregory Campoli

The IRC continues to believe that these a certification types of requirements and that they do not belong in a standard. The SRC believes that the requirement to have a medium to communicate should be required to be certified. When you are operating as a registered entity, the requirements should be performance based such as taking corrective actions and if you fail to communicate for any reason you will be found non-compliance. The lack of a communication medium should not be a defense for non compliance of the performance based standards. The SDT should require reporting times of failed mediums for GOP and DP similar to that for RC/BA/TOP.

# Consideration of Comments

## Project 2006-06 Reliability Coordination

The Reliability Coordination Standard Drafting Team (RCSDT) thanks all commenters who submitted comments on the successive posting of the COM-01-2 reliability standard for Project 2006-06—Reliability Coordination. These standards were posted for a 30-day public comment period from June 7, 2012 through July 6, 2012. Stakeholders were asked to provide feedback on the standards and associated documents through a special electronic comment form. There were 41 sets of comments, including comments from approximately 136 different people from approximately 90 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

### Summary Consideration

The RCSDT received comments from stakeholders, where a majority of those comments were focused on compliance elements of the standards, various typographical errors, and other minor ambiguities. The RCSDT believes it has been responsive to the many comments and has either provided adequate explanation, where applicable, as well as incorporating the suggested clarifications or corrections. There was one minority issue raised by several commenters which the RCSDT addressed, but did not make a revision to the standard. These commenters suggested adding a time threshold to Requirement R11 that would trigger the Distribution Provider and Generation Operator to consult with its Balancing Authority and Transmission Operator after losing its Interpersonal Communication capability for a defined period. The RCSDT believed this would be unnecessarily prescriptive and notes that each entity along with its affected neighbors, should, by procedures, identify what constitutes the detection of a failure of its capability and the acceptable time threshold for restoration. Revisions made to the standards are summarized in the following sections by standard.

### COM-001-2

In the last posting and successive ballot, the standard received approval from 72.16% of the ballot body and fewer overall comments from previous postings. The RCSDT made minor, non-substantive changes to the standard based on these comments. The RCSDT believes it has addressed stakeholder comments and concerns in such a way that the standard is improved and meets the expectations expressed in comments for reliability and industry approval. Now that the standard has achieved industry consensus, this standard will advance to a recirculation ballot.

*Purpose:* No change.

*Effective Date:* No change.

**Requirements:** Changes were minor. The RCSDT for Requirements R1, R3, R5, R7, R8, and R11 changed the term “experiences” in the phrase “experiences a failure” to “detects.” This more appropriately aligns with the performance expectation that an entity must detect a failure first which would start the threshold for performance. The change maintains the intent while adding clarity and measurability.

The RCSDT also notes a minor change in Requirement R5, Part 5.5 and Requirement R6, Part 6.3 concerning “adjacent.” The team, during the revisions of draft 6, inadvertently changed “Adjacent” to a lower case when making revisions to the two parts that began with capitalized term. Commenters regarding draft 5 were concerned that the capitalized term would imply a NERC Glossary term, such as, “Adjacent Reliability Coordinator,” and cause confusion since there was no such term. The RCSDT recognizes that the glossary term should have remained, in the case of Parts 5.5 and 6.3, “Adjacent Balancing Authority.”

One commenter argued that the Violation Risk Factor (VRF) for Requirement R7 should be Medium, not High. The RCSDT considered this argument and concluded the change had merit based on the risk a Distribution Provider has in the scope of communications. Furthermore, the RCSDT also considered the VRF with regard to the Generator Operator in Requirement R8, but concluded the VRF should remain High because the Generator Operator may have a role as a blackstart resource in a Reliability Coordinator’s restoration plan.

Other commenters raised a concern that the relationship in Requirement R10 between the functions and the requirements listed were not clear. The suggested solution was to use the phrase, “as applicable”; however, the RCSDT opted to use the term “respectively” to more appropriately make the distinction between the functions and the listed requirements (i.e., the Reliability Coordinator (R1), Transmission Operator (R3), and Balancing Authority (R5)). This change was also applied to Measure M11.

**Measures:** One commenter recognized an error in Measure M3. The conjunction between asynchronously and synchronously should have been “or,” not “and” to accurately reflect the situation in Requirement R3, Parts 3.5 and 3.6. The extra word “that” was removed from Measure M7, as it was a typographical error. Measure M10 was updated to include the word “respectively” to coincide with the revision to Requirement R10. The Measure M11 was revised to reflect the changes in Requirement R11 to change the word “experiences” to “detects.” Last, the colon in Measures M9, M10, and M11 was moved to the appropriate location in each sentence.

**Compliance, Compliance Enforcement Authority:** No change.

**Compliance, Data Retention:** A commenter raised the question about the Measures allowing voice recordings, but requiring an entity to maintain this evidence for 12 calendar months. Standard drafting guidelines recommend that voice recordings be retained for 90 calendar days. The RCSDT agreed that 90 calendar days is the recommended practice and modified each of the data retention bulleted items to reflect the specific case of voice recordings.

**Violation Severity Levels:** Several of the Violation Severity Levels (VSL) required updating to account for the term changes in the requirements and the correction of certain typographical errors. For the word change from “experiences” to “detects,” the following VSLs were revised; R1, R3, R5, R7, R8, and R11. The Requirement R3 VSL had the “Reliability Coordinator” listed where it should have been the “Transmission Operator.” Likewise, the same error appeared in the Requirement R5 VSL where “Reliability Coordinator” should have been “Balancing Authority.” A commenter discovered a minor conjunction error in the Requirement R9 VSL in the listing of functional entities. The conjunction was changed from “and” to “or” to accurately reflect the construction of the VSLs. The same issue was revealed in the Requirement R10 VSL and was corrected, as well as removing the additional “identified” that was not needed.

### Additional Information

All comments submitted may be reviewed in their original format on the standard’s project page:

[http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Mark Lauby, at 404-446-2560 or at [mark.lauby@nerc.net](mailto:mark.lauby@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

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<sup>1</sup> The appeals process is in the Standard Processes Manual: [http://www.nerc.com/files/Appendix\\_3A\\_StandardsProcessesManual\\_20120131.pdf](http://www.nerc.com/files/Appendix_3A_StandardsProcessesManual_20120131.pdf)



**Index to Questions, Comments, and Responses**

1. The RCSDT has revised the parts of Requirements R1, R2, R3, R4, R5, and R6 of COM-001-2 that began only with “Adjacent...” to begin with “Each adjacent...” to avoid the appearance of creating a defined glossary phrase. Do you agree with the changes? If not, please explain in the comment area below. ....15

2. The RCSDT has revised parts of two requirements (Parts 3.5 and 4.3) in COM-001-2 and added two additional parts (Parts 3.6 and 3.4) to address concerns about the phrase “synchronously connected within the same Interconnection.” Do you agree these changes address concerns where entities might only be adjacent across an Interconnection for where connected by a Direct Current (DC) tie? If not, please explain in the comment area below. ....20

3. The RCSDT made minor changes and reformatted the evidence examples in the Measures of COM-001-2 for greater clarity. Do you agree with these revisions? If not, please explain in the comment area below. ....26

4. Do you have any other comments on COM-001-2, not expressed in questions above, for the RCSDT? ....30

**The Industry Segments are:**

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment										
				1	2	3	4	5	6	7	8	9	10	
1.	Group	Sam Ciccone	FirstEnergy	X		X	X	X	X					
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	L. Raczkowski	FE	RFC											
2.	D. Hohbaugh	FE	RFC											

Group/Individual		Commenter	Organization	Registered Ballot Body Segment										
				1	2	3	4	5	6	7	8	9	10	
2.	Group	Gerald Beckerle	SERC OC Standards Review Group	X		X								
Additional Member		Additional Organization	Region	Segment Selection										
1.	Joe Riels	SMEPA	SERC	1, 3, 4, 5										
2.	Jake Miller	Dynegy	SERC	5										
3.	Stuart Goza	TVA	SERC	1, 3, 5, 6										
4.	Jim Case	Entergy	SERC	1, 3, 6										
5.	Larry Rodriguez	Entegra	SERC	6										
6.	Tim Hattaway	PowerSouth	SERC	1, 5										
7.	William Berry	OMU	SERC	3, 5										
8.	Raleigh Nobles	GA. System Operations	SERC	3										
9.	Tom Hanzlik	SCE&G	SERC	1, 3, 5, 6										
10.	Bill Thigpen	PowerSouth	SERC	1, 5										
11.	Marie Knox	MISO	SERC	2										
12.	J.T. Wood	Southern	SERC	1, 5										
13.	Joel Wise	TVA	SERC	5, 6, 1, 3										
14.	Wayne Van Liere	LGE-KU	SERC	3										
15.	Mike Hardy	Southern	SERC	1, 5										

Group/Individual	Commenter	Organization	Registered Ballot Body Segment											
			1	2	3	4	5	6	7	8	9	10		
16. Andy Burch	Electric Energy, Inc.	SERC 5												
17. Scott Brame	NCEMC	SERC 1, 3, 4, 5												
18. John Troha	SERC Reliability Corporation	SERC 10												
3. Group	Chris Higgins	Bonneville Power Administration	X		X		X	X						
<b>Additional Member Additional Organization Region Segment Selection</b>														
1. Huy	Ngo	WECC 1												
2. Chris	Sanford	WECC 1												
3. Paul	Blake	WECC 1												
4. Group	Brenda Hampton	Luminant							X					
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	Mike Laney	Luminant Generation Company LLC	ERCOT	5										
5. Group	Steve Rueckert	Western Electricity Coordinating Council												X
No additional members listed.														
6. Group	Connie Lowe	Dominion	X		X		X	X						
<b>Additional Member Additional Organization Region Segment Selection</b>														
1. Mike Garton		MRO	5, 6											

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
			1	2	3	4	5	6	7	8	9	10								
2. Louis Slade		RFC	5, 6																	
3. Randi Heise		NPCC	5, 6																	
4. Michael Crowley		SERC	1, 3, 5, 6																	
7.	Group	Kent Kujala	Detroit Edison			X	X	X												
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1. Jeffrey DePriest		RFC	3, 4, 5																	
2. Alexander Eizans		RFC	3, 4, 5																	
3. Barbara Holland		NPCC																		
8.	Group	Robert Rhodes	SPP Standards Review Group		X															
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1. Michelle Corley	Cleco Power		SPP	1, 3, 5																
2. Bo Jones	Westar Energy		SPP	1, 3, 5, 6																
3. Allen Klassen	Westar Energy		SPP	1, 3, 5, 6																
4. Tiffany Lake	Westar Energy		SPP	1, 3, 5, 6																
5. Julie Lux	Westar Energy		SPP	1, 3, 5, 6																
6. Terri Pyle	Oklahoma Gas & Electric		SPP	1, 3, 5																
7. Sean Simpson	Board of Public Utilities of Kansas City, KS		SPP	NA																

Group/Individual		Commenter	Organization		Registered Ballot Body Segment									
					1	2	3	4	5	6	7	8	9	10
8. Bryan Taggart		Westar Energy	SPP	1, 3, 5, 6										
9.	Group	WILL SMITH	MRO NSRF		X	X	X	X	X	X				
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	MAHMOOD SAFI	OPPD	MRO	1, 3, 5, 6										
2.	CHUCK LAWRENCE	ATC	MRO	1										
3.	TOM WEBB	WPS	MRO	3, 4, 5, 6										
4.	JODI JENSON	WAPA	MRO	1, 6										
5.	KEN GOLDSMITH	ALTW	MRO	4										
6.	ALICE IRELAND	XCEL	MRO	1, 3, 5, 6										
7.	DAVE RUDOLPH	BEPC	MRO	1, 3, 5, 6										
8.	ERIC RUSKAMP	LES	MRO	1, 3, 5, 6										
9.	JOE DEPOORTER	MGE	MRO	3, 4, 5, 6										
10.	SCOTT NICKELS	RPU	MRO	4										
11.	TERRY HARBOUR	MEC	MRO	5, 6, 1, 3										
12.	MARIE KNOX	MISO	MRO	2										
13.	LEE KITTELSON	OTP	MRO	1, 3, 5, 6										
14.	SCOTT BOS	MPW	MRO	1, 3, 5, 6										

Group/Individual	Commenter	Organization	Registered Ballot Body Segment											
			1	2	3	4	5	6	7	8	9	10		
15. TONY EDDLEMAN	NPPD	MRO	1, 3, 5											
16. MIKE BRYTOWSKI	GRE	MRO	1, 3, 5, 6											
17. DAN INMAN	MPC	MRO	1, 3, 5, 6											
10. Group	Guy Zito	Northeast Power Coordinating Council												X
Additional Member	Additional Organization	Region	Segment Selection											
1. Alan Adamson	New York State Reliability Council, LLC	NPCC	10											
2. Carmen Agavriloi	Independent Electricity System Operator	NPCC	2											
3. Greg Campoli	New York Independent System Operator	NPCC	2											
4. Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1											
5. Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1											
6. Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10											
7. Mike Garton	Dominion Resources Services, Inc.	NPCC	5											
8. Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3											
9. Michael Jones	National Grid	NPCC	1											
10. David Kiguel	Hydro One Networks Inc.	NPCC	1											
11. Michael R. Lombardi	Northeast Utilities	NPCC	1											
12. Randy MacDonald	New Brunswick Power Transmission	NPCC	9											

Group/Individual	Commenter	Organization	Registered Ballot Body Segment											
			1	2	3	4	5	6	7	8	9	10		
13. Bruce Metruck	New York Power Authority	NPCC 6												
14. Silvia Parada Mitchell	NextEra Energy, LLC	NPCC 5												
15. Lee Pedowicz	Northeast Power Coordinating Council	NPCC 10												
16. Robert Pellegrini	The United Illuminating Company	NPCC 1												
17. Si-Truc Phan	Hydro-Quebec TransEnergie	NPCC 1												
18. David Ramkalawan	Ontario Power Generation, Inc.	NPCC 5												
19. Brian Robinson	Utility Services	NPCC 8												
20. Michael Schiavone	National Grid	NPCC 1												
21. Wayne Sipperly	New York Power Authority	NPCC 5												
22. Donald Weaver	New Brunswick System Operator	NPCC 2												
23. Ben Wu	Orange and Rockland Utilities	NPCC 1												
11. Group	Jennifer Eckels	Colorado Springs Utilities	X		X		X	X						
<b>Additional Member Additional Organization Region Segment Selection</b>														
1. Paul Morland		WECC 1												
2. Charles Morgan		WECC 3												
3. Lisa Rosintoski		WECC 6												
12. Group	Jason Marshall	ACES Power Marketing Standards						X						



Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
			Collaborators										
Additional Member		Additional Organization	Region	Segment Selection									
1.	Bill Hutchison	Southern Illinois Power Cooperative	SERC	1									
2.	Megan Wagner	Sunflower Electric Power Corporation	SPP	1									
3.	Mark Ringhausen	Old Dominion Electric Cooperative	RFC	3, 4									
4.	Shari Heino	Brazos Electric Power Cooperative, Inc.	ERCOT	1, 5									
13.	Group	Gregory Campoli	ISO/RTO Standards Review Committee			X							
Additional Member		Additional Organization	Region	Segment Selection									
1.	Stephanie Monzon	PJM	RFC	2									
2.	Ben Li	IESO	NPCC	2									
3.	Matt Goldberg	ISO-NE	NPCC	2									
4.	Gary DeShazo	CAISO	WECC	2									
5.	Steve Myers	ERCOT	ERCOT	2									
6.	Ken Gardner	AESO	WECC	2									
7.	Bill Phillips	MISO	RFC	2									
8.	Don Weaver	NBSO	NPCC	2									
9.	Charles Yeung	SPP	SPP	2									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment										
				1	2	3	4	5	6	7	8	9	10	
14.	Individual	Janet Smith, Regulatory Affairs Supervisor	Arizona Public Service Company	X		X		X	X					
15.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X					
16.	Individual	Brent.Ingebrigtsen	LG&E and KU Services	X		X		X	X					
17.	Individual	Alice Ireland	Xcel Energy	X		X		X	X					
18.	Individual	Thad Ness	American Electric Power	X		X		X	X					
19.	Individual	John Seelke	Public Service Enterprise Group	X		X		X	X					
20.	Individual	David Thorne	Pepco Holdings Inc	X		X								
21.	Individual	Karen Webb	City of Tallahassee (TAL)					X						
22.	Individual	Andrew Gallo	City of Austin dba Austin Energy	X		X	X	X	X					
23.	Individual	Kasia Mihalchuk	Manitoba Hydro	X		X		X	X					
24.	Individual	Steve Alexanderson P.E.	Central Lincoln			X	X						X	
25.	Individual	Michelle D'Antuono	Ingleside Cogeneration LP (Occidental Chemical in the ballot body)					X						
26.	Individual	Laura Lee	Duke Energy	X		X		X	X					
27.	Individual	Don Jones	Texas Reliability Entity											X

Group/Individual		Commenter	Organization	Registered Ballot Body Segment											
				1	2	3	4	5	6	7	8	9	10		
28.	Individual	John Brockhan	CenterPoint Energy Houston Electric, LLC	X											
29.	Individual	Michael Falvo	Independent Electricity System Operator		X										
30.	Individual	Steve Alexanderson P.E.	Central Lincoln			X	X						X		
31.	Individual	Andrew Z. Puztai	American Transmission Company	X											
32.	Individual	Daniel Duff	Liberty Electric Power					X							
33.	Individual	Chris Mattson	Tacoma Power	X		X	X	X	X						
34.	Individual	Patrick Brown	Essential Power, LLC					X							
35.	Individual	Maggy Powell	Exelon Corporation and its affiliates	X		X		X	X						
36.	Individual	Jay Campbell	NV Energy	X		X	X	X							
37.	Individual	Darryl Curtis	Oncor Electric Delivery Company LLC	X											
38.	Individual	Greg Travis	Idaho Power Company	X		X									
39.	Individual	Marie Knox	MISO		X										
40.	Individual	Scott Berry	Indiana Municipal Power Agency				X								
41.	Individual	Kathleen Goodman	ISO New England Inc		X										

1. The RCSDT has revised the parts of Requirements R1, R2, R3, R4, R5, and R6 of COM-001-2 that began only with “Adjacent...” to begin with “Each adjacent...” to avoid the appearance of creating a defined glossary phrase. Do you agree with the changes? If not, please explain in the comment area below.

**Summary Consideration:** Twenty-seven stakeholders completing the comment form support the changes by the RCSDT. Of those, there were two commenters not in support of the RCSDT’s change to the sentence structure from “Adjacent...” to “Each adjacent...” This change was made to eliminate the ambiguity that a glossary term was intended by the drafting team and to achieve greater clarity. Another comment concerned the meaning of “adjacent” in terms of geography. The RCSDT notes that due to asynchronous connection (DC tie), some entities may not be geographically adjacent, but electrically adjacent; therefore, adjacency for synchronously connected entities is applied in the typical manner for entities which are, as a rule, geographically adjacent. Additionally, one commenter questioned the revision in Draft 6, Requirement R5, Part 5.5 and Requirement R6, Part 6.3, when the RCSDT applied “Each” before “adjacent,” and by doing so inadvertently changed the glossary term “Adjacent Balancing Authority” to just “adjacent Balancing Authority” which is not a glossary term. The RCSDT notes that the spirit of the phrase “adjacent Balancing Authority” remains accurate and that this was a clerical error.

A single entity argued the requirements should be certification requirements, and not in a standard. The RCSDT directs the commenter to Section 500 of the NERC Rules of Procedure which address certification. The certification process is a program to identify entities that are applicable to and responsible for the reliability standards.

Organization	Yes or No	Question 1 Comment
Colorado Springs Utilities	No	Adjacent is still an ambiguous term. Does the SDT mean to refer to entities which share an interface/tie-line; entities which have geographically abutting service territories or Areas; entities within the same geographical region but not necessarily “touching”; etc.? Is this the same as or different from “neighboring,” and what is the meaning of that term? Perhaps this term deserves a glossary entry.
<b>Response:</b> The RCSDT believes this standard is not about geographical neighbors, it is about the effect of being electrical neighbors. No change made.		
NV Energy	No	If "Adjacent", a capitalized word, must be in the Definitions section merely

Organization	Yes or No	Question 1 Comment
		because it's capitalized, what about "Each"? Other sentences have capitalized words, such as "If", "Its" and "All". If "Adjacent" is in the Definitions merely because it's capitalized, please also add "If", "Its" and "All".
<p><b>Response:</b> The RCSDT modified the usage of “Adjacent” in draft 5 of COM-001-2 to eliminate the appearance of a defined term to achieve clarity within the requirements because it started the sentence. No change made.</p>		
MISO	No	While MISO disagrees with the modifications to COM-001-1 proposed in COM-001-2 generally, it does not disagree with the clarity provided in the proposed addition of “Each” in front of “Adjacent”.
<p><b>Response:</b> The RCSDT thanks you for your support of the modification to “Adjacent.” No change made.</p>		
ISO New England Inc	No	The ISO-NE continues to believe that these a certification types of requirements and that they do not belong in a standard.
<p><b>Response:</b> NERC maintains an Organization Certification Program, the goal of which is to ensure that organizations who apply to register or are registered to perform certain reliability functions deemed particularly crucial to the reliability of the bulk power system will meet or exceed certain minimum criteria (i.e., Reliability Standards) demonstrating they are capable of performing the tasks (i.e., Requirements) for these functions. The process for certification of organizations is included in the NERC Rules of Procedure, Section 500 and Appendix 5A. For example, the first paragraph of Section 500 – Organization Registration and Certification states: “The purpose of the Organization Registration Program is to clearly identify those entities that are responsible for compliance with the FERC approved reliability standards. Organizations that are registered are included on the NERC Compliance Registry (NCR) and are responsible for knowing the content of and for complying with all applicable reliability standards...” No change made.</p>		
PacifiCorp	No	
Ingleside Cogeneration LP (Occidental Chemical in the ballot	Yes	Ingleside Cogeneration LP agrees that the modification removes all doubt that a glossary definition is inferred. We support all clarifications of this

Organization	Yes or No	Question 1 Comment
body)		kind.
<b>Response:</b> The RCSDT thanks you for your comment.		
Texas Reliability Entity	Yes	“Adjacent Balancing Authority” is a defined term in the NERC Glossary, and use of the non-defined term “adjacent Balancing Authority” in this draft will cause confusion. Exactly what difference is intended by using the lower-case “a” instead of the defined term?
<b>Response:</b> The RCSDT agrees “adjacent Balancing Authority” should be “Adjacent Balancing Authority,” the defined NERC Glossary term. This change was made during the draft 6 process and a typo was made during editing of the other usages of “adjacent.” Error correction made.		
Independent Electricity System Operator	Yes	Notwithstanding our opposition to R1.2.
<b>Response:</b> Thank you for your support. No change made.		
FirstEnergy	Yes	
SERC OC Standards Review Group	Yes	
Luminant	Yes	
Western Electricity Coordinating Council	Yes	
Dominion	Yes	
SPP Standards Review Group	Yes	

Organization	Yes or No	Question 1 Comment
MRO NSRF	Yes	
Northeast Power Coordinating Council	Yes	
ACES Power Marketing Standards Collaborators	Yes	
Arizona Public Service Company	Yes	
Xcel Energy	Yes	
American Electric Power	Yes	
Public Service Enterprise Group	Yes	
Pepco Holdings Inc	Yes	
City of Tallahassee (TAL)	Yes	
City of Austin dba Austin Energy	Yes	
Manitoba Hydro	Yes	
Duke Energy	Yes	
CenterPoint Energy Houston Electric, LLC	Yes	
American Transmission Company	Yes	

Organization	Yes or No	Question 1 Comment
Liberty Electric Power	Yes	
Tacoma Power	Yes	
Oncor Electric Delivery Company LLC	Yes	
Idaho Power Company	Yes	



2. The RCSDT has revised parts of two requirements (Parts 3.5 and 4.3) in COM-001-2 and added two additional parts (Parts 3.6 and 3.4) to address concerns about the phrase “synchronously connected within the same Interconnection.” Do you agree these changes address concerns where entities might only be adjacent across an Interconnection for where connected by a Direct Current (DC) tie? If not, please explain in the comment area below.

**Summary Consideration:** Thirty-one stakeholders completing the comment form support the changes by the RCSDT. Of those, seven provided comments. Two comments suggested combining Requirements R3, Parts 3.5 and 3.6 and Requirement R4, Parts 4.3 and 4.4 to have one part each that says “...synchronously or asynchronously connected.” The RCSDT believes this is a semantic change and having each condition in each requirement separates the emphases and provides the desired clarity. One commenter raised the issue of “adjacent” addressed in Question 1 above. A commenter expressed concern about the Reliability Coordinator not being required to have an Interpersonal Communication capability across an interconnection. The RCSDT notes that some Reliability Coordinators communicate with other Reliability Coordinators across interconnections; however, the requirement is to have the Interpersonal Communication capability within the same interconnection. Two commenters questioned why the synchronous and asynchronous conditions were in the requirements. The RCSDT added these to achieve a greater level of clarity that not all Transmission Operators are geographically adjacent. For example, the RCSDT considered phrases like “electrically connected,” but that creates the problem that all Transmission Operators are electrically connected. The use of adjacent and the synchronous and asynchronous conditions in each part achieve the necessary clarity based on transmission operations.

A single entity argued the requirements should be certification requirements and not in a standard. The RCSDT directs the commenter to Section 500 of the NERC Rules of Procedure which address certification. The certification process is a program to identify entities that are applicable to and responsible for the reliability standards.

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	<p>If 3.5 and 4.3 were made to read: “Each connected adjacent Transmission Operator.” Then 3.6 and 4.4 (not 3.4 as indicated in the question) would not be required.</p> <p>If 3.6 and 4.4 are to be kept, then the wording of 3.6 and 4.4 should be made to read: “Each adjacent Transmission Operator asynchronously connected through a DC tie.” Systems cannot be asynchronously connected.</p>

**Response:** The RCSDT thanks you for your comments. These are semantic changes and the current Requirement R3, Parts 3.5 and 3.6 and Requirement R4, Parts 4.3 and 4.4 provide the clarity requested by industry stakeholders represented by the ballot. No

Organization	Yes or No	Question 2 Comment
change made.		
Colorado Springs Utilities	No	See previous comment on “adjacent”.
<b>Response:</b> Please see the RCSDT’s response above in question 1. No change made.		
PacifiCorp	No	PacifiCorp does not understand the RCSDT’s rationale for creating separate sub-requirements for adjacent Transmission Operators that are synchronously and asynchronously connected, in both R3.5/R3.6 and R4.3/R4.4. PacifiCorp recommends the following singular sub-requirement for both R3 and R4: “Each adjacent Transmission Operator (whether synchronously or asynchronously connected).”
<b>Response:</b> The RCSDT thanks you for your comments. These are semantic changes and the current Requirement R3, Parts 3.5 and 3.6 and Requirement R4, Parts 4.3 and 4.4 provide the clarity requested by industry stakeholders represented by the ballot. No change made.		
Texas Reliability Entity	No	<p>The proposed revision to include Transmission Operators asynchronously connected (Parts 3.5 and 4.4) is an appropriate revision to the Standard.</p> <p>The Reliability Coordinator responsibilities for communications with a Reliability Coordinator across an asynchronous connection do not appear to be addressed in this revision. Did the RCSDT have a particular reason not to address the RC issue?</p> <p>We believe each RC should have Interpersonal Communication capability with all neighboring RCs regardless of Interconnection boundaries, the type of connection, or whether a connection exists.</p>
<b>Response:</b> The RCSDT thanks you for your support of the improvements to Requirements R3 part 3.5 and R4 part 4.4. The RCSDT made additional clarifying changes from draft 5 to draft 6 in Requirements R3 and R4 to address the issue that some Transmission Operators (not Reliability Coordinators) that may not be adjacent for situations other than synchronously connected within the same Interconnection in the traditional understanding. For example, some entities have connections beyond the interconnection and some connections are asynchronous. To address this concern, the RCSDT separated the requirements to identify “synchronously		

Organization	Yes or No	Question 2 Comment
<p>connected” and “asynchronously connected,” and removed the “within the same Interconnection” to achieve this clarity. No change made.</p> <p>Requirements for the Reliability Coordinator are addressed in Requirements R1 and R2, which do not specify the synchronous or asynchronous connection. Additionally, the parts 1.2 and 2.2 only require the Reliability Coordinator to have an Interpersonal Communication and Alternative Interpersonal Communication capability with other Reliability Coordinators within the same Interconnection. For example, the loss of a DC tie does not result in a negative reliability impact and is analogous to a load or generator loss because flows would not redistribute. Each end of the DC tie must adjust generation to account for the loss of the DC tie; therefore, no coordination is required between entities. The standard does not preclude the Reliability Coordinator from having a capability with another Reliability Coordinator in another Interconnection. No change made.</p>		
NV Energy	No	<p>What difference does a synchronous or asynchronous connection make? Do not both have a reliability impact on the two entities on either side? Since there is a reliability impact, regardless of connection type, a separate Requirement is superfluous.</p>
<p><b>Response:</b> The RCSDT made additional clarifying changes from draft 5 to draft 6 in Requirements R3 and R4 to address the issue that some Transmission Operators may not be adjacent for situations other than synchronously connected within the same Interconnection in the traditional understanding. For example, some entities have connections beyond the interconnection and some connections are asynchronous. To address this concern, the RCSDT separated the requirements to identify “synchronously connected” and “asynchronously connected,” and removed the “within the same Interconnection” to achieve this clarity. For example, the loss of a DC-Tie does not result in a negative reliability impact and is analogous to a load or generator loss because flows would not redistribute. Each end of the DC-Tie must adjust generation to account for the loss of the DC-Tie; therefore, no coordination is required between entities. No change made.</p>		
MISO	No	<p>While MISO disagrees with the modifications to COM-001-1 proposed in COM-001-2 generally, it does not disagree with the proposed removal of “within the same interconnection.”</p>
<p><b>Response:</b> The RCSDT thanks you for your support in removing “...within the same Interconnection.” No change made.</p>		
ISO New England Inc	No	<p>The ISO-NE continues to believe that these a certification types of requirements and</p>

Organization	Yes or No	Question 2 Comment
		that they do not belong in a standard.
<p><b>Response:</b> NERC maintains an Organization Certification Program, the goal of which is to ensure that organizations who apply to register or are registered to perform certain reliability functions deemed particularly crucial to the reliability of the bulk power system will meet or exceed certain minimum criteria (i.e., Reliability Standards) demonstrating they are capable of performing the tasks (i.e., Requirements) for these functions. The process for certification of organizations is included in the NERC Rules of Procedure, Section 500 and Appendix 5A. For example, the first paragraph of Section 500 – Organization Registration and Certification states: “The purpose of the Organization Registration Program is to clearly identify those entities that are responsible for compliance with the FERC approved reliability standards. Organizations that are registered are included on the NERC Compliance Registry (NCR) and are responsible for knowing the content of and for complying with all applicable reliability standards...” No change made.</p>		
Tacoma Power	Yes	This seems excessive. It should be sufficient to say “each adjacent TOP” regardless of whether they are connected synchronously or via a DC tie.
<p><b>Response:</b> The RCSDT thanks you for your comment. The clarifications for asynchronous and synchronous were based on industry stakeholder comment. No change made.</p>		
FirstEnergy	Yes	
SERC OC Standards Review Group	Yes	
Luminant	Yes	
Western Electricity Coordinating Council	Yes	
Dominion	Yes	
SPP Standards Review Group	Yes	

Organization	Yes or No	Question 2 Comment
MRO NSRF	Yes	
ACES Power Marketing Standards Collaborators	Yes	
Arizona Public Service Company	Yes	
Xcel Energy	Yes	
American Electric Power	Yes	
Public Service Enterprise Group	Yes	
Pepco Holdings Inc	Yes	
City of Tallahassee (TAL)	Yes	
Manitoba Hydro	Yes	
Ingleside Cogeneration LP (Occidental Chemical in the ballot body)	Yes	
Duke Energy	Yes	
CenterPoint Energy Houston Electric, LLC	Yes	
Independent Electricity	Yes	

Organization	Yes or No	Question 2 Comment
System Operator		
American Transmission Company	Yes	
Liberty Electric Power	Yes	
Oncor Electric Delivery Company LLC	Yes	
Idaho Power Company	Yes	

**3. The RCSDT made minor changes and reformatted the evidence examples in the Measures of COM-001-2 for greater clarity. Do you agree with these revisions? If not, please explain in the comment area below.**

**Summary Consideration:** Twenty-eight stakeholders completing the comment form question support the changes by the RCSDT. Of those, three offered substantive comments. One commenter noted that having “physical assets” listed as one type of evidence in the Measures M1 through M8 is problematic. The RCSDT believes an entity may utilize any number of options to demonstrate compliance with the requirements. One commenter had concerns about the use of an intermediary for Interpersonal Communication capability. The RCSDT emphasizes that an entity may employ any number of approaches to achieve the requirements. Another commenter suggested inserting “applicable” as a clarification in Measure M10 to more clearly state the relationship between the entities and the associated requirements. In consideration of the suggestion, the RCSDT inserted the word “respectively,” rather than “applicable” to more accurately note the relationship. Additionally, the RCSDT applied the same consideration to Requirement R10 to achieve the same clarity. The RCSDT also removed a typographical error revealed by a commenter.

Organization	Yes or No	Question 3 Comment
Colorado Springs Utilities	No	See the comment on "evidence" included in the comment section of question 4.
<b>Response:</b> Please see the RCSDT’s response in question 4. No change made.		
ACES Power Marketing Standards Collaborators	No	We continue to believe that use of “physical assets” instead of “demonstration of physical assets” is problematic. Auditors must be able to take evidence with them and they could not take the physical assets. They could, however, takes notes they record from demonstration of the physical assets with them. While we understand that the auditors will understand they can’t take the “physical assets”, it does not change the fact that the listing “physical assets” as evidence is technically not correct.
<b>Response:</b> The RCSDT believes that physical assets are demonstration of evidence for Interpersonal Communication capability. The responsible entity may exercise other methods of evidence for the physical assets (e.g., photographs or other documentation). No change made.		
Ingleside Cogeneration LP (Occidental Chemical in the	No	Ingleside Cogeneration LP would like to see the project team include references to intermediaries which act as a single point of contact between GOPs and BAs/TOPs. This is a very common and necessary communications hierarchy - as it is just not possible for the

Organization	Yes or No	Question 3 Comment
ballot body)		BA/TOP to otherwise coordinate the actions of multiple GOPs. We believe that it is appropriate that GOP must retain evidence that Interpersonal Communication capability is maintained up to the intermediary - but the BA or TOP must be responsible for the remainder of the link. This accountability matches the most common contractual arrangements where both the BA/TOP and the GOP have signed agreements with the intermediary.
<p><b>Response:</b> The RCSDT believes the standard provides the “what” to do, not the “how” to implement the standard. Having an intermediary for communication is one approach in “how” the entity may implement the standard. No change made.</p>		
MISO	No	<p>While MISO appreciates the SDT’s modifications to Measure M10 since the last draft, the Measure remains ambiguous as to which parties should be contacted when an entity experiences a failure of its Interpersonal Communication capability that lasts 30 minutes or longer.</p> <p>MISO respectfully submits the following changes for Measure 10:</p> <p>”Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it notified the entities as identified in Requirements R1, R3, and R5, as applicable, within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasted 30 minutes or longer. Evidence could include, but is not limited to dated and time-stamped: test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R10.)”</p>
<p><b>Response:</b> The RCSDT agrees with the ambiguity in Measure M10 and proposes to clarify Requirement R10, Measure M10, and R10 VSL by inserting the word “respectively,” rather than the suggested “as applicable.” The word “respectively” is used rather than “applicable” because “applicable” is open to interpretation. For example, adding the word “respectively” means that the Reliability Coordinator in R1 is not required to notify the entities identified in Requirement R3 or R5. The RCSDT intended the requirements to map to the entity. Clarifying changes made.</p>		
City of Tallahassee (TAL)	Yes	For Measure 7, the first line duplicates the word "that".
<p><b>Response:</b> The RCSDT appreciates you bringing awareness to this typo. The additional “that” has been removed from Measure M7 in COM-001-</p>		



Organization	Yes or No	Question 3 Comment
2. Error correction made.		
Independent Electricity System Operator	Yes	Notwithstanding our opposition to R1.2.
<b>Response:</b> Thank you for your support. No change made.		
FirstEnergy	Yes	
SERC OC Standards Review Group	Yes	
Luminant	Yes	
Western Electricity Coordinating Council	Yes	
Dominion	Yes	
SPP Standards Review Group	Yes	
MRO NSRF	Yes	
Northeast Power Coordinating Council	Yes	
Arizona Public Service Company	Yes	
PacifiCorp	Yes	

Organization	Yes or No	Question 3 Comment
Xcel Energy	Yes	
Public Service Enterprise Group	Yes	
Pepco Holdings Inc	Yes	
City of Austin dba Austin Energy	Yes	
Manitoba Hydro	Yes	
Duke Energy	Yes	
Texas Reliability Entity	Yes	
CenterPoint Energy Houston Electric, LLC	Yes	
American Transmission Company	Yes	
Liberty Electric Power	Yes	
Tacoma Power	Yes	
NV Energy	Yes	
Oncor Electric Delivery Company LLC	Yes	
Idaho Power Company	Yes	

#### 4. Do you have any other comments on COM-001-2, not expressed in questions above, for the RCSDT?

**Summary Consideration:** There were several minority comments concerning the proposed standards COM-002-3 and IRO-001-3 that the RCSDT could not respond to because they were approved by industry. Other comments revealed errors in the standard that the RCSDT corrected. Most comments were continuances from previous comment periods, along with various minority comments which the RCSDT provided. Commenters raised the issue that having a communication capability should be a matter of the NERC Certification process, as raised in the above questions. The RCSDT noted that certification was the process to ensure registered entities could perform those tasks associated with the reliability standards and that each entity should address this issue with NERC if further information is needed. Also from previous comment periods, commenters noted this standard should be a Results-Based Standard (RBS). The RCSDT did not disagree that the RBS format would be beneficial, but the current standard, as written, achieves the necessary goals set forth in the Standards Authorization Request (SAR).

Other minority continuances from previous comment periods include the use of “means,” “primary,” and other words or suggestions in the proposed definitions. The RCSDT maintains that these words are problematic and did not alter the definitions. Additionally, the definitions describe the “what” for communications, not the “how.” Some commenters noted that requiring the Generation Operator or Distribution Provider to have an Interpersonal Communication capability is redundant and unnecessary because they would already have a capability by virtue of it being established by the Balancing Authority and Transmission Operator. The RCSDT responded that each entity (i.e., both ends of the communication) is required to have the communication capability which is coordinated with the other entity to establish the capability. Other comments included requests to specifically say that the proposed COM-001-2 is “not for the exchange of data.” The RCSDT did not feel it necessary to insert such a clause, but pointed the commenter to reliability standards IRO-010 and IRO-014 which address data and information.

A commenter questioned having the ability to select other communications as needed; however, the RCSDT notes that an entity cannot randomly choose or designate other communication capabilities without coordinating the capability with other parties. Each applicable entity must know what its Interpersonal Communication capability is with others and, if applicable, its Alternative Interpersonal Communication capability with others. The same commenter questioned how the standard achieves “diversely routed,” as written in the current standard COM-001-1. The RCSDT contends “diversely routed” is achieved through the proposed definitions. The proposed definition of Alternative Interpersonal Communication contains, “...not utilize the same infrastructure (medium) as Interpersonal Communication used for day-to-day operation.”

There were other minority comments about time limits and notifications. One commenter suggested having a defined notification process using a hierarchal format. The RCSDT did not agree with this concept due to the diverse relationships between entities making it impractical. One noted that the 60-minute notification time was insufficient. The RCSDT considered this, as in previous drafts, and contends the period is adequate. Another did not agree with the two-hour limit on initiating action to repair or designating an

Alternative Interpersonal Communication capability. Again, the RCSDT holds that the time elements have been considered and supported by industry.

There were minority comments about the Measures and VSLs. The RCSDT inserted the word “respectively” in Requirement R10 and similarly in Measure M10 to clarify the expected relationship between the listed functional entities and the listed requirements. Some commenters noted that the use of “physical assets” is an inappropriate listing of evidence in the measures. The RCSDT disagreed that having the asset can be one form of demonstrating the necessary evidence. A commenter requested additional granularity in the VSLs in addition to what the RCSDT provided in the draft 6 posting. The RCSDT believes that having two (High and Severe) VSLs is the appropriate VSL granularity given the expected number of entities required to have a communication capability. More importantly, the reliability need is not to miss having a communication capability with any entity necessary for reliability operations. The same commenter requested a lower VSL for Requirements R1, R3 and R5 because, in this case, the Reliability Coordinator, Transmission Operator, and Balancing Authority are all required to have an Alternative Interpersonal Communication capability. The RCSDT contends that a violation should not be contingent on the preponderance of other mitigating requirements. Both VRFs and VSLs are to be evaluated on an individual requirement level without regard to other contributing circumstances. A comment suggested lowering the VRF on Requirement R7 from High to Medium. The RCSDT agreed and made the change since the loss of a communication capability with the Distribution Provider does not present the same level of risk that a Generator Operator would (e.g., during blackstart restoration).

Other minority comments related to the effective date language and data retention. The effective date language governed by NERC staff and the RCSDT only addresses the time elements within the template language. A question was raised about voice recordings generally having only a 90-calendar day retention, but the data retention specified 12 calendar months. The RCSDT recognizes this oversight and added clarifying language to account for voice recordings.

The majority comments in Question 4, also raised in previous comment periods, are related to Requirement R11, which had six distinct reoccurring themes: (1) A threshold for determining when to report a failure of the Generation Operator or Distribution Provider communication capability. (2) The reliability benefit of having to consult with the Balancing Authority or Transmission Operator when neither the Generation Operator nor Distribution Provider are required to have an Alternative Interpersonal Communication capability. (3) Consultation for the purpose of determining a mutually agreeable action for the restoration of its Interpersonal Communication capability. (4) What does “action” constitute? (5) Changing the language to specifically name the entities to be notified in the corresponding Measure M11. (6) The Generation Operator and Distribution Provider should be required to have an Alternative Interpersonal Communication capability. The RCSDT appropriately responded to all six issues as follows:

For item (1) a threshold is not provided to allow flexibility for the Generation Operator or Distribution Provider to determine what constitutes a failure of its Interpersonal Communication capability. The reliability benefit argued in (2) about consulting with the Balancing Authority or Transmission Operator is for the purpose of bringing awareness to these entities that communications are

compromised and to know what is being done to restore the capability. In issue (3) the purpose is to consult, the requirement clarifies the reliability purpose to determine a mutually agreeable action for restoration. The reliability goal is for the Balancing Authority or Transmission Operator to maintain awareness the communication capability has failed and what is being done to restore the capability. The Generation Operator or Distribution Provider is free to employ an Alternative Interpersonal Communication capability, but has no requirement to do so. The RCSDT responded to item (4) regarding what “action” meant. Action can be a number of things which the entity under takes to restore its capability. It could include, but is not limited to: contacting internal staff to initiate a repair, contacting a third party for repair, seeking assistance to troubleshoot the problem, or implementing its procedure(s) regarding the restoration of the capability. There was a suggestion concerning item (5) to explicitly name the entities in Requirement R11. The RCSDT agreed it would improve readability, but it would not be inconsistent with the way the measure is written using the reference to the two requirements. Item (6) was also raised in previous comment periods and the RCSDT noted that only requiring the Generation Operator and Distribution Provider to have an Interpersonal Communication capability is consistent with the direction provided in Order 693.

Organization	Yes or No	Question 4 Comment
City of Austin dba Austin Energy		<p>(1) Both instances of “Reliability Coordinator” in the VSLs for R3 should be “Transmission Operator” to match the language of the standard.</p> <p><b>Response:</b> The RCSDT appreciates you bringing awareness to this error in Requirement R3 VSL. The reference to “Reliability Coordinator” has been changed to Transmission Operator for Requirement R3 in both the High and Severe VSL. Error correction made.</p> <p>(2) Both instances of “Reliability Coordinator” in the VSLs for R5 should be “Balancing Authority” to match the language of the standard.</p> <p><b>Response:</b> The RCSDT appreciates you bringing awareness to this error in Requirement R5. The reference to “Reliability Coordinator” has been changed to Balancing Authority for Requirement R5 in both the High and Severe VSL. Error correction made.</p> <p>(3) In the VSLs for R9 and R10 the use of “and” seems incorrect.</p> <p>Austin Energy suggests the following revisions for all VSL levels (only the Lower VSL shown for simplicity and revised words suggested in capital letters):</p>

Organization	Yes or No	Question 4 Comment
		<p>R9, Lower VSL: “The Reliability Coordinator, Transmission Operator, OR Balancing Authority...”</p> <p><b>Response:</b> RCSDT appreciates you bringing awareness to this error in Requirement R9 VSL. The use of “and” between the responsible entities and the requirement references has been corrected to “or” for proper construction in Requirements R9 and R10 VSLs. Error correction made.</p> <p>R10, Lower VSL: “The Reliability Coordinator, Transmission Operator, OR Balancing Authority failed to notify the entities identified in Requirements R1, R3, OR R5, RESPECTIVELY, upon the detection ...”</p> <p><b>Response:</b> The RCSDT agrees with the ambiguity in Measure M10 and proposes to clarify Requirement R10, Measure M10, and R10 VSL by inserting the word “respectively.” For example, adding the word “respectively” means that the Reliability Coordinator in R1 is not required to notify the entities identified in Requirement R3 or R5. The RCSDT intended the requirements to map to the entity. Clarifying changes made.</p>
<p><b>Response:</b> Please see responses above.</p>		
<p>ACES Power Marketing Standards Collaborators</p>		<p>(1) The definition of Alternative Interpersonal Communication needs further refinement. As it is written, the primary Interpersonal Communication that is used to satisfy R1, R3, and R5 is also an Alternative Interpersonal Communication. This primary Interpersonal Communication established in R1, R3, and R5 meet all of the requirements of Alternative Interpersonal Communication. It is an Interpersonal Communication and it is capable of replacing the Interpersonal Communication used as the Alternative Interpersonal Communication (which by definition is an Interpersonal Communication) in R2, R4, and R6. Thus, each Interpersonal Communication used in R1, R3, and R5 really are an Interpersonal Communication and Alternative Interpersonal Communication. One solution may be to add a third definition: Primary Interpersonal Communication. It would essentially be an</p>

Organization	Yes or No	Question 4 Comment
		<p>Interpersonal Communication that is designated as primary or the normal communication system. Then Alternative Interpersonal Communication would be defined based on the ability of the Interpersonal Communication to substitute for the Primary. R1, R3, and R5 would need to be changed to refer to the Primary Interpersonal Communication. Another option might be to simply stick with the two existing definitions and use “primary” in R1, R3, and R5. Regardless of the option selected, “another” needs to be added before the second use of Interpersonal Communication for absolute clarity.</p> <p><b>Response:</b> The definitions clarify the need to differentiate the communication capabilities. The RCSDT notes that, in this last ballot, industry stakeholder consensus does not support the use of “primary” as a part of Interpersonal Communication. No change made.</p> <p>(2) We appreciate that the drafting team added another VSL for requirements R1 through R8, however, we believe additional levels should be populated. For example, if a Transmission Operator or Balancing Authority failed to have Interpersonal Communications capability with a Distribution Provider but had Interpersonal Communications capability with all other required entities, it has met the vast majority of the requirement. Since VSLs are a measure of how much the requirement was missed by the responsible entity, a Lower VSL seems most appropriate for failing to have Interpersonal Communication capability with a DP.</p> <p><b>Response:</b> The RCSDT added the High VSL for Requirements R1 through R8 from draft 5 to draft 6 to account for greater granularity in a violation. For each applicable responsible entity named in each of the requirements, the number of entities for which it must have an Interpersonal Communication or Alternative Interpersonal Communication may vary significantly. The RCSDT believed that adding one additional VSL was an appropriate solution to account for variability in the number of entities. No change made.</p> <p>(3) It seems odd to change the effective date language from what NERC has consistently used throughout the standards. “Following” was replaced with “beyond</p>

Organization	Yes or No	Question 4 Comment
		<p>the date this standard is approved”. For consistency with the rest of NERC standards, we recommend changing it back to the original language.</p> <p><b>Response:</b> The RCSDT appreciates your comment. The language in the Effective Date section is standard language adopted by NERC and used throughout the body of standards currently under development by teams. The RCSDT is not able to alter this language. No change made</p> <p>(4) We appreciate the changes to R1, R3, R5, R7 and R8 that attempt to clarify that a failure of the primary Interpersonal Communication capability is not a violation of these requirements. However, we believe these requirements will never be approved by the Commission. As they are written, they literally say that R1, R3, R5, R7, and R8 apply when the responsible entity has Interpersonal Communication capability and they don’t apply when you don’t have the capability but rather other requirements apply. This means R1, R3, R5, R7 and R8 could never be violated which begs the question why are they even needed. Because Commission approval is unlikely for these requirements, we continue to believe the best solution is to focus the requirements on having a communication medium rather than capability. If “capability” were struck from all of the requirements, the requirements would then focus on a communication medium as defined in Interpersonal Communication and Alternative Interpersonal Communication. This solution would still keep the requirements technology neutral since a medium could be any communication system or device and actually provide more flexibility in the requirements. Because the requirements would focus on having a medium in place rather than a capability, failure of the medium would not automatically translate into a violation which means the problematic “unless [responsible entity] experiences a failure of its Interpersonal Communication capability ...” language could be dropped. Dropping this language would improve the likelihood that the Commission would approve the standard.</p> <p><b>Response:</b> The RCSDT thoughtfully considered the comments about where an entity might be exempt from the requirement(s). No situation exempts an applicable entity from the requirement(s) of this standard. No change made.</p>



Organization	Yes or No	Question 4 Comment
		<p>(5) The VRF for R7 should be Medium. Failure for the DP to have Interpersonal Communication with its BA or TOP does not meet the basic requirement of a High VRF. A High VRF requires that violation of the requirement would “directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures.” We cannot fathom any situation where failure of a BA and TOP being able to communicate would directly lead to or cause instability, separation, or cascading. It could, however, lead to the inability to know the electrical state of part of the transmission system. This fits the Medium VRF definition. Furthermore, the fact that R4 and R6 do not include DP in the list of functional entities for a TOP and BA to have Alternative Interpersonal Communication further supports a Medium VRF.</p> <p><b>Response:</b> The RCSDT thanks you for your comments and changed Requirement R7 to Medium VRF. Further consideration has been given to the Requirement R8 VRF; however, the RCSDT concluded the Generator Operator has a higher importance and risk to reliability, particularly blackstart capability. Change made to Requirement R7 VRF. No change made to Requirement R8 VRF.</p> <p>(6) In Measure M11, we believe entity affected should be replaced with its TOP and BA. This makes the measure clearer and easier to read without the need to refer back to the requirement.</p> <p><b>Response:</b> The RCSDT agrees that naming the specific entities in the measure adds to the readability; however, changing the word “entity” to the named entities in Requirements R7 and R8 would be inconsistent with the way the measure is written using the reference to the two requirements. No change made.</p> <p>(7) We disagree with the data retention period. Because voice recordings are mentioned in the measures as one type of evidence for demonstrating compliance to the requirements, the data retention period should not exceed 90 days. Many companies do not store voice recordings longer than this. To compel a responsible entity to store voice recordings for longer should be justified. We do not see this</p>

Organization	Yes or No	Question 4 Comment
		<p>justification.</p> <p><b>Response:</b> The RCSDT agrees with the comment about the issue concerning the time period for retaining voice recording. The data retention has been revised to reflect a period of 90 calendar days for all evidence related to the requirements. Clarifying change made.</p> <p>(8) We continue to believe that the DP should not be included in this standard. However, we recognize that the drafting team is attempting to address a FERC directive. An equally efficient and effective alternative would be to leave the responsibility to the BA and TOP. Parts 3.3 and 5.3 require the TOP and BA respectively to have Interpersonal Communication capability with the DP. This will be required whether the standard applies to DP or not based on the Commission directive because the Commission expressed concern about the BA and TOP having communications with the DP during an emergency such as a blackstart event. Because DPs will have to follow directives from the RC, TOP, and BA per IRO-001-3, it is in the best interest of the DP to cooperate with assisting the BA and TOP in establishing this capability. Thus, Parts 3.3 and 5.3 could be relied on exclusively for establishing this Interpersonal Communication Capability without adding unnecessary additional compliance burden on the DP that does not support reliability.</p> <p><b>Response:</b> The RCSDT thanks you for your comment and agrees that the standard is addressing FERC directives concerning the Distribution Provider. Entities on each end of the communication capability must have a responsibility to have communications. No change made.</p>
<p><b>Response:</b> Please see responses above.</p>		
MRO NSRF		<p>The NSRF understands the importance of Interpersonal Communications and Alternate Interpersonal Communications and always having the ability to communicate with others. The NSRF questions why per R9 (and similar time requirement per R10) that when testing the Alternate Interpersonal Communications</p>

Organization	Yes or No	Question 4 Comment
		<p>is unsuccessful, why there is a two-hour time limit to initiate an action, repair, or designate a replacement.</p> <p><b>Response:</b> The RCSDT believes that the Reliability Coordinator, Transmission Operator and Balancing Authority, as reliability entities for Requirement R9, must initiate action to repair or designate an Alternative Interpersonal Communication capability timely so that in the event the Alternative Interpersonal Communication capability is called upon, the capability will be available. Having the measurable time period in the requirement ensures that entities will not delay action in addressing the unsuccessful testing of the capability. No change made.</p> <p>Project 2012-08.1 defines “Reliable Operation” means operating the Elements of the Bulk Power System within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or Cascading failures of such system will not occur as a result of a sudden disturbance, including a Cyber Security Incident, or unanticipated failure of system Elements. The loss of an Alternate Interpersonal Communication will not immediately impact the Reliable Operations of the BPS. Recommend that this not be contained within the Standard as entity’s will view this as a Good Utility Practice.</p> <p><b>Response:</b> The RCSDT agrees that the loss of an entity’s Alternative Interpersonal Communication capability should not affect “Reliable Operation” of the Bulk Power System; however, the regulatory directive in Order No. 693 addressing the proposed definitions of “Bulk Power System,” “Reliability Standard,” and “Reliable Operations” must be reviewed collectively. The proposed definition for “Reliability Standard” contains the defined term “Reliable Operations,” and is defined as: <i>“A requirement to provide for Reliable Operation of the Bulk Power System, including without limiting the foregoing, requirements for the operation of existing Bulk Power System Facilities, including cyber security protection, and including the design of planned additions or modifications to such Facilities to the extent necessary for Reliable Operation of the Bulk Power System, but the term does not include any requirement to enlarge Bulk Power System Facilities or to construct new transmission capacity or generation</i></p>

Organization	Yes or No	Question 4 Comment
		<p><i>capacity. A Reliability Standard shall not be effective in the United States until approved by the Federal Energy Regulatory Commission and shall not be effective in other jurisdictions until made or allowed to become effective by the Applicable Governmental Authority.”</i> In the current paradigm, having an Alternative Interpersonal Communication capability is: <i>“A requirement to provide for Reliable Operation of the Bulk Power System,”</i> as the proposed definition of “Reliability Standard” defines and is necessary to support communications between and among the applicable entities in the standard. The RCSDT has addressed the scope of the SAR in addressing communication requirements for entities through an open industry consensus process.</p> <p>R10 The NSRF recommends that “applicable” be inserted between “...notify entities...” This will assure that RC’s will inform per R1, TOP’s will inform per R3 and BA’s will inform per R5. This will assure that an interpretation is not required as in Interpretation 2010-INT-01, TOP-006.</p> <p><b>Response:</b> The RCSDT agrees with the ambiguity in Measure M10 and proposes to clarify Requirement R10, Measure M10, and R10 VSL by inserting the word “respectively,” rather than the suggested: “as applicable.” The word “respectively” is used rather than “applicable” because “applicable” is open to interpretation. For example, adding the word “respectively” means that the Reliability Coordinator in R1 is not required to notify the entities identified in Requirement R3 or R5. The RCSDT intended the requirements to map to the entity. Clarifying changes made.</p>
<p><b>Response:</b> See responses above.</p>		
<p>CenterPoint Energy Houston Electric, LLC</p>		<p>1. For R10, there can be a large number of entities to notify for an Interpersonal Communication failure. During normal operations, 60 minutes can be enough time to make all the notifications. However, during emergency or adverse conditions, 60 minutes may not be sufficient. Thus, at the end of R10, the following should be added: “unless certain adverse conditions (e.g. severe weather, multiple events)</p>

Organization	Yes or No	Question 4 Comment
		<p>prevent the completion of notification within the 60 minutes.”</p> <p><b>Response:</b> The RCSDT contends that 60 minutes is sufficient for notification because the BA, RC, and TOP are required to have an Alternative Interpersonal Communication capability, and should have the ability to accomplish the required notification. Also, the loss of Interpersonal Communication capability may not always impact the entire capability. This time frame does not apply to the DP and GOP since the Alternative Interpersonal Communication capability is not required for these functional entities. <b>No change made.</b></p> <p>2. For R11, the change from “mutually agreeable time” to “mutually agreeable action” is not an improvement. It should not be the concern of the other entities how (what action) the capability is restored, only that it is restored and that the entity with the failure can be reached in the interim. Thus, we suggest the following: “to determine a mutually agreeable alternative until Interpersonal Communication capability is restored.”</p> <p><b>Response:</b> The RCSDT agrees the desired end result is restoring the capability, and appreciates the suggested modification; however, the suggestion presents other issues; such as: What if an alternative is not available? The RCSDT believes the most appropriate and measureable way to address the loss of the Distribution Provider or Generation Operator’s capability is to require the entities to communicate the action taken to restore the capability. <b>No change made.</b></p>
<p><b>Response:</b> Please see responses above.</p>		
<p>Independent Electricity System Operator</p>		<p>1. COM-001:</p> <p>We continue to disagree with R1.2, the phrase “within the same Interconnection” is troublesome. RCs between two Interconnections still need to communicate with each other for reliability coordination (e.g. between Quebec and the other RCs in the NPCC region to curtail interchange transactions crossing Interconnection boundary). The SDT’s previous response that the phrase was added to address the ERCOT situation and citing that ERCOT does not need to communicate with other RCs leaves a</p>

Organization	Yes or No	Question 4 Comment
		<p>reliability gap. The SDT’s latest response that R1 as written does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others is inconsistent with the basic principle for having a reliability standard. A standard should stipulate the requirements based on what is needed to ensure reliability, not on what is not precluded. If there is a reliability need for RCs across Interconnection boundary to coordination operations, then Interpersonal Communication shall be provided. If we apply the SDT’s philosophy (that the standard does not preclude...), then one can argue that the standard does not need to stipulate a requirement to have Interpersonal Communication as without such a requirement, the standard does not preclude any operating entities to have it.</p> <p>Finally, we would reiterate the fact that RCs between asynchronously interconnected systems do communicate, e.g. between Quebec and its neighbor RCs. We are also aware that RCs in the Western Interconnection and those in the Eastern Interconnection do communicate as needed to coordinate TLR for transactions crossing Interconnection boundary.</p> <p><b>Response:</b> From the Functional Model V5, Functional Entity - Reliability Coordinator, the RCSDT notes the following: “Balancing operations. The Reliability Coordinator ensures that the generation-demand balance is maintained within its Reliability Coordinator Area; which, in turn, ensures that the Interconnection frequency remains within acceptable limits. The Balancing Authority has the responsibility for generation-demand-interchange balance in the Balancing Authority Area. The Reliability Coordinator may direct a Balancing Authority within its Reliability Coordinator Area to take whatever action is necessary to ensure that this balance does not adversely impact reliability.” Based on the last sentence, the Reliability Coordinator does not have the responsibility for these transactions. No change made.</p> <p>2. The follow comments address data retention for COM-002-3:</p> <p>a. The first bullet in Section D 1.3 stipulates that “The Reliability Coordinator, Transmission Operator, and Balancing Authority shall retain evidence of Requirement</p>

Organization	Yes or No	Question 4 Comment
		<p>R1 and R3, Measure M1 and M2 for the most recent 3 calendar months.” We believe M2 should be M3.</p> <p><b>Response:</b> The RCSDT agrees with your assessment that M2 should be M3 and has advised NERC staff of the typo in COM-002-3. Error correction made.</p> <p>b. The second bullet: “The Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall retain evidence of Requirement R1, Measure M1 for the most recent 3 calendar months.” We believe R1 and M1 should read R2 and M2 since DP is only responsible for meeting R2.</p> <p><b>Response:</b> The RCSDT agrees with your assessment that R1 and M1 should be R2 and M2. The RCSDT has advised NERC staff of the typo in COM-002-3. Error correction made.</p> <p>c. Section 2 “Violation Severity Levels”: R# R2 Severe includes the Balancing Authority as one of the listed entities; however, this is inconsistent with R2 / M2 which do not include the Balancing Authority. To be consistent with R2 / M2, the Balancing Authority should be removed from VSL R# R2.</p> <p><b>Response:</b> The RCSDT agrees with your assessment and has advised NERC staff that the VSL for Requirement R2 should have the entity “Reliability Coordinator” replaced with “Balancing Authority” in COM-002-3 to be consistent with the named entities in Requirement R2. Error correction made.</p> <p>While these can be regarded as typos, and do not contribute to a show-stopper vote for some, we urge the SDT and the Standards Committee to pay closer attention to the accuracy of all elements in the standard.</p> <p>3. IRO-001-3:</p> <p>Section 1.3 Data Retention (second bullet) states:</p> <p>The Operator, Balancing Authority, Generator Operator, or Distribution Provider shall retain for Requirements R2 and R3, Measures M2 and M3 shall retain voice recordings for the most recent 90 calendar days or documentation for the most</p>

Organization	Yes or No	Question 4 Comment
		<p>recent 12 calendar months.</p> <p>- The statement above appears to be missing “Transmission” before the word Operator.</p> <p><b>Response:</b> The RCSDT agrees with your assessment of IRO-001-3 and has advised NERC staff that in the second bullet of Section D, 1.3 section, the word “Transmission” needs to be inserted in front of “Operator.” Error correction made.</p> <p>- The statement above repeats “shall retain” and the highlighted instance is not required.</p> <p><b>Response:</b> The RCSDT agrees with your assessment of IRO-001-3 and has advised NERC staff that in the second bullet of Section D, 1.3, the first occurrence of “shall retain” needs to be removed. Error correction made.</p> <p>- The statement above states “or” Distribution provider, implying that one entity needs to retain evidence. Starting the sentence with “Each” rather than “The” and replacing “or” with “and” may provide clarity. The same would apply to the introduction sentence prior to the bullets. COM-002-3 section D. Compliance 1.3 Data Retention provides an example of the suggested format.</p> <p><b>Response:</b> The RCSDT agrees with your assessment of IRO-001-3 and has advised NERC staff that in the second bullet of Section D, 1.3, the “or” between the responsible entities should be an “and.” Error correction made.</p> <p>Here is an example of the revised sentence: “Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall retain voice recordings for the most recent 90 calendar days or documentation for the most recent 12 calendar months, for Requirements R2 and R3, Measures M2 and M3”.</p>
<p><b>Response:</b> Please see responses above.</p>		
Bonneville Power		BPA thanks you for the opportunity to comment on Project 2006-06, COM-001-2 and



Organization	Yes or No	Question 4 Comment
Administration		has no comments or concerns at this time.
<p><b>Response:</b> The RCSDT thanks you for your comment.</p>		
Public Service Enterprise Group		<p>Change R11 and replace “experiences a failure” with “detects a failure” because one may have a failure, but if it’s undetected for some period of time because no communications are taking place, it’s unclear when one actually “experienced a failure.” We note that R10 uses the terminology “detection of a failure.” Using consistent terminology in R10 and R11 would result in less confusion for compliance because there would not be an issue as to whether a difference was intended by the SDT between “experiences” and “detects” in the two requirements.</p>
<p><b>Response:</b> The RCSDT agrees with your assessment of the differences in terms and has changed “experiences” to “detects” in Requirement R11 to be consistent with Requirement R10. Change made.</p>		
Colorado Springs Utilities		<p>CSU appreciates the work the SDT has put into this standard, along with the others in this project and the opportunity to comment. We agree with the goal to encourage consistent communications and availability of robust &amp; redundant communication paths. CSU appreciates that the SDT appears to have tried to write some flexibility into this standard. As written, however, this draft of COM-001-2 in its entirety seems to us unwieldy and unmanageable.</p> <p>It appears each entity may choose its own ‘primary’ and Alternate “Interpersonal Communication” capabilities. Entity A may select email as its ‘primary’ capability, while Entity B might not select that among either ‘primary’ or “Alternate,” and may not pay any attention on the real-time desk to email (only the designated “Alternate” requires testing).</p> <p><b>Response:</b> The requirements require the applicable entity to have a communication capability with the defined entities in each requirement. An applicable entity should not be changing its Interpersonal Communication capability independently without coordinating the change with the defined entities in a given requirement. The</p>

Organization	Yes or No	Question 4 Comment
		<p>proposed definition says, “...between two or more individuals...” No change made.</p> <p>Also, DOs &amp; GOs are not expected to maintain a backup (“Alternate”) communications capability. It is unclear how those entities can then comply with R11 if their one and only interpersonal communication capability has failed.</p> <p><b>Response:</b> The RCSDT, from draft 5 to 6 of COM-001-3, added clarifying language in Requirement R7 for the Distribution Provider and in Requirement R8 for the Generator Operator to account for the potential gap of compliance. The language was: “... (unless the &lt;responsible entity&gt; experiences a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply).” The RCSDT also notes this parenthetical was updated to more appropriately address the detection of the failure and now reads: “... (unless the &lt;responsible entity&gt; detects a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply).” No change made.</p> <p>Sufficient evidence includes “physical assets.” Does that mean we can point to the phone on the desk and the email program on the desktop PC and we’re compliant? Are photographs of physical assets sufficient evidence to submit for the pre-audit questionnaire?</p> <p><b>Response:</b> The RCSDT believes that physical assets are demonstration of evidence for Interpersonal Communication capability. The responsible entity may exercise other methods of evidence for the physical assets (e.g., photographs or other documentation). No change made.</p> <p>There is no requirement for the communications capabilities to be either diverse or redundant. If both our capabilities, in the end, rely on the POTS/PSTN system, is that acceptable?</p> <p><b>Response:</b> The RCSDT agrees that the requirements do not specifically address this condition within the requirements themselves; however, the issue of redundancy is addressed within the proposed defined term “Alternative Interpersonal Communication.” The definition reads: “Any Interpersonal Communication that is</p>

Organization	Yes or No	Question 4 Comment
		able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.” No change made.
<b>Response:</b> Please see responses above.		
Detroit Edison		<p>Defining Interpersonal Communication as “Any medium that allows two or more individuals to interact, consult, or exchange information” will also include all Alternative Interpersonal Communications since “Any medium” is all inclusive. Consider replacing the definition of Interpersonal Communication with the following:</p> <p>Primary Interpersonal Communication: The normal communication medium that two or more individuals use to interact, consult, or exchange information relating to day-to-day operations.</p> <p><b>Response:</b> The RCSDT notes that previous drafts received comments recommending the use of terms; such as, “primary,” “secondary,” “device,” “means,” and “medium” with regard to the proposed definitions. The RCSDT thanks you for your suggestion; however, the requirements are for “capability” and adding such proposed terms is not needed to achieve the necessary clarity. No change made.</p> <p>Consider replacing the definition of Alternative Interpersonal Communication with the following:</p> <p>Alternative Interpersonal Communication: Any communication medium that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as the designated Primary Interpersonal Communication.</p> <p><b>Response:</b> This suggestion has only added the word “Primary” to the definition. The RCSDT contends that the use of terms, such as, “primary,” “secondary,” “device,” “means,” and “medium” with regard to the proposed definitions is not needed to achieve the necessary clarity. No change made.</p> <p>R1, R3, R5, R7, R8 should require entities to designate Primary Interpersonal</p>

Organization	Yes or No	Question 4 Comment
		<p>Communication.</p> <p><b>Response:</b> This suggestion has only added the word “Primary” to the defined term. The RCSDT contends that the use of terms, such as, “primary,” “secondary,” “device,” “means,” and “medium” with regard to the proposed definitions is not needed to achieve the necessary clarity. No change made.</p> <p>R10 and R11 should address failures to designated Primary and Alternate Interpersonal Communication.</p> <p><b>Response:</b> This suggestion has only added the word “Primary” to Requirements R10 and R11. The RCSDT contends that the use of terms, such as, “primary,” “secondary,” “device,” “means,” and “medium” with regard to the proposed definitions is not needed to achieve the necessary clarity. No change made.</p> <p>R9 in all VSL levels the phrase "failed to initiate action to repair" or designate a replacement is subject to interpretation. Does "initiate action" include notification to the proper party to investigate and repair or does it require repairs to begin within specified times as listed in severity levels?</p> <p><b>Response:</b> The RCSDT notes that the requirement is for the entity to “initiate action,” which may include, but is not limited to, notifying or request repair to restore the capability. The available alternative is to designate an Alternative Interpersonal Communication capability. No change made.</p>
<p><b>Response:</b> Please see response above.</p>		
<p>Duke Energy</p>		<p>Distribution Providers and Generator Operators have significant responsibilities that require reliable means of communications with other entities, such as implementing load shedding and adjusting real and reactive power. The requirements for the Distribution Provider and Generator Operator should therefore be consistent with those for the Reliability Coordinator, Transmission Operator and Balancing Authority, namely, they should be required to designate Alternative Interpersonal Communication capability, to test this capability and to notify appropriate entities</p>

Organization	Yes or No	Question 4 Comment
		<p>when its Interpersonal Communication capability has failed.</p> <p><b>Response:</b> The RCSDT thanks you for your comment about requiring the Distribution Provider and Generation Operator to have the requirements similar to that of the Reliability Coordinator, Transmission Operator, and Balancing Authority. The standard, as proposed, has included the Distribution Provider and Generation Operator in accordance with the regulatory statements in Order No. 693, Paragraphs 483, 491, 495, 496, and 503 which recognized the need for Distribution Providers and Generation Operators to have flexibility in meeting the communication capability requirements and not to burden smaller entities (i.e., DPs and GOPs) with the additional requirement of adding communication redundancy. No change made.</p> <p>The definition of Interpersonal Communication should also be expanded to clearly include the drafting team’s intent that the capability is NOT for the exchange of data.</p> <p>With respect to the standard being tacit on “not for the exchange of data,” the RCSDT believes this concern is addressed within the earlier IRO-014-1 – Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators standard and now the proposed IRO-014-2 – Coordination Among Reliability Coordinators adopted by the NERC Board of Trustees August 4, 2011. No change made.</p>
<p><b>Response:</b> Please see the responses above.</p>		
<p>Dominion</p>		<p>Dominion has no additional comments on COM-001-2, but does have the below comments on IRO-001-3:</p> <p>Dominion believes that our previous comment remains valid and the response provided by the SDT does not address all aspects of our concerns. Dominion suggests that the language of ‘direction’ be changed to ‘Reliability Directive’ to remain consistent with COM-002. Another alternative would be as written below;</p> <p>IRO-001-3 uses the term ‘direct’ in its purpose statement, R1, R2 and R3. To avoid confusion with a Reliability Directive (both for auditors and entities), we suggest the</p>

Organization	Yes or No	Question 4 Comment
		<p>following: To establish the authority of Reliability Coordinators to make requests of other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System.</p> <p>R1: Each Reliability Coordinator shall have the authority to act or request others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts.</p> <p>R2: Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator’s request unless compliance with the request cannot be physically implemented, or unless such actions would violate safety, equipment, regulatory or statutory requirements, or unless the TOP, BA, GOP or DP convey a business reason not to comply with the request but express that they will comply if a Reliability Directive is given.</p> <p>R3: Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as requested in accordance with Requirement R2.”</p> <p>Or we could cite Southwest Transmission Cooperative, Inc. comments which read “COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: “When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact?</p> <p>Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent. For clarity and consistency, IRO-001-3 Requirement R2 and R3 should also be clear that the responsible entities will respond to the Reliability Coordinator’s Reliability Directives.</p>
<p><b>Response:</b> The RCS DT thanks you for your support of COM-001-2. The standards COM-002-3 and IRO-001-3 were approved by</p>		

Organization	Yes or No	Question 4 Comment
<p>industry in July 2012; therefore, the RCSDT is not able to respond to Dominion’s comments and consider changes to the standard. No change made.</p>		
<p>FirstEnergy</p>		<p>FE supports COM-001-2 and has no further comments.</p> <p>PLEASE NOTE: THE FOLLOWING COMMENTS RELATE TO COM-002-3 AND IRO-001-3 SINCE WE WERE NOT ABLE TO PROVIDE COMMENTS ON THE RECIRCULATION BALLOT AND WANTED TO EXPLAIN OUR REASONS FOR NOT SUPPORTING THOSE STANDARDS:</p> <p>Although we believe the team made significant improvements to the standard, and would support a 3-part communication standard, we believe the introduction of both COM-002-2 which utilizes Reliability Directives and COM-003-1 which utilizes Operating Communications cause confusion for system operators and may in fact be detrimental to reliability.</p> <p>We do not support two standards on three-part communication. We suggest, as we have in the past, that the subject of three-part communication be addressed in a single standard, and that the requirements be developed for simplicity. The industry is, and has been, using three-part communication for decades and although we agree it should be more consistently practiced and standardized, the required communications protocols should be simple while meeting the goal of BES reliability. Introducing complicated requirements and standards that have different definitions such as Reliability Directive and Operating Communication may cause the operator to hesitate when issuing directives in real-time and every second counts when a potential system emergency must be mitigated.</p> <p>Therefore, FE does not support the creation of both COM-003-1 nor the revisions to COM-002-2 and IRO-001-3 which introduce the “Reliability Directive” term and ask NERC to reevaluate the need to have two separate standards for three-part communication.</p>
<p><b>Response:</b> The RCSDT thanks you for your support of COM-001-2. The standards COM-002-3 and IRO-001-3 were approved by industry in July 2012; therefore, the RCSDT is not able to respond to FirstEnergy’s comments and consider changes to the standard.</p>		

Organization	Yes or No	Question 4 Comment
No change made.		
Indiana Municipal Power Agency		<p>IMPA does not like the wording in R11 that states "mutually agreeable action for the restoration of its Interpersonal Communication capability." IMPA sees that entities will have to prove that the action taken by entities was "mutually agreeable" to the parties involved which will be very problematic. IMPA believes as long as the entity who owns the equipment is taking steps to get it back into service that is all that should be required by any requirement of this standard.</p>
<p><b>Response:</b> The RCSDT addressed the concern about “mutually agreeable restoration time” by revising the phrase to “mutually agreeable action,” which allows the applicable entities to reach consensus on the effort needed to restore communications. Additionally, working toward a mutually agreeable action also ensures that both parties understand the magnitude of the loss of their Interpersonal Communication capability and agree to the actions needed to restore and minimize the time the capability is unavailable. From a compliance standpoint, the Distribution Provider and Generation Operator that is working to restore its Interpersonal Communication capability is not out of compliance as far as the entity is meeting the requirement for taking action to restore its capability. It is practical on the part of the Balancing Authority or Transmission Operator to reach a mutual agreement, as it will facilitate restoring the capability. No change made.</p>		
Texas Reliability Entity		<p>In the Measures for R3 and R4 (M3 and M4), should the phrase “each adjacent Transmission Operator asynchronously AND synchronously connected” be changed to “each adjacent Transmission Operator asynchronously OR synchronously connected”?</p> <p><b>Response:</b> The RCSDT agrees with your assessment in COM-001-2 and has changed the word in Measure M3 from “and” to “or” between the words “asynchronously and synchronously.” Error correction made.</p> <p>In the VSLs for R3 it appears that “Reliability Coordinator” should be “Transmission Operator”.</p> <p><b>Response:</b> The RCSDT agrees with your assessment and has advised NERC staff that the VSL for Requirement R3 should have the entity “Reliability Coordinator” replaced with “Transmission Operator” in COM-002-3 to be consistent with the named entities</p>



Organization	Yes or No	Question 4 Comment
		<p>in Requirement R3. Error correction made.</p> <p>In the VSLs for R5 it appears that “Reliability Coordinator” should be “Balancing Authority”.</p> <p><b>Response:</b> The RCSDT appreciates you bringing awareness to this error in Requirement R5 VSL. The reference to “Reliability Coordinator” has been changed to Balancing Authority for Requirement R5 in both the High and Severe VSL. Error correction made.</p> <p>In the Severe VSL for R10 the phrase “failed to notify the identified entities identified” should probably be “failed to notify the entities identified”.</p> <p><b>Response:</b> The RCSDT appreciates you bringing awareness to this error in Requirement R10 VSL Severe column. The first occurrence of “identified” has been removed. Error correction made.</p>
<p><b>Response:</b> Please see the above responses.</p>		
<p>Ingleside Cogeneration LP (Occidental Chemical in the ballot body)</p>		<p>Ingleside Cogeneration LP generally agrees with the modifications that the SDT has made to COM-001-2. However, we cannot vote to accept the standard unless requirement R10 is modified to include a minimum communications outage duration before consultation with the BA or TOP is necessary. This is similar to R10, which allows an outage to extend up to 30 minutes - thus avoiding the need for a notification that an insignificant interruption in service took place.</p> <p>The following language could be added to R11 as shown in the brackets below:</p> <p>R11. Each Distribution Provider and Generator Operator that experiences a failure of its Interpersonal Communication capability [that lasts 30 minutes or longer] shall consult each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of its Interpersonal Communication capability.</p>

Organization	Yes or No	Question 4 Comment
<p><b>Response:</b> The RCSDT notes that the requirement allows flexibility for the Distribution Provider and Generator Operator to define what constitutes a failure of its Interpersonal Communication capability. The RCSDT believes it is inappropriate to establish a single defined threshold applicable to the numerous entities applicable to this standard. No change made.</p>		
<p>Essential Power, LLC</p>		<p>It is unclear what we are trying to accomplish in R11. If the intent is to coordinate the restoration of communications, then there should be an additional requirement that the GOP have a Communications Recovery Plan, and R11 should focus on the coordination and implementation of that Plan.</p> <p>If the intent is to maintain continuous communications, then there should be an additional requirement for the GOP to maintain an Alternative Interpersonal Communications capability, and R11 should focus on the coordination and implementation of that capability.</p>
<p><b>Response:</b> The RCSDT thanks you for your comments. The intent of Requirement R11 is to require the Distribution Provider and Generator Operator to consult with its Balancing Authority or Transmission Operator, as the case may be, to mutually agree on the action needed to restore the Interpersonal Communication capability. Additionally, working toward a mutually agreeable action also ensures that both parties understand the magnitude of the loss of their Interpersonal Communication capability and impact to reliability; therefore, both need to agree on the actions needed to restore and minimize the time the capability is unavailable. It is practical on the part of the Balancing Authority or Transmission Operator to reach a mutual agreement, as it will facilitate restoring the capability. No change made.</p>		
<p>Manitoba Hydro</p>		<p>Manitoba Hydro would like additional clarification added to the definition of interpersonal communication. The definition should explicitly state that interpersonal communication does not data links (e.g. the ICCP data link). Also, does interpersonal communication include emails?</p> <p><b>Response:</b> With respect to the standard being tacit on “not for the exchange of data,” the RCSDT believes this concern is addressed within the earlier IRO-014-1 – Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators standard and now the proposed IRO-014-2 – Coordination Among Reliability Coordinators adopted by the NERC Board of Trustees August 4, 2011.</p>

Organization	Yes or No	Question 4 Comment
		<p>Additionally, Requirement R3 in IRO-010-1a – Reliability Coordinator Data Specification and Collection states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. No change made.</p> <p>Under the Effective Date Section, the effective date language has a few issues in its drafting. It would be clearer to use the word ‘following’ as opposed to the word ‘beyond’ (and this would also be more consistent with the drafting of similar sections in other standards). The words ‘the standard becomes effective’ in the third line are not needed. The words ‘made pursuant to the laws applicable to such ERO governmental authorities’ may not be appropriate. It’s not the laws applicable to the governmental authorities that are relevant, but the laws applicable to the entity itself. We would suggest wording like ‘or as otherwise made effective pursuant to the laws applicable to the Balancing Authority’.</p> <p><b>Response:</b> NERC staff note that the phrase: “... the standard becomes effective” is a clarifying statement that needs to remain. This phrase would become more important if the heading “Effective Date” was not used. The phrase, “made pursuant to the laws applicable to such ERO governmental authorities” is a reference to governmental entities that have authority over BPS reliability within a jurisdictional territory; for example, in the United States, the Federal Energy Regulatory Commission; and in Canada, those parties delegated authority by Canadian provinces. Therefore, the statement is appropriate because the laws that are applicable to “such ERO governmental entities” will determine the effective date under the circumstances, not necessarily the laws that are applicable to functional entities. No change made.</p> <p>Also, ERO is not defined.</p> <p><b>Response:</b> The RCSDT appreciates your comment. The language in the Effective Date section is standard language adopted by NERC and used throughout the body of</p>

Organization	Yes or No	Question 4 Comment
		<p>standards currently under development by teams. The RCSDT is not able to alter this language. No change made</p> <p>R11 and M11 - would suggest replacing ‘action’ with ‘plan of action’ or ‘action plan’</p> <p><b>Response:</b> The RCSDT believes the use of “action” is sufficient for Requirement R11 and Measure M11 and that adding “plan” does not add clarity. The RCSDT understands that whatever actions are mutually agreed upon will constitute a plan which the Distribution Provider or Generation Operator will use in the restoration of its Interpersonal Communication capability. No change made.</p> <p>M3 and M4 - the word ‘and’ between asynchronously and synchronously should more appropriately be ‘or’</p> <p><b>Response:</b> The RCSDT agrees with your assessment and has changed the word in Measure M3 from “and” to “or” between the words “asynchronously and synchronously”. Error correction made.</p> <p>M10 - the semi colon after stamped should be deleted</p> <p><b>Response:</b> The RCSDT agrees with your assessment and has added a colon at the appropriate location and changed the current colon to a comma for the Measures M9, M10, and M11. Error correction made.</p> <p>Compliance Section - Compliance Enforcement Authority is defined as CEA, but then both the acronym and the entire term is later used in the document. Should either not define, or use acronym consistently.</p> <p><b>Response:</b> The RCSDT notes that the usage of the acronyms is consistent with the NERC style guide. No change made.</p>
<p><b>Response:</b> Please see responses above.</p>		
MISO		<p>MISO respectfully submits that the subject matter of COM-001-1 is better addressed through an official NERC certification - that is, by having NERC certify that a registered</p>

Organization	Yes or No	Question 4 Comment
		<p>entity has the appropriate communications facilities - than through a formal Reliability Standard.</p> <p><b>Response:</b> NERC maintains an Organization Certification Program, the goal of which is to ensure that organizations who apply to register or are registered to perform certain reliability functions deemed particularly crucial to the reliability of the bulk power system will meet or exceed certain minimum criteria (i.e., Reliability Standards) demonstrating they are capable of performing the tasks (i.e., Requirements) for these functions. The process for certification of organizations is included in the NERC Rules of Procedure, Section 500 and Appendix 5A. For example, the first paragraph of Section 500 – Organization Registration and Certification states: “The purpose of the Organization Registration Program is to clearly identify those entities that are responsible for compliance with the FERC approved reliability standards. Organizations that are registered are included on the NERC Compliance Registry (NCR) and are responsible for knowing the content of and for complying with all applicable reliability standards...” The RCSDT has addressed the scope of the SAR in addressing communication requirements for entities through an open industry consensus process.</p> <p>Furthermore, the Reliability Standards surrounding communications should be performance based and specifically targeted toward testing, maintenance, and implementation of corrective actions when an issue arises or is otherwise detected. As a result of narrowing the focus of these standards, enforcement would then be tailored toward a Registered Entity’s failure to take such actions when necessary, a direct benefit and correlation to enhancement of the reliability of the BES.</p> <p><b>Response:</b> The RCSDT thanks you for your comment. Although this standard is not a Results-Based Standard (RBS), it achieves the need to require both Interpersonal Communication and Alternative Interpersonal Communication capability of the applicable entities to ensure reliable operations of the Bulk Electric System. The RCSDT believes the requirements achieve the needed level of communications to ensure reliable operations. No change made.</p>

Organization	Yes or No	Question 4 Comment
		<p>Under the currently proposed approach, the lack of a communication medium or a finding that a communication medium is “inadequate” or does not otherwise qualify under the standard would result in a non-compliance.</p> <p><b>Response:</b> The RCSDT is not sure what is meant by a “lack of communication medium.” The applicable entity either has the necessary Interpersonal Communication and Alternative Interpersonal Communication capability or does not. The requirements account for conditions where the capability is unavailable and has provided language to avoid situations of non-compliance due to the strict language construction of the requirements. No change made.</p> <p>Finally, MISO respectfully submits that:</p> <ul style="list-style-type: none"> <li>-Distribution Providers (DPs) and Generator Operators (GOPs) should have alternate communication media as well.</li> </ul> <p><b>Response:</b> The RCSDT thanks you for your comment about requiring the Distribution Provider and Generation Operator to have the requirements similar to that of the Reliability Coordinator, Transmission Operator, and Balancing Authority. The standard, as proposed, has included the Distribution Provider and Generation Operator in accordance with the regulatory statements in Order No. 693, Paragraphs 483, 491, 495, 496, and 503 which recognized the need for Distribution Providers and Generation Operators to have flexibility in meeting the communication capability requirements and not to burden smaller entities (i.e., DPs and GOPs) with the additional requirement of adding communication redundancy. No change made.</p> <ul style="list-style-type: none"> <li>-If an alternate communication tool is tested once a month, there is no need to address deficiencies within two hours; six hours is sufficient in such instances.</li> </ul> <p><b>Response:</b> The RCSDT contends the time frame has been through industry consensus, and two hours has been determined acceptable. No change made.</p> <ul style="list-style-type: none"> <li>-The standard should acknowledge that if more than two independent communication mechanisms are available, the VRF/VSL associated with missing a</li> </ul>

Organization	Yes or No	Question 4 Comment
		<p>timing requirement is minimal.</p> <p><b>Response:</b> The RCSDT agrees that the applicable entities in Requirements R1, R3, and R6 are required to designate an Alternative Interpersonal Communication capability; however, this does not create a rationale for lowering the VRF/VSL. The VRF is a measure of the risk, if violated, and the VSL is a measure of non-compliance with the specific requirement.</p> <p>The RCSDT added the High VSL for Requirements R1 through R8 from draft 5 to draft 6 to account for greater granularity in a violation. For each applicable responsible entity named in each of the requirements, the number of entities for which it must have an Interpersonal Communication or Alternative Interpersonal Communication may vary significantly. The RCSDT believed that adding one additional VSL was an appropriate solution to account for variability in the number of entities. No change made.</p> <p>The SDT should require reporting times of failed mediums for GOP and DP similar to that for RC/BA/TOP.</p> <p><b>Response:</b> The RCSDT thanks you for your comment about requiring the Distribution Provider and Generation Operator to have the requirements similar to that of the Reliability Coordinator, Transmission Operator, and Balancing Authority. The standard, as proposed, has included the Distribution Provider and Generation Operator in accordance with the regulatory statements in Order No. 693, Paragraphs 483, 491, 495, 496, and 503 which recognized the need for Distribution Providers and Generation Operators to have flexibility in meeting the communication capability requirements and not to burden smaller entities (i.e., DPs and GOPs) with the additional requirement of adding communication redundancy. No change made.</p>
<p><b>Response:</b> Please see responses above.</p>		
<p>Oncor Electric Delivery Company LLC</p>		<p>Oncor takes the position that the premise of R3 does not provide a reliability enhancement but may in effect; increase the risk to reliability by placing notification</p>

Organization	Yes or No	Question 4 Comment
		<p>requirements on the Transmission Operator that could best be managed by the Reliability Coordinator. In fact,</p> <p>Oncor takes the position that as a Transmission Operator, it is being placed into the position of having to continually validate the registration status of every entity that may be registered as a Distribution Provider, Transmission Operator, and Generator Operator within its Transmission Operator Area. Oncor takes the position that since each of these entities are in the applicability section of the standard, the Distribution Provider, Transmission Operator, and Generator Operator should be responsible for seeking Interpersonal Communication capability with the Transmission Operator and the Transmission Operator should then reciprocate Interpersonal Communication capability in response to their initial request. This eliminates an unnecessary compliance obligation of the Transmission Operator to manage "who is" and "who is not" registered as a Generator Operator, Distribution Provider or Transmission Operator.</p> <p><b>Response:</b> The RCSDT notes this is not within the scope of the SAR. No change made.</p> <p>Oncor recommends the following change to the standard language:</p> <p>Remove 3.3 &amp; 3.4 because R7 and R8 already cover the GO and DP seeking Interpersonal Communication capability with the Transmission Operator.</p> <p><b>Response:</b> The RCSDT thanks you for your comment and notes that the standard is addressing FERC directives concerning the Generation Owner and Distribution Provider. Entities on each end of the communication capability must have a responsibility to have communications. No change made.</p> <p>Oncor also takes the position that the Reliability Coordinator (RC) is in the best position and not the Transmission Operator to make extensive notifications on a broad basis in the event of a failure of its Interpersonal Communication. In accordance with that position, the Transmission Operator should make a single notification to the RC, and the RC would then make the notification to all impacted</p>



Organization	Yes or No	Question 4 Comment
		<p>entities in the event of the failure of the Transmission Operator’s Interpersonal Communication.</p> <p><b>Response:</b> The RCSDT notes this implementation is entity-specific and is not achievable by all entities. Each entity is required to make the notifications as applicable to the requirements. No change made.</p> <p>Oncor proposes the following language for R10</p> <p>“R10. Each Transmission Operator shall notify the Reliability Coordinator and the Balancing Authority within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer.</p> <p>After notification by any Transmission Operator, the Reliability Coordinator shall immediately notify entities as identified in Requirements R1, R3, and R5 of any Transmission Operator's detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer.</p> <p>Each Reliability Coordinator and Balancing Authority shall notify entities as identified in Requirements R1, R3, and R5 within 60 minutes of the detection of a failure of its own Interpersonal Communication capability that lasts 30 minutes or longer.”</p> <p><b>Response:</b> The RCSDT disagrees with the method. Each entity is required to make the notifications as applicable to the requirements. No change made.</p>
<p><b>Response:</b> Please see the above responses.</p>		
Central Lincoln		<p>Prior Central Lincoln Comment</p> <p>1) The new requirement presents us with a paradoxical situation. The communication has failed, so we must consult; yet consultation requires communication. We note that the SDT used the word “any”, implying that multiple communication paths are required. The reality of the situation at Central Lincoln, due to our remote location, is that a single back hoe incident at the right location can take out all of our of our communication capability (including the terrestrial portion of the cellular networks)</p>

Organization	Yes or No	Question 4 Comment
		<p>with our BA/TO; making this requirement impossible to meet for this circumstance using our present capabilities.</p> <p>Prior RCSDT Response</p> <p>1) The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. Furthermore, R11 addresses the direction given in Order 693 that DP and GOP entities do not necessarily need to have Alternative Interpersonal Communication capability. The requirement allows flexibility in “consult with” by not naming the method. If all communications are out, then the DP or GOP may have to meet the requirement by an in-person consultation.</p> <p>New Central Lincoln Response</p> <p>1) Thank you for the changes made. We realize that in-person consultation is an option, but find it not too hard to imagine the same event that disrupts communications might also block roads. We don’t believe entities should be found non-compliant and sanctioned for events beyond their control.</p> <p><b>Response:</b> The RCSDT understands the paradoxical situation presented here. The standard addresses the essential communication capability needed to operate the Bulk Electric System reliably. No change made.</p> <p>Prior Central Lincoln Comment</p> <p>2) We also note that no time limit was indicated. Most interruptions are brief, and fixed before consultation could reasonably take place. CEAs will be finding entities non-compliant for quickly fixing problems at their end without first consulting to ensure the restoration time was agreeable. To avoid non-compliance, entities will be forced to delay repairs while they investigate alternative communication paths for consultation purposes. We fail to see how such an outcome improves reliability.</p> <p>Prior RCSDT Response</p>

Organization	Yes or No	Question 4 Comment
		<p>2) The DP and GOP are only required to have Interpersonal Communication capability. If the DP or GOP restores its Interpersonal Communication capability before it could reasonably contact the affected entity by another method, there is no failure to comply. The DP or GOP could then consult with the affected entity to determine a mutually agreeable action. In this case, the RCSDT believes the "action" would then be the entities acknowledging the failure and the repair; therefore, no mutually agreeable action is needed. The RCSDT recognizes there is no way to account for all the various circumstances in a failure. To comply, the DP and GOP are still required to consult the entity which the failure affected regardless of whether the Interpersonal Communication capability was restored or is still failed. No change made.</p> <p>New Central Lincoln Response</p> <p>2) If consultation after restoration is acceptable, we suggest that this be made clear in the requirement. Presently it is not at all clear, and there is no accompanying guidance document to suggest so. We also remain unclear what reliability benefit would result from such a consultation following restoration. While accounting for all the various failures might be impossible, we would like to see a few of the more common ones discussed in a guidance document.</p> <p><b>Response:</b> The RCSDT notes that the requirement allows flexibility for the Distribution Provider and Generator Operator to define what constitutes a failure of its Interpersonal Communication capability. The RCSDT believes it is inappropriate to establish a single-defined threshold or attempt to make a list of the various failures which may potentially affect the numerous entities applicable to this standard. No change made.</p> <p>Prior Central Lincoln Comment</p> <p>3) The new requirement is one sided, requiring the DP and GOP to consult with no corresponding requirement for the TO or BA to have personnel available for such a consultation. Consultation failure or failure to mutually agree due to actions or</p>

Organization	Yes or No	Question 4 Comment
		<p>inactions on the part of the TO or BA should not result in an enforcement action against the DP or GOP, yet that is how the requirement is written.</p> <p>Prior RCSDT Response</p> <p>3) The RCSDT notes that once the failure has been detected, the responsible entity must make the consultation with the BA or TOP; that relieves the compliance burden. While the RCSDT understands your concern about single points of failure, the question becomes should this relieve the DP or GOP of the requirement for having Interpersonal Communication capabilities. No change made.</p> <p>New Central Lincoln Response</p> <p>3) The requirement remains one-sided. If a consultation effort fails due to actions or inactions taken by the BA/TO, the DP or GOP is the only entity that can be found non-compliant.</p> <p><b>Response:</b> The RCSDT addressed the concern about “mutually agreeable restoration time” by revising the phrase to “mutually agreeable action,” which allows the applicable entities to reach consensus on the effort needed to restore communications. Additionally, working toward a mutually agreeable action also ensures that both parties understand the magnitude of the loss of their Interpersonal Communication capability and agree to the actions needed to restore and minimize the time the capability is unavailable. From a compliance standpoint, the Distribution Provider and Generation Operator that is working to restore its Interpersonal Communication capability is not out of compliance as far as the entity is meeting the requirement for taking action to restore its capability. It is practical on the part of the Balancing Authority or Transmission Operator to reach a mutual agreement, as it will facilitate restoring the capability. No change made.</p> <p>Prior Central Lincoln Comment</p> <p>4) The new requirement fails to add any “clarity” to the other requirements, and we don’t see that the stakeholders thought there was a problem with DP/GOP obligation clarity. Instead, it adds new obligations with no justification for how they enhance</p>

Organization	Yes or No	Question 4 Comment
		<p>reliability. We suggest removing the requirement.</p> <p>Prior RCSDT Response</p> <p>4) Based on the RCSDT’s understanding of the comments received on the previous posting, the industry desired additional clarity on specifically what communication capabilities the DP and GOP were required to have. There was confusion that the standard did not specifically say that the DP and GOP were required to have Alternative Interpersonal Communication capabilities. R11 clarifies that a DP and GOP are not required to have Alternative Interpersonal Communication capability if the DP or GOP consult with their TOP or BA, whichever is applicable in the given situation, and they mutually agree that the restoration action does not adversely impact the reliability of the BES. No change made.</p> <p>New Central Lincoln Response</p> <p>4) We disagree that R11 clarifies anything regarding Alternative Interpersonal Communication capabilities; the requirement says nothing on the matter. If other requirements remain unclear, we suggest they be clarified within those requirements. We ask that R11 be removed. Alternatively, we suggest that a plan for communication failure be developed by the affected entities prior to a failure, applicable to both the BA/TO and DP/GOP.</p> <p><b>Response:</b> The RCSDT contends the desired result is restoring the capability and that the most appropriate and measureable way to address the loss of the Distribution Provider or Generation Operator’s capability is to require the entities to communicate the action taken to restore the capability. No change made.</p> <p>Prior Central Lincoln Comment</p> <p>5) As stated in our prior comments, we continue to have problems with COM-002, R2 and R3 as written. The SDT’s answer (“It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive”) addresses our concern perfectly, and we would agree with such an expectation. Unfortunately, the expressed expectation</p>

Organization	Yes or No	Question 4 Comment
		<p>is not in the proposed standard or even in a proposed guideline for the standard.</p> <p>Prior RCSDT Response</p> <p>5) The RCSDT believes this is a process or procedure question that should be determined by the entity in how it handles communication with the RC. The standard, as written does, not preclude the entity from having a procedure. No change made.</p> <p>New Central Lincoln Response</p> <p>5) We agree that this is a procedure issue, but disagree that the procedure lies with the entity receiving the Reliability Directive. The SDT’s words inside the quotation marks above state it is the issuer of the Directive that should request a return call. Procedures like this, in order to ensure the Directive gets to the party who understands it and can take the needed action, are the responsibility of the issuer. If reliability is at risk, it is little to ask that issuers of Reliability Directives be required to attempt to reach the proper party prior to identifying, delivering the directive, and asking for repetition.</p> <p><b>Response:</b> The standard COM-002-3 was approved by industry in July 2012; therefore, the RCSDT is not able to respond to Central Lincoln’s comments and consider changes to the standard. No change made.</p>
<p><b>Response:</b> Please see responses above.</p>		
Liberty Electric Power		<p>R11 remains an issue even with the revision. The purpose of R11 should be to inform the BA and TO of a loss of interpersonal communications capability so that the BA or TO can react effectively to grid conditions in an emergency. The methods of repair for generator telephone and data lines are properly the business decisions of the generator, and there is no benefit to the reliability of the BES if a standard requires a generator to attempt to gain consensus from the BA and TO on his repair actions.</p> <p>Taking the time to discuss a "mutually agreed action" will delay the start of repairs,</p>

Organization	Yes or No	Question 4 Comment
		<p>and lengthen the time of a communications outage as generators first must discuss the issue with the BA and TO instead of initiating the action on their own and informing those entities of the failure. Further, failure to follow a mutually agreed action plan could become a topic of exploration for audit staff. As telecommunications repairs are generally not in the scope of expertise of electrical generators, this places the entities at the mercy of contractor repair schedules, making following any mutually agreed action problematic.</p> <p><b>Response:</b> The RCSDT notes that the purpose of consulting with the appropriate entities ensures those entities are aware of the loss of Interpersonal Communication capabilities and will have the necessary information to adjust reliability operations accordingly. There is nothing in Requirement R11 preventing the Distribution Provider or Generator Operator from taking action beforehand. No change made.</p> <p>Further, there is no duration trigger on R11, as opposed to the RC/TO/BA requirement in R10. This forces the generator to inform the listed entities even of losses of capability which last a handful of seconds. If a small generator has a single line into the control room, and the control room operator is on the phone to the TOP, does he then have to inform the TO and BA at the end of the call that they would have received a busy signal? If the operator knocks the phone from the cradle, is the requirement to inform triggered? In a strict reading of the language, it would be.</p> <p>Suggested rewrite of R11:</p> <p>"Upon discovery of an unresolved loss of interpersonal communications which has the potential to last more than 15 minutes, the GOP shall inform the entities listed in R8 of the status of interpersonal communications. The GOP shall initiate the process to restore the interpersonal communications, and inform the entities listed in R8 of the restoration of communications when repairs are complete."</p> <p><b>Response:</b> The RCSDT notes that the requirement allows flexibility for the Distribution Provider and Generator Operator to define what constitutes a failure of its Interpersonal Communication capability. The RCSDT believes it is inappropriate to</p>

Organization	Yes or No	Question 4 Comment
		establish a single-defined threshold applicable to the numerous entities applicable to this standard. No change made.
<b>Response:</b> Please see responses above.		
Tacoma Power		<p>R9 - The Standard requires that when there is a failure to a primary or alternate communication system that action is initiated within 2 hours of the communication failure. It is not clear what the term “action” means. Tacoma requests clarification for what “actions” are intended by the standard.</p> <p><b>Response:</b> The RCSDT notes that the requirement is for the entity to “initiate action,” which may include, but is not limited to, notifying or requesting repair to restore the capability. The option is to designate an Alternative Interpersonal Communication capability. Additionally, there is no time constraint for the Interpersonal Communication capability, only the AIC. No change made.</p> <p>R10 - Interpersonal Communication is defined as “any medium that allows two or more individuals to interact, consult, or exchange information”. As it is written, R10 requires an entity to contact another entity “within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer”. This contact may not be possible in a situation where there is “a failure of Interpersonal Communication capability”.</p> <p><b>Response:</b> The RCSDT notes that the responsible entities named in Requirement R10 are also required to have a designated Alternative Interpersonal Communication capability and should be able to make the necessary notifications. No change made.</p> <p>R11 – The lack of a time line in R11 seems inconsistent with the time line requirements in R9 and R10. If there is a communication failure affecting the GO and DP then the standard only requires that they agree on an action to restore communication but does not assign a timeline.</p> <p><b>Response:</b> The RCSDT notes that the requirement allows flexibility for the Distribution Provider and Generator Operator to define what constitutes a failure of</p>



Organization	Yes or No	Question 4 Comment
		its Interpersonal Communication capability. The RCSDT believes it is inappropriate to establish a single-defined threshold applicable to the numerous entities applicable to this standard. No change made.
<b>Response:</b> Please see responses above.		
LG&E and KU Services		<p>Regarding COM-001-2 and proposed definitions, LG&amp;E and KU Services recommends changing the terms being defined from “Interpersonal Communications” and “Alternative Interpersonal Communication” to “Means for Interpersonal Communication” and “Alternative Means for Interpersonal Communication.” A communication is an exchange of information, not a medium. The medium is simply the means. LG&amp;E and KU Services Company further recommend that each requirement be rewritten with these new defined terms as appropriate and that the word “capabilities” currently following the defined terms be removed from each of the requirements.</p> <p><b>Response:</b> The RCSDT notes that commenters recommended using the terms, such as, “primary,” “secondary,” “device,” “means,” and “medium” with regard to the proposed definitions. The RCSDT thanks you for your suggestion; however, the requirements are for “capability” and adding such proposed terms is not needed to achieve the necessary clarity. No change made.</p> <p>We suggest the definition for “Means for Interpersonal Communication” be: “A medium utilizing electromagnetic energy that allows two or more individuals to interact, consult or exchange information.” We suggest the definition for “Alternative Means for Interpersonal Communication” be: “Any Means for Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Means for Interpersonal Communications used for day-to-day operation.” Regarding R1 through R10, it is unclear what “shall have Interpersonal Communications capability” means. That could mean that the responsible entity simply has to have an IC capability that is different from our designated AIC capability (as R1 through R8 suggest). That could also mean,</p>

Organization	Yes or No	Question 4 Comment
		<p>differently, that the responsible entity has to designate an IC capability (as R10 suggests). It is also unclear whether the IC capability can change, e.g. from email to land line. There is nothing in the Standard that makes this clear. Regarding R11, as written it is unclear who would be responsible for non-compliance if the consulting entities did not “determine a mutually agreeable action for the restoration of its Interpersonal Communication capability.”</p> <p><b>Response:</b> The RCSDT believes the definitions and requirements are clear and does not agree with the proposed definition changes. The requirements and definition allow the entity to determine the medium. No change made.</p>
<p><b>Response:</b> Please see responses above.</p>		
<p>City of Tallahassee (TAL)</p>		<p>TAL has no comments on COM-001-2.</p> <p>However, for COM-002-3, under Data Retention, the second bullet requires the BA, TOP, GOP, and DP to retain evidence for R1, M1; however, R1 is not applicable to the GOP or DP. This should read R2, M2.</p> <p><b>Response:</b> The RCSDT agrees with your assessment that R1 and M1 should be R2 and M2. The RCSDT has advised NERC staff of the typo in COM-002-3.</p> <p>Also, there is room for debate on the clarity of the VSLs for R3. Specifically, the use of the word "accurately" could be interpreted to mean "verbatim" in cases where varying verbiage results in the same understanding and action between the parties, and therefore no re-issuance of the directive is required in the eyes of the issuer.</p> <p><b>Response:</b> The standard COM-002-3 was approved by industry in July 2012; therefore, the RCSDT is not able to respond to the City of Tallahassee’s comment to consider changes to the standard. No change made.</p>
<p><b>Response:</b> Please see responses above.</p>		
<p>American Electric Power</p>		<p>The definition of Alternative Interpersonal Communication is “Any Interpersonal</p>

Organization	Yes or No	Question 4 Comment
		<p>Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.” Does the Alternative Interpersonal Communication have to be a different technology? For example, if a satellite phone is used, but it calls the same land-line on the other end, does this qualify as Alternative Interpersonal Communication?</p> <p><b>Response:</b> The proposed definitions only specify that the alternative has to utilize a separate medium. The standard is not technology dependent and allows entities flexibility in selecting the capability appropriate for its need. No change made.</p> <p>How does a TOP notify a DP of a failure in its Interpersonal Communications capability per R10, if it there is no Alternative Interpersonal Communication required? Within Requirement 10, the entities to be notified should not reference R1, R3, and R5 but should instead reference R2, R4, and R6 respectively. This change is necessary because the requirements we are referring to are those that have Alternative Interpersonal Communications. You cannot expect notification to entities where an Alternative Interpersonal Communication does not exist.</p> <p><b>Response:</b> The RCSDT notes that Requirement R10 applies to the TOP and that the TOP is required to have AIC per Requirement R4. The RCSDT disagrees with the suggested change in the requirement references because the current references are specific to the entities that apply to the Interpersonal Communication capability. No change made.</p> <p>With regard to the requirement references in R10, the RCSDT agrees with the ambiguity in both the Requirement R10 and Measure M10 and proposes to clarify Requirement R10, Measure M10, and R10 VSL by inserting the word “respectively.” For example, adding the word “respectively” means that the Reliability Coordinator in R1 is not required to notify the entities identified in Requirement R3 or R5. The RCSDT intended the requirements to map to the entity. Clarifying changes made.</p>
<p><b>Response:</b> Please see the responses above.</p>		

Organization	Yes or No	Question 4 Comment
<p>Exelon Corporation and its affiliates</p>		<p>The definition of Interpersonal Communication requires further clarification. The use of the term “Any medium” opens the definition up to broad interpretation. It’s not clear whether the definition means to apply to the point of communication owned, managed, and operated by the entity, or the total communications pathway? For example if entity A’s phone system is working fine, but Entity B is experiencing trouble, does Entity A have a compliance concern if Entity B experiences a communication breakdown on their end of the medium?</p> <p>Please provide greater insight on the intended compliance obligation and consider the following revision to the definition:</p> <p>Interpersonal Communication: Any medium, owned, managed, or operated by the applicable entity, that allows two or more individuals to interact, consult, or exchange information.</p> <p><b>Response:</b> The RCSDT notes that each requirement does not prescribe the “how,” “why,” “who,” or “where” concerning the failure or loss of its Interpersonal Communication (or Alternative Interpersonal Communication) capability. It is the responsibility of the applicable entity to perform the “what” of each requirement. There is no compliance risk based on the “how,” “why,” “who,” or “where.” No change made.</p> <p>The RCSDT appreciates the suggested changes to the defined term. The suggestion introduces specifics which make the definition less flexible and more prescriptive. Such a change could potentially be invalidated by the way an entity operates in the future. No change made.</p> <p>R9 provides ambiguous instruction for the resolution process surrounding tests and failures of Alternative Interpersonal Communication capability. Please confirm whether the intent of the requirement is to initiate repairs within two hours, or to effect repairs within two hours, with the alternate option being to designate a replacement Alternative Interpersonal Communication if repairs cannot be completed within two hours.</p>

Organization	Yes or No	Question 4 Comment
		<p><b>Response:</b> The RCSDT notes that the requirement is for the entity to “initiate action,” which may include, but is not limited to, notifying or request repair to restore the capability. The option is to designate an Alternative Interpersonal Communication capability. No change made.</p> <p>R10 has similar ambiguity, referencing a 60 minute notification timeframe requirement upon the detection of a failure lasting 30 minutes or longer. Please confirm the intended start of the requirement notification. Does the clock for notification begins at the point of failure, at the point of discovery, or at the point that the failure is discovered to have been effective for 30 minutes or greater? Thank you for the opportunity to comment.</p> <p><b>Response:</b> The RCSDT notes the 60-minute clock starts at the point the failure has reached the 30-minute threshold. This is to allow time for intermittent failures to be resolved. No change made.</p>
<p><b>Response:</b> Please see the responses above.</p>		
<p>ISO/RTO Standards Review Committee</p>		<p>The IRC continues to believe that these a certification types of requirements and that they do not belong in a standard.</p> <p>The SRC believes that the requirement to have a medium to communicate should be required to be certified.</p> <p><b>Response:</b> NERC maintains an Organization Certification Program, the goal of which is to ensure that organizations who apply to register or are registered to perform certain reliability functions deemed particularly crucial to the reliability of the bulk power system will meet or exceed certain minimum criteria (i.e., Reliability Standards) demonstrating they are capable of performing the tasks (i.e., Requirements) for these functions. The process for certification of organizations is included in the NERC Rules of Procedure, Section 500 and Appendix 5A. For example, the first paragraph of Section 500 – Organization Registration and Certification states: “The purpose of the Organization Registration Program is to clearly identify those</p>

Organization	Yes or No	Question 4 Comment
		<p>entities that are responsible for compliance with the FERC approved reliability standards. Organizations that are registered are included on the NERC Compliance Registry (NCR) and are responsible for knowing the content of and for complying with all applicable reliability standards...” The RCSDT has addressed the scope of the SAR in addressing communication requirements for entities through an open industry consensus process. No change made.</p> <p>When you are operating as a registered entity, the requirements should be performance based such as taking corrective actions and if you fail to communicate for any reason you will be found non-compliance. The lack of a communication medium should not be a defense for non-compliance of the performance based standards.</p> <p><b>Response:</b> The RCSDT thanks you for your comment. Although this standard is not a Results-Based Standard (RBS), it achieves the need to require both Interpersonal Communication and Alternative Interpersonal Communication capability of the applicable entities to ensure reliable operations of the Bulk Electric System. The RCSDT believes the requirements achieve the needed level of communications to ensure reliable operations. No change made.</p> <p>The SDT should require reporting times of failed mediums for GOP and DP similar to that for RC/BA/TOP.</p> <p><b>Response:</b> The RCSDT notes that the requirement allows flexibility for the Distribution Provider and Generator Operator to define what constitutes a failure of its Interpersonal Communication capability. The RCSDT believes it is inappropriate to establish a single-defined threshold applicable to the numerous entities applicable to this standard. No change made.</p>
<b>Response:</b>		
ISO New England Inc		The ISO-NE continues to believe that these a certification types of requirements and that they do not belong in a standard.

Organization	Yes or No	Question 4 Comment
		<p>ISO-NE believes that the requirement to have a medium to communicate should be required to be certified.</p> <p><b>Response:</b> NERC maintains an Organization Certification Program, the goal of which is to ensure that organizations who apply to register or are registered to perform certain reliability functions deemed particularly crucial to the reliability of the bulk power system will meet or exceed certain minimum criteria (i.e., Reliability Standards) demonstrating they are capable of performing the tasks (i.e., Requirements) for these functions. The process for certification of organizations is included in the NERC Rules of Procedure, Section 500 and Appendix 5A. For example, the first paragraph of Section 500 – Organization Registration and Certification states: “The purpose of the Organization Registration Program is to clearly identify those entities that are responsible for compliance with the FERC approved reliability standards. Organizations that are registered are included on the NERC Compliance Registry (NCR) and are responsible for knowing the content of and for complying with all applicable reliability standards...” The RCSDT has addressed the scope of the SAR in addressing communication requirements for entities through an open industry consensus process. No change made.</p> <p>When you are operating as a registered entity, the requirements should be performance based such as taking corrective actions and if you fail to communicate for any reason you will be found non-compliance. The lack of a communication medium should not be a defense for non compliance of the performance based standards.</p> <p><b>Response:</b> The RCSDT thanks you for your comment. Although this standard is not a Results-Based Standard (RBS), it achieves the need to require both Interpersonal Communication and Alternative Interpersonal Communication capability of the applicable entities to ensure reliable operations of the Bulk Electric System. The RCSDT believes the requirements achieve the needed level of communications to ensure reliable operations. No change made.</p> <p>The SDT should require reporting times of failed mediums for GOP and DP similar to</p>

Organization	Yes or No	Question 4 Comment
		<p>that for RC/BA/TOP.</p> <p><b>Response:</b> The RCSDT notes that the requirement allows flexibility for the Distribution Provider and Generator Operator to define what constitutes a failure of its Interpersonal Communication capability. The RCSDT believes it is inappropriate to establish a single-defined threshold applicable to the numerous entities applicable to this standard. No change made.</p>
<p><b>Response:</b> Please see responses above.</p>		
<p>SERC OC Standards Review Group</p>		<p>The SERC OC SRG would like to thank the Standard Drafting Team for their service.”The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers.”</p>
<p><b>Response:</b> The RCSDT thanks you for your support.</p>		
<p>SPP Standards Review Group</p>		<p>There are a couple of cut &amp; paste errors in the VSLs for R3 and R5.</p> <p>In R3, Reliability Coordinator in the High and Severe VSLs should be replaced with Transmission Operator.</p> <p><b>Response:</b> The RCSDT appreciates you bringing awareness to this error in Requirement R3 VSL. The reference to “Reliability Coordinator” has been changed to Transmission Operator for Requirement R3 in both the High and Severe VSL. Error correction made.</p> <p>In R5, Reliability Coordinator in the High and Severe VSLs should be replaced with Balancing Authority.</p> <p><b>Response:</b> The RCSDT appreciates you bringing awareness to this error in Requirement R5. The reference to “Reliability Coordinator” has been changed to Balancing Authority for Requirement R5 in both the High and Severe VSL. Error correction made.</p>



Organization	Yes or No	Question 4 Comment
<b>Response:</b> Please see responses above.		
PacifiCorp		N/A
Arizona Public Service Company		None

END OF REPORT

## A. Introduction

1. **Title:** **Communications**
2. **Number:** COM-001-2
3. **Purpose:** To establish Interpersonal Communication capabilities necessary to maintain reliability.
4. **Applicability:**
  - 4.1. Transmission Operator
  - 4.2. Balancing Authority
  - 4.3. Reliability Coordinator
  - 4.4. Distribution Provider
  - 4.5. Generator Operator
5. **Effective Date:** The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

## B. Requirements

- R1. Each Reliability Coordinator shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
  - 1.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.
  - 1.2. Each adjacent Reliability Coordinator within the same Interconnection.
- R2. Each Reliability Coordinator shall designate an Alternative Interpersonal Communication capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
  - 2.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.
  - 2.2. Each adjacent Reliability Coordinator within the same Interconnection.
- R3. Each Transmission Operator shall have Interpersonal Communication capability with the following entities (unless the Transmission Operator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
  - 3.1. Its Reliability Coordinator.
  - 3.2. Each Balancing Authority within its Transmission Operator Area.

- 3.3. Each Distribution Provider within its Transmission Operator Area.
  - 3.4. Each Generator Operator within its Transmission Operator Area.
  - 3.5. Each adjacent Transmission Operator synchronously connected.
  - 3.6. Each adjacent Transmission Operator asynchronously connected.
- R4.** Each Transmission Operator shall designate an Alternative Interpersonal Communication capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 4.1. Its Reliability Coordinator.
  - 4.2. Each Balancing Authority within its Transmission Operator Area.
  - 4.3. Each adjacent Transmission Operator synchronously connected.
  - 4.4. Each adjacent Transmission Operator asynchronously connected.
- R5.** Each Balancing Authority shall have Interpersonal Communication capability with the following entities (unless the Balancing Authority detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 5.1. Its Reliability Coordinator.
  - 5.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area.
  - 5.3. Each Distribution Provider within its Balancing Authority Area.
  - 5.4. Each Generator Operator that operates Facilities within its Balancing Authority Area.
  - 5.5. Each Adjacent Balancing Authority.
- R6.** Each Balancing Authority shall designate an Alternative Interpersonal Communication capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 1.1. Its Reliability Coordinator.
  - 1.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area.
  - 1.3. Each Adjacent Balancing Authority.
- R7.** Each Distribution Provider shall have Interpersonal Communication capability with the following entities (unless the Distribution Provider detects a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply): *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*
- 7.1. Its Balancing Authority.
  - 7.2. Its Transmission Operator.
- R8.** Each Generator Operator shall have Interpersonal Communication capability with the following entities (unless the Generator Operator detects a failure of its Interpersonal

Communication capability in which case Requirement R11 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*

**8.1.** Its Balancing Authority.

**8.2.** Its Transmission Operator.

**R9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communication capability at least once each calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communication capability within 2 hours. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations, Same-day Operations]*

**R10.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1, R3, and R5, respectively within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*

**R11.** Each Distribution Provider and Generator Operator that detects a failure of its Interpersonal Communication capability shall consult each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of its Interpersonal Communication capability. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*

### **C. Measures**

**M1.** Each Reliability Coordinator shall have and provide upon request evidence that it has Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R1.)

**M2.** Each Reliability Coordinator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R2.)

- M3.** Each Transmission Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority, Distribution Provider, and Generator Operator within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously or synchronously connected, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communication. (R3.)
- M4.** Each Transmission Operator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously and synchronously connected, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R4.)
- M5.** Each Balancing Authority shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator and Generator Operator that operates Facilities within its Balancing Authority Area, each Distribution Provider within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R5.)
- M6.** Each Balancing Authority shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator that operates Facilities within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R6.)
- M7.** Each Distribution Provider shall have and provide upon request evidence that it has Interpersonal Communication capability with its Transmission Operator and its Balancing Authority, which could include, but is not limited to:

- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R7.)
- M8.** Each Generator Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Balancing Authority and its Transmission Operator, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R8.)
- M9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it tested, at least once each calendar month, its Alternative Interpersonal Communication capability designated in Requirements R2, R4, or R6. If the test was unsuccessful, the entity shall have and provide upon request evidence that it initiated action to repair or designated a replacement Alternative Interpersonal Communication capability within 2 hours. Evidence could include, but is not limited to: dated and time-stamped test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R9.)
- M10.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it notified entities as identified in Requirements R1, R3, and R5, respectively within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasted 30 minutes or longer. Evidence could include, but is not limited to: dated and time-stamped test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R10.)
- M11.** Each Distribution Provider and Generator Operator that detected a failure of its Interpersonal Communication capability shall have and provide upon request evidence that it consulted with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine mutually agreeable action to restore the Interpersonal Communication capability. Evidence could include, but is not limited to: dated operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R11.)

## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance Enforcement Authority**

The Regional Entity shall serve as the Compliance Enforcement Authority (CEA) unless the applicable entity is owned, operated, or controlled by the Regional Entity. In such cases, the ERO or a Regional Entity approved by FERC or other applicable governmental authority shall serve as the CEA.

## 1.2. Compliance Monitoring and Enforcement Processes

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

## 1.3. Data Retention

The Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator for Requirements R1, R2, R9, and R10, Measures M1, M2, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.
- The Transmission Operator for Requirements R3, R4, R9, and R10, Measures M3, M4, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.
- The Balancing Authority for Requirements R5, R6, R9, and R10, Measures M5, M6, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.
- The Distribution Provider for Requirements R7 and R11, Measures M7 and M11 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.
- The Generator Operator for Requirements R8 and R11, Measures M8 and M11 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.

If a Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, or Generator Operator is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

## 1.4. Additional Compliance Information

None.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	The Reliability Coordinator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Reliability Coordinator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R2	N/A	N/A	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R2, Parts 2.1 or 2.2.	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R2, Parts 2.1 or 2.2.
R3	N/A	N/A	The Transmission Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Transmission Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Transmission Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Transmission Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R4	N/A	N/A	The Transmission Operator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.	The Transmission Operator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.



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R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R5	N/A	N/A	The Balancing Authority failed to have Interpersonal Communication capability with one of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Balancing Authority detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Balancing Authority failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Balancing Authority detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R6	N/A	N/A	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.
R7	N/A	N/A	The Distribution Provider failed to have Interpersonal Communication capability with one of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Distribution Provider failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.

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R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R8</b>	N/A	N/A	The Generator Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Generator Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.
<b>R9</b>	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 2 hours and less than or equal to 4 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 4 hours and less than or equal to 6 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 6 hours and less than or equal to 8 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to test the Alternative Interpersonal Communication capability once each calendar month.  OR The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 8 hours upon an unsuccessful test.
<b>R10</b>	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 60 minutes but less than or equal to 70 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 70 minutes but less than or equal to 80 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 80 minutes but less than or equal to 90 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 90 minutes.

**Standard COM-001-2 — Communications**

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R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R11	N/A	N/A	N/A	<p>The Distribution Provider or Generator Operator that detected a failure of its Interpersonal Communication capability failed to consult with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of the Interpersonal Communication capability.</p>

**E. Regional Differences**

None identified.

**F. Associated Documents**

**Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
1.1	October 29, 2008	BOT adopted errata changes; updated version number to “1.1”	Errata
2	November 7, 2012	Adopted by Board of Trustees	Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Replaced R1 with R1-R8; R2 replaced by R9; R3 included within new R1; R4 remains enforce pending Project 2007-02; R5 redundant with EOP-008-0, retiring R5 as redundant with EOP-008-0, R1; retiring R6, relates to ERO procedures; R10 & R11, new.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R8</b>	N/A	N/A	The Generator Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Generator Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.
<b>R9</b>	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 2 hours and less than or equal to 4 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 4 hours and less than or equal to 6 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 6 hours and less than or equal to 8 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to test the Alternative Interpersonal Communication capability once each calendar month.  OR The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 8 hours upon an unsuccessful test.
<b>R10</b>	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 60 minutes but less than or equal to 70 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 70 minutes but less than or equal to 80 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 80 minutes but less than or equal to 90 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 90 minutes.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R11	N/A	N/A	N/A	<p>The Distribution Provider or Generator Operator that detected a failure of its Interpersonal Communication capability failed to consult with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of the Interpersonal Communication capability.</p>

**E. Regional Differences**

None identified.

**F. Associated Documents****Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
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1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
2	TBD	Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Replaced R1 with R1-R8; R2 replaced by R9; R3 included within new R1; R4 remains enforce pending Project 2007-02; R5 redundant with EOP-008-0, retiring R5 as redundant with EOP-008-0, R1; retiring R6, relates to ERO procedures; R10 & R11, new.	Revised

### Standard Development Roadmap

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

#### Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007.
2. Draft SAR Version 1 Comment Period ended February 14, 2007.
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007.
4. Draft Version 2 SAR comment period ended April 17, 2007.
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 18, 2010.
11. Fourth posting of revised standards on January 25, 2011 with comment period closed on March 7, 2011.
12. Initial ballot conducted February 25 through March 7, 2011.
13. Draft version 5 of the standard and response to comments March 7, 2011 – January 9, 2012.
14. Fifth posting of revised standards on January 9, 2012 with comment period closed on February 9, 2012.
15. Successive ballot conducted January 30 through February 9, ~~2011~~2012.
16. Draft version 6 of the standard and response to comments February 9, ~~2011~~2012 – June ~~5~~7, 2012.
17. Sixth posting of revised standard on June 7, 2012 with comment period closed on July 6, 2012.
18. Successive ballot conducted June 27 through July 6, 2012.
19. ~~Draft~~Revised version 6 of the standard and response to comments July 6, 2011+2 – July ~~XX~~September 5, 2012.



20. Recirculation ballot conducted July ~~XX~~ September 5 through August ~~XX~~ September 14, 2012.

**Proposed Action Plan and Description of Current Draft:**

The SDT began working on revisions to the standards in August 2007. The current posting contain revisions based on stakeholder comments on the initial ballot. The team is posting for a successive ballot.

**Future Development Plan:**

<b>Anticipated Actions</b>	<b>Anticipated Date</b>
1. Post standards for a successive ballot.	January-February 2012
2. Respond to comments on successive ballot.	March - April 2012
3. Standard posted for second successive ballot.	June 2012
4. Standard posted for recirculation ballot.	September 2012
5. Standard to be sent to BOT for approval.	November 2012
6. Standard filed with regulatory authorities.	January 2013

### Definitions of Terms Used in Standard

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

The RC SDT proposes the following new definitions:

**Interpersonal Communication:** Any medium that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.

## A. Introduction

1. **Title:** **Communications**
2. **Number:** COM-001-2
3. **Purpose:** To establish Interpersonal Communication capabilities necessary to maintain reliability.
4. **Applicability:**
  - 4.1. Transmission Operator
  - 4.2. Balancing Authority
  - 4.3. Reliability Coordinator
  - 4.4. Distribution Provider
  - 4.5. Generator Operator
5. **Effective Date:** The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

## B. Requirements

- R1. Each Reliability Coordinator shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator ~~detects~~~~experiences~~ a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
  - 1.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.
  - 1.2. Each adjacent Reliability Coordinator within the same Interconnection.
- R2. Each Reliability Coordinator shall designate an Alternative Interpersonal Communication capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
  - 2.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.
  - 2.2. Each adjacent Reliability Coordinator within the same Interconnection.
- R3. Each Transmission Operator shall have Interpersonal Communication capability with the following entities (unless the Transmission Operator ~~detects~~~~experiences~~ a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
  - 3.1. Its Reliability Coordinator.
  - 3.2. Each Balancing Authority within its Transmission Operator Area.

- 3.3. Each Distribution Provider within its Transmission Operator Area.
  - 3.4. Each Generator Operator within its Transmission Operator Area.
  - 3.5. Each adjacent Transmission Operator synchronously connected.
  - 3.6. Each adjacent Transmission Operator asynchronously connected.
- R4.** Each Transmission Operator shall designate an Alternative Interpersonal Communication capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 4.1. Its Reliability Coordinator.
  - 4.2. Each Balancing Authority within its Transmission Operator Area.
  - 4.3. Each adjacent Transmission Operator synchronously connected.
  - 4.4. Each adjacent Transmission Operator asynchronously connected.
- R5.** Each Balancing Authority shall have Interpersonal Communication capability with the following entities (unless the Balancing Authority ~~detects~~~~experiences~~ a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 5.1. Its Reliability Coordinator.
  - 5.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area.
  - 5.3. Each Distribution Provider within its Balancing Authority Area.
  - 5.4. Each Generator Operator that operates Facilities within its Balancing Authority Area.
  - 5.5. Each ~~A~~adjacent Balancing Authority.
- R6.** Each Balancing Authority shall designate an Alternative Interpersonal Communication capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 6.1. Its Reliability Coordinator.
  - 6.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area.
  - 6.3. Each ~~A~~adjacent Balancing Authority.
- R7.** Each Distribution Provider shall have Interpersonal Communication capability with the following entities (unless the Distribution Provider ~~detects~~~~experiences~~ a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply): *[Violation Risk Factor: ~~Medium~~High] [Time Horizon: Real-time Operations]*
- 7.1. Its Balancing Authority.
  - 7.2. Its Transmission Operator.
- R8.** Each Generator Operator shall have Interpersonal Communication capability with the following entities (unless the Generator Operator ~~detects~~~~experiences~~ a failure of its

Interpersonal Communication capability in which case Requirement R11 shall apply):  
*[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*

**8.1.** Its Balancing Authority.

**8.2.** Its Transmission Operator.

**R9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communication capability at least once each calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communication capability within 2 hours. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations, Same-day Operations]*

**R10.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1, R3, and R5, respectively within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*

**R11.** Each Distribution Provider and Generator Operator that detects/experiences a failure of its Interpersonal Communication capability shall consult each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of its Interpersonal Communication capability. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*

### C. Measures

**M1.** Each Reliability Coordinator shall have and provide upon request evidence that it has Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R1.)

**M2.** Each Reliability Coordinator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R2.)

- M3.** Each Transmission Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority, Distribution Provider, and Generator Operator within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously ~~or~~ synchronously connected, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communication. (R3.)
- M4.** Each Transmission Operator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously and synchronously connected, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R4.)
- M5.** Each Balancing Authority shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator and Generator Operator that operates Facilities within its Balancing Authority Area, each Distribution Provider within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R5.)
- M6.** Each Balancing Authority shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator that operates Facilities within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R6.)
- M7.** Each Distribution Provider shall have and provide upon request evidence ~~that~~ that it has Interpersonal Communication capability with its Transmission Operator and its Balancing Authority, which could include, but is not limited to:

- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R7.)
- M8.** Each Generator Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Balancing Authority and its Transmission Operator, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R8.)
- M9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it tested, at least once each calendar month, its Alternative Interpersonal Communication capability designated in Requirements R2, R4, or R6. If the test was unsuccessful, the entity shall have and provide upon request evidence that it initiated action to repair or designated a replacement Alternative Interpersonal Communication capability within 2 hours. Evidence could include, but is not limited to: ~~dated and time-stamped~~ test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R9.)
- M10.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it notified entities as identified in Requirements R1, R3, and R5, respectively within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasted 30 minutes or longer. Evidence could include, but is not limited to: ~~dated and time-stamped~~ test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R10.)
- M11.** Each Distribution Provider and Generator Operator that ~~detected~~experienced a failure of its Interpersonal Communication capability shall have and provide upon request evidence that it consulted with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine mutually agreeable action to restore the Interpersonal Communication capability. Evidence could include, but is not limited to: ~~dated~~ operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R11.)

## D. Compliance

### 1. Compliance Monitoring Process

#### 1.1. Compliance Enforcement Authority

The Regional Entity shall serve as the Compliance Enforcement Authority (CEA) unless the applicable entity is owned, operated, or controlled by the Regional

Entity. In such cases, the ERO or a Regional Entity approved by FERC or other applicable governmental authority shall serve as the CEA.

## 1.2. Compliance Monitoring and Enforcement Processes

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

## 1.3. Data Retention

The Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator ~~for shall retain evidence of~~ Requirements R1, R2, R9, and R10, Measures M1, M2, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.
- The Transmission Operator ~~for shall retain evidence of~~ Requirements R3, R4, R9, and R10, Measures M3, M4, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.
- The Balancing Authority ~~for Requirements shall retain evidence of Requirements~~ R5, R6, R9, and R10, Measures M5, M6, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.
- The Distribution Provider ~~for shall retain evidence of~~ Requirements R7 and R11, Measures M7 and M11 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.
- The Generator Operator ~~for shall retain evidence of~~ Requirements R8 and R11, Measures M8 and M11 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.

If a Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, or Generator Operator is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.



The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

**1.4. Additional Compliance Information**

None.

**2. Violation Severity Levels**

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	The Reliability Coordinator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator <del>detected</del> <u>experienced</u> a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Reliability Coordinator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator <del>detected</del> <u>experienced</u> a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R2	N/A	N/A	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R2, Parts 2.1 or 2.2.	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R2, Parts 2.1 or 2.2.
R3	N/A	N/A	The Transmission Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the <u>Transmission Operator</u> <del>detected</del> <u>Reliability Coordinator experienced</u> a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Transmission Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the <u>Transmission Operator</u> <del>detected</del> <u>Reliability Coordinator experienced</u> a failure of its Interpersonal Communication capability in accordance with Requirement R10.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R4	N/A	N/A	The Transmission Operator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.	The Transmission Operator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.
R5	N/A	N/A	The Balancing Authority failed to have Interpersonal Communication capability with one of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the <del>Balancing Authority detected Reliability Coordinator experienced</del> a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Balancing Authority failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the <del>Balancing Authority detected Reliability Coordinator experienced</del> a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R6	N/A	N/A	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R7	N/A	N/A	The Distribution Provider failed to have Interpersonal Communication capability with one of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider <del>detected</del> <del>experienced</del> a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Distribution Provider failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider <del>detected</del> <del>experienced</del> a failure of its Interpersonal Communication capability in accordance with Requirement R11.
R8	N/A	N/A	The Generator Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator <del>detected</del> <del>experienced</del> a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Generator Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator <del>detected</del> <del>experienced</del> a failure of its Interpersonal Communication capability in accordance with Requirement R11.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R9	<p>The Reliability Coordinator, Transmission Operator, <del>orand</del> Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 2 hours and less than or equal to 4 hours upon an unsuccessful test.</p>	<p>The Reliability Coordinator, Transmission Operator, <del>orand</del> Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 4 hours and less than or equal to 6 hours upon an unsuccessful test.</p>	<p>The Reliability Coordinator, Transmission Operator, <del>orand</del> Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 6 hours and less than or equal to 8 hours upon an unsuccessful test.</p>	<p>The Reliability Coordinator, Transmission Operator, <del>orand</del> Balancing Authority failed to test the Alternative Interpersonal Communication capability once each calendar month.</p> <p>OR</p> <p>The Reliability Coordinator, Transmission Operator, <del>orand</del> Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 8 hours upon an unsuccessful test.</p>
R10	<p>The Reliability Coordinator, Transmission Operator, <del>orand</del> Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, <u>respectively</u> upon the detection of a failure of its Interpersonal Communication capability in more than 60 minutes but less than or equal to 70 minutes.</p>	<p>The Reliability Coordinator, Transmission Operator, <del>orand</del> Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, <u>respectively</u> upon the detection of a failure of its Interpersonal Communication capability in more than 70 minutes but less than or equal to 80 minutes.</p>	<p>The Reliability Coordinator, Transmission Operator, <del>orand</del> Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, <u>respectively</u> upon the detection of a failure of its Interpersonal Communication capability in more than 80 minutes but less than or equal to 90 minutes.</p>	<p>The Reliability Coordinator, Transmission Operator, <del>orand</del> Balancing Authority failed to notify the <del>identified</del>-entities identified in Requirements R1, R3, and R5, <u>respectively</u> upon the detection of a failure of its Interpersonal Communication capability in more than 90 minutes.</p>

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R11	N/A	N/A	N/A	<p>The Distribution Provider or Generator Operator that <del>detected</del><del>experienced</del> a failure of its Interpersonal Communication capability failed to consult with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of the Interpersonal Communication capability.</p>

**E. Regional Differences**

None identified.

**F. Associated Documents****Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
2	TBD	Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Replaced R1 with R1-R8; R2 replaced by R9; R3 included within new R1; R4 remains enforce pending Project 2007-02; R5 redundant with EOP-008-0, retiring R5 as redundant with EOP-008-0, R1; retiring R6, relates to ERO procedures; R10 & R11, new.	Revised

## A. Introduction

1. **Title:** ~~Telecommunications~~Communications
2. **Number:** COM-001-~~1~~2
3. **Purpose:** ~~Each Reliability Coordinator, Transmission Operator and Balancing Authority needs adequate and reliable telecommunications facilities internally and with others for the exchange of Interconnection and operating information~~To establish Interpersonal Communication capabilities necessary to maintain reliability.
4. **Applicability:**
  - 4.1. Transmission ~~Operators~~Operator
  - 4.2. Balancing ~~Authorities~~Authority
  - 4.3. Reliability ~~Coordinators~~Coordinator
  - 4.4. ~~NERCNet User Organizations.~~
5. ~~Effective Date:~~ May 13, 2009
  - 4.4. Distribution Provider
  - 4.5. Generator Operator
5. **Effective Date:** The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

## B. Requirements

- ~~R1.~~ Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information:
- ~~R1.1.~~ Internally.
- R1. Between shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator ~~and its~~ detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- ~~R1.2.~~ All Transmission Operators and Balancing Authorities.
- ~~R1.3.~~ With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability.
- ~~R1.4.~~ Where applicable, these facilities shall be redundant and diversely routed.
- 1.1. Each within its Reliability Coordinator, Transmission Operator, and Balancing Authority shall manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications Area.



~~R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas.~~

~~1.2. Unless agreed to otherwise, each Each adjacent Reliability Coordinator within the same Interconnection.~~

~~R2. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real shall designate an Alternative Interpersonal Communication capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time generation control and operation of the interconnected Bulk Electric System: Operations]*~~

~~R3. 2.1. All Transmission Operators and Balancing Authorities may use an alternate language for internal operations.~~

~~Each within its Reliability Coordinator, Area.~~

~~2.2. Each adjacent Reliability Coordinator within the same Interconnection.~~

~~R3. Each Transmission Operator shall have Interpersonal Communication capability with the following entities (unless the Transmission Operator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*~~

~~3.1. Its Reliability Coordinator.~~

~~3.2. Each Balancing Authority within its Transmission Operator Area.~~

~~3.3. Each Distribution Provider within its Transmission Operator Area.~~

~~3.4. Each Generator Operator within its Transmission Operator Area.~~

~~3.5. Each adjacent Transmission Operator, and synchronously connected.~~

~~3.6. Each adjacent Transmission Operator asynchronously connected.~~

~~R4. Each Transmission Operator shall designate an Alternative Interpersonal Communication capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*~~

~~4.1. Its Reliability Coordinator.~~

~~4.2. Each Balancing Authority within its Transmission Operator Area.~~

~~4.3. Each adjacent Transmission Operator synchronously connected.~~

~~4.4. Each adjacent Transmission Operator asynchronously connected.~~

~~R5. Each Balancing Authority shall have Interpersonal Communication capability with the following entities (unless the Balancing Authority detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*~~

~~5.1. Its Reliability Coordinator.~~

- 5.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area.
- 5.1.5.3. ~~Each Distribution Provider within its Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities Area.~~
- 5.4. ~~Each NERCNet User Organization~~Generator Operator that operates Facilities within its Balancing Authority Area.
- 5.5. Each Adjacent Balancing Authority.
- R6. Each Balancing Authority shall ~~adhere to~~ designate an Alternative Interpersonal Communication capability with ~~the requirements~~ following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 1.1. Its Reliability Coordinator.
- 1.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area.
- 1.3. Each Adjacent Balancing Authority.
- R7. Each Distribution Provider shall have Interpersonal Communication capability with the following entities (unless the Distribution Provider detects a failure of its Interpersonal Communication capability in Attachment which case Requirement R11 shall apply): *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*
- 7.1-COM-001, “NERCNet Security Policy.”. Its Balancing Authority.
- 7.2. Its Transmission Operator.
- R8. Each Generator Operator shall have Interpersonal Communication capability with the following entities (unless the Generator Operator detects a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 8.1. Its Balancing Authority.
- 8.2. Its Transmission Operator.
- R9. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communication capability at least once each calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communication capability within 2 hours. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations, Same-day Operations]*
- R10. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1, R3, and R5, respectively within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*

R11. Each Distribution Provider and Generator Operator that detects a failure of its Interpersonal Communication capability shall consult each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of its Interpersonal Communication capability. [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]

### C. Measures

M1. Each Reliability Coordinator, ~~Transmission Operator and Balancing Authority~~ shall have and provide upon request evidence that it has Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to ~~communication facility test-procedure documents, records of testing, and maintenance records for communication facilities;~~

- physical assets, or equivalent that will be used to confirm that it manages, alarms, tests and/or actively monitors vital telecommunications facilities. (Requirement 2 part 1)
- ~~The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and provide upon request~~ dated evidence that could include, but is not limited to, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings or, transcripts of voice recordings, or electronic communications, or equivalent, that will be used to determine compliance to Requirement 4. (R1.)

~~M1.~~M2. Each Reliability Coordinator, ~~Transmission Operator and Balancing Authority~~ shall ~~have and provide upon request its current operating instructions and procedures, either electronic or hard copy that will be used to confirm that it meets Requirement 5.~~ shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to:

- ~~The NERCnet User Organization shall have and provide upon request evidence that could include, but is not limited to documented procedures~~ physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings or, transcripts of voice recordings, or electronic communications. (R2.)

M3. Each Transmission Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority, Distribution Provider, and Generator Operator within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously or synchronously connected, which could include, but is not limited to:

- physical assets, or

- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, electronic communications, or electronic communication. (R3.)
- M4.** Each Transmission Operator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously and synchronously connected, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R4.)
- M5.** Each Balancing Authority shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator and Generator Operator that operates Facilities within its Balancing Authority Area, each Distribution Provider within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R5.)
- M6.** Each Balancing Authority shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator that operates Facilities within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R6.)
- M7.** Each Distribution Provider shall have and provide upon request evidence that will be used it has Interpersonal Communication capability with its Transmission Operator and its Balancing Authority, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R7.)

M8. Each Generator Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Balancing Authority and its Transmission Operator, which could include, but is not limited to determine if it adhered:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R8.)

M2-M9. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it tested, at least once each calendar month, its Alternative Interpersonal Communication capability designated in Requirements R2, R4, or R6. If the test was unsuccessful, the entity shall have and provide upon request evidence that it initiated action to the (User Accountability and Compliance) requirements in Attachment 1 COM-001. (Requirement 6) repair or designated a replacement Alternative Interpersonal Communication capability within 2 hours. Evidence could include, but is not limited to: dated and time-stamped test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R9.)

M10. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it notified entities as identified in Requirements R1, R3, and R5, respectively within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasted 30 minutes or longer. Evidence could include, but is not limited to: dated and time-stamped test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R10.)

M11. Each Distribution Provider and Generator Operator that detected a failure of its Interpersonal Communication capability shall have and provide upon request evidence that it consulted with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine mutually agreeable action to restore the Interpersonal Communication capability. Evidence could include, but is not limited to: dated operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R11.)

## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance ~~Monitoring Responsibility~~ Enforcement Authority**

~~NERC shall be responsible for compliance monitoring of the Regional Reliability Organizations~~

~~Regional Reliability Organizations shall be responsible for compliance monitoring of all other entities~~

The Regional Entity shall serve as the Compliance Enforcement Authority (CEA) unless the applicable entity is owned, operated, or controlled by the Regional Entity. In such cases, the ERO or a Regional Entity approved by FERC or other applicable governmental authority shall serve as the CEA.

## 1.2. Compliance Monitoring and ~~Reset Time Frame~~ Enforcement Processes

~~One or more of the following methods will be used to assess compliance:~~

~~— Self certification (Conducted annually with submission according to schedule.)~~

~~— Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)~~

~~— Periodic Audit (Conducted once every three years according to schedule.)~~

~~— Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 calendar days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case by case basis.)~~

~~The Performance Reset Period shall be 12 months from the last finding of non-compliance.~~

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

## 1.3. Data Retention

~~For Measure 1 each~~ The Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall keep data or evidence ~~to show~~ compliance for the previous two calendar years plus the current year. as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- ~~• For Measure 2 each~~ The Reliability Coordinator, Transmission Operator for Requirements R1, R2, R9, and Balancing Authority R10, Measures M1, M2, M9, and M10 shall ~~keep~~ retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days of historical data (evidence).
- ~~• For Measure 3, each Reliability Coordinator, The~~ Transmission Operator, for Requirements R3, R4, R9, and R10, Measures M3, M4, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.
- ~~• The~~ Balancing Authority shall have its current operating instructions and procedures to confirm that it meets Requirement 5. for Requirements R5, R6, R9, and R10, Measures M5, M6, M9, and M10 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.
- ~~• For Measure 4, each~~ The Distribution Provider for Requirements R7 and R11, Measures M7 and M11 shall retain written documentation for the most

recent twelve calendar months and voice recordings for the most recent 90 calendar days.

- The Generator Operator for Requirements R8 and R11, Measures M8 and M11 shall retain written documentation for the most recent twelve calendar months and voice recordings for the most recent 90 calendar days.

If a Reliability Coordinator, Transmission Operator, Balancing Authority and NERCnet User Organization shall keep 90 days of historical data (evidence).

If an entity, Distribution Provider, or Generator Operator is found non-compliant the entity, it shall keep information related to the ~~none compliance~~ non-compliance until ~~found compliant~~ mitigation is complete and approved or for two years plus the current year time specified above, whichever is longer.

Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor.

The Compliance ~~Monitor~~ Enforcement Authority shall keep the last ~~periodic~~ audit report records and all requested and submitted subsequent ~~compliance~~ audit records.

#### 1.4. Additional Compliance Information

Attachment 1 — COM-001 — NERCnet Security Policy

#### ~~2. — Levels of Non-Compliance for Transmission Operator, Balancing Authority or Reliability Coordinator~~

~~2.1. Level 1: Not applicable.~~

~~2.2. Level 2: Not applicable.~~

~~2.3. Level 3: There shall be a separate Level 3 non-compliance, for every one of the following requirements that is in violation:~~

~~2.3.1 — The Transmission Operator, Balancing Authority or Reliability Coordinator used a language other than English without agreement as specified in R4.~~

~~2.3.2 — There are no written operating instructions and procedures to enable continued operation of the system during the loss of telecommunication facilities as specified in R5.~~

~~2.4. Level 4: Telecommunication systems are not actively monitored, tested, managed or alarmed as specified in R2.~~

#### ~~3. — Levels of Non-Compliance — NERCnet User Organization~~

~~3.1. Level 1: Not applicable.~~

~~3.2. Level 2: Not applicable.~~

~~3.3. Level 3: Not applicable.~~

~~3.4. Level 4: Did not adhere to the requirements in Attachment 1 COM-001, NERCnet Security Policy.~~

None.

**2. Violation Severity Levels**

R#	Lower_VSL	Moderate_VSL	High_VSL	Severe_VSL
<u>R1</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>	<u>The Reliability Coordinator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>
<u>R2</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R2, Parts 2.1 or 2.2.</u>	<u>The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R2, Parts 2.1 or 2.2.</u>
<u>R3</u>	<u>N/A</u>	<u>N/A</u>	<u>The Transmission Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Transmission Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>	<u>The Transmission Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Transmission Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>
<u>R4</u>	<u>N/A</u>	<u>N/A</u>	<u>The Transmission Operator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.</u>	<u>The Transmission Operator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.</u>



Standard COM-001-2 — Communications

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
<u>R5</u>	<u>N/A</u>	<u>N/A</u>	<u>The Balancing Authority failed to have Interpersonal Communication capability with one of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Balancing Authority detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>	<u>The Balancing Authority failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Balancing Authority detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u>
<u>R6</u>	<u>N/A</u>	<u>N/A</u>	<u>The Balancing Authority failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.</u>	<u>The Balancing Authority failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.</u>
<u>R7</u>	<u>N/A</u>	<u>N/A</u>	<u>The Distribution Provider failed to have Interpersonal Communication capability with one of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>	<u>The Distribution Provider failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>

**Standard COM-001-2 — Communications**

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R8</b>	N/A	N/A	<u>The Generator Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>	<u>The Generator Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>
<b>R9</b>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 2 hours and less than or equal to 4 hours upon an unsuccessful test.</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 4 hours and less than or equal to 6 hours upon an unsuccessful test.</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 6 hours and less than or equal to 8 hours upon an unsuccessful test.</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to test the Alternative Interpersonal Communication capability once each calendar month.</u>  <u>OR</u> <u>The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 8 hours upon an unsuccessful test.</u>
<b>R10</b>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 60 minutes but less than or equal to 70 minutes.</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 70 minutes but less than or equal to 80 minutes.</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 80 minutes but less than or equal to 90 minutes.</u>	<u>The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 90 minutes.</u>

Standard COM-001-2 — Communications

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R11	N/A	N/A	N/A	<p>The Distribution Provider or Generator Operator that detected a failure of its Interpersonal Communication capability failed to consult with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of the Interpersonal Communication capability.</p>

**E. Regional Differences**

None ~~Identified~~identified.

**F. Associated Documents**

**Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
<u>1</u>	<u>April 4, 2007</u>	<u>Regulatory Approval — Effective Date</u>	<u>New</u>
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
1.1	October 29, 2008	BOT adopted errata changes; updated version number to “1.1”	Errata
<u>2</u>	<u>November 7, 2012</u>	<u>Adopted by Board of Trustees</u>	<u>Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Replaced R1 with R1-R8; R2 replaced by R9; R3 included within new R1; R4 remains enforce pending Project 2007-02; R5 redundant with EOP-008-0, retiring R5 as redundant with EOP-008-0, R1; retiring R6, relates to ERO procedures; R10 &amp; R11, new.</u>

## **Attachment 1 — COM-001 — NERCnet Security Policy**

### **Policy Statement**

The purpose of this NERCnet Security Policy is to establish responsibilities and minimum requirements for the protection of information assets, computer systems and facilities of NERC and other users of the NERC frame relay network known as “NERCnet.” The goal of this policy is to prevent misuse and loss of assets.

For the purpose of this document, information assets shall be defined as processed or unprocessed data using the NERCnet Telecommunications Facilities including network documentation. This policy shall also apply as appropriate to employees and agents of other corporations or organizations that may be directly or indirectly granted access to information associated with NERCnet.

The objectives of the NERCnet Security Policy are:

- To ensure that NERCnet information assets are adequately protected on a cost effective basis and to a level that allows NERC to fulfill its mission.
- To establish connectivity guidelines for a minimum level of security for the network.
- To provide a mandate to all Users of NERCnet to properly handle and protect the information that they have access to in order for NERC to be able to properly conduct its business and provide services to its customers.

### **NERC’s Security Mission Statement**

NERC recognizes its dependency on data, information, and the computer systems used to facilitate effective operation of its business and fulfillment of its mission. NERC also recognizes the value of the information maintained and provided to its members and others authorized to have access to NERCnet. It is, therefore, essential that this data, information, and computer systems, and the manual and technical infrastructure that supports it, are secure from destruction, corruption, unauthorized access, and accidental or deliberate breach of confidentiality.

### **Implementation and Responsibilities**

— This section identifies the various roles and responsibilities related to the protection of NERCnet resources.

#### **NERCnet User Organizations**

Users of NERCnet who have received authorization from NERC to access the NERC network are considered users of NERCnet resources. To be granted access, users shall complete a User Application Form and submit this form to the NERC Telecommunications Manager.

#### **Responsibilities**

It is the responsibility of NERCnet User Organizations to:

- Use NERCnet facilities for NERC authorized business purposes only.
- Comply with the NERCnet security policies, standards, and guidelines, as well as any procedures specified by the data owner.
- Prevent unauthorized disclosure of the data.
- Report security exposures, misuse, or non-compliance situations via Reliability Coordinator Information System or the NERC Telecommunications Manager.
- Protect the confidentiality of all user IDs and passwords.
- Maintain the data they own.
- Maintain documentation identifying the users who are granted access to NERCnet data or applications.
- Authorize users within their organizations to access NERCnet data and applications.

- ~~• Advise staff on NERCnet Security Policy.~~
- ~~• Ensure that all NERCnet users understand their obligation to protect these assets.~~
- ~~• Conduct self assessments for compliance.~~

### **User Accountability and Compliance**

~~All users of NERCnet shall be familiar and ensure compliance with the policies in this document.~~

~~Violations of the NERCnet Security Policy shall include, but not be limited to any act that:~~

- ~~• Exposes NERC or any user of NERCnet to actual or potential monetary loss through the compromise of data security or damage.~~
- ~~• Involves the disclosure of trade secrets, intellectual property, confidential information or the unauthorized use of data:  
Involves the use of data for illicit purposes, which may include violation of any law, regulation or reporting requirement of any law enforcement or government body.~~

**E. Regional Differences**

None ~~Identified~~identified.

**F. Associated Documents**

**Version History**

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<u>1</u>	<u>April 4, 2007</u>	<u>Regulatory Approval — Effective Date</u>	<u>New</u>
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
<u>1.12</u>	<u>October 29, 2008</u> <u>TBD</u>	<u>BOT adopted errata changes; updated version number to “1.1”</u> <u>Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Replaced R1 with R1-R8; R2 replaced by R9; R3 included within new R1; R4 remains enforce pending Project 2007-02; R5 redundant with EOP-008-0, retiring R5 as redundant with EOP-008-0, R1; retiring R6, relates to ERO procedures; R10 &amp; R11, new.</u>	<u>Errata</u> <u>Revised</u>

## **Attachment 1 — COM-001 — NERCnet Security Policy**

### **Policy Statement**

The purpose of this NERCnet Security Policy is to establish responsibilities and minimum requirements for the protection of information assets, computer systems and facilities of NERC and other users of the NERC frame relay network known as “NERCnet.” The goal of this policy is to prevent misuse and loss of assets.

For the purpose of this document, information assets shall be defined as processed or unprocessed data using the NERCnet Telecommunications Facilities including network documentation. This policy shall also apply as appropriate to employees and agents of other corporations or organizations that may be directly or indirectly granted access to information associated with NERCnet.

The objectives of the NERCnet Security Policy are:

- To ensure that NERCnet information assets are adequately protected on a cost-effective basis and to a level that allows NERC to fulfill its mission.
- To establish connectivity guidelines for a minimum level of security for the network.
- To provide a mandate to all Users of NERCnet to properly handle and protect the information that they have access to in order for NERC to be able to properly conduct its business and provide services to its customers.

### **NERC’s Security Mission Statement**

NERC recognizes its dependency on data, information, and the computer systems used to facilitate effective operation of its business and fulfillment of its mission. NERC also recognizes the value of the information maintained and provided to its members and others authorized to have access to NERCnet. It is, therefore, essential that this data, information, and computer systems, and the manual and technical infrastructure that supports it, are secure from destruction, corruption, unauthorized access, and accidental or deliberate breach of confidentiality.

### **Implementation and Responsibilities**

— This section identifies the various roles and responsibilities related to the protection of NERCnet resources.

#### **NERCnet User Organizations**

Users of NERCnet who have received authorization from NERC to access the NERC network are considered users of NERCnet resources. To be granted access, users shall complete a User Application Form and submit this form to the NERC Telecommunications Manager.

#### **Responsibilities**

It is the responsibility of NERCnet User Organizations to:

- Use NERCnet facilities for NERC-authorized business purposes only.
- Comply with the NERCnet security policies, standards, and guidelines, as well as any procedures specified by the data owner.
- Prevent unauthorized disclosure of the data.
- Report security exposures, misuse, or non-compliance situations via Reliability Coordinator Information System or the NERC Telecommunications Manager.
- Protect the confidentiality of all user IDs and passwords.
- Maintain the data they own.
- Maintain documentation identifying the users who are granted access to NERCnet data or applications.
- Authorize users within their organizations to access NERCnet data and applications.



- ~~Advise staff on NERCnet Security Policy.~~
- ~~Ensure that all NERCnet users understand their obligation to protect these assets.~~
- ~~Conduct self assessments for compliance.~~

### **User Accountability and Compliance**

~~All users of NERCnet shall be familiar and ensure compliance with the policies in this document.~~

~~Violations of the NERCnet Security Policy shall include, but not be limited to any act that:~~

- ~~Exposes NERC or any user of NERCnet to actual or potential monetary loss through the compromise of data security or damage.~~
- ~~Involves the disclosure of trade secrets, intellectual property, confidential information or the unauthorized use of data:~~
  - ~~Involves the use of data for illicit purposes, which may include violation of any law, regulation or reporting requirement of any law enforcement or government body.~~

# Implementation Plan and Mapping Document

## COM-001-2 Communications

### Requested Approval

COM-001-2 – Communications

Definition: Interpersonal Communication

Definition: Alternative Interpersonal Communication

### Requested Retirement

COM-001-1.1 – Telecommunications, except Requirement R4

Requirement R4 is being revised for inclusion in Standard COM-002-4, Operating Personnel Communications Protocols and will be requested for retirement upon the effective date COM-002-4.

### Prerequisite Approvals

None.

### Defined Terms in the NERC Glossary

The RCSDT proposes the following new definitions:

**Interpersonal Communication:** Any medium that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.

### Conforming Changes to Requirements in Already Approved Standards

The RCSDT proposes retiring COM-001-1.1 Requirement R5 as it is redundant with EOP-008-0, Requirement R1 as well as EOP-008-1 Requirement R1.

### Revisions to Approved Standards and Definitions

The RCSDT revised the COM-001-1.1 standard proposes retiring four Requirements (R1, R4, R5, and R6). The COM-001-1.1 standard, Requirement R1 is proposed for replacement with COM-001-2, Requirements R1, R2, R3, R4, R5, R6, R7, and R8 to achieve clarity to which entities are required to have to reliable communications. Requirement R2 in COM-001-1.1 will become Requirement R9 in COM-001-2. Requirement R3 in COM-001-1.1 is included within Requirement R1 of COM-001-2. Requirement R4 will remain effective until its inclusion in COM-003-1 that is currently under development in Project 2007-02 – Operating Personnel Communication Protocols. Requirement R5 in COM-001-1.1 is redundant with EOP-008-0, Requirement R1 and EOP-008-1, Requirement R1 and is

proposed for retirement upon the effective date of COM-001-2. The COM-001-1.1 standard, Requirement R6 is proposed for retirement as it is an ERO procedural requirement and does not impact reliability. Requirements R10 and R11 are new requirements. Changes were made to eliminate redundancies between standards (existing and proposed), to align with the ERO Rules of Procedure and to address known issues and certain directives in FERC Order 693.

### **Applicable Entities**

- Reliability Coordinator
- Balancing Authority
- Transmission Operator
- Generator Operator
- Distribution Provider

### **Effective Date**

#### **New or Revised Standards**

COM-001-2      The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

#### **Standard for Retirement**

COM-001-1.1, Requirements R1, R2, R3, R5, and R6      Midnight of the day immediately prior to the Effective Date of COM-001-2 in the particular Jurisdiction in which the new standard is becoming effective. Note: Requirement R4 will remain effective until its inclusion in the standard COM-003-1 currently under development.

## New or Revised Definitions

**Interpersonal Communication** – The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

**Alternative Interpersonal Communication** – The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

**Revisions or Retirements to Already Approved Standards**

The following tables identify the sections of approved standards that shall be retired or revised when this standard becomes effective. If the drafting team is recommending the retirement or revision of a requirement, that text is [blue](#).

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1.1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></p>	<p><b>COM-001-2</b></p> <p><b>R1.</b> Each Reliability Coordinator shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R1.1.</b> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R1.2.</b> Each adjacent Reliability Coordinator within the same Interconnection.</p> <p><b>R2.</b> Each Reliability Coordinator shall designate an Alternative Interpersonal Communication capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R2.1.</b> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R2.2.</b> Each adjacent Reliability Coordinator within the same Interconnection.</p> <p><b>R3.</b> Each Transmission Operator shall have Interpersonal</p>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p>Communication capability with the following entities (unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R3.1.</b> Its Reliability Coordinator.</p> <p><b>R3.2.</b> Each Balancing Authority within its Transmission Operator Area.</p> <p><b>R3.3.</b> Each Distribution Provider within its Transmission Operator Area.</p> <p><b>R3.4.</b> Each Generator Operator within its Transmission Operator Area.</p> <p><b>R3.5.</b> Each adjacent Transmission Operator synchronously connected.</p> <p><b>R3.6.</b> Each adjacent Transmission Operator asynchronously connected.</p> <p><b>R4.</b> Each Transmission Operator shall designate an Alternative Interpersonal Communication capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R4.1.</b> Its Reliability Coordinator.</p> <p><b>R4.2.</b> Each Balancing Authority within its Transmission Operator Area.</p>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p><b>R4.3.</b> Each adjacent Transmission Operator synchronously connected.</p> <p><b>R4.4.</b> Each adjacent Transmission Operator asynchronously connected.</p>
<p><b>Notes:</b> The requirements were made clearer as to which capabilities specific entities were required to have to reliable communications.</p>	
<p><b>COM-001-1.1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <ul style="list-style-type: none"> <li><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></li> <li><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></li> <li><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></li> <li><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></li> </ul>	<p><b>COM-001-2</b></p> <p><b>R5.</b> Each Balancing Authority shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <ul style="list-style-type: none"> <li><b>R5.1.</b> Its Reliability Coordinator.</li> <li><b>R5.2.</b> Each Transmission Operator that operates Facilities within its Balancing Authority Area.</li> <li><b>R5.3.</b> Each Distribution Provider within its Balancing Authority Area.</li> <li><b>R5.4.</b> Each Generator Operator that operates Facilities within its Balancing Authority Area.</li> <li><b>R5.5.</b> Each Adjacent Balancing Authority.</li> </ul> <p><b>R6.</b> Each Balancing Authority shall designate an Alternative Interpersonal Communication capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time</i></p>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p><i>Operations]</i></p> <p><b>R6.1.</b> Its Reliability Coordinator.</p> <p><b>R6.2.</b> Each Transmission Operator that operates Facilities within its Balancing Authority Area.</p> <p><b>R6.3.</b> Each Adjacent Balancing Authority.</p> <p><b>R7.</b> Each Distribution Provider shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply): <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R7.1.</b> Its Transmission Operator.</p> <p><b>R7.2.</b> Its Balancing Authority.</p> <p><b>R8.</b> Each <b>Generator Operator</b> shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply): <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R8.1.</b> Its Balancing Authority.</p> <p><b>R8.2.</b> Its Transmission Operator.</p>
<p><b>Notes:</b> The requirements we made clearer as to which capabilities specific entities were required to have for reliable interpersonal communications. Requirements R7 and R8 were created to address the FERC directive (Order No. 693, P508) to “(1) expand the applicability to include generator operators and distribution providers and includes Requirements for their telecommunications facilities;”</p>	



Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1.1</b></p> <p><b>R2.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall <b>manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.</b> <i>[Violation Risk Factor: Medium]</i></p>	<p><b>COM-001-2</b></p> <p><b>R9.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall <b>test its Alternative Interpersonal Communication capability at least once each calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communication capability within 2 hours.</b> <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b></p>	
<p><b>COM-001-1.1</b></p> <p><b>R3.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall <b>provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas.</b> <i>[Violation Risk Factor: Lower]</i></p>	<p><b>COM-001-2</b></p> <p><b>R1.</b> Each Reliability Coordinator shall have Interpersonal Communication capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R1.1.</b> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R1.2.</b> Each adjacent Reliability Coordinator within the same Interconnection.</p>
<p><b>Notes:</b></p>	
<p><b>COM-001-1.1</b></p> <p><b>R4.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use</p>	<p><b>None - retire</b></p> <ul style="list-style-type: none"> <li>▪ This requirement is being vetted by the OPCPSDT in Project</li> </ul>

Already Approved Standard	Proposed Replacement Requirement(s)
<p>English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. <i>[Violation Risk Factor: Medium]</i></p>	<p>2007-02 – Operating Personnel Communication Protocols (COM-003-1). This requirement and measure will be removed from COM-001-1.1 upon the effective date of COM-003-1.</p>
<p><b>Notes:</b></p>	
<p><b>COM-001-1.1</b></p> <p><b>R5.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>EOP-008-0</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements:</p> <ul style="list-style-type: none"> <li><b>R1.1.</b> The contingency plan shall not rely on data or voice communication from the primary control facility to be viable.</li> <li><b>R1.2.</b> The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules.</li> <li><b>R1.3.</b> The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities.</li> </ul>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p><b>R1.4.</b> The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas.</p> <p><b>R1.5.</b> The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.</p> <p><b>R1.6.</b> The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans.</p> <p><b>R1.7.</b> The plan shall be reviewed and updated annually.</p> <p><b>R1.8.</b> Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.</p> <p><b>EOP-008-1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have a current Operating Plan describing the manner in which it continues to meet its functional obligations with regard to the reliable operations of the BES in the event that its primary control center functionality is lost. This Operating Plan for backup functionality shall include the following, at a minimum: [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]</p> <p><b>1.1.</b> The location and method of implementation for providing backup functionality for the time it takes to restore the</p>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p>primary control center functionality.</p> <p><b>1.2.</b> A summary description of the elements required to support the backup functionality. These elements shall include, at a minimum:</p> <p><b>1.2.1.</b> Tools and applications to ensure that System Operators have situational awareness of the BES.</p> <p><b>1.2.2.</b> Data communications.</p> <p><b>1.2.3.</b> Voice communications.</p> <p><b>1.2.4.</b> Power source(s).</p> <p><b>1.2.5.</b> Physical and cyber security.</p> <p><b>1.3.</b> An Operating Process for keeping the backup functionality consistent with the primary control center.</p> <p><b>1.4.</b> Operating Procedures, including decision authority, for use in determining when to implement the Operating Plan for backup functionality.</p> <p><b>1.5.</b> A transition period between the loss of primary control center functionality and the time to fully implement the backup functionality that is less than or equal to two hours.</p> <p><b>1.6.</b> An Operating Process describing the actions to be taken during the transition period between the loss of primary control center functionality and the time to fully implement backup functionality elements identified in Requirement R1, Part 1.2. The Operating Process shall include at a minimum:</p>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p><b>1.6.1.</b> A list of all entities to notify when there is a change in operating locations.</p> <p><b>1.6.2.</b> Actions to manage the risk to the BES during the transition from primary to backup functionality as well as during outages of the primary or backup functionality.</p> <p><b>1.6.3.</b> Identification of the roles for personnel involved during the initiation and implementation of the Operating Plan for backup functionality.</p>
<p><b>Notes:</b> The RCSDT proposes retiring COM-001-1.1, Requirement R5 as it is redundant with EOP-008-0, Requirement R1 as well as EOP-008-1 Requirement R1.</p>	
<p><b>COM-001-1.1</b></p> <p><b>R6.</b> Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, “NERCNet Security Policy.” <i>[Violation Risk Factor: Lower]</i></p>	<p><b>None – retire</b></p>
<p><b>Notes:</b> The RCSDT is recommending that R6 be retired. This is an ERO procedural issue and should not be in a reliability standard. It should be included in the ERO Rules of Procedure.</p>	
<p><b>None</b></p>	<p><b>New Requirement</b></p> <p><b>R10.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1, R3, and R5, respectively within 60 minutes of the detection of a failure of its Interpersonal Communication</p>

Already Approved Standard	Proposed Replacement Requirement(s)
	capability that lasts 30 minutes or longer. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]</i>
None	<p><b>New Requirement</b></p> <p><b>R11.</b>Each Distribution Provider and Generator Operator that detects a failure of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority to determine a mutually agreeable action to restore the Interpersonal Communication capability. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>
Notes:	

**Functions that Must Comply with the Requirements in the Standards**

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Purchasing Selling Entity	Transmission Operator	Transmission Service Provider	Load Serving Entity	Generator Operator	Distribution Provider
COM-001-2 Communications	X	X		X	X		X	X

# Implementation Plan and Mapping Document

## COM-001-2 Communications

### Requested Approval

The RC SDT requests the approval of COM-001-2 – Communications ~~and two new NERC Glossary terms.~~

Definition: Interpersonal Communication

Definition: Alternative Interpersonal Communication

### Requested Retirement

The RC SDT request the retirement of standard COM-001-1.1 – Telecommunications, Requirements R1, R2, R3, R5, R6 and the associated sub requirements, except Requirement R4. This Requirement R4 is being revised for inclusion in Standard COM-002-4, Operating Personnel Communications Protocols and will be requested for retirement upon the retired when COM-003-1 becomes effective date COM-002-4.

### Prerequisite Approvals

None.

### Defined Terms in the NERC Glossary

The ~~RCS DT~~ RC SDT proposes the following new definitions:

**Interpersonal Communication:** Any medium that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.

### Conforming Changes to Requirements in Already Approved Standards

The ~~RCS DT~~ RC SDT proposes retiring COM-001-1.1, Requirement R5 as it is redundant with EOP-008-0, Requirement R1 as well as EOP-008-1, Requirement R1.

### Revisions to Approved Standards and Definitions

The RCS DT revised the COM-001-1.1 standard ~~proposes and is proposing~~ retiring four Requirements (R1, R4, R5, and R6). The COM-001-1.1 standard, Requirement R1 is proposed ~~for replacement to be replaced~~ with COM-001-2, Requirements R1, R2, R3, R4, R5, R6, R7, and R8 to achieve clarity to which entities ~~are were~~ required to have to reliable communications. Requirement R2 in COM-001-1.1 will become Requirement R9 in COM-001-2. Requirement R3 in COM-001-1.1 ~~is has been~~ included within Requirement R1 of COM-001-2. Requirement R4 will remain ~~effective enforceable~~ until its inclusion revision is included in COM-003-1 that is ~~currently being developed~~ under development in Project 2007-02 – Operating Personnel Communication Protocols. Requirement R5 in COM-001-1.1 is redundant

with EOP-008-0, Requirement R1 and EOP-008-1, Requirement R1 and is proposed for retirement will be retired upon the effective date of COM-001-2. The COM-001-1.1 standard, Requirement R6 is proposed for retirement will be retired as it is an ERO procedural requirement and does not impact reliability. Requirements R10 and R11 are new requirements. Changes were made to eliminate redundancies between standards (existing and proposed), to align with the ERO Rules of Procedure and to address known issues and certain directives in FERC Order 693.

### Applicable Entities

- Reliability Coordinator
- Balancing Authority
- Transmission Operator
- Generator Operator
- Distribution Provider

### Effective Date

#### New or Revised Standards

COM-001-2      The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

#### Standard for Retirement

COM-001-1.1, Requirements R1, R2, R3, R5, and R6      Midnight of the day immediately prior to the Effective Date of COM-001-2 in the particular Jurisdiction in which the new standard is becoming effective. Note: Requirement R4 will remain effective until its inclusion in the standard COM-003-1 currently under development.



### New or Revised Definitions

**Interpersonal Communication** – The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

**Alternative Interpersonal Communication** – The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

### New or Revised Standards

~~COM-001-2~~      ~~In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees adoption.~~

### Standard for Retirement

~~COM-001-1.1, Requirements R1, R2, R3, R5, and R6~~      ~~Midnight of the day immediately prior to the Effective Date of COM-001-2 in the particular Jurisdiction in which the new standard is becoming effective. Note: Requirement R4 will remain effective until its inclusion in the standard COM-003-1 currently under development.~~

### Implementation Plan for Definitions

~~**Interpersonal Communication** – Entities shall use this definition when implementing the standard COM-001-2, which uses this defined term.~~

~~**Alternative Interpersonal Communication** – Entities shall use this definition when implementing the standard COM-001-2, which uses this defined term.~~

**Revisions or Retirements to Already Approved Standards**

The following tables identify the sections of approved standards that shall be retired or revised when this standard becomes effective. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1.1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <p><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></p>	<p><b>COM-001-2</b></p> <p><b>R1.</b> Each Reliability Coordinator shall have Interpersonal Communication capability with the following entities <u>(unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply):-</u> <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R1.1.</b> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R1.2.</b> Each adjacent Reliability Coordinator within the same Interconnection.</p> <p><b>R2.</b> Each Reliability Coordinator shall designate an Alternative Interpersonal Communication capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R2.1.</b> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R2.2.</b> Each adjacent Reliability Coordinator within the same Interconnection.</p> <p><b>R3.</b> Each Transmission Operator shall have Interpersonal Communication capability with the following entities <u>(unless the</u></p>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p><u>Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply):</u> <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R3.1.</b> Its Reliability Coordinator.</p> <p><b>R3.2.</b> Each Balancing Authority within its Transmission Operator Area.</p> <p><b>R3.3.</b> Each Distribution Provider within its Transmission Operator Area.</p> <p><b>R3.4.</b> Each Generator Operator within its Transmission Operator Area.</p> <p><b>R3.5.</b> Each adjacent Transmission Operator synchronously connected.</p> <p><b>R3.6.</b> Each adjacent Transmission Operator asynchronously connected.</p> <p><b>R4.</b> Each Transmission Operator shall designate an Alternative Interpersonal Communication capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R4.1.</b> Its Reliability Coordinator.</p> <p><b>R4.2.</b> Each Balancing Authority within its Transmission Operator Area.</p> <p><b>R4.3.</b> Each adjacent Transmission Operator synchronously</p>

Already Approved Standard	Proposed Replacement Requirement(s)
	<p>connected.</p> <p><b>R4.4.</b> Each adjacent Transmission Operator asynchronously connected.</p>

**Notes:** The requirements were made clearer as to which capabilities specific entities were required to have to reliable communications.

Already-Approved-Standard	Proposed-Replacement-Requirement(s)
<p><b>COM-001-1.1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information: <i>[Violation Risk Factor: High]</i></p> <ul style="list-style-type: none"> <li><b>R1.1.</b> Internally. <i>[Violation Risk Factor: High]</i></li> <li><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities. <i>[Violation Risk Factor: High]</i></li> <li><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability. <i>[Violation Risk Factor: High]</i></li> <li><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed. <i>[Violation Risk Factor: High]</i></li> </ul>	<p><b>COM-001-2</b></p> <p><b>R5.</b> Each Balancing Authority shall have Interpersonal Communication capability with the following entities <u>(unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply):</u> <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <ul style="list-style-type: none"> <li><b>R5.1.</b> Its Reliability Coordinator.</li> <li><b>R5.2.</b> Each Transmission Operator that operates Facilities within its Balancing Authority Area.</li> <li><b>R5.3.</b> Each Distribution Provider within its Balancing Authority Area.</li> <li><b>R5.4.</b> Each Generator Operator that operates Facilities within its Balancing Authority Area.</li> <li><b>R5.5.</b> Each <del>A</del>adjacent Balancing Authority.</li> </ul> <p><b>R6.</b> Each Balancing Authority shall designate an Alternative Interpersonal Communication capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <ul style="list-style-type: none"> <li><b>R6.1.</b> Its Reliability Coordinator.</li> <li><b>R6.2.</b> Each Transmission Operator that operates Facilities within its Balancing Authority Area.</li> <li><b>R6.3.</b> Each <del>A</del>adjacent Balancing Authority.</li> </ul> <p><b>R7.</b> Each Distribution Provider shall have Interpersonal</p>

Already-Approved-Standard	Proposed-Replacement-Requirement(s)
	<p>Communication capability with the following entities <u>(unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply):</u> [Violation Risk Factor: High][Time Horizon: Real-time Operations]</p> <p><b>R7.1.</b> Its Transmission Operator.</p> <p><b>R7.2.</b> Its Balancing Authority.</p> <p><b>R8.</b> Each <b>Generator Operator</b> shall have Interpersonal Communication capability with the following entities <u>(unless the Reliability Coordinator detects a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply):</u> [Violation Risk Factor: High][Time Horizon: Real-time Operations]</p> <p><b>R8.1.</b> Its Balancing Authority.</p> <p><b>R8.2.</b> Its Transmission Operator.</p>

**Notes:** The requirements we made clearer as to which capabilities specific entities were required to have for reliable interpersonal communications. Requirements R7 and R8 were created to address the FERC directive (Order No. 693, P508) to “(1) expand the applicability to include generator operators and distribution providers and includes Requirements for their telecommunications facilities;”

Already-Approved-Standard	Proposed-Replacement-Requirement(s)
<p><b>COM-001-1.1</b></p> <p><b>R2.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications. <i>[Violation Risk Factor: Medium]</i></p>	<p><b>COM-001-2</b></p> <p><b>R9.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communication capability at least once each calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communication capability within 2 hours. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b></p>	
<p><b>COM-001-1.1</b></p> <p><b>R3.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>COM-001-2</b></p> <p><b>R1.</b> Each Reliability Coordinator shall have Interpersonal Communication capability with the following entities: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <p><b>R1.1.</b> All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.</p> <p><b>R1.2.</b> Each adjacent Reliability Coordinator within the same Interconnection.</p>
<p><b>Notes:</b></p>	
<p><b>COM-001-1.1</b></p> <p><b>R4.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and</p>	<p><b>None - retire</b></p> <ul style="list-style-type: none"> <li>▪ This requirement is being vetted by the OPCPSDT in Project 2007-02</li> </ul>

<b>Already-Approved-Standard</b>	<b>Proposed-Replacement-Requirement(s)</b>
<p>among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. <i>[Violation Risk Factor: Medium]</i></p>	<p>– Operating Personnel Communication Protocols (COM-003-1). This requirement and measure will be removed from COM-001-1.1 upon the effective date of COM-003-1.</p>
<p><b>Notes:</b></p>	
<p><b>COM-001-1.1</b></p> <p><b>R5.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities. <i>[Violation Risk Factor: Lower]</i></p>	<p><b>EOP-008-0</b></p> <p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements:</p> <p><b>R1.1.</b> The contingency plan shall not rely on data or voice communication from the primary control facility to be viable.</p> <p><b>R1.2.</b> The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules.</p> <p><b>R1.3.</b> The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities.</p> <p><b>R1.4.</b> The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other</p>



Already-Approved-Standard	Proposed-Replacement-Requirement(s)
	<p>areas.</p> <p><b>R1.5.</b> The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.</p> <p><b>R1.6.</b> The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans.</p> <p><b>R1.7.</b> The plan shall be reviewed and updated annually.</p> <p><b>R1.8.</b> Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.</p> <p><b>EOP-008-1</b></p> <p><b>R1.</b> Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have a current Operating Plan describing the manner in which it continues to meet its functional obligations with regard to the reliable operations of the BES in the event that its primary control center functionality is lost. This Operating Plan for backup functionality shall include the following, at a minimum: [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]</p> <p><b>1.1.</b> The location and method of implementation for providing backup functionality for the time it takes to restore the primary control center functionality.</p> <p><b>1.2.</b> A summary description of the elements required to support the backup functionality. These elements shall include, at a</p>

Already-Approved-Standard	Proposed-Replacement-Requirement(s)
	<p>minimum:</p> <ul style="list-style-type: none"> <li><b>1.2.1.</b> Tools and applications to ensure that System Operators have situational awareness of the BES.</li> <li><b>1.2.2.</b> Data communications.</li> <li><b>1.2.3.</b> Voice communications.</li> <li><b>1.2.4.</b> Power source(s).</li> <li><b>1.2.5.</b> Physical and cyber security.</li> <li><b>1.3.</b> An Operating Process for keeping the backup functionality consistent with the primary control center.</li> <li><b>1.4.</b> Operating Procedures, including decision authority, for use in determining when to implement the Operating Plan for backup functionality.</li> <li><b>1.5.</b> A transition period between the loss of primary control center functionality and the time to fully implement the backup functionality that is less than or equal to two hours.</li> <li><b>1.6.</b> An Operating Process describing the actions to be taken during the transition period between the loss of primary control center functionality and the time to fully implement backup functionality elements identified in Requirement R1, Part 1.2. The Operating Process shall include at a minimum: <ul style="list-style-type: none"> <li><b>1.6.1.</b> A list of all entities to notify when there is a change in operating locations.</li> <li><b>1.6.2.</b> Actions to manage the risk to the BES during the transition from primary to backup functionality as well as during</li> </ul> </li> </ul>

Already-Approved-Standard	Proposed-Replacement-Requirement(s)
	<p>outages of the primary or backup functionality.</p> <p><b>1.6.3.</b> Identification of the roles for personnel involved during the initiation and implementation of the Operating Plan for backup functionality.</p>
<p><b>Notes:</b> The <del>RCS DTRC SDT</del> proposes retiring COM-001-1.1, Requirement R5 as it is redundant with EOP-008-0, Requirement R1 as well as EOP-008-1 Requirement R1.</p>	
<p><del>COM-001-1.1</del></p> <p><b>R6.</b> Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, “NERCNet Security Policy.” <i>[Violation Risk Factor: Lower]</i></p>	<p><b>None</b> – retire</p>
<p><b>Notes:</b> The <del>RCS DTRC SDT</del> is recommending that R6 be retired. This is an ERO procedural issue and should not be in a reliability standard. It should be included in the ERO Rules of Procedure.</p>	
<p><u>None</u></p>	<p><b><u>New Requirement</u></b></p> <p><b><u>R10.</u></b> <u>Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1, R3, and R5, respectively within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer.</u> <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]</i></p>
<p><b>None</b></p>	<p><b><u>New Requirement</u></b></p> <p><b>R11.</b> Each Distribution Provider and Generator Operator that <del>detects</del><b>experiences</b> a failure of its Interpersonal Communication capabilities shall consult with their Transmission Operator or</p>

Already-Approved-Standard	Proposed-Replacement-Requirement(s)
	Balancing Authority to determine a mutually agreeable action to restore the Interpersonal Communication capability. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i>

Notes:

**Functions that Must Comply with the Requirements in the Standards**

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Purchasing Selling Entity	Transmission Operator	Transmission Service Provider	Load Serving Entity	Generator Operator	Distribution Provider
COM-001-2 Communications	X	X		X	X		X	X

# Violation Risk Factor and Violation Severity Level Justifications

## COM-001-2 - Communications

### Violation Risk Factor and Violation Severity Level Justifications

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in: COM-001-2 – Communications

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Reliability Coordination Standard Drafting Team (SDT) applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSL for the requirements under this project.

#### **NERC Criteria – Violation Risk Factors**

##### ***High Risk Requirement***

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

##### ***Medium Risk Requirement***

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

***Lower Risk Requirement***

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

**FERC Violation Risk Factor Guidelines**

The SDT also considered consistency with the FERC Violation Risk Factor Guidelines for setting VRFs:<sup>1</sup>

***Guideline 1 – Consistency with the Conclusions of the Final Blackout Report***

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:<sup>2</sup>

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities

<sup>1</sup> North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh'g and compliance filing, 120 FERC ¶ 61,145 (2007) (“VRF Rehearing Order”).

<sup>2</sup> Id. at footnote 15.

- Appropriate use of transmission loading relief

***Guideline 2 – Consistency within a Reliability Standard***

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

***Guideline 3 – Consistency among Reliability Standards***

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

***Guideline 4 – Consistency with NERC’s Definition of the Violation Risk Factor Level***

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC’s definition of that risk level.

***Guideline 5 – Treatment of Requirements that Co-mingle More Than One Obligation***

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC’s VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC’s Reliability Standards and implies that these requirements should be assigned a “High” VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

There are eleven requirements in the standard. None of the eleven requirements were assigned a “Lower” VRF. Requirements R1-R8 are assigned a “High” VRF while the other three requirements are assigned a “Medium” VRF.

**NERC Criteria – Violation Severity Levels**

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance, and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
<p>Missing a minor element (or a small percentage) of the required performance</p> <p>The performance or product measured has significant value as it almost meets the full intent of the requirement.</p>	<p>Missing at least one significant element (or a moderate percentage) of the required performance.</p> <p>The performance or product measured still has significant value in meeting the intent of the requirement.</p>	<p>Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component.</p> <p>The performance or product has limited value in meeting the intent of the requirement.</p>	<p>Missing most or all of the significant elements (or a significant percentage) of the required performance.</p> <p>The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.</p>

**FERC Order of Violation Severity Levels**

FERC’s VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in the standard meet the FERC Guidelines for assessing VSLs:

***Guideline 1 – Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance***

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

***Guideline 2 – Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties***

A violation of a “binary” type requirement must be a “Severe” VSL.

Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

***Guideline 3 – Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement***

VSLs should not expand on what is required in the requirement.



***Guideline 4 – Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations***

... unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

**VRF and VSL Justifications**

VRF Justifications – COM-001-2, R1-R6	
Proposed VRF	High
NERC VRF Discussion	
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report: N/A
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: Each requirement specifies which functional entities that are required to have Interpersonal Communication capability and Alternative Interpersonal Communication capability. The VRFs for each requirement are consistent with each other and are only applied at the Requirement level.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: These requirements are facility requirements that provide communications capability between functional entities. There are no similar facility requirements in the standards. The approved VRF for COM-001-1.1, R1 (which proposed R1-R6 replaces) is High and therefore the proposed VRF for R1-R6 is consistent.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to have Interpersonal Communication capability and Alternative Interpersonal Communication capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the Bulk Power System and could lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
FERC VRF G5	Guideline 5- Treatment of Requirements that Co-mingle More than One

VRF Justifications – COM-001-2, R1-R6	
Proposed VRF	High
Discussion	Obligation: Each of the six requirements, R1-R6, contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R1-R6				
R#	Lower	Moderate	High	Severe
R1	N/A	N/A	The Reliability Coordinator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Reliability Coordinator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R2	N/A	N/A	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R2, Parts 2.1 or 2.2.	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R2, Parts 2.1 or 2.2.
R3	N/A	N/A	The Transmission Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Transmission Operator detected a failure of its Interpersonal Communication	The Transmission Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Transmission Operator detected a failure of its Interpersonal Communication capability in accordance with

Proposed VSLs for COM-001-2, R1-R6				
			capability in accordance with Requirement R10.	Requirement R10.
R4	N/A	N/A	The Transmission Operator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.	The Transmission Operator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.
R5	N/A	N/A	The Balancing Authority failed to have Interpersonal Communication capability with one of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Balancing Authority detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Balancing Authority failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Balancing Authority detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R6	N/A	N/A	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.
VSL Justifications – COM-001-2, R1-R6				
NERC VSL Guidelines			Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance			The proposed requirement is a revision of COM-001-1.1, R1 and its sub-requirements. Each sub-requirement was separated out into a new stand-alone requirement. The VSLs for the approved sub-requirements are binary; however, proposed in these VSLs are increments because each entity may have multiple entities for which it must have	

Proposed VSLs for COM-001-2, R1-R6	
	an Interpersonal Communication capability.
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:</p> <p>N/A</p> <p>Guideline 2b:</p> <p>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</p>
<p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations.</p>

VRF Justifications – COM-001-2, R7	
Proposed VRF	Medium
NERC VRF Discussion	
FERC VRF G1 Discussion	<p>Guideline 1- Consistency w/ Blackout Report:</p> <p>N/A</p>
FERC VRF G2 Discussion	<p>Guideline 2- Consistency within a Reliability Standard:</p> <p>The requirement has no sub-requirements; only one VRF is assigned, so there</p>

<b>VRF Justifications – COM-001-2, R7</b>	
<b>Proposed VRF</b>	<b>Medium</b>
	is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, the Distribution Provider VRF is Medium because is not required to have an Alternative Interpersonal Communication and is not subject to Blackstart situations like that of the Generator Owner in Requirement R8.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to have Interpersonal Communication capability could limit or prevent communication between entities and directly; however, Bulk Power System instability, separation, or cascading failures are not likely to occur due to a failure to notify another entity of the failure. Therefore, this requirement is assigned a Medium VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation: The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R7				
R#	Lower	Moderate	High	Severe
R7	N/A	N/A	The Distribution Provider failed to have Interpersonal Communication capability with one of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Distribution Provider failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.
VSL Justifications – COM-001-2, R7				
NERC VSL Guidelines			Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance			The proposed requirement is a revision of COM-001-1.1, R1 and its sub-requirements. Each sub-requirement was separated out into a new stand-alone requirement. The VSLs for the approved sub-requirements are incremental and this is reflected in the proposed VSLs.	
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain			Guideline 2a: N/A  Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	

Proposed VSLs for COM-001-2, R7	
Ambiguous Language	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

VRF Justifications – COM-001-2, R8	
Proposed VRF	High
NERC VRF Discussion	
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report: N/A
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, Requirement R8 is an analog to Parts 3.4 and 5.4 and they have the same VRF (High). The Generator Owner may be subject to Blackstart plans and system restoration.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to have Interpersonal Communication capability could limit or prevent communication between entities and directly affect the electrical state or the

VRF Justifications – COM-001-2, R8	
Proposed VRF	High
	capability of the Bulk Power System and could lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:  The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R8				
R#	Lower	Moderate	High	Severe
R8	N/A	N/A	The Generator Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Generator Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.

VSL Justifications – COM-001-2, R8	
NERC VSL Guidelines	Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations..
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The most comparable VSLs for a similar requirement are for the proposed analog requirement and its parts COM-001-2, Part 3.4 and Part 5.4. This requirement specifies the two-way nature of entities having Interpersonal Communications capability. In other words, if one entity is required to have Interpersonal Communications



Proposed VSLs for COM-001-2, R8	
	capability with another entity, then the reciprocal should also be required or the onus would be exclusively on one entity. Since Requirement R3 and R5 are assigned incremental VSLs, it appropriate for Requirement R8 to also be assigned an incremental VSL.
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:</p> <p>N/A</p> <p>Guideline 2b:</p> <p>The proposed VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSLs use the same terminology as used in the associated requirement, and are, therefore, consistent with the requirement.</p>
<p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSLs are based on a single violation and not cumulative violations.</p>

<b>VRF Justifications – COM-001-2, R9</b>	
<b>Proposed VRF</b>	<b>Medium</b>
NERC VRF Discussion	
FERC VRF G1 Discussion	
FERC VRF G2 Discussion	<p>Guideline 2- Consistency within a Reliability Standard:</p> <p>The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.</p>
FERC VRF G3 Discussion	<p>Guideline 3- Consistency among Reliability Standards:</p> <p>COM-001-2, Requirement R9 is a requirement for entities to test their Alternative Interpersonal Communication capability and to take restorative action should the test fail and is a replacement requirement for COM-001-1.1, R2, which has an approved VRF of Medium.</p>
FERC VRF G4 Discussion	<p>COM-001-2, Requirement R9 is a requirement for entities to test their Alternative Interpersonal Communication capability and to take restorative action should the test fail. The act of testing in and of itself is not likely to “directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures...” Therefore, this requirement is assigned a Medium VRF.</p>
FERC VRF G5 Discussion	<p>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</p> <p>The requirement contains only one objective; therefore, only one VRF was assigned.</p>

Proposed VSLs for COM-001-2, R9				
R#	Lower	Moderate	High	Severe
R9	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 2 hours and less than or equal to 4 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 4 hours and less than or equal to 6 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 6 hours and less than or equal to 8 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to test the Alternative Interpersonal Communication capability once each calendar month.  OR The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 8 hours upon an unsuccessful test.
VSL Justifications – COM-001-2, R9				
NERC VSL Guidelines		Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.		

Proposed VSLs for COM-001-2, R9	
<p>FERC VSL G1</p> <p>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>The proposed requirement is a new and there are no comparable VSLs.</p>
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: N/A</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</p>
<p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations.</p>

<b>VRF Justifications – COM-001-2, R10</b>	
<b>Proposed VRF</b>	<b>Medium</b>
NERC VRF Discussion	
FERC VRF G1 Discussion	
FERC VRF G2 Discussion	<p>Guideline 2- Consistency within a Reliability Standard:</p> <p>The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.</p>
FERC VRF G3 Discussion	<p>Guideline 3- Consistency among Reliability Standards:</p> <p>COM-001-2, Requirement R10 is a new requirement that was assigned a Medium VRF. When evaluating the VRF to be assigned to this requirement, the SDT took into account that this requirement is a notification item, not an actual action that has a direct impact on the Bulk Power System. Therefore, the simple act of failing to notify another entity of the failure of Interpersonal Communication capability, while it may impair the entity’s ability communicate, does not, in itself, lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a Medium VRF.</p>
FERC VRF G4 Discussion	<p>Guideline 4- Consistency with NERC Definitions of VRFs:</p> <p>COM-001-2, Requirement R10 mandates that entities notify entities of a failure of Interpersonal Communications capability. Bulk Power System instability, separation, or cascading failures are not likely to occur due to a failure to notify another entity of the failure. Therefore, this requirement is assigned a Medium VRF.</p>
FERC VRF G5 Discussion	<p>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</p> <p>The requirement contains only one objective; therefore, only one VRF was assigned.</p>

Proposed VSLs for COM-001-2, R10				
R#	Lower	Moderate	High	Severe
R10	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 60 minutes but less than or equal to 70 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 70 minutes but less than or equal to 80 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 80 minutes but less than or equal to 90 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, respectively upon the detection of a failure of its Interpersonal Communication capability in more than 90 minutes.
VSL Justifications – COM-001-2, R10				
NERC VSL Guidelines		Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.		
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance		The proposed requirement is new and there are no comparable VSLs.		
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary"		Guideline 2a: N/A Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar		

Proposed VSLs for COM-001-2, R10	
Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	penalties for similar violations.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

VRF Justifications – COM-001-2, R11	
Proposed VRF	Medium
NERC VRF Discussion	
FERC VRF G1 Discussion	
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, Requirement R11 is a new requirement that was assigned a Medium VRF. When evaluating the VRF to be assigned to this requirement, the SDT took into account that this requirement is a consultation item, not an actual action that has a direct impact on the Bulk Power System. Therefore, the simple act of failing to consult with another entity on the failure of Interpersonal Communications capability and its restoration, while it may

VRF Justifications – COM-001-2, R11	
Proposed VRF	Medium
	impair the entity’s ability communicate, does not, in itself, lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a Medium VRF.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: COM-001-2, Requirement R11 mandates that entities consult with other entities regarding restoration of Interpersonal Communication capability. Bulk Power System instability, separation, or cascading failures are not likely to occur due to a failure to consult with another entity on restoration times. Therefore, this requirement is assigned a Medium VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:  The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R11				
R#	Lower	Moderate	High	Severe
R11	N/A	N/A	N/A	The Distribution Provider or Generator Operator that detected a failure of its Interpersonal Communication capability failed to consult with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of the Interpersonal Communication capability.
VSL Justifications – COM-001-2, R11				
NERC VSL Guidelines			Meets NERC’s VSL guidelines. This is a binary requirement and the VSL is severe.	
FERC VSL G1 Violation Severity Level			The proposed requirement is new and there are no comparable existing VSLs.	



Proposed VSLs for COM-001-2, R11	
Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:</p> <p>N/A</p> <p>Guideline 2b:</p> <p>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</p>
<p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations.</p>

# Violation Risk Factor and Violation Severity Level Justifications

## COM-001-2 - Communications

### Violation Risk Factor and Violation Severity Level Justifications

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in: COM-001-2 – Communications

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Reliability Coordination Standard Drafting Team (SDT) applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSL for the requirements under this project.

#### **NERC Criteria – Violation Risk Factors**

##### ***High Risk Requirement***

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

##### ***Medium Risk Requirement***

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

***Lower Risk Requirement***

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

**FERC Violation Risk Factor Guidelines**

The SDT also considered consistency with the FERC Violation Risk Factor Guidelines for setting VRFs:<sup>1</sup>

***Guideline 1 – Consistency with the Conclusions of the Final Blackout Report***

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:<sup>2</sup>

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities

<sup>1</sup> North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh'g and compliance filing, 120 FERC ¶ 61,145 (2007) ("VRF Rehearing Order").

<sup>2</sup> Id. at footnote 15.

- Appropriate use of transmission loading relief

***Guideline 2 – Consistency within a Reliability Standard***

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

***Guideline 3 – Consistency among Reliability Standards***

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

***Guideline 4 – Consistency with NERC’s Definition of the Violation Risk Factor Level***

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC’s definition of that risk level.

***Guideline 5 – Treatment of Requirements that Co-mingle More Than One Obligation***

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC’s VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC’s Reliability Standards and implies that these requirements should be assigned a “High” VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

There are eleven requirements in the standard. None of the eleven requirements were assigned a “Lower” VRF. Requirements R1-R8 are assigned a “High” VRF while the other three requirements are assigned a “Medium” VRF.

**NERC Criteria – Violation Severity Levels**

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance, and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
<p>Missing a minor element (or a small percentage) of the required performance</p> <p>The performance or product measured has significant value as it almost meets the full intent of the requirement.</p>	<p>Missing at least one significant element (or a moderate percentage) of the required performance.</p> <p>The performance or product measured still has significant value in meeting the intent of the requirement.</p>	<p>Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component.</p> <p>The performance or product has limited value in meeting the intent of the requirement.</p>	<p>Missing most or all of the significant elements (or a significant percentage) of the required performance.</p> <p>The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.</p>

**FERC Order of Violation Severity Levels**

FERC’s VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in the standard meet the FERC Guidelines for assessing VSLs:

***Guideline 1 – Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance***

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

***Guideline 2 – Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties***

A violation of a “binary” type requirement must be a “Severe” VSL.

Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

***Guideline 3 – Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement***

VSLs should not expand on what is required in the requirement.

***Guideline 4 – Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations***

... unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

**VRF and VSL Justifications**

VRF Justifications – COM-001-2, R1-R6	
Proposed VRF	High
NERC VRF Discussion	
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report: N/A
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: Each requirement specifies which functional entities that are required to have Interpersonal Communication capability and Alternative Interpersonal Communication capability. The VRFs for each requirement are consistent with each other and are only applied at the Requirement level.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: These requirements are facility requirements that provide communications capability between functional entities. There are no similar facility requirements in the standards. The approved VRF for COM-001-1.1, R1 (which proposed R1-R6 replaces) is High and therefore the proposed VRF for R1-R6 is consistent.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to have Interpersonal Communication capability and Alternative Interpersonal Communication capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the Bulk Power System and could lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
FERC VRF G5	Guideline 5- Treatment of Requirements that Co-mingle More than One

VRF Justifications – COM-001-2, R1-R6	
Proposed VRF	High
Discussion	Obligation: Each of the six requirements, R1-R6, contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R1-R6				
R#	Lower	Moderate	High	Severe
R1	N/A	N/A	<u>The Reliability Coordinator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u> N/A	The Reliability Coordinator failed to <del>have</del> designate Alternative Interpersonal Communication capability with <del>two</del> or more of the entities listed in Requirement <del>R1</del> R2, Parts <del>1.1</del> or <del>1.2</del> , except when the Reliability Coordinator detected a failure of its Interpersonal Communication capability in accordance with Requirement <del>R10</del> 2.2.
R2	N/A	N/A	<u>The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R2, Parts 2.1 or 2.2.</u> N/A	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with <del>two</del> or more of the entities listed in Requirement R2, Parts 2.1 or 2.2.
R3	N/A	N/A	<u>The Transmission Operator failed to have Interpersonal</u>	The Transmission Operator failed to have Interpersonal Communication capability with <del>two</del> or more of the

Proposed VSLs for COM-001-2, R1-R6				
			<p><u>Communication capability with one of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Transmission Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u> N/A</p>	<p>entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, <u>except when the Transmission Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u></p>
R4	N/A	N/A	<p><u>The Transmission Operator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.</u> N/A</p>	<p>The Transmission Operator failed to designate Alternative Interpersonal Communication capability with <del>two</del> one or more of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.</p>
R5	N/A	N/A	<p><u>The Balancing Authority failed to have Interpersonal Communication capability with one of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Balancing Authority detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u> N/A</p>	<p>The Balancing Authority failed to have Interpersonal Communication capability with <del>two</del> one or more of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, <u>except when the Balancing Authority detected a failure of its Interpersonal Communication capability in accordance with Requirement R10.</u></p>



Proposed VSLs for COM-001-2, R1-R6				
R6	N/A	N/A	<u>The Balancing Authority failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.</u> N/A	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with <del>two</del> or more of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.
VSL Justifications – COM-001-2, R1-R6				
NERC VSL Guidelines				Meets NERC’s VSL guidelines. <u>There is an incremental aspect to—Severe: The performance or product measured does not substantively meet the violation and intent of the VSLs follow the guidelines for incremental violations requirement.</u>
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance				The proposed requirement is a revision of COM-001-1.1, R1 and its sub-requirements. Each sub-requirement was separated out into a new stand-alone requirement. The VSLs for the approved sub-requirements are binary; <u>however, proposed in these VSLs are increments because each entity may have multiple entities for which it must have an Interpersonal Communication capability. -and this is reflected in the proposed VSLs.</u>
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is			Guideline 2a: N/A Guideline 2b:	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency

Proposed VSLs for COM-001-2, R1-R6	
Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	in the determination of similar penalties for similar violations.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

VRF Justifications – COM-001-2, R7	
<b>Proposed VRF</b>	<b><u>MediumHigh</u></b>
NERC VRF Discussion	
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report: N/A
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF is assigned, so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: <u>COM-001-2, the Distribution Provider VRF is Medium because is not required to have an Alternative Interpersonal Communication and is not subject to Blackstart situations like that of the Generator Owner in Requirement R8. COM 001 2, Requirement R7 is an analog to Parts 3.3 and 5.3 and they have the same VRF (High).</u>
FERC VRF G4	Guideline 4- Consistency with NERC Definitions of VRFs:

VRF Justifications – COM-001-2, R7	
Proposed VRF	<u>MediumHigh</u>
Discussion	Failure to have Interpersonal Communication capability could limit or prevent communication between entities and directly; <del>however, affect the electrical state or the capability of the Bulk Power System and could lead to</del> Bulk Power System instability, separation, or cascading failures <u>are not likely to occur due to a failure to notify another entity of the failure.</u> Therefore, this requirement is assigned a <u>MediumHigh</u> VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:  The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R7				
R#	Lower	Moderate	High	Severe
R7	N/A	N/A	<u>The Distribution Provider failed to have Interpersonal Communication capability with one of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u> N/A	The Distribution Provider failed to have Interpersonal Communication capability with <del>two</del> or more of the entities listed in Requirement R7, Parts 7.1 or 7.2, <u>except when the Distribution Provider detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>

VSL Justifications – COM-001-2, R7	
NERC VSL Guidelines	Meets NERC’s VSL guidelines. <u>There is an incremental aspect to</u> <del>Severe: The performance or product measured does not substantively meet</del> the <u>violation and intent of the VSLs follow the guidelines for incremental violations</u> requirement.

Proposed VSLs for COM-001-2, R7	
<p>FERC VSL G1</p> <p>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>The proposed requirement is a revision of COM-001-1.1, R1 and its sub-requirements. Each sub-requirement was separated out into a new stand-alone requirement. The VSLs for the approved sub-requirements are <u>incremental</u> <del>binary</del> and this is reflected in the proposed VSLs.</p>
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: N/A</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</p>
<p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations.</p>

VRF Justifications – COM-001-2, R8	
Proposed VRF	High

VRF Justifications – COM-001-2, R8	
Proposed VRF	High
NERC VRF Discussion	
FERC VRF G1 Discussion	<u>Guideline 1- Consistency w/ Blackout Report:</u> <u>N/A</u>
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, Requirement R8 is an analog to Parts 3.4 and 5.4 and they have the same VRF (High). <u>The Generator Owner may be subject to Blackstart plans and system restoration.</u>
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to have Interpersonal Communication capability could limit or prevent communication between entities and directly affect the electrical state or the capability of the Bulk Power System and could lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation: The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R8				
R#	Lower	Moderate	High	Severe
R8	N/A	N/A	<u>The Generator Operator failed to have Interpersonal Communication capability</u>	The Generator Operator failed to have Interpersonal Communication capability with

Proposed VSLs for COM-001-2, R8				
			<u>with one of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u> <del>N/A</del>	<del>two</del> <u>one</u> or more of the entities listed in Requirement R8, Parts 8.1 or 8.2, <u>except when a Generator Operator detected a failure of its Interpersonal Communication capability in accordance with Requirement R11.</u>
VSL Justifications – COM-001-2, R8				
NERC VSL Guidelines		Meets NERC’s VSL guidelines. <u>There is an incremental aspect to</u> <del>Severe: The performance or product measured does not substantively meet the violation and intent of the VSLs follow the guidelines for incremental violations.</del> <u>requirement.</u>		
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance		The most comparable VSLs for a similar requirement are for the proposed analog requirement and its parts COM-001-2, Part 3.4 and Part 5.4. This requirement specifies the two-way nature of entities having Interpersonal Communications capability. In other words, if one entity is required to have Interpersonal Communications capability with another entity, then the reciprocal should also be required or the onus would be exclusively on one entity. Since Requirement R3 and R5 are assigned <u>incremental</u> <del>binary</del> VSLs, it appropriate for Requirement <del>R3R5</del> to also be assigned <u>an incremental</u> <del>a binary</del> VSL.		
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity		Guideline 2a: N/A Guideline 2b: The proposed VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.		

Proposed VSLs for COM-001-2, R8	
Level Assignments that Contain Ambiguous Language	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSLs use the same terminology as used in the associated requirement, and are, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSLs are based on a single violation and not cumulative violations.

VRF Justifications – COM-001-2, R9	
Proposed VRF	Medium
NERC VRF Discussion	
FERC VRF G1 Discussion	
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, Requirement R9 is a requirement for entities to test their Alternative Interpersonal Communication capability and to take restorative action should the test fail and is a replacement requirement for COM-001-1.1, R2, which has an approved VRF of Medium.
FERC VRF G4	COM-001-2, Requirement R9 is a requirement for entities to test their

VRF Justifications – COM-001-2, R9	
Proposed VRF	Medium
Discussion	Alternative Interpersonal Communication capability and to take restorative action should the test fail. The act of testing in and of itself is not likely to “directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures...” Therefore, this requirement is assigned a Medium VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:  The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R9				
R#	Lower	Moderate	High	Severe
R9	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 2 hours and less than or equal to 4 hours	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 4 hours and less than or equal to 6 hours	The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 6 hours and less than or equal to 8 hours	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to test the Alternative Interpersonal Communication capability once each calendar month.  OR  The Reliability Coordinator, Transmission Operator, or Balancing Authority tested the



Proposed VSLs for COM-001-2, R9				
	upon an unsuccessful test.	upon an unsuccessful test.	upon an unsuccessful test.	Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 8 hours upon an unsuccessful test.
VSL Justifications – COM-001-2, R9				
NERC VSL Guidelines		Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.		
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance		The proposed requirement is a new and there are no comparable VSLs.		
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties  Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent  Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language		Guideline 2a: N/A  Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.		
FERC VSL G3 Violation Severity Level Assignment Should		The proposed VSL uses the same terminology as used in the associated requirement, and is,		

Proposed VSLs for COM-001-2, R9	
Be Consistent with the Corresponding Requirement	therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

VRF Justifications – COM-001-2, R10	
Proposed VRF	Medium
NERC VRF Discussion	
FERC VRF G1 Discussion	
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, Requirement R10 is a new requirement that was assigned a Medium VRF. When evaluating the VRF to be assigned to this requirement, the SDT took into account that this requirement is a notification item, not an actual action that has a direct impact on the Bulk Power System. Therefore, the simple act of failing to notify another entity of the failure of Interpersonal Communication capability, while it may impair the entity’s ability to communicate, does not, in itself, lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a Medium VRF.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: COM-001-2, Requirement R10 mandates that entities notify entities of a failure of Interpersonal Communications capability. Bulk Power System

VRF Justifications – COM-001-2, R10	
<b>Proposed VRF</b>	<b>Medium</b>
	instability, separation, or cascading failures are not likely to occur due to a failure to notify another entity of the failure. Therefore, this requirement is assigned a Medium VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:  The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R10				
R#	Lower	Moderate	High	Severe
R10	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, <u>respectively</u> upon the detection of a failure of its Interpersonal Communication capability in more than 60 minutes but less than or equal to 70 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, <u>respectively</u> upon the detection of a failure of its Interpersonal Communication capability in more than 70 minutes but less than or equal to 80 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5, <u>respectively</u> upon the detection of a failure of its Interpersonal Communication capability in more than 80 minutes but less than or equal to 90 minutes.	The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to notify the <del>identified</del> entities identified in Requirements R1, R3, and R5, <u>respectively</u> upon the detection of a failure of its Interpersonal Communication capability in more than 90 minutes.
VSL Justifications – COM-001-2, R10				
NERC VSL Guidelines		Meets NERC’s VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.		

Proposed VSLs for COM-001-2, R10	
<p>FERC VSL G1</p> <p>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>The proposed requirement is new and there are no comparable VSLs.</p>
<p>FERC VSL G2</p> <p>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</p> <p>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</p> <p>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: N/A</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p>FERC VSL G3</p> <p>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</p>
<p>FERC VSL G4</p> <p>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations.</p>

VRF Justifications – COM-001-2, R11	
<b>Proposed VRF</b>	<b>Medium</b>
NERC VRF Discussion	

VRF Justifications – COM-001-2, R11	
Proposed VRF	Medium
FERC VRF G1 Discussion	
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: COM-001-2, Requirement R11 is a new requirement that was assigned a Medium VRF. When evaluating the VRF to be assigned to this requirement, the SDT took into account that this requirement is a consultation item, not an actual action that has a direct impact on the Bulk Power System. Therefore, the simple act of failing to consult with another entity on the failure of Interpersonal Communications capability and its restoration, while it may impair the entity’s ability communicate, does not, in itself, lead to Bulk Power System instability, separation, or cascading failures. Therefore, this requirement is assigned a Medium VRF.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: COM-001-2, Requirement R11 mandates that entities consult with other entities regarding restoration of Interpersonal Communication capability. Bulk Power System instability, separation, or cascading failures are not likely to occur due to a failure to consult with another entity on restoration times. Therefore, this requirement is assigned a Medium VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation: The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for COM-001-2, R11				
R#	Lower	Moderate	High	Severe

Proposed VSLs for COM-001-2, R11				
R11	N/A	N/A	N/A	The Distribution Provider or Generator Operator <u>that detected a failure of its Interpersonal Communication capability</u> failed to consult with <u>each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator's Transmission Operator, and Balancing Authority</u> to determine a mutually agreeable action for the restoration of the Interpersonal Communication capability.
VSL Justifications – COM-001-2, R11				
NERC VSL Guidelines		Meets NERC’s VSL guidelines. This is a binary requirement and the VSL is severe.		
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance		The proposed requirement is new and there are no comparable existing VSLs.		
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language		Guideline 2a: N/A Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.		
FERC VSL G3 Violation Severity Level		The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the		

Proposed VSLs for COM-001-2, R11	
Assignment Should Be Consistent with the Corresponding Requirement	requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

## Standards Announcement Project 2006-06 Reliability Coordination

Recirculation Ballot Windows Open through 8 p.m. Monday, September 17, 2012

### Now Available

The drafting team for **COM-001-2 – Communications** has posted its consideration of comments received during a parallel formal comment period and successive ballot that ended July 11, 2012. The drafting team made the following clarifying changes to the standard:

- In Requirements R1, R3, R5, R7, R8 and R 11 the word ‘experiences’ was changed to ‘detects’. Respective changes were also made to the measures.
- In Requirement R7 the VRF was changed from high to medium.
- In Requirement R10 the word ‘respectively’ was added to connect referenced requirements to the responsible entities named in the requirement. The respective change was also made in the measure.
- In Measure M3 ‘and’ was changed to ‘or’.
- The Data Retention section was updated for readability and retention of voice recordings was added.

A recirculation ballot of COM-001-1 is open from **Thursday, September 6, 2012 through 8 p.m. Eastern on Monday, September 17, 2012.**

### Instructions

In the recirculation ballot, votes are counted by exception. Only members of the ballot pool may cast a ballot; all ballot pool members may change their previously cast votes. A ballot pool member who failed to cast a ballot during the last ballot window may cast a ballot in the recirculation ballot window. If a ballot pool member does not participate in the recirculation ballot, that member’s vote cast in the previous ballot will be carried over as that member’s vote in the recirculation ballot.

Members of the ballot pool associated with this project may log in and submit their vote by clicking [here](#).

### Next Steps

If approved, the standard will be presented to the Board of Trustees for adoption and then filed with the appropriate regulatory authorities.



## Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measureable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to the scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standard IRO-003-2.

Additional information is available on the [project page](#).

## Standards Development Process

The [Standards Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact Monica Benson,  
Standards Process Administrator, at [monica.benson@nerc.net](mailto:monica.benson@nerc.net) or at 404-446-2560.*

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# Standards Announcement

## Project 2006-06 Reliability Coordination

### Recirculation Ballot Results

#### [Now Available](#)

A recirculation ballot of **COM-001-2 – Communications** concluded on Monday, September 17, 2012.

Voting statistics are listed below, and the [Ballots Results](#) page provides a link to the detailed results.

Approval
Quorum: 80.35%
Approval: 75.01%

#### Next Steps

The standard will be presented to the Board of Trustees in November.

#### Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measureable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to the scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standard IRO-003-2.

Additional information is available on the [project page](#).

#### Standards Development Process

The [Standards Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

User Name

Password

Log in

Register

- Ballot Pools
- Current Ballots
- Ballot Results
- Registered Ballot Body
- Proxy Voters

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Ballot Results	
<b>Ballot Name:</b>	Project 2006-06 COM-001 Recirculation Ballot August 2012_in
<b>Ballot Period:</b>	9/6/2012 - 9/17/2012
<b>Ballot Type:</b>	Initial
<b>Total # Votes:</b>	274
<b>Total Ballot Pool:</b>	341
<b>Quorum:</b>	<b>80.35 % The Quorum has been reached</b>
<b>Weighted Segment Vote:</b>	75.01 %
<b>Ballot Results:</b>	<b>The Standard has Passed</b>

Summary of Ballot Results								
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Abstain	No Vote
			# Votes	Fraction	# Votes	Fraction	# Votes	
1 - Segment 1.	88	1	50	0.781	14	0.219	8	16
2 - Segment 2.	11	0.8	6	0.6	2	0.2	2	1
3 - Segment 3.	85	1	35	0.565	27	0.435	2	21
4 - Segment 4.	24	1	14	0.737	5	0.263	1	4
5 - Segment 5.	69	1	36	0.75	12	0.25	6	15
6 - Segment 6.	44	1	27	0.818	6	0.182	4	7
7 - Segment 7.	0	0	0	0	0	0	0	0
8 - Segment 8.	8	0.7	5	0.5	2	0.2	0	1
9 - Segment 9.	4	0.2	2	0.2	0	0	1	1
10 - Segment 10.	8	0.7	6	0.6	1	0.1	0	1
<b>Totals</b>	<b>341</b>	<b>7.4</b>	<b>181</b>	<b>5.551</b>	<b>69</b>	<b>1.849</b>	<b>24</b>	<b>67</b>

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Allegheny Power	Rodney Phillips		
1	Ameren Services	Kirit Shah	Affirmative	
1	American Electric Power	Paul B. Johnson	Negative	
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith		
1	Avista Corp.	Scott J Kinney	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Abstain	
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	

1	Beaches Energy Services	Joseph S Stonecipher	Abstain
1	Bonneville Power Administration	Donald S. Watkins	Affirmative
1	Central Maine Power Company	Kevin L Howes	Affirmative
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative
1	City of Vero Beach	Randall McCamish	
1	City Water, Light & Power of Springfield	Shaun Anders	
1	Clark Public Utilities	Jack Stamper	Affirmative
1	Cleco Power LLC	Danny McDaniel	Affirmative
1	Colorado Springs Utilities	Paul Morland	Negative
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative
1	Dayton Power & Light Co.	Hertzel Shamash	Affirmative
1	Dominion Virginia Power	Michael S Crowley	Affirmative
1	Duke Energy Carolina	Douglas E. Hils	Negative
1	East Kentucky Power Coop.	George S. Carruba	Negative
1	Empire District Electric Co.	Ralph F Meyer	Affirmative
1	Entergy Corporation	George R. Bartlett	Negative
1	FirstEnergy Energy Delivery	Robert Martinko	Affirmative
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative
1	Great River Energy	Gordon Pietsch	Affirmative
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon	Negative
1	Hydro One Networks, Inc.	Ajay Garg	Negative
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Affirmative
1	Idaho Power Company	Ronald D. Schellberg	
1	International Transmission Company Holdings Corp	Michael Moltane	Negative
1	Kansas City Power & Light Co.	Michael Gammon	Negative
1	Keys Energy Services	Stan T. RZad	
1	Lake Worth Utilities	Walt Gill	
1	Lakeland Electric	Larry E Watt	Affirmative
1	Lee County Electric Cooperative	John W Delucca	Affirmative
1	Long Island Power Authority	Robert Ganley	Affirmative
1	Manitoba Hydro	Joe D Petaski	Negative
1	MEAG Power	Danny Dees	Affirmative
1	MidAmerican Energy Co.	Terry Harbour	Affirmative
1	Minnkota Power Coop. Inc.	Richard Burt	Abstain
1	National Grid	Saurabh Saksena	
1	Nebraska Public Power District	Richard L. Koch	
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Affirmative
1	New York Power Authority	Arnold J. Schuff	
1	Northeast Utilities	David Boguslawski	Affirmative
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative
1	NorthWestern Energy	John Canavan	Affirmative
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Affirmative
1	Omaha Public Power District	Doug Peterchuck	Affirmative
1	Oncor Electric Delivery	Michael T. Quinn	Negative
1	Orlando Utilities Commission	Brad Chase	Affirmative
1	Otter Tail Power Company	Daryl Hanson	Affirmative
1	PacifiCorp	Colt Norrish	
1	PECO Energy	Ronald Schloendorn	Affirmative
1	Platte River Power Authority	John C. Collins	Affirmative
1	Portland General Electric Co.	Frank F Afranji	Affirmative
1	Potomac Electric Power Co.	David Thorne	Affirmative
1	PowerSouth Energy Cooperative	Larry D Avery	Abstain
1	PPL Electric Utilities Corp.	Brenda L Truhe	Abstain
1	Public Service Company of New Mexico	Laurie Williams	Affirmative
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Affirmative
1	Puget Sound Energy, Inc.	Catherine Koch	Affirmative
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative
1	Salt River Project	Robert Kondziolka	Affirmative
1	Santee Cooper	Terry L Blackwell	Affirmative
1	SCE&G	Henry Delk, Jr.	
1	Seattle City Light	Pawel Krupa	Affirmative

1	Sierra Pacific Power Co.	Rich Salgo	Abstain
1	South Texas Electric Cooperative	Richard McLeon	
1	Southern California Edison Co.	Dana Cabbell	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Affirmative
1	Southern Illinois Power Coop.	William Hutchison	Negative
1	Southwest Transmission Cooperative, Inc.	James Jones	Negative
1	Southwestern Power Administration	Gary W Cox	Abstain
1	Sunflower Electric Power Corporation	Noman Lee Williams	
1	Tampa Electric Co.	Beth Young	
1	Tennessee Valley Authority	Larry Akens	Affirmative
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative
1	Tucson Electric Power Co.	John Tolo	Affirmative
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative
1	Westar Energy	Allen Klassen	Negative
1	Western Area Power Administration	Brandy A Dunn	Affirmative
1	Western Farmers Electric Coop.	Forrest Brock	Abstain
1	Xcel Energy, Inc.	Gregory L Pieper	Affirmative
2	Alberta Electric System Operator	Mark B Thompson	Abstain
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative
2	California ISO	Gregory Van Pelt	Affirmative
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative
2	Independent Electricity System Operator	Kim Warren	Negative
2	ISO New England, Inc.	Kathleen Goodman	Affirmative
2	Midwest ISO, Inc.	Jason L Marshall	
2	New Brunswick System Operator	Alden Briggs	Negative
2	New York Independent System Operator	Gregory Campoli	Abstain
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative
2	Southwest Power Pool	Charles H. Yeung	Affirmative
3	Alabama Power Company	Richard J. Mandes	Affirmative
3	Allegheny Power	Bob Reeping	
3	Anaheim Public Utilities Dept.	Kelly Nguyen	
3	APS	Steven Norris	Affirmative
3	Atlantic City Electric Company	James V. Petrella	Affirmative
3	BC Hydro and Power Authority	Pat G. Harrington	
3	Blachly-Lane Electric Co-op	Bud Tracy	Negative
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Negative
3	Central Lincoln PUD	Steve Alexanderson	Negative
3	City of Bartow, Florida	Matt Culverhouse	
3	City of Clewiston	Lynne Mila	
3	City of Farmington	Linda R Jacobson	Affirmative
3	City of Garland	Ronnie C Hoeinghaus	
3	City of Green Cove Springs	Gregg R Griffin	
3	City of Leesburg	Phil Janik	
3	City of Redding	Bill Hughes	Affirmative
3	Clearwater Power Co.	Dave Hagen	Negative
3	Cleco Corporation	Michelle A Corley	Affirmative
3	ComEd	Bruce Krawczyk	Affirmative
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative
3	Constellation Energy	CJ Ingersoll	Abstain
3	Consumers Energy	David A. Lapinski	Negative
3	Consumers Power Inc.	Roman Gillen	Negative
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Negative
3	Cowlitz County PUD	Russell A Noble	Negative
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative
3	Detroit Edison Company	Kent Kujala	Negative
3	Dominion Resources Services	Michael F. Gildea	Affirmative
3	Douglas Electric Cooperative	Dave Sabala	Negative
3	Duke Energy Carolina	Henry Ernst-Jr	Negative
3	East Kentucky Power Coop.	Sally Witt	
3	Entergy	Joel T Plessinger	Negative
3	Fall River Rural Electric Cooperative	Bryan Case	Negative
3	FirstEnergy Solutions	Kevin Querry	Affirmative
3	Georgia Power Company	Anthony L Wilson	Affirmative
3	Georgia System Operations Corporation	Scott S. Barfield-McGinnis	Affirmative

3	Great River Energy	Sam Kokkinen	Affirmative
3	Hydro One Networks, Inc.	David Kiguel	Negative
3	Idaho Power Company	Shaun Jensen	
3	JEA	Garry Baker	Affirmative
3	Kansas City Power & Light Co.	Charles Locke	Negative
3	Kissimmee Utility Authority	Gregory D Woessner	Negative
3	Lakeland Electric	Mace D Hunter	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Negative
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Negative
3	Lincoln Electric System	Bruce Merrill	
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative
3	Lost River Electric Cooperative	Richard Reynolds	Negative
3	Louisville Gas and Electric Co.	Charles A. Freibert	Negative
3	Manitoba Hydro	Greg C. Parent	Negative
3	MidAmerican Energy Co.	Thomas C. Mielnik	
3	Mississippi Power	Don Horsley	Affirmative
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative
3	Muscatine Power & Water	John S Bos	Affirmative
3	Nebraska Public Power District	Tony Eddleman	Negative
3	New York Power Authority	Marilyn Brown	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative
3	Northern Lights Inc.	Jon Shelby	Negative
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Negative
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative
3	PacifiCorp	John Apperson	
3	Platte River Power Authority	Terry L Baker	Affirmative
3	Potomac Electric Power Co.	Robert Reuter	Affirmative
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Affirmative
3	Public Utility District No. 2 of Grant County	Greg Lange	
3	Raft River Rural Electric Cooperative	Heber Carpenter	Negative
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative
3	Salmon River Electric Cooperative	Ken Dizes	Abstain
3	Salt River Project	John T. Underhill	Affirmative
3	San Diego Gas & Electric	Scott Peterson	
3	Santee Cooper	Zack Dusenbury	
3	Seattle City Light	Dana Wheelock	Affirmative
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative
3	Southern California Edison Co.	David Schiada	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative
3	Tampa Electric Co.	Ronald L Donahey	
3	Tennessee Valley Authority	Ian S Grant	Affirmative
3	Umatilla Electric Cooperative	Steve Eldrige	Negative
3	West Oregon Electric Cooperative, Inc.	Marc M Farmer	Negative
3	Wisconsin Electric Power Marketing	James R Keller	Affirmative
3	Wisconsin Public Service Corp.	Gregory J Le Grave	
3	Xcel Energy, Inc.	Michael Ibold	Affirmative
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative
4	American Municipal Power - Ohio	Kevin Koloini	Negative
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative
4	Central Lincoln PUD	Shamus J Gamache	Negative
4	City of Clewiston	Kevin McCarthy	
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative
4	Consumers Energy	David Frank Ronk	Abstain
4	Cowlitz County PUD	Rick Syring	Negative
4	Florida Municipal Power Agency	Frank Gaffney	
4	Fort Pierce Utilities Authority	Thomas W. Richards	
4	Georgia System Operations Corporation	Guy Andrews	Affirmative
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Negative
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative
4	Public Utility District No. 1 of Snohomish	John D Martinsen	Affirmative

	County		
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative
4	Seattle City Light	Hao Li	Affirmative
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative
4	Tacoma Public Utilities	Keith Morissette	Affirmative
4	Tallahassee Electric	Allan Morales	Negative
4	Wisconsin Energy Corp.	Anthony Jankowski	Affirmative
5	AEP Service Corp.	Brock Ondayko	Negative
5	AES Corporation	Leo Bernier	Negative
5	Amerenue	Sam Dwyer	Affirmative
5	Arizona Public Service Co.	Edward Cambridge	Affirmative
5	Avista Corp.	Edward F. Groce	Affirmative
5	BC Hydro and Power Authority	Clement Ma	Abstain
5	Bonneville Power Administration	Francis J. Halpin	Affirmative
5	City of Grand Island	Jeff Mead	Abstain
5	City of Redding	Paul A. Cummings	Affirmative
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick	Affirmative
5	City of Tallahassee	Alan Gale	
5	Cleco Power	Stephanie Huffman	Affirmative
5	Cogentrix Energy, Inc.	Mike D Hirst	Abstain
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Affirmative
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Abstain
5	Consumers Energy	James B Lewis	Negative
5	Cowlitz County PUD	Bob Essex	Negative
5	CPS Energy	Robert B Stevens	
5	Detroit Edison Company	Christy Wicke	Negative
5	Dominion Resources, Inc.	Mike Garton	Affirmative
5	Duke Energy	Dale Q Goodwine	Negative
5	Dynegy Inc.	Dan Roethemeyer	Affirmative
5	Electric Power Supply Association	John R Cashin	
5	Entergy Corporation	Stanley M Jaskot	
5	Exelon Nuclear	Michael Korchynsky	Affirmative
5	ExxonMobil Research and Engineering	Martin Kaufman	
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative
5	Florida Municipal Power Agency	David Schumann	
5	Great River Energy	Preston L Walsh	Affirmative
5	Green Country Energy	Greg Froehling	
5	Indeck Energy Services, Inc.	Rex A Roehl	
5	Kansas City Power & Light Co.	Scott Heidtbrink	
5	Kissimmee Utility Authority	Mike Blough	Negative
5	Lakeland Electric	James M Howard	Affirmative
5	Liberty Electric Power LLC	Daniel Duff	Negative
5	Lincoln Electric System	Dennis Florom	Affirmative
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative
5	Luminant Generation Company LLC	Mike Laney	Affirmative
5	Manitoba Hydro	S N Fernando	Negative
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Affirmative
5	MEAG Power	Steven Grego	Affirmative
5	MidAmerican Energy Co.	Christopher Schneider	Affirmative
5	Muscatine Power & Water	Mike Avesing	Affirmative
5	Nebraska Public Power District	Don Schmit	Negative
5	New York Power Authority	Gerald Mannarino	
5	Occidental Chemical	Michelle R D'Antuono	Negative
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative
5	Orlando Utilities Commission	Richard Kinan	
5	PacifiCorp	Sandra L. Shaffer	Affirmative
5	Platte River Power Authority	Pete Ungerman	
5	Portland General Electric Co.	Gary L Tingley	Affirmative
5	PPL Generation LLC	Annette M Bannon	Abstain
5	Public Service Enterprise Group Incorporated	Dominick Grasso	Affirmative
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative
5	Salt River Project	Glen Reeves	
5	Santee Cooper	Lewis P Pierce	Affirmative
5	Seattle City Light	Michael J. Haynes	Affirmative

5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative
5	Southern Company Generation	William D Shultz	Affirmative
5	Tampa Electric Co.	RJames Rocha	Affirmative
5	Tenaska, Inc.	Scott M. Helyer	Abstain
5	Tennessee Valley Authority	David Thompson	Affirmative
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative
5	US Power Generating Company	Bohdan M Dackow	
5	Wisconsin Electric Power Co.	Linda Horn	Affirmative
5	Wisconsin Public Service Corp.	Leonard Rentmeester	
6	AEP Marketing	Edward P. Cox	Negative
6	Ameren Energy Marketing Co.	Jennifer Richardson	Affirmative
6	Arizona Public Service Co.	Justin Thompson	Affirmative
6	Black Hills Power	andrew heinle	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative
6	City of Austin dba Austin Energy	Lisa L Martin	Affirmative
6	Cleco Power LLC	Robert Hirschak	Affirmative
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative
6	Constellation Energy Commodities Group	Brenda L Powell	Affirmative
6	Dominion Resources, Inc.	Louis S. Slade	Affirmative
6	Duke Energy Carolina	Walter Yeager	Negative
6	Entergy Services, Inc.	Terri F Benoit	Negative
6	Exelon Power Team	Pulin Shah	Abstain
6	FirstEnergy Solutions	Mark S Travaglianti	Affirmative
6	Florida Municipal Power Agency	Richard L. Montgomery	
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative
6	Great River Energy	Donna Stephenson	
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative
6	Lakeland Electric	Paul Shipps	Affirmative
6	Lincoln Electric System	Eric Ruskamp	Affirmative
6	Manitoba Hydro	Daniel Prowse	Negative
6	MidAmerican Energy Co.	Dennis Kimm	Abstain
6	Muscatine Power & Water	Brandy D Olson	
6	New York Power Authority	William Palazzo	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative
6	Omaha Public Power District	David Ried	Affirmative
6	PacifiCorp	Scott L Smith	Affirmative
6	Platte River Power Authority	Carol Ballantine	Affirmative
6	PPL EnergyPlus LLC	Mark A Heimbach	Abstain
6	Progress Energy	John T Sturgeon	Abstain
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative
6	Sacramento Municipal Utility District	Claire Warshaw	Affirmative
6	Salt River Project	Steven J Hulet	Affirmative
6	Santee Cooper	Suzanne Ritter	
6	Seattle City Light	Dennis Sismaet	Affirmative
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative
6	Shell Energy North America (US), L.P.	Paul Kerr	Affirmative
6	South California Edison Company	Lujuanna Medina	Affirmative
6	Tacoma Public Utilities	Michael C Hill	Affirmative
6	Tampa Electric Co.	Benjamin F Smith II	
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative
6	Xcel Energy, Inc.	David F Lemmons	Affirmative
8		Roger C Zaklukiewicz	Affirmative
8		James A Maenner	Negative
8		Edward C Stein	Affirmative
8	JDRJC Associates	Jim Cyrulewski	Affirmative
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Negative
8	Power Energy Group LLC	Peggy Abbadini	
8	Utility Services, Inc.	Brian Evans-Mongeon	Affirmative
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative
9	National Association of Regulatory Utility Commissioners	Diane J. Barney	Affirmative





9	Oregon Public Utility Commission	Jerome Murray	Abstain	
9	Snohomish County PUD No. 1	William Moojen		
10	Florida Reliability Coordinating Council	Linda Campbell	Affirmative	
10	Midwest Reliability Organization	James D Burley		
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	
10	SERC Reliability Corporation	Carter B. Edge	Affirmative	
10	Texas Reliability Entity	Larry D. Grimm	Negative	
10	Western Electricity Coordinating Council	Louise McCarren	Affirmative	

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**Exhibit N**

**Summary of Development History and Complete Record of Development COM-002-4**

## **Summary of Development History**

### **Project 2007-02 – Operating Personnel Communications Protocols**

The development record for proposed Reliability Standard COM-002-4 is summarized below.

#### **I. Overview of the Standard Drafting Team**

When evaluating a proposed Reliability Standard, the Commission is expected to give “due weight” to the technical expertise of the ERO<sup>1</sup>. The technical expertise of the ERO is derived from the standard drafting team. For this project, the standard drafting team consisted of industry experts, all from a diverse set of experiences. A roster of the standard drafting team members is included in Exhibit P.

#### **II. Standard Development History**

##### **A. Standard Authorization Request (SAR) Development**

Project 2007-02- Operating Personnel Communications Protocols was initiated on March 1, 2007 as a SAR for revisions to existing standards and development of a new standard. The SAR was posted for 30-day comment period from March 15, 2007 to April 17, 2007. NERC received 23 sets of comments, including comments from sixty-nine different individuals from more than forty-five companies representing 9 of the 10 industry segments. Based on comments received, a revised SAR was posted with a solicitation for drafting team members from April 18, 2007 to May 2, 2007.

##### **B. First Posting – COM-003-1 Comment Period**

COM-003-1 was first posted for a 45-day comment period from November 30, 2009 to January 15, 2010. NERC received 71 sets of comments from more than 280 different individuals

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<sup>1</sup> Section 215(d)(2) of the Federal Power Act; 16 U.S.C. §824(d) (2) (2012).

from over 100 companies representing nine of the 10 industry segments. In response to comments, the standard drafting team made the following changes to the draft COM-003-1

Standard:

- The three proposed defined terms (Communications Protocol, Three-part Communication and Interoperability Communication) were removed.
- The term “Operating Communication” was introduced, replacing “Interoperability Communication.”
- The requirement to have a Communications Protocol Operating Procedure was removed, based on comments that it was administrative in nature.
- Transmission Service Providers and Load Serving Entities were removed from the applicability section based on their roles and expected communications.
- Requirement R4 was modified to no longer mandate “Central Standard Time” and allowed entities to specify the time zone in the communication.
- The requirement for repeat-back of communications, Requirement R5, was modified to add the phrase “not necessarily verbatim” to address concerns regarding potential audit citations if a repeat-back was not word-for-word or verbatim.
- The requirement to use the NATO alphabet was modified to allow other alpha-numeric clarifiers to address the concern that requiring strict adherence to and precise pronunciation of the NATO phonetic alphabet is overly prescriptive, and the proposed standard should allow for other phonetic clarifiers where clarity on alpha-numeric information is necessary.

- The requirement to use pre-determined, mutually agreed upon line and equipment identifiers was modified to apply only to interface Elements, not Elements or Facilities internal to the footprint of an entity.

### **C. Second Posting – COM-003-1 Comment Period**

The second draft of the COM-003-1 standard was posted for a 45-day comment period from May 7, 2012 to June 20, 2012. NERC received 94 sets of comments from approximately 292 different individuals from approximately 166 companies representing all 10 industry segments. A common theme among many entities was that the approach to COM-003-1 should be changed. Most agreed with the comments submitted by the NERC Operating Committee that applicable entities should be required to

- a. develop written communication protocols that address the elements in COM-003-1,
- b. train on those protocols, and
- c. develop internal controls to find and correct deviances from those protocols.

In response to comments, the proposed standard was modified to use the approach suggested by the NERC Operating Committee. Additionally, the term “Operating Communication” was changed to “Operating Instruction” and modified to limit the communications that were applicable to the standard to just those that were a command to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.

### **D. Third Posting – COM-003-1 Comment Period**

The third draft of the COM-003-1 standard was posted for a 30-day comment period from August 22, 2012 to September 20, 2012. NERC received 80 sets of comments from approximately 232 different individuals from approximately 141 companies representing all 10

industry segments. In response to comments, the standard drafting team made the following changes to the draft COM-003-1 Standard:

- The term “Operating Instruction” was modified to clarify the scope and intent of the term; and
- The concept of “identify, assess, and correct” introduced in the development of version 5 of the CIP standards was incorporated.

#### **E. Fourth Posting – COM-003-1 Comment Period**

The fourth draft of the COM-003-1 standard was posted for a 30-day comment period from November 14, 2012 to December 13, 2012. In response to comments, the standard drafting team made the following changes to the draft COM-003-1 Standard:

- The concept of “identify, assess, and correct” was removed.
- References to the term “Reliability Directive” were added to clarify the protocols applied to Reliability Directives and Operating Instructions.
- The requirement to use a 24 hour clock reference was modified to allow flexibility for entities to define their time specification.
- The requirement to use three part communication for all Operating Instructions was modified to allow entities the flexibility to determine when three part communication was required.
- A requirement for coordination of communication protocols among entities was added.
- A requirement for entities to develop method(s) to assess System Operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols was added.

### **F. Fifth Posting – COM-003-1 Comment Period**

The fifth draft of the COM-003-1 standard was posted for a 30-day comment period from March 7, 2013 to April 5, 2013. NERC received 78 sets of comments from approximately 215 different individuals from approximately 130 companies representing all 10 industry segments. In response to comments, the standard drafting team made the following changes to the draft COM-003-1 Standard:

- References to the term “Reliability Directive” were removed to address concerns of double jeopardy with COM-002-3.
- References to “all call” communications was removed to address concerns of double jeopardy with COM-002-3.
- The requirement for coordination of communication protocols among entities was modified to require entities to jointly develop protocols.

### **G. Sixth Posting – COM-003-1 Comment Period**

The sixth draft of the COM-003-1 standard was posted for a 30-day comment period from June 20, 2013 to July 19, 2013. NERC received 80 sets of comments from approximately 50 different organizations or individuals. Following draft 6, the standard drafting team created draft 7 as COM-002-4, a single combined standard of the Board-approved COM-002-3 Reliability Standard and proposed COM-003-1.

### **H. First Posting – COM-002-4 Comment Period**

COM-002-4 was first posted for a 14-day comment period from October 21, 2013 to November 4, 2013. NERC received 77 sets of comments from approximately 178 different individuals from approximately 115 companies representing all 10 industry segments. In

response to comments, the standard drafting team made the following changes to the draft COM-002-4 Standard:

- The definition of Operating Instruction was revised to remove the reference to Reliability Directive.
- The standard was revised to clarify that DPs and GOPs are required to train their operators prior to receiving an Operating Instruction and also use three-part communication when receiving an Operating Instruction during an Emergency.
- Requirement R1 was revised to provide more clarity, as well as provide more latitude to operating personnel issuing an Operating Instruction.
- Part 1.8 was removed, which required entities to specify which instances required alphanumeric clarifiers in their communications protocols.
- The seventh posting's Requirement R2 was removed, which required documented communications protocols for GOPs and DPs that receive Operating Instructions.
- Requirements R3 and R4 were removed and Requirements R2 and R3 were added in the eighth posting.
- The phrase "consistent pattern" was removed for the revised VRFs and VSLs.
- The VRFs and VSLs was modified to better reflect the differences in severity of violating documents requirement (*i.e.* Requirement R1), violating a training or assessment requirement (*i.e.* Requirement R2, R3 and R4) and violating a requirement when issuing or receiving an Operation Instruction during an Emergency (*i.e.* Requirements R5, R6 and R7).



## **I. Second Posting – COM-002-4 Comment Period**

The second draft of the COM-002-4 standard was posted for a 30-day public comment period from January 2, 2014 to January 31, 2014. NERC received 70 sets of comments from approximately 185 different individuals from approximately 125 companies representing all 10 industry segments. In response to comments, the standard drafting team made the following changes to the draft COM-002-4 Standard:

- Requirement R4.1 was altered from “as appropriate “ to “as deemed appropriate by the entity”
- In Measure M2 the words “its initial” was added to the sentence “shall provide its initial training records ...” in order to align the language in Measure M2 with the language in Requirement R2
- Measure M4 was altered to include the phrase “as part of its assessment” and “of any corrective actions taken” within the sentence “The entity shall provide, as part of its assessment, evidence of any corrective actions taken”
- Measure M6 and M7 were changes to add the parenthetical “(if an entity has such recording)” after the words “time-stamped recordings,” and the second entry for “time-stamped recordings” was removed due to redundancy.

## **J. Final Ballot**

Proposed Reliability Standard COM-002-4 was posted for a 10-day final ballot period from March 28, 2014 through April 7, 2014. The proposed Reliability Standard received a quorum of 78.21% and an approval of 77.62%.

## **K. Board of Trustees Approval**

Proposed Reliability Standard COM-002-4 was adopted by NERC Board of Trustees on May 6, 2014.

## Project 2007-02 Operating Personnel Communications Protocols

Related Files

**Status:**

A final ballot for **COM-002-4 - Operating Personnel Communications Protocols** concluded at **8 p.m. Eastern on Monday, April 7, 2014**. The standard achieved a quorum and received sufficient votes for approval. Voting statistics can be found via the link below. The standard will be submitted to the Board of Trustees for adoption and then filed with the appropriate regulatory authorities.

**Purpose/Industry Need:**

This SAR calls for the development of communications protocols for use by Real-time System Operators to improve situational awareness and shorten response time.

**Background:**

The purpose of the proposed COM-002-4 Reliability Standard is to improve communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES). The proposed Reliability Standard, similar to posting 7, combines COM-002-3 and former draft COM-003-1 into one standard that addresses communications protocols for operating personnel in Emergency, and non-emergency conditions. The Operating Personnel Communications Protocols Standard Drafting Draft (OPCP SDT) continues to believe that one communications protocols standard that addresses emergency and non-emergency situations will improve communications because operating personnel will not need to refer to a different set of protocols during the different operating conditions.

In preparing Posting 8, the OPCS SDT revised the first draft of COM-002-4 in Posting 7 to develop a single communications standard that addresses protocols for operating personnel in Emergency and non-emergency conditions. The OPCS SDT considered the comments provided on Posting 7 and also drew from a variety of other resources including:

- The NERC Board of Trustees' November 7<sup>th</sup>, 2013 Resolution for Operating Personnel Communication Protocols, discussed below.
- A survey distributed to a sample of industry experts by the Director of Standards Development and the Standards Committee Chair requesting feedback on the draft standard in Posting 8; and
- Consultation on the use of the term "Reliability Directive" in the COM-002-4 standard with the Project 2007-03 Real-time Transmission Operations Standard Drafting Team and the Project 2006-06 Reliability Coordination Standard Drafting Team.

On December 11, 2013, the NERC Standards Committee authorized a waiver of the standard process, in accordance with Section 16 of the Standard Processes Manual, to shorten this comment period from 45 days to 30 days with a ballot during the last 10 days of the comment period to meet the NERC Board of Trustees requested deadline. The standard drafting team is posting this standard for a shortened 30 day formal Comment and 10 day Ballot period per the Standards Committee waiver.

Draft	Action	Dates	Results	Consideration of Comments
COM-002-4 Clean (142)   Redline to last Posting (143)	Final Ballot Info>> (146)	03/28/14 - 04/07/14	Summary>> (147)	
Implementation Plan Clean (144)   Redline to last Posting (145)	Vote>>		Ballot Results>> (148)	
COM-002-4 Clean (122)   Redline to last Posting (123)	Additional Ballot and Non-Binding Poll	01/22/14 – 02/04/14	Summary>> (137)	
Implementation Plan Clean (124)   Redline to last Posting (125)	Updated Info>> (134)	Extended an additional day to achieve quorum	Ballot Results>> (138)	
RSAW (126)	Info>> (135)		Non-Binding Poll Results>> (139)	
Supporting Materials:				
Unofficial Comment Form (Word) (127)	RSAW Industry Comment Period			
Rationale and Technical Justification (128)	RSAW Feedback Form>>	01/02/14 – 01/31/14		
Mapping Document (129)	Please send RSAW Feedback forms to:			

<p>VRF/VSL Justification <b>(130)</b></p> <p>Table of Issues and Directives <b>(131)</b></p> <p>Request to Waive the Standard Process (Authorized on December 11, 2013) <b>(132)</b></p> <p>Posting 8 FAQ Document <b>(133)</b></p>	<p><a href="mailto:RSAWfeedback@nerc.net">RSAWfeedback@nerc.net</a></p>	<p>01/02/14 – 02/04/14</p> <p>Extended an additional day to achieve quorum</p>	<p>Comments Received&gt;&gt; <b>(140)</b></p>	<p>Consideration of Comments&gt;&gt; <b>(141)</b></p>
<p>COM-002-4 <b>(105)</b></p> <p>Implementation Plan <b>(106)</b></p> <p><b>Supporting Materials:</b></p> <p>Unofficial Comment Form (Word) <b>(107)</b></p> <p>Rationale and Technical Justification <b>(108)</b></p> <p>Mapping Document <b>(109)</b></p> <p>VRF/VSL Justification <b>(110)</b></p> <p>Table of Issues and Directives <b>(111)</b></p> <p>Reliability Standard Audit Worksheet <b>(112)</b></p> <p>Request to Waive the Standard Process (Authorized on October 17, 2013) <b>(113)</b></p>	<p>Additional Ballot and Non-binding Poll Updated Info&gt;&gt; <b>(114)</b></p> <p>Info&gt;&gt; <b>(115)</b></p> <p>Vote&gt;&gt;</p>	<p>10/25/13 – 11/07/13</p> <p>Extended an additional day to achieve quorum</p> <p>(closed)</p>	<p>Summary&gt;&gt; <b>(117)</b></p> <p>Ballot Results&gt;&gt; <b>(118)</b></p> <p>Non-Binding Poll Results&gt;&gt; <b>(119)</b></p>	<p>Consideration of Comments&gt;&gt; <b>(121)</b></p>
<p><b>Responses to NERC Board of Trustees' Questions</b></p> <p><b>[SEE BOARD EXHIBIT]</b></p> <p>Independent Experts Review Panel</p> <p>Reliability Issues Steering Committee</p> <p>NERC Management</p>	<p>Submit Comments&gt;&gt;</p>			
	<p>Successive Ballot and Non-binding Poll</p>	<p>07/10/13 - 07/19/13</p> <p>(closed)</p>	<p>Summary&gt;&gt; <b>(100)</b></p>	

<p><b>COM-003-1</b> Clean (88)   Redline to last posting (89)</p> <p><b>Implementation Plan</b> Clean (90)   Redline to last posting (91)</p> <p><b>Supporting Materials:</b></p> <p>Unofficial Comment Form (Word) (92)</p> <p>Technical White Paper (93)</p> <p>Mapping Document Clean (94)   Redline to last posting (95)</p> <p>VRF/VSL Justification Clean (96)   Redline to last posting (97)</p>	<p>Updated Info&gt;&gt; (98)</p> <p>Vote&gt;&gt;</p>		<p>Ballot Results&gt;&gt; (101)</p> <p>Non-binding Poll Results&gt;&gt; (102)</p>	
<p>COM-003-1 Clean (69)   Redline to last posting (70)</p> <p><b>Implementation Plan</b> Clean (71)   Redline to last posting (72)</p> <p><b>Supporting Materials:</b></p> <p>Unofficial Comment Form (Word) (73)</p> <p>Rationale and Technical Justification Clean (74)   Redline to last posting (75)</p> <p>Mapping Document Clean (76)   Redline to last posting (77)</p> <p>VRF/VSL Justification Clean (78)   Redline to last posting (79)</p> <p>COM-003, Draft 5 FAQ Document (80)</p>	<p>Comment Period</p> <p>Info&gt;&gt; (99)</p> <p>Submit Comments&gt;&gt;</p>	<p>06/20/13 - 07/19/13 (closed)</p>	<p>Comments Received&gt;&gt; (103)</p> <p>Consideration of Comments&gt;&gt; (104)</p>	
	<p>Successive Ballot and Non-binding Poll</p> <p>Info&gt;&gt; (81)</p> <p>Vote&gt;&gt;</p>	<p>03/27/13 - 04/05/13 (closed)</p>	<p>Summary&gt;&gt; (83)</p> <p>Ballot Results&gt;&gt; (84)</p> <p>Non-binding Poll Results&gt;&gt; (85)</p>	
	<p>RSAW Industry Comment Period (Now Available)</p> <p>RSAW Feedback Form&gt;&gt;</p> <p>Please send RSAW Feedback Forms to:</p> <p>RSAWfeedback@nerc.net</p>	<p>03/07/13 - 04/05/13 (closed)</p>		

	<p>Standard Comment Period</p> <p><a href="#">Info&gt;&gt; (82)</a></p> <p><a href="#">Submit Comments&gt;&gt;</a></p>	<p>03/07/13 - 04/05/13</p> <p>(closed)</p>	<p><a href="#">Comments Received&gt;&gt; (86)</a></p>	<p><a href="#">Consideration of Comments&gt;&gt; (87)</a></p>
<p><b>Draft 4</b></p> <p>COM-003-1</p> <p>Clean (52)   Redline to last posting (53)</p> <p>Implementation Plan</p> <p>Clean (54)   Redline (55)</p> <p><b>Supporting Materials:</b></p> <p>Unofficial Comment Form (Word) (56)</p> <p>Rationale and Technical Justification (57)</p> <p>Mapping Document</p> <p>Clean (58)   Redline (59)</p> <p>VRF/VSL Justification</p> <p>Clean (60)   Redline (61)</p>	<p>Successive Ballot and Non-binding Poll</p> <p><a href="#">Updated Info&gt;&gt; (62)</a></p> <p><a href="#">Info&gt;&gt; (63)</a></p> <p><a href="#">Vote&gt;&gt;</a></p>	<p>12/4/2012 – 12/13/2012</p> <p>(closed)</p>	<p><a href="#">Summary&gt;&gt; (65)</a></p> <p><a href="#">Ballot Results&gt;&gt; (66)</a></p> <p><a href="#">Non-binding Poll Results&gt;&gt; (67)</a></p>	
	<p>RSAW Industry Comment Period</p> <p><a href="#">RSAW Feedback Form&gt;&gt;</a></p> <p>Please send RSAW Feedback Forms to:</p> <p><a href="mailto:RSAWfeedback@nerc.net">RSAWfeedback@nerc.net</a></p>	<p>11/14/2012 - 12/13/2012</p> <p>(closed)</p>		
	<p>Standard Comment Period</p> <p><a href="#">Info&gt;&gt; (64)</a></p> <p><a href="#">Submit Comments&gt;&gt;</a></p>	<p>11/14/2012 - 12/13/2012</p> <p>(closed)</p>	<p><a href="#">Comments Received&gt;&gt; (68)</a></p>	
	<p>Successive Ballot and Non-binding Poll</p> <p><a href="#">Updated Info&gt;&gt; (44)</a></p> <p><a href="#">Info&gt;&gt; (45)</a></p> <p><a href="#">Vote&gt;&gt;</a></p>	<p>9/11/2012 - 09/20/2012</p> <p>(closed)</p>	<p><a href="#">Summary&gt;&gt; (47)</a></p> <p><a href="#">Ballot Results&gt;&gt; (48)</a></p> <p><a href="#">Non-binding Poll Results&gt;&gt; (49)</a></p>	
<p><b>Draft 3</b></p> <p>COM-003-1</p> <p>Clean (34)</p> <p>Implementation Plan</p> <p>Clean (35)   Redline (36)</p> <p><b>Supporting Materials:</b></p> <p>Comment Form (Word) (37)</p> <p>Rationale and Technical Justification (38)</p> <p>Mapping Document</p> <p>Clean (39)   Redline (40)</p> <p>VRF/VSL Justification</p> <p>Clean (41)</p> <p>COM-001-2</p> <p>Clean (42)   Redline to Last Approved (43)</p>	<p>RSAW Industry Comment Period</p> <p><a href="#">RSAW Feedback Form&gt;&gt;</a></p> <p>Please send RSAW Feedback Forms to:</p> <p><a href="mailto:RSAWfeedback@nerc.net">RSAWfeedback@nerc.net</a></p>	<p>8/22/12 - 9/20/2012</p> <p>(closed)</p>		
	<p>Standard Comment Period</p> <p><a href="#">Info&gt;&gt; (46)</a></p>	<p>8/22/12 - 09/20/2012</p> <p>(closed)</p>	<p><a href="#">Comments Received&gt;&gt; (50)</a></p>	<p><a href="#">Consideration of Comments&gt;&gt; (51)</a></p>

	Submit Comments>>			
<b>Draft2</b> COM-003-1 Clean (16)  <b>Supporting Materials:</b> Comment Form (Word) (17)  Implementation Plan Clean (18)   Redline (19)  Mapping Document (20)  VRF/VSL Justification (21)  White Paper (22)  COM-001-2 Clean (23)   Redline to Last Approved (24)	Initial Ballot and Non-binding Poll  Updated Info (061112)>> (25)  White Paper Info>> (26)  Info>> (27)  Vote>>	6/11/12 - 6/20/2012 (closed)	Summary>> (29)  Ballot Results>> (30)  Non-binding Poll Results>> (31)	
	Comment Period  Info>> (28)  Submit Comments>>	5/7/2012 - 6/20/2012 (closed)	Comments Received>> (32)	Consideration of Comments>> (33)
	Join Ballot Pool>>	5/7/2012 - 6/5/2012 (closed)		
<b>Draft 1 Standard</b> COM-003-1 (9)  Implementation Plan (10)  Disposition of Requirements Identified in SAR (11)  <b>Supporting Materials:</b> Comment Form (Word) (12)	Comment Period  Info>> (13)  Submit Comments>>	11/30/2009 - 1/15/2010 (closed)	Comments Received>> (14)	Consideration of Comments>> (15)
Standard Drafting Team Nominations  Draft SAR Version 2 Clean (6)   Redline (7)	Nomination Period  Info>> (8)  Submit Nomination>>	4/18/2007 - 5/02/2007 (closed)		

SAR for Communications Protocols Draft SAR Version 1 (2)	<p style="text-align: center;">Comment Period</p> <p style="text-align: center;"><a href="#">Info&gt;&gt; (3)</a></p> <p style="text-align: center;"><a href="#">Submit Comments&gt;&gt;</a></p>	3/19/2007 - 4/17/2007 (closed)	<p style="text-align: center;"><a href="#">Comments Received&gt;&gt; (4)</a></p>	<p style="text-align: center;"><a href="#">Consideration of Comments&gt;&gt; (5)</a></p>
SAR Drafting Team Nominations	<p style="text-align: center;">Nomination Period</p> <p style="text-align: center;"><a href="#">Info&gt;&gt; (1)</a></p> <p style="text-align: center;"><a href="#">Submit Nomination&gt;&gt;</a></p>	3/15/2007 - 3/29/2007 (closed)		



March 19, 2007

TO: REGISTERED BALLOT BODY

Ladies and Gentlemen:

**Announcement: Comment Periods Open for SAR for Reliability Coordination, SAR for Operating Personnel Communications Protocols, and Relay Loadability Standard**

**The Standards Committee (SC) announces the following standards actions:**

**SAR to Modify the Reliability Coordinator Standards (March 19–April 17, 2007)**

The Reliability Coordination SAR drafting team posted the second draft of its SAR for [Project 2006-06](#) for a 30-day comment period from March 19 through April 17, 2007.

The SAR proposes retiring, modifying or moving to other standards the Reliability Coordinator requirements contained within a set of ten already approved standards. The purpose of making these modifications is to ensure that the remaining requirements are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System. This project also involves addressing concerns raised by FERC and stakeholders and involves bringing the set of standards into conformance with the ERO Rules of Procedure and the latest version of the Reliability Standards Development Procedure. Please use the [comment form](#) to provide comments on this SAR.

**SAR for Project 2007-02 Operating Personnel Communications Protocols (March 19–April 17, 2007)**

The Operating Personnel Communications Protocols SAR for [Project 2007-02](#) is posted for a 30-day comment period from March 19 through April 17, 2007.

This SAR calls for the development of communications protocols for use by real-time system operators to improve situational awareness and shorten response time. The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Please use the [comment form](#) to provide comments on this SAR.

**Transmission Relay Loadability Standard (March 19–April 17, 2007)**

The [Transmission Relay Loadability](#) drafting team posted the third draft of its standard for a 30-day comment period from March 19 through April 17, 2007. The drafting team is seeking comments on a change in the requirements that assigns responsibility for identifying certain critical facilities to the planning coordinator, in support of the latest approved version of the [Functional Model](#).

The standard codifies the relay loadability criteria embodied in the NERC Recommendation 8a, *Improve System Protection to Slow or Limit the Spread of Future Cascading Outages*, and U.S.–Canada Power System Outage Task Force Recommendation 21A, *Make More Effective and*

REGISTERED BALLOT BODY

March 19, 2007

Page Two

*Wider Use of System Protection Measures.* Please use the [comment form](#) to provide comments on this standard.

### **Standards Development Process**

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. If you have any questions, please contact me at 813-468-5998 or [maureen.long@nerc.net](mailto:maureen.long@nerc.net).

Sincerely,

*Maureen E. Long*

cc: Registered Ballot Body Registered Users  
Standards Mailing List  
NERC Roster

## Standard Authorization Request Form

Title of Proposed Standard:	Operating Personnel Communications Protocols
Request Date:	March 1, 2007

### ***SAR Requester Information***

Name: <b><i>Harry Tom - to be replaced with SAR drafting team chair when SAR drafting team is appointed.</i></b>	<b><i>SAR Type (Check one box.)</i></b>
Company: NERC	<input checked="" type="checkbox"/> New Standard
Telephone: 609-452-8060	<input checked="" type="checkbox"/> Revision to Existing Standard
Fax: 609-452-9550	<input type="checkbox"/> Withdrawal of Existing Standard
E-mail: harry.tom@nerc.net	<input type="checkbox"/> Urgent Action

**Purpose** (Describe the purpose of the proposed standard – what the standard will achieve in support of reliability.)

Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The purpose of revising and expanding the existing requirements that address real-time system operator communications is to:

1. Provide an adequate level of reliability for the North American bulk power systems – by ensuring that the standards are complete and the requirements are set at an appropriate level to ensure reliability.
2. Ensure the standard or standards are enforceable as mandatory reliability standards with financial penalties – the applicability to bulk power system owners, operators, and users, are clearly defined; the purpose, requirements, and measures are results-focused and unambiguous; the consequences of violating the requirements are clear.
3. Consider other general improvements described in the standards development work plan.
4. Consider stakeholder comments received during the initial development of the standards and other comments received from Electric Reliability Organization (ERO) regulatory authorities, as noted in the attached review sheets.
5. Satisfy the standards procedure requirement for five-year review of the standards.

**Industry Need** (Provide a detailed statement justifying the need for the proposed standard, along with any supporting documentation.)

The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Blackout Recommendation #26 is: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." (Note that this SAR does not include the second part of this recommendation regarding the upgrade to communication system hardware.)

**Brief Description** (Describe the proposed standard in sufficient detail to clearly define the scope in a manner that can be easily understood by others.)

This standard will require the use of specific communication protocols, especially for communications during alerts and emergencies. The standard will be applicable to transmission operators, balancing authorities, reliability coordinators, generator operators and distribution providers.

Requirements will include protocols for communicating changes to real-time operating states and protocols for issuing and responding to operating directives.

The project may involve moving some requirements that address communications protocols from existing standards into this new standard and will involve adding new requirements that more fully address communications protocols under various operating scenarios.

## Reliability Functions

<b>The Standard will Apply to the Following Functions</b> (Check all applicable boxes.)		
<input checked="" type="checkbox"/>	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
<input checked="" type="checkbox"/>	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports Interconnection frequency in real time.
<input type="checkbox"/>	Interchange Coordinator	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
<input type="checkbox"/>	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
<input type="checkbox"/>	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator area.
<input type="checkbox"/>	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.
<input type="checkbox"/>	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
<input type="checkbox"/>	Transmission Owner	Owns and maintains transmission facilities.
<input checked="" type="checkbox"/>	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
<input checked="" type="checkbox"/>	Distribution Provider	Delivers electrical energy to the End-use customer.
<input type="checkbox"/>	Generator Owner	Owns and maintains generation facilities.
<input checked="" type="checkbox"/>	Generator Operator	Operates generation unit(s) to provide real and reactive power.
<input type="checkbox"/>	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
<input type="checkbox"/>	Market Operator	Interface point for reliability functions with commercial functions.

## **Reliability and Market Interface Principles**

<b>Applicable Reliability Principles</b> (Check all boxes that apply.)	
<input checked="" type="checkbox"/>	1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
<input type="checkbox"/>	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
<input type="checkbox"/>	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
<input type="checkbox"/>	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained, and implemented.
<input type="checkbox"/>	5. Facilities for communication, monitoring, and control shall be provided, used, and maintained for the reliability of interconnected bulk power systems.
<input type="checkbox"/>	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
<input type="checkbox"/>	7. The reliability of the interconnected bulk power systems shall be assessed, monitored, and maintained on a wide-area basis.
<input type="checkbox"/>	8. Bulk power systems shall be protected from malicious physical or cyber attacks.
<b>Does the proposed Standard comply with all of the following Market Interface Principles?</b> (Select 'yes' or 'no' from the drop-down box.)	
Recognizing that reliability is an essential requirement of a robust North American economy:	
1. A reliability standard shall not give any market participant an unfair competitive advantage. Yes	
2. A reliability standard shall neither mandate nor prohibit any specific market structure. Yes	
3. A reliability standard shall not preclude market solutions to achieving compliance with that standard. Yes	
4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

**Detailed Description** (Provide enough detail so that an independent entity familiar with the industry could draft a standard based on this description.)

### **Scope**

The scope of the proposed standard or revised standards is to establish a common lexicon of communications protocols and communications paths such that all operators and users of the North American bulk electric system have the same understanding as to its meaning, usage and take pre-determined action in response. The August 2003 Blackout Recommendation Number 26 calls for a tightening of communications protocols. This standard is to ensure that effective communication is practiced and delivered in clear language via pre-established communications paths among pre-identified operating entities. References to communication protocols in other NERC Standards may be moved to this new standard.

### **Applicability**

Medical, law enforcement, air traffic control and other fields routinely use mutually defined and understood terminology or codes. Clear and mutually established communications protocols used during real time operations under normal and emergency conditions ensure universal understanding of terms and reduce errors.

Communications protocols shall precisely define terms, codes, phrases, words, etc. as to their connotation, conditions for use, context of use and expected responses in reply to these terms, codes, phrases, words, etc. Furthermore the protocols shall define a rigorous script for the Sender and Receiver of information. Effective communications with proper communications protocols among the operating entities are essential for maintaining reliable system operations.

The standard will include requirements for the following:

1. Real-time system operators will be required to use specific communications protocols under normal, abnormal and emergency conditions to quickly relay critical reliability-related information.
2. Reliability Coordinators, Balancing Authorities, Generation Operators, Transmission Operators and Distribution Providers will be required to adopt and employ directives that use pre-defined terms, and will require entities that receive those directives to respond to the reliability coordinator using pre-defined terms.
3. The standard will include requirements for entities that experience abnormal conditions to use pre-defined terms to communicate the operating situation to other entities that are in a position to either assist in resolving the operating situation or to entities that are impacted by the operating situation.
4. The standard may include other requirements that involve communications protocols for real-time system operators.

The standard should consider the FERC staff's Preliminary Assessment of NERC Standards (dated May 11, 2006) in which the FERC staff cited



various Blackout Report excerpts pertaining to ineffective communications as a factor common to the August 14 blackout and other previous major outages in North America. The Commission staff interprets Blackout Report recommendation #26 that urges "effective communications" with "tightened communications protocols" among operating entities to include two key components:

- (i) Effective communications that are delivered in clear language via pre-established communications paths among pre-identified operating entities, and
- (ii) Communications protocols which clearly identify that any operating actions with reliability impact beyond a local area or beyond a Reliability Coordinator's area must be communicated to the appropriate Reliability Coordinator for assessment and approval prior to their implementation to ensure reliability of the interconnected systems.

The communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

## ***Related Standards***

<b><i>Standard No.</i></b>	<b><i>Explanation – these requirement may need to be modified or moved to the new standard</i></b>
COM-001-1	R4 is a requirement for the Reliability Coordinator's, Transmission Operator's, and Balancing Authority's real-time operating personnel to use English when communicating between entities.
COM-002-2	R1.1 is a requirement for the Balancing Authority and Transmission Operator to make notifications when there is a threat to reliability. R2 is a requirement for the Reliability Coordinator, Transmission Operator and Balancing Authority relative to issuing and receiving operating directives.
EOP-001-9	R4.1 includes a requirement for the Transmission Operator and Balancing Authority to have communications protocols for use during emergencies
EOP-002-2	R6.5 and R7.2 require the Balancing Authority to ask the Reliability Coordinator to declare an Energy Emergency or an Energy Emergency Alert under certain conditions R8 requires the Reliability Coordinator to issue an Energy Emergency Alert under certain conditions R9.1 requires the Load-serving Entity to ask the Reliability Coordinator to declare an Energy Emergency Alert under certain conditions
EOP-006-1	R4 requires the Reliability Coordinator to disseminate information regarding restoration to neighboring Reliability Coordinators and Transmission Operators or Balancing Authorities R5 requires the Reliability Coordinator to approve, communicate, and coordinate the re-synchronizing of major system islands or synchronizing points
CIP-001-1	R1 and R2 require operating entities to have procedures for communicating information relative to sabotage of bulk power system facilities
CIP-008-1	R1.2 requires the responsible entity to have a communication plan for response to a cyber security incident
IRO-001-1	R3 requires the Reliability Coordinator to direct entities to act and R8 requires entities to respond to the Reliability Coordinator's directives
IRO-004-1	R6 requires the Reliability Coordinator to direct entities to act and R7 requires entities to respond to the Reliability Coordinator's directives
IRO-005-2	R4 requires the Reliability Coordinator to issue an Energy Emergency Alert under certain conditions R3, R5, R8, R11, F15, and R17 require the Reliability Coordinator to direct actions to alleviate various types of abnormal or emergency situations
IRO-014-1	R1.1 requires Reliability Coordinators to have procedures processes or plans that address communications and notifications made between Reliability Coordinators under various operating scenarios
PRC-001-1	R6 requires the Transmission Operator and Balancing Authority to make notifications when there is a change in the status of a special protection system
TOP-001-1	R3 requires some responsible entities to comply with the Reliability Coordinator's and Transmission Operator's directives R4 requires some responsible entities to comply with the Transmission Operator's directives R5 requires the Transmission Operator to notify its Reliability Coordinator of certain emergency situations

TOP-002-2	R14, R16 and R17 require responsible entities to notify their Reliability Coordinator of various changes to operating parameters R18 requires the use of uniform line identifiers when referring to transmission facilities of an interconnected network
TOP-007-0	R1 requires the Transmission Operator to notify its Reliability Coordinator when it exceeds an SOL or IROL R4 requires the Reliability Coordinator to direct entities to take actions to restore the system to within SOLs or IROLs
TOP-008-1	R3 requires the Transmission Operator to make notifications if it disconnects an overloaded facility
VAR-001-1	R8 and R12 require the Transmission Operator to direct actions to maintain voltage within limits and to prevent voltage collapse
VAR-002-1	R2.2 and R5.1 require the Generator Operator to comply with directives Rr3 requires the Generator Operator to notify the Transmission Operator of various status or capability changes

### ***Related SARs***

<b><i>SAR ID</i></b>	<b><i>Explanation</i></b>

### ***Regional Variances***

<b><i>Region</i></b>	<b><i>Explanation</i></b>
ERCOT	
FRCC	
MRO	
NPCC	
RFC	
SERC	
SPP	
WECC	

March 19, 2007

TO: REGISTERED BALLOT BODY

Ladies and Gentlemen:

**Announcement: Comment Periods Open for SAR for Reliability Coordination, SAR for Operating Personnel Communications Protocols, and Relay Loadability Standard**

**The Standards Committee (SC) announces the following standards actions:**

**SAR to Modify the Reliability Coordinator Standards (March 19–April 17, 2007)**

The Reliability Coordination SAR drafting team posted the second draft of its SAR for [Project 2006-06](#) for a 30-day comment period from March 19 through April 17, 2007.

The SAR proposes retiring, modifying or moving to other standards the Reliability Coordinator requirements contained within a set of ten already approved standards. The purpose of making these modifications is to ensure that the remaining requirements are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System. This project also involves addressing concerns raised by FERC and stakeholders and involves bringing the set of standards into conformance with the ERO Rules of Procedure and the latest version of the Reliability Standards Development Procedure. Please use the [comment form](#) to provide comments on this SAR.

**SAR for Project 2007-02 Operating Personnel Communications Protocols (March 19–April 17, 2007)**

The Operating Personnel Communications Protocols SAR for [Project 2007-02](#) is posted for a 30-day comment period from March 19 through April 17, 2007.

This SAR calls for the development of communications protocols for use by real-time system operators to improve situational awareness and shorten response time. The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Please use the [comment form](#) to provide comments on this SAR.

**Transmission Relay Loadability Standard (March 19–April 17, 2007)**

The [Transmission Relay Loadability](#) drafting team posted the third draft of its standard for a 30-day comment period from March 19 through April 17, 2007. The drafting team is seeking comments on a change in the requirements that assigns responsibility for identifying certain critical facilities to the planning coordinator, in support of the latest approved version of the [Functional Model](#).

The standard codifies the relay loadability criteria embodied in the NERC Recommendation 8a, *Improve System Protection to Slow or Limit the Spread of Future Cascading Outages*, and U.S.–Canada Power System Outage Task Force Recommendation 21A, *Make More Effective and*

REGISTERED BALLOT BODY

March 19, 2007

Page Two

*Wider Use of System Protection Measures.* Please use the [comment form](#) to provide comments on this standard.

### **Standards Development Process**

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. If you have any questions, please contact me at 813-468-5998 or [maureen.long@nerc.net](mailto:maureen.long@nerc.net).

Sincerely,

*Maureen E. Long*

cc: Registered Ballot Body Registered Users  
Standards Mailing List  
NERC Roster

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

Please use this form to submit comments on the proposed SAR for Operating Personnel Communications Protocols. Comments must be submitted by **April 17, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "Protocols" in the subject line. If you have questions please contact **Harry Tom** at [Harry.Tom@nerc.net](mailto:Harry.Tom@nerc.net) or by telephone at 609-452-8060.

<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Howard Rulf	
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NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> MRO	<input checked="" type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input checked="" type="checkbox"/>	4 — Transmission-dependent Utilities
<input checked="" type="checkbox"/> RFC	<input checked="" type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities



## **Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols**

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### **Background Information**

The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Blackout Recommendation #26 is: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." (Note that this SAR does not include the second part of this recommendation regarding the upgrade to communication system hardware.)

This SAR proposes developing a set of standardized communication protocols for system operators to use during normal and emergency operations to improve situational awareness and shorten response time.

The requirements for communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

Please review the SAR and then answer the questions on the following page.



## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: The scope should be limited to communications between entities and should not prescribe communication protocols for communication within an organization. Intra-company communications are most appropriately addressed by interal policies and procedures tailored to an entity's specific needs and characteristics.

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: Scope should be limited to communication among separate entities/organizations. For example, the standard should not address communication protocols between a Balancing Authority, Generaotr Operator and a Distribution Provider tha are the same corporate entity. The requirement to maintain situational awareness within a given entiy is addressed by other standards.

4. **The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments:

## **Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols**

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- 5. Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments:

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

Please use this form to submit comments on the proposed SAR for Operating Personnel Communications Protocols. Comments must be submitted by **April 17, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "Protocols" in the subject line. If you have questions please contact **Harry Tom** at [Harry.Tom@nerc.net](mailto:Harry.Tom@nerc.net) or by telephone at 609-452-8060.

<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
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NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input checked="" type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities



## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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### **Background Information**

The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Blackout Recommendation #26 is: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." (Note that this SAR does not include the second part of this recommendation regarding the upgrade to communication system hardware.)

This SAR proposes developing a set of standardized communication protocols for system operators to use during normal and emergency operations to improve situational awareness and shorten response time.

The requirements for communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: There is no doubt that during alerts and emergencies, both parties in communication require a common definition. To the extent the standard requires neighboring BAs, TOs and RCs to use the same word with the same meaning, then the scope of the proposed standard makes sense. However, as written the standard appears to indicate the kind of scripting that is better suited to selling magazines from a boiler room. No defined protocol can match every situation. And if in fact that was even a goal, the operators would have the time-consuming task of identifying which script currently was needed when their time would be better spent resolving the situation.

The SAR also proposes that any reliability impacts beyond a Reliability Coordinator's area must be coordinated and approved by the impacted Reliability Coordinator. Clearly, if time permits, this coordination is appropriate. However, in an emergency, the RC may have to use independent judgement.

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

4. **The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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Comments:

- 5. Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments:

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(Complete this page for comments from one organization or individual.)		
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NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs
<input checked="" type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input checked="" type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities





## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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### **Background Information**

The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Blackout Recommendation #26 is: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." (Note that this SAR does not include the second part of this recommendation regarding the upgrade to communication system hardware.)

This SAR proposes developing a set of standardized communication protocols for system operators to use during normal and emergency operations to improve situational awareness and shorten response time.

The requirements for communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: The SAR needs further clarification before it is moved into the next stage. The SAR should identify at a minimum the words and procedures that the SDT is going to consider for a reliability standard.

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: The SAR should be expanded to include local control center's system operators.

See our comments to question 3.

The SAR should specify how each of the identified standards will be addressed through this process.

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: Issue 1:

The recommendation from the blackout report is overly broad and vague. Tightening does not sound like a complete overhaul but rather tweaking the existing protocols and documenting them if they are informal. This may not even require a standard across all functional entities. TOPs and BAs in a given region have long history of communication and differing terms are already understood. However, for communications that occur between regional areas, there may be a need for common terms.

ATC does not agree with the concept of a rigorous script for communications. This may sound like it would require the team to identify any operational situation that could ever occur and then establish a script. If this were possible, it would be great. However, it is not possible. This is why we have trained operators to make decisions when new operational situations occur.

Issue 2:

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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The SAR needs to include local control center's system operators. The inclusion of this group of system operators will not be simple because local control centers are not an identified entity in NERC's functional model. Never the less if the SDT is going to create a common lexicon and procedures it's important that these system operators are required to follow the standard. ATC believes that the purpose behind this SAR would be better address through NERC's CEH program then through reliability standards.

SAR Scope:

"The scope of the proposed standard or reviewed standards is to establish a common lexicon of communications protocols and communications paths such that all operators and users of the North American bulk electric system have the same understanding as to its meaning, usage and take pre-determined action in response."

PER FERC Final Rule RM06-

"1343. Clearly, in a region where an RTO or ISO performs the transmission operator function, its personnel with primary responsibility for real-time operations must receive formal training pursuant to PER-002-0. IN addition, personnel who are responsible for implementing instructions at a local control center also affect the reliability of the Bulk Power System. These entities may take independent action under certain circumstances, for example, to protect assets, personnel safety and during system restorations. Whether the RTO or the local control center is ultimately responsible for compliance is a separate issue addressed above, but regardless of which entity registers for that responsibility, these local control center employees must receive formal training consistent with their roles, responsibilities and tasks. Thus, while we direct the ERO to develop modifications to PER-002-0 to include formal training for local control center personnel, that training should be tailored to the needs of the positions."

"1345. Another organization structure, typically representative of relative smaller entities, consists of a single control center that implements operating instructions from its transmission operator, e.g., an RTO, ISO or pooled resources. Similar to the discussion above, operators at these control centers also may take independent action to protect assets, safety and system restoration. Such control center personnel must also receive formal training pursuant to PER-002-0."

Because NERC has been order to create training plans for local control center's system operator any common lexicon and communications protocols could be dealt with for all entities most effectively in NERC's CEH program.

**4. The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments:

**5. Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments:

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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Please use this form to submit comments on the proposed SAR for Operating Personnel Communications Protocols. Comments must be submitted by **April 17, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "Protocols" in the subject line. If you have questions please contact **Harry Tom** at [Harry.Tom@nerc.net](mailto:Harry.Tom@nerc.net) or by telephone at 609-452-8060.

<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
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NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input checked="" type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities



## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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### **Background Information**

The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Blackout Recommendation #26 is: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." (Note that this SAR does not include the second part of this recommendation regarding the upgrade to communication system hardware.)

This SAR proposes developing a set of standardized communication protocols for system operators to use during normal and emergency operations to improve situational awareness and shorten response time.

The requirements for communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

4. **The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments: Non identified

5. **Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments: No additional comments



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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
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NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> MRO	<input checked="" type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
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<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities



## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

### **Background Information**

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This SAR proposes developing a set of standardized communication protocols for system operators to use during normal and emergency operations to improve situational awareness and shorten response time.

The requirements for communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: CECD believes there is a reliability reason for establishing a set of communication protocols.

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: CECD agrees with the scope, however, CECD would caution that pre-defined action in response to grid operations would need to be broad enough to allow the flexibility that is required by a diverse system. The statement that raises this concern in the Scope is the first sentence which states, the scope of the proposed standard or revised standards is to establish a common lexicon of communications protocols and communication paths such that all operators and users of the North American bulk electric system have the same understanding as to its meaning, usage and take pre-determined action in response. The standard should focus on the communication paths, pre-determined contacts (regular communication/testing), the applicable language and the terminology but not necessarily a specific action.

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

4. **The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments:

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

5. Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.

Comments:

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

Please use this form to submit comments on the proposed SAR for Operating Personnel Communications Protocols. Comments must be submitted by **April 13, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "Protocols" in the subject line. If you have questions please contact **Harry Tom** at [Harry.Tom@nerc.net](mailto:Harry.Tom@nerc.net) or by telephone at 609-452-8060.

<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
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Telephone:	504-576-3029	
E-mail:	edavis@entergy.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input checked="" type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities



## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

### **Background Information**

The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Blackout Recommendation #26 is: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." (Note that this SAR does not include the second part of this recommendation regarding the upgrade to communication system hardware.)

This SAR proposes developing a set of standardized communication protocols for system operators to use during normal and emergency operations to improve situational awareness and shorten response time.

The requirements for communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

Please review the SAR and then answer the questions on the following page.



## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

4. **The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments:

5. **Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments:

## **Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols**

---

We have the following suggestions concerning this SAR:

1. The use of the phrase “communications protocols” is not the best choice of labels for the purposes at hand because of the widespread and multi-faceted use of this phrase in the field of data communications. As an alternative we would recommend using the term “communication procedures”.
2. The scope of this standard should be constrained to inter-operator human communications vocabulary solely about the bulk electric system. A different SAR should be written for cyber communication standards.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Colleen Frosch	
Organization:	ERCOT	
Telephone:	512-248-4219	
E-mail:	cfrosch@ercot.com	
NERC Region		Registered Ballot Body Segment
<input checked="" type="checkbox"/> <b>ERCOT</b>	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> <b>FRCC</b>	<input checked="" type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> <b>MRO</b>	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> <b>NPCC</b>	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> <b>RFC</b>	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> <b>SERC</b>	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> <b>SPP</b>	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> <b>WECC</b>	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> <b>NA – Not Applicable</b>	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input checked="" type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities



## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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### **Background Information**

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Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: There may be a need for pre-defined terms, however we do not agree with the concept of a rigorous script for communications. It would not be possible to identify every operational situation.

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

4. **The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

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Comments:

5. **Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments:

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	David L. Folk	
Organization:	FirstEnergy Corp.	
Telephone:	330-384-4668	
E-mail:	folkd@firstenergycorp.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> MRO	<input checked="" type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
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<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities





## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

4. **The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments:

5. **Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments: No additional comments

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Roger Champagne	
Organization:	Hydro-Québec TransÉnergie (HQT)	
Telephone:	514 289-2211, X 2766	
E-mail:	champagne.roger.2@hydro.qc.ca	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input checked="" type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities



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Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: HQT supports establishing communication protocols to define consistent emergency determinations. However, the standard should not extend to establishing pre-defined scripts that operators must follow in their communications without the element of judgement and discussion that are needed in such situations.

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: See response Question #1.

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

4. **The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments: No others.

5. **Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments:

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Ron Falsetti	
Organization:	IESO	
Telephone:	905-855-6187	
E-mail:	ron.falsetti@ieso.ca	
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input checked="" type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities





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Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: The scope of the SAR is too broad and too prescriptive. The Applicability section of the SAR where it states "... the protocol shall define a rigorous script for the Sender and Receiver of information..." is too prescriptive yet not exhaustive enough to cover all situations. We support the notion of defining standard terms to be used in operation personnel communication, but do not believe predetermined script is required in every communication situation, nor do we think it is possible to have a set of scripts that covers all possible cases.

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

4. **The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

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Comments:

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## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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Comments:

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> <b>ERCOT</b>	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> <b>FRCC</b>	<input type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> <b>MRO</b>	<input type="checkbox"/>	3 — Load-serving Entities
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<input type="checkbox"/> <b>RFC</b>	<input type="checkbox"/>	5 — Electric Generators
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## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: We are concerned that the scope of "... the protocol shall define a rigorous script for the Sender and Receiver of information" is too prescriptive yet not exhaustive enough to cover all situations. We support the notion of defining standard terms to be used in operation personnel communication, but do not believe predetermined script is required in every communication situation, nor do we think it is possible to have a set of scripts that covers all possible cases.

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

4. **The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

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Comments:

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Comments:

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Kathleen Goodman	
Organization:	ISO New England	
Telephone:	(413) 535-4111	
E-mail:	kgoodman@iso-ne.com	
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/>	2 — RTOs, ISOs
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<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
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	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities





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You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: ISO New England supports establishing communication protocols to define consistent emergency determinations. However, the standard should not extend to establishing pre-defined scripts that operators must follow in their communications without the element of judgement and discussion that are needed in such situations.

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: See response Question #1.

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

4. **The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments: No others.

5. **Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments:

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Brian F Thumm	
Organization:	ITC Transmission	
Telephone:	248-374-7846	
E-mail:	bthumm@itctransco.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs
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<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities



## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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### **Background Information**

The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Blackout Recommendation #26 is: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." (Note that this SAR does not include the second part of this recommendation regarding the upgrade to communication system hardware.)

This SAR proposes developing a set of standardized communication protocols for system operators to use during normal and emergency operations to improve situational awareness and shorten response time.

The requirements for communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: The SAR scope needs to be clear in that it refers to specific protocols for communication, and not to "scripted" responses for every situation. Although the SAR discusses the use of protocols, other context of the remaining passages in the SAR lead one to believe otherwise.

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

4. **The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments:

5. **Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments:

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

Please use this form to submit comments on the proposed SAR for Operating Personnel Communications Protocols. Comments must be submitted by **April 17, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "Protocols" in the subject line. If you have questions please contact **Harry Tom** at [Harry.Tom@nerc.net](mailto:Harry.Tom@nerc.net) or by telephone at 609-452-8060.

<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Michael Gammon	
Organization:	Kansas City Power & Light	
Telephone:	816-654-1242	
E-mail:	816-654-1245	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input checked="" type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities





## **Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols**

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### **Background Information**

The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Blackout Recommendation #26 is: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." (Note that this SAR does not include the second part of this recommendation regarding the upgrade to communication system hardware.)

This SAR proposes developing a set of standardized communication protocols for system operators to use during normal and emergency operations to improve situational awareness and shorten response time.

The requirements for communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: Not to the extent this SAR is addressing itself. The Black Out Report is overly broad and vague regarding this issue. This SAR would make more sense if it were addressing itself to tightening existing protocols and documenting them between entities. The way this SAR has been presented, pre-defined terms would have to be developed. Who would be responsible to determine what these pre-defined terms would be and would the terms be applicable to all operating entities? Adjacent operating entities have a long history of communicating and differing terms are understood.

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: The SAR description suggests establishment of "protocols shall define a rigorous script" to be followed. It would be impracticable to presume to think through every operating condition that scripting would require. Although the notion of everyone using the same terms or phrases sounds good, the development of such an operating "dictionary" is not practicable. Who will be the final word on terminology the industry must adopt that changes the way in which operating entities have described their adopted practices and procedures for decades?

The scope of the SAR should limit itself to the principles of effective communication for operating entities to follow and not so prescriptive such as pre-definition of terms. Operating entities are smart enough to be able to use effective communication principles in a standard to determine and document communication protocols and terminology between them that provides effective communication. The same should apply between Reliability Coordinators. Follow the basic standards development: a standard should not say how something should be done, it should say what the required outcome should be.

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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- 4. The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments:

- 5. Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments:

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Robert Coish	
Organization:	Manitoba Hydrot	
Telephone:	204-487-5479	
E-mail:	rgcoish@hydro.mb.ca	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs
<input checked="" type="checkbox"/> MRO	<input checked="" type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input checked="" type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input checked="" type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities



## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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### **Background Information**

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This SAR proposes developing a set of standardized communication protocols for system operators to use during normal and emergency operations to improve situational awareness and shorten response time.

The requirements for communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

- 1. Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

- 2. Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: The scope of this SAR is much to far reaching. It appears that the intention is for the this Standard to reach into the intra region operation. This could become a safety issue as Utility Safety Rule Books could be in conflict with terminology being proposed by the standard writer. Getting this standard accepted by the industry at large will be a major hurdle to jump.

- 3. The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

- 4. The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments: If it is the intention of the standard writer to re write these requirements into scripts than we see problems, especially if it is intended to push these scripts into the entities' intra region operating procedures.

- 5. Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**



## **Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols**

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Comments: We believe that there is a need to clean up the communication protocol in as far as full name identification of all parties for all communications between entities and three part communication: the sender giving the information or direction, the receiver repeating the information or direction back as to his understanding, and the receiver confirming or correcting the repeated statement. If there is a correction than the process is repeated.

A glossary of terms for industry standard operating terms is essential. This glossary with input from the entities should be an integral part of this SAR.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> <b>ERCOT</b>	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> <b>FRCC</b>	<input type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> <b>MRO</b>	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> <b>NPCC</b>	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> <b>RFC</b>	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> <b>SERC</b>	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> <b>SPP</b>	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> <b>WECC</b>	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> <b>NA – Not Applicable</b>	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities



## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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### **Background Information**

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This SAR proposes developing a set of standardized communication protocols for system operators to use during normal and emergency operations to improve situational awareness and shorten response time.

The requirements for communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

- 1. Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

- 2. Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: The recommendation from the blackout report is overly broad and vague. Tightening does not sound like a complete overhaul but rather tweaking the existing protocols and documenting them if they are informal. This may not even require a standard across all functional entities. For instance, establishing a common lexicon makes sense at face value; however, it may not be needed for communications between neighboring BAs. BAs and TOPs in a given region have long history of communication and differing terms are already understood. However, for communications that occur between regional areas, there may be a need for common terms.

We do not agree with the concept of a rigorous script for communications. This sounds like it would require the team to identify any operational situation that could ever occur and then establish a script. If this were possible, it would be great. However, it is not possible. This is why we have trained (yes there is a training standard) operators to make decisions when new operational situations occur.

The SAR also proposes that any reliability impacts beyond a Reliability Coordinator's area must be coordinated and approved by the impacted Reliability Coordinator. This is certainly a laudable goal but is not reasonable in all cases. If there is an IROL violation in RC A's area and the action the RC would take would impact the area of RC B, RC A could not take action until RC B approved the action. Let's assume the impact on RC B is that a small load would be radialized when RC A opens a circuit to correct the IROL. This seems like a small risk to subject to RC B since the action will immediately correct the IROL. After the IROL is corrected, then RC A and RC B could begin determining other options. With the proposed language in the SAR, RC A would have violated this standard even though they eliminated that risk of more widespread outages.

- 3. The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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Comments: We agree that these functional entities should be considered for applicability; however, it is possible that the final standard should not apply to all of them. Further examination of the reason for the recommendation of the from the blackout report would help determine this.

- 4. The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments:

- 5. Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments:

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities

**Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols**

Group Comments (Complete this page if comments are from a group.)

**Group Name:** Midwest Reliability Organization  
**Lead Contact:** Neal Balu  
**Contact Organization:** MRO for Group ( WPS Corporation for Contact)  
**Contact Segment:** 10  
**Contact Telephone:** 920-433-1846  
**Contact E-mail:** NJBalu@wisconsinpublicservice.com

Additional Member Name	Additional Member Organization	Region*	Segment*
Terry Bilke	MISO	MRO	10
Alan Boesch	NPPD	MRO	10
Robert Coish, Chair	MHEB	MRO	10
Carol Gerou	MP	MRO	10
Ken Goldsmith	ALT	MRO	10
Todd Gosnell	OPPD	MRO	10
Jim Haigh	WAPA	MRO	10
Tom Mielnik	MEC	MRO	10
Pam Oreschnick	Xcel	MRO	10
Dick Pursley	GRE	MRO	10
Dave Rudolph	BEPC	MRO	10
Eric Ruskamp	LES	MRO	10
Michael Brytowski, Secretary	MRO	MRO	10
27 Additional members		MRO	10

\*If more than one region or segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.



## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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### **Background Information**

The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Blackout Recommendation #26 is: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." (Note that this SAR does not include the second part of this recommendation regarding the upgrade to communication system hardware.)

This SAR proposes developing a set of standardized communication protocols for system operators to use during normal and emergency operations to improve situational awareness and shorten response time.

The requirements for communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: .

The scope need not be so expansive , it should start at a high level with no scripted message.

We do not agree with the concept of a rigorous script for communications. This sounds like it would require the team to identify any operational situation that could ever occur and then establish a script. If this were possible, it would be great. However, it is not possible. This is why we have trained (yes there is a training standard) operators to make decisions when new operational situations occur.

The Communication Training can be made part of Operator Training Procedures.

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: We agree that these functional entities should be considered for applicability; and in addition it should apply to Interchange Coordinator Function.

4. **The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications: EOP-001-0 Attachment 1

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

Comments:

**5. Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments: Proof of the pudding is in tightly defining the Requirements and stipulating the Severity Levels and VRFs accurately so that the penalties are commensurate with the severity level and the VRF.

Is there a consistent methodology between IRO-014-1 R1.1 footnote 1 and CIP-008-1 R1.2?

Is IRO-001-1 R3 a repeat of IRO-005-2 R3?

There is an overlapping request for requirements for communication facilities for use during emergencies. These requests are made in this SAR (Operating Personnel Communications Protocols Project 2007-02) and in the SAR for Project 2006-06 Reliability Coordination-Attachment 1. Perhaps both the associated drafting teams could work together so that there are no overlapping requirements among developed standards. We do not see the purpose behind not including the recommendation regarding the upgrade to communication system hardware in this SAR. This SAR should include , if need be, the recommendations to upgrade communication system hardware.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input checked="" type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
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<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
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	<input checked="" type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities

**Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols**

Group Comments (Complete this page if comments are from a group.)			
<b>Group Name:</b>	NPCC CP9, Reliability Standards Working Group		
<b>Lead Contact:</b>	Guy V. Zito		
<b>Contact Organization:</b>	Northeast Power Coordinating Council		
<b>Contact Segment:</b>	10		
<b>Contact Telephone:</b>	212-840-1070		
<b>Contact E-mail:</b>	gzito@npcc.org		
<b>Additional Member Name</b>	<b>Additional Member Organization</b>	<b>Region*</b>	<b>Segment*</b>
Ralph Rufrano	New York Power Authority	NPCC	1
Ron Falsetti	The IESO, Ontario	NPCC	2
Roger Champagne	TransEnergie, HydroQuebec	NPCC	1
Randy Macdonald	New Brunswick System Operator	NPCC	2
Herb Schrayshuen	National Grid US	NPCC	1
Al Adamson	New York State Reliability Council	NPCC	10
Kathleen Goodman	ISO New England	NPCC	2
David Kiguel	Hydro One Networks	NPCC	1
William Shemley	ISO New England	NPCC	2
Murale Gopinathan	Northeast Utilities	NPCC	1
Guy V. Zito	NPCC	NPCC	10
Greg Campoli	New York ISO	NPCC	2
Donald Nelson	MA Department of Tel and Energy	NPCC	9
Ed Thompson	ConEd	NPCC	1
Michael Ranalli	National Grid US	NPCC	1
Michael Gildea	Constallation Energy	NPCC	5
Michael Schiavone	National Grid US	NPCC	1

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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\*If more than one region or segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

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Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: NPCC participating members agree with the need to establish communication protocols to define consistent emergency determinations. However, the standard should not extend to establishing pre-defined scripts that operators must follow in their communications without the element of judgement and discussion that are needed in such situations.

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: See our comments to question 1

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

4. **The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments: No others.

5. **Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments: NPCC participating members agree with the concepts in the SAR.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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Please use this form to submit comments on the proposed SAR for Operating Personnel Communications Protocols. Comments must be submitted by **April 17, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "Protocols" in the subject line. If you have questions please contact **Harry Tom** at [Harry.Tom@nerc.net](mailto:Harry.Tom@nerc.net) or by telephone at 609-452-8060.

<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Michael Calimano	
Organization:	New York Independent System Operator	
Telephone:	518-356-6129	
E-mail:	mcalimano@nyiso.com	
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input checked="" type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities





## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

### **Background Information**

The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Blackout Recommendation #26 is: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." (Note that this SAR does not include the second part of this recommendation regarding the upgrade to communication system hardware.)

This SAR proposes developing a set of standardized communication protocols for system operators to use during normal and emergency operations to improve situational awareness and shorten response time.

The requirements for communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: see comment in #2

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: The NYISO is concerned that the scope of "... the protocol shall define a rigorous script for the Sender and Receiver of information" is too prescriptive yet not exhaustive enough to cover all situations. We support the notion of defining standard terms to be used in operation personnel communication, but do not believe predetermined script is required in every communication situation, nor do we think it is possible to have a set of scripts that covers all possible cases.

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

4. **The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments:

5. **Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments:

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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Please use this form to submit comments on the proposed SAR for Operating Personnel Communications Protocols. Comments must be submitted by **April 17, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "Protocols" in the subject line. If you have questions please contact **Harry Tom** at [Harry.Tom@nerc.net](mailto:Harry.Tom@nerc.net) or by telephone at 609-452-8060.

<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> <b>ERCOT</b>	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> <b>FRCC</b>	<input type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> <b>MRO</b>	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> <b>NPCC</b>	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> <b>RFC</b>	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> <b>SERC</b>	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> <b>SPP</b>	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> <b>WECC</b>	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> <b>NA – Not Applicable</b>	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities

**Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols**

Group Comments (Complete this page if comments are from a group.)			
<b>Group Name:</b>		Public Service Commission of South Carolina	
<b>Lead Contact:</b>		Phil Riley	
<b>Contact Organization:</b>		Public Service Commission of South Carolina	
<b>Contact Segment:</b>		9	
<b>Contact Telephone:</b>		803-896-5154	
<b>Contact E-mail:</b>		philip.riley@psc.sc.gov	
Additional Member Name	Additional Member Organization	Region*	Segment*
Mignon L. Clyburn	Public Service Commission of South Carolina	SERC	9
Elizabeth B. "Lib" Fleming	Public Service Commission of South Carolina	SERC	9
G. O'Neal Hamilton	Public Service Commission of South Carolina	SERC	9
John E. "Butch" Howard	Public Service Commission of South Carolina	SERC	9
Randy Mitchell	Public Service Commission of South Carolina	SERC	9
C. Robert "Bob" Moseley	Public Service Commission of South Carolina	SERC	9
David A. Wright	Public Service Commission of South Carolina	SERC	9

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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\*If more than one region or segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

### Background Information

The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Blackout Recommendation #26 is: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." (Note that this SAR does not include the second part of this recommendation regarding the upgrade to communication system hardware.)

This SAR proposes developing a set of standardized communication protocols for system operators to use during normal and emergency operations to improve situational awareness and shorten response time.

The requirements for communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

- 1. Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

- 2. Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

- 3. The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

- 4. The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments:

- 5. Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments: The PSCSC believes the SAR should specifically acknowledge the power and effectiveness of three-part communications in ensuring common understanding of verbal exchanges. Three-part communications include the sender giving the information, the receiver repeating the information back, and the sender acknowledging the correctness of the repeated information. This form of communication is used in nuclear plant

## **Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols**

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communications and in other industries where it is critical that everyone involved has a common understanding of the intended message.



## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> MRO	<input checked="" type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input checked="" type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities



## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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### **Background Information**

The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Blackout Recommendation #26 is: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." (Note that this SAR does not include the second part of this recommendation regarding the upgrade to communication system hardware.)

This SAR proposes developing a set of standardized communication protocols for system operators to use during normal and emergency operations to improve situational awareness and shorten response time.

The requirements for communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

- 1. Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: If all Owners, Operators, and Users of the Bulk Electric system adhered to the current NERC standards (and previous Operating Policies), we do not believe this standard would be necessary. However, we understand that this SAR is an attempt to make it very clear what is expected of a RC, TOP, BA, GO, and DP in way of communications during emergency situations.

We feel that this communication protocol should be only applicable under the current EEA Level 1 and above state or with the new Transmission Emergency state currently being developed.

- 2. Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: As mentioned in the answer to question #1, we feel it should be applicable for EEA Level 1 and above or with the new Transmission Emergency state currently being developed.

- 3. The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: However, there is only one "real time" requirement that is applicable to the DP. It is contained in TOP-001-1, R4.

- 4. The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications: IRO-016-1, R1

Comments: We do not recommend bringing the requirement over to this SAR. It is better to leave in the IRO standards.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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**5. Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments:

\*Under FERC staff's Preliminary Assessment contained on page 7 of the SAR (items i and ii), item ii should not be addressed in this SAR. There are numerous requirements in the IRO standards already that adequately cover communications to other RCs for situations in which a reliability impact may go beyond a RC's area of view. In particular, the following standard requirements address the 2<sup>nd</sup> part (ii): IRO-001-1, Req. 7; IRO-003-2, Req.1; IRO-004-1, Req.2; IRO-014-1, Req.1,2,3; IRO-015-1, Req.1,2; IRO-016-1, Req.1;

\*If the SAR drafting team removes the requirements of the standards referenced in the "Related Standards" section of this SAR and move them to this SAR, it will become difficult for a Reliability Coordinator to know where to go for standards applicable to them. For example, currently most of the requirements related to real time actions taken by a RC are contained in the IRO standards. If the 4 IRO standard requirements are removed from the IRO standards and placed into this SAR, the RC system operators will now have to refer to more standards to find requirements related to their responsibilities. This same scenario also applies to the other standard drafting teams who are considering the same actions.

It would be helpful if NERC were to provide on the Standards Homepage a listing of standards by Function: RC, BA, TOP, etc. Then the RC could review the RC function and know all standards that are applicable to them in a quick and easy fashion.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:	Ron Taylor	
Organization:	Salt River Project	
Telephone:	602-236-8957	
E-mail:	Ron.Taylor@srpnet.com	
NERC Region		Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input checked="" type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities



## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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### **Background Information**

The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Blackout Recommendation #26 is: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." (Note that this SAR does not include the second part of this recommendation regarding the upgrade to communication system hardware.)

This SAR proposes developing a set of standardized communication protocols for system operators to use during normal and emergency operations to improve situational awareness and shorten response time.

The requirements for communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

Please review the SAR and then answer the questions on the following page.



## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

4. **The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments:

5. **Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

## **Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols**

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Comments: The SAR is a proposal for protocols to be used over "pre-established communications paths". This is good as far as it goes. When Operations sits down to write up these protocols with their peers, I recommend that they have a Communications person from at least one of the utilities on the panel to initially clearly delineate what the recommended path(s) are between the subject utilities. This will be based on use of private systems first with the possibility of widespread unavailability of commercial services, etc.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

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<b>Individual Commenter Information</b>		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> <b>ERCOT</b>	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> <b>FRCC</b>	<input type="checkbox"/>	2 — RTOs, ISOs
<input type="checkbox"/> <b>MRO</b>	<input type="checkbox"/>	3 — Load-serving Entities
<input type="checkbox"/> <b>NPCC</b>	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> <b>RFC</b>	<input type="checkbox"/>	5 — Electric Generators
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<input type="checkbox"/> <b>SPP</b>	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> <b>WECC</b>	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> <b>NA – Not Applicable</b>	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations and Regional Entities



## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

### **Background Information**

The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Blackout Recommendation #26 is: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." (Note that this SAR does not include the second part of this recommendation regarding the upgrade to communication system hardware.)

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The requirements for communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards.

Please review the SAR and then answer the questions on the following page.

## Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

---

You do not have to answer all questions.

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. **Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments:

2. **Do you agree with the scope of the proposed standard?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: While the WECC RCCWG agrees in general with the scope of the proposed standard, the work group has some questions and comments regarding terms used in the scope. The scope of the SAR may be widened to "establish and implement a lexicon of communications protocols and communications paths." Please define "communication path" as used in the scope - is this the expected communications between entities as opposed to the actual physical paths of those communications? Additionally, there is a general comment that establishment of a lexicon does not, in itself ensure pre-determined action as noted in the scope. What type of pre-determined actions are expected, operating or communications?

3. **The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability?**

Yes

No

**If "No," please explain why in the comment area below and provide supporting information.**

Comments: The WECC RCCWG generally agrees, but some questions remain. The standard will apply to TO, BA, GO, DP; however, the SAR (Applicability Section #2) states that all those entities "will be required to adopt and employ directives that use pre-defined terms, and will require entities that receive those directives to respond to the reliability coordinator using pre-defined terms." Entities that receive those directives should respond to the entity issuing the directives using pre-defined terms. Additionally, the WECC RCCWG believes that the SAR drafting committee should consider adopting the term "directive" for reliability coordinator issue only and adopt another term, such as "operating instructions" for those actions directed by other than the reliability coordinator to distinguish between the two terms.

## **Comment Form — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols**

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- 4. The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.**

The following list of requirements involves the issuing or receipt of real-time communications:

Comments:

- 5. Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.**

Comments:

## **Consideration of Comments on First Draft of SAR for Operating Personnel Communications Protocols**

The Operating Personnel Communications Protocols SAR requesters thank all commenters who submitted comments on Draft 1 of the Communications Protocols SAR. This SAR was posted for a 30-day public comment period from March 15 through April 17, 2007. The requesters asked stakeholders to provide feedback on the standard through a special standard Comment Form. There were 23 sets of comments, including comments from 69 different people from more than 45 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

Based on the comments received, the drafting team is recommending the SAR be submitted to the Standards Committee for authorization to proceed to the standard drafting step. The SAR was not materially changed. The description of the SAR scope was re-written to convey the intent of the standard more clearly.

In this “Consideration of Comments” document stakeholder comments have been organized so that it is easier to see the responses associated with each question. All comments received on the standards can be viewed in their original format at:

[http://www.nerc.com/~filez/standards/Op\\_Comm\\_Protocol\\_Project\\_2007-02.html](http://www.nerc.com/~filez/standards/Op_Comm_Protocol_Project_2007-02.html)

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Director of Standards, Gerry Adamski, at 609-452-8060 or at [gerry.adamski@nerc.net](mailto:gerry.adamski@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

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<sup>1</sup> The appeals process is in the Reliability Standards Development Procedure manual: <http://www.nerc.com/standards/newstandardsprocess.html>.



## Consideration of Comments — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

	Commenter	Organization	Industry Segment											
			1	2	3	4	5	6	7	8	9	10		
1.	Anita Lee (G1)	AESO		✓										
2.	Fred Waites (G6)	Alabama Power Company			✓									
3.	Ken Goldsmith (G3)	ALT												✓
4.	Jeff Hackman	Ameren Services	✓											
5.	Jason Shaver	American Transmission Co.	✓											
6.	Dave Rudolph (G3)	BEPC												✓
7.	Susan Renne	BPA	✓											
8.	Brent Kingsford (G1)	CAISO		✓										
9.	Ed Thompson (G4)	ConEd	✓											
10.	CJ Ingersoll	Constellation			✓									
11.	Michael Gildea (G4)	Constellation Energy					✓							
12.	Ed Davis	Entergy Services, Inc.	✓											
13.	Coleen Frosch	ERCOT		✓										
14.	Steve Myers (G1)	ERCOT		✓										
15.	David Folk	FirstEnergy Corp.	✓		✓		✓	✓						
16.	Dick Pursley (G3)	GRE												✓
17.	David Kiguel (G4)	Hydro One Networks	✓											
18.	Roger Champagne (I) (G4)	Hydro-Québec TransÉnergie (HQT)	✓											
19.	Ron Falsetti (I) (G1) (G4)	IESO		✓										
20.	Matt Goldberg (G1)	ISO-NE		✓										
21.	Kathleen Goodman (I) (G4)	ISO-NE		✓										
22.	William Shemley (G4)	ISO-NE		✓										
23.	Brian Thumm	ITC Transco	✓											
24.	Jim Cyrulewski (G2)	JDRJC Associates									✓			
25.	Mike Gammon	KCPL	✓											

**Consideration of Comments — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols**

	Commenter	Organization	Industry Segment											
			1	2	3	4	5	6	7	8	9	10		
26.	Eric Ruskamp (G3)	LES												✓
27.	Donald Nelson (G4)	MA Dept. of Tel. and Energy											✓	
28.	Robert Coish (I) (G3)	Manitoba Hydro	✓		✓			✓	✓					
29.	Tom Mielnik (G3)	MEC												✓
30.	Terry Bilke (G2) (G3)	MISO		✓										
31.	William Phillips (G1)	MISO, SERC, MRO		✓										
32.	Carol Gerou (G3)	MP												✓
33.	Michael Brytowski (G3)	MRO												✓
34.	Randy Macdonald (G4)	NBSO		✓										
35.	Herb Schrayshuen (G4)	NGRID	✓											
36.	Michael Ranalli (G4)	NGRID	✓											
37.	Michael Schiavone (G4)	NGRID	✓											
38.	Guy V. Zito (G4)	NPCC												✓
39.	Alan Boesch (G3)	NPPD												✓
40.	Murale Gopinathan (G4)	NU	✓											
41.	Mike Calimano (I) (G1)	NYISO		✓										
42.	Greg Campoli (G4)	NYISO		✓										
43.	Al Adamson (G4)	NYSRC												✓
44.	Alicia Daugherty (G1)	PJM		✓										
45.	Phil Riley (G5)	Public Service Commission of SC											✓	
46.	Mignon L. Clyburn (G5)	Public Service Commission of SC											✓	
47.	Elizabeth B. Fleming (G5)	Public Service Commission of SC											✓	
48.	G. O'Neal Hamilton (G5)	Public Service Commission of SC											✓	
49.	John E. Howard (G5)	Public Service Commission of SC											✓	
50.	Randy Mitchell (G5)	Public Service Commission of SC											✓	
51.	C. Robert Moseley (G5)	Public Service Commission of SC											✓	
52.	David A. Wright (G5)	Public Service Commission of SC											✓	
53.	Roman Carter (G6)	Southern Company Transmission	✓											
54.	Marc Butts (G6)	Southern Company Transmission	✓											
55.	J.T. Wood (G6)	Southern Company Transmission	✓											

**Consideration of Comments — 1<sup>st</sup> Draft of SAR for Operating Personnel Communications Protocols**

Commenter		Organization	Industry Segment											
			1	2	3	4	5	6	7	8	9	10		
56.	Jim Busbin (G6)	Southern Company Transmission	✓											
57.	Jim Griffith (G6)	Southern Company Transmission	✓											
58.	Charles Yeung (G1)	SPP		✓										
59.	Ron Taylor	SRP	✓											
60.	Jim Haigh (G3)	WAPA												✓
61.	Neal Balu (G3)	WPS												✓
62.	Pam Oreschnik (G3)	Xcel												✓
63.	David Lemmons (G2)	Xcel Energy							✓					
64.	Nancy Bellows (G7)	WAPA												✓
65.	Mike Gentry (G7)	SRP												✓
66.	Bob Johnson (G7)	Xcel (PSC)												✓
67.	Frank McElvain (G7)	RDRC												✓
68.	Greg Tillitson (G7)	CMRC												✓
69.	Howard Rulf	We Energies			✓	✓	✓							

I – Indicates that individual comments were submitted in addition to comments submitted as part of a group

G1 – IRC Standards Review Committee (IRC SRC)

G2 – Midwest Standards Collaboration Group (Midwest SCG)

G3 – MRO Members

G4 – NPCC CP9 Reliability Standards Working Group (NPCC CP9)

G5 – Public Service Commission of South Carolina

G6 – Southern Company Transmission

G7 – WECC Reliability Coordination Comments Work Group (WECC RCCWG)

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**Consideration of Comments — SAR for Operating Personnel Communications Protocols**

1. Do you believe that there is a reliability-related need to establish a set of communications protocols to improve situational awareness and shorten response time? If "No," please explain why.

**Summary Consideration:** The majority of comments indicate that there is a reliability need for this SAR. Many comments took issue with the phrase "pre-defined scripts" and the SAR DT has re-written the SAR scope description to clarify that it is not the intent of the standard to require an extensive list of scripts to be used for all operating conditions. The SAR DT intent is for the Standard DT to develop requirements for communications protocols that include essential elements such that when applied, information is efficiently conveyed and mutually understood.

Question #1			
Commenter	Yes	No	Comment
Ameren Services	<input checked="" type="checkbox"/>		
BPA	<input checked="" type="checkbox"/>		
Entergy Services	<input checked="" type="checkbox"/>		
ERCOT	<input checked="" type="checkbox"/>		
FirstEnergy	<input checked="" type="checkbox"/>		
IESO	<input checked="" type="checkbox"/>		
IRC SRC	<input checked="" type="checkbox"/>		
ITC Transco	<input checked="" type="checkbox"/>		
Manitoba Hydro	<input checked="" type="checkbox"/>		
Midwest SCG	<input checked="" type="checkbox"/>		
MRO Members	<input checked="" type="checkbox"/>		
PSC of South Carolina	<input checked="" type="checkbox"/>		
WECC RCCWG	<input checked="" type="checkbox"/>		
We Energies	<input checked="" type="checkbox"/>		
<p><b>Response:</b>                      The SAR DT acknowledges the commenters' affirmative response to this question and appreciates their submission.</p>			

**Consideration of Comments — SAR for Operating Personnel Communications Protocols**

<b>Question #1</b>			
<b>Commenter</b>	<b>Yes</b>	<b>No</b>	<b>Comment</b>
ATC LLC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The SAR needs further clarification before it is moved into the next stage. The SAR should identify at a minimum the words and procedures that the SDT is going to consider for a reliability standard.
<p><b>Response:</b> The SAR's detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p>			
Constellation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ECD believes there is a reliability reason for establishing a set of communication protocols.
<p><b>Response:</b> The SAR DT acknowledges the commenter's affirmative response to this question and appreciates its submission.</p>			
Hydro-Québec TransÉnergie	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	HQT supports establishing communication protocols to define consistent emergency determinations. However, the standard should not extend to establishing pre-defined scripts that operators must follow in their communications without the element of judgment and discussion that are needed in such situations.
<p><b>Response:</b> The SAR's detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p>			
ISO-NE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ISO New England supports establishing communication protocols to define consistent emergency determinations. However, the standard should not extend to establishing pre-defined scripts that operators must follow in their communications without the element of judgment and discussion that are needed in such situations.
<p><b>Response:</b> The SAR's detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p>			
NPCC CP9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NPCC participating members agree with the need to establish communication protocols

Consideration of Comments — SAR for Operating Personnel Communications Protocols

Question #1			
Commenter	Yes	No	Comment
			to define consistent emergency determinations. However, the standard should not extend to establishing pre-defined scripts that operators must follow in their communications without the element of judgment and discussion that are needed in such situations.
<p><b>Response:</b> The SAR's detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p>			
NYISO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	See comments in Question #2.
<p><b>Response:</b> The SAR's detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p>			
Southern Company Transmission	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>If all Owners, Operators, and Users of the Bulk Electric system adhered to the current NERC standards (and previous Operating Policies), we do not believe this standard would be necessary. However, we understand that this SAR is an attempt to make it very clear what is expected of a RC, TOP, BA, GO, and DP in way of communications during emergency situations.</p> <p>We feel that this communication protocol should be only applicable under the current EEA Level 1 and above state or with the new Transmission Emergency state currently being developed.</p>
<p><b>Response:</b> The SAR DT believes that communications protocols that enable information to be efficiently conveyed and mutually understood are necessary under all operating conditions and not only during emergency or abnormal operating conditions.</p>			
KCPL		<input checked="" type="checkbox"/>	Not to the extent this SAR is addressing itself. The Black Out Report is overly broad and vague regarding this issue. This SAR would make more sense if it were addressing itself to tightening existing protocols and documenting them between entities. The way this SAR has been presented, pre-defined terms would have to be developed. Who would be responsible to determine what these pre-defined terms would be and would the terms be applicable to all operating entities? Adjacent operating entities have a long history of

Consideration of Comments — SAR for Operating Personnel Communications Protocols

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Question #1			
Commenter	Yes	No	Comment
			communicating and differing terms are understood.
<p><b>Response:</b> The SAR's detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p>			



**Consideration of Comments — SAR for Operating Personnel Communications Protocols**

2. Do you agree with the scope of the proposed standard? If “No,” please explain why

**Summary Consideration:** Many commenters expressed concern with “pre-defined scripts”. The SAR DT did not intend to prescribe scripts for all possible conditions, and the SAR DT has re-written the SAR’s description to clarify that it is not the intent of the standard to require an extensive list of scripts to be used for all operating conditions but rather for the Standard DT to develop requirements for communications protocols that include essential elements such that when applied, information is efficiently conveyed and mutually understood.

There was a comment that the standard should apply to “local control centers”. The SAR DT noted that although the system operators who work in local control centers operate under the direction of a TOP or RC, the local control center is typically owned and operated by the Transmission Owner. The SAR DT has added the functional entity of Transmission Owner as an applicable entity to give the standard DT maximum flexibility to do their work.

Question #2			
Commenter	Yes	No	Comment
BPA	<input checked="" type="checkbox"/>		
Entergy Services	<input checked="" type="checkbox"/>		
FirstEnergy	<input checked="" type="checkbox"/>		
PSC of South Carolina	<input checked="" type="checkbox"/>		
<p><b>Response:</b> The SAR DT acknowledges the commenters’ affirmative response to this question and appreciates their submission.</p>			
Southern Company Transmission	<input checked="" type="checkbox"/>		As mentioned in the answer to question #1, we feel it should be applicable for EEA Level 1 and above or with the new Transmission Emergency state currently being developed.
<p><b>Response:</b> The SAR DT believes that communications protocols that enable information to be efficiently conveyed and mutually understood are necessary under all operating conditions and not only during emergency or abnormal operating conditions.</p>			
Constellation	<input checked="" type="checkbox"/>		CECD agrees with the scope, however, CECD would caution that pre-defined action in response to grid operations would need to be broad enough to allow the flexibility that is required by a diverse system. The statement that raises this concern in the Scope is the first sentence which states, the scope of the proposed standard or revised standards is to establish a common lexicon of communications protocols and communication paths

**Consideration of Comments — SAR for Operating Personnel Communications Protocols**

<b>Question #2</b>			
<b>Commenter</b>	<b>Yes</b>	<b>No</b>	<b>Comment</b>
			such that all operators and users of the North American bulk electric system have the same understanding as to its meaning, usage and take pre-determined action in response. The standard should focus on the communication paths, per-determined contacts (regular communication/testing), the applicable language and the terminology but not necessarily a specific action.
<b>Response:</b> The SAR's detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.			
WECC RCCWG	<input checked="" type="checkbox"/>		While the WECC RCCWG agrees in general with the scope of the proposed standard, the work group has some questions and comments regarding terms used in the scope. The scope of the SAR may be widened to "establish and implement a lexicon of communications protocols and communications paths." Please define "communication path" as used in the scope - is this the expected communications between entities as opposed to the actual physical paths of those communications? Additionally, there is a general comment that establishment of a lexicon does not, in itself ensure pre-determined action as noted in the scope. What type of pre-determined actions are expected, operating or communications?
<b>Response:</b> The SAR DT defines communications path as the means/method used to communicate. The SAR DT does not intend to prescribe which means/method to use but that one is in place. Pre-determined actions are previously agreed upon communication actions taken in response to specific operating conditions.			
Hydro-Québec TransÉnergie	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	See response to Question #1.
IESO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	The scope of the SAR is too broad and too prescriptive. The Applicability section of the SAR where it states "... the protocol shall define a rigorous script for the Sender and Receiver of information..." is too prescriptive yet not exhaustive enough to cover all situations. We support the notion of defining standard terms to be used in operation personnel communication, but do not believe predetermined script is required in every communication situation, nor do we think it is possible to have a set of scripts that covers all possible cases.
ISO-NE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	See response to Question #1.
NPCC CP9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	See our comments to Question #1.

**Consideration of Comments — SAR for Operating Personnel Communications Protocols**

Question #2			
Commenter	Yes	No	Comment
<p><b>Response:</b> The SAR’s detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT’s intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p>			
Ameren Services		<input checked="" type="checkbox"/>	<p>There is no doubt that during alerts and emergencies, both parties in communication require a common definition. To the extent the standard requires neighboring BAs, TOs and RCs to use the same word with the same meaning, then the scope of the proposed standard makes sense. However, as written the standard appears to indicate the kind of scripting that is better suited to selling magazines from a boiler room. No defined protocol can match every situation. And if in fact that was even a goal, the operators would have the time-consuming task of identifying which script currently was needed when their time would be better spent resolving the situation.</p> <p>The SAR also proposes that any reliability impacts beyond a Reliability Coordinator's area must be coordinated and approved by the impacted Reliability Coordinator. Clearly, if time permits, this coordination is appropriate. However, in an emergency, the RC may have to use independent judgment.</p>
<p><b>Response:</b> The SAR’s detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT’s intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p> <p>The coordination between RC and TOP/BA is addressed in a separate project 2006-6 Reliability Coordination and is not part of this SAR.</p>			
ATC LLC		<input checked="" type="checkbox"/>	<p>The SAR should be expanded to include local control center’s system operators.</p> <p>See our comments to question 3.</p> <p>The SAR should specify how each of the identified standards will be addressed through this process.</p>
<p><b>Response:</b> The SAR DT believes that while “local control centers” are under the purview of either a Transmission Operator/Balancing Authority or Distribution Service Provider the SAR DT have added the functional entity of Transmission Owner as an applicable entity to give the standard DT maximum flexibility to do their work.</p>			
ERCOT		<input checked="" type="checkbox"/>	<p>There may be a need for pre-defined terms, however we do not agree with the concept of a rigorous script for communications. It would not be possible to identify every operational situation.</p>
<p><b>Response:</b> The SAR’s detailed description was revised to delete the sentence that indicated the standard would require</p>			

Consideration of Comments — SAR for Operating Personnel Communications Protocols

Question #2			
Commenter	Yes	No	Comment
<p>scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p>			
IRC SRC		<input checked="" type="checkbox"/>	<p>We are concerned that the scope of "... the protocol shall define a rigorous script for the Sender and Receiver of information" is too prescriptive yet not exhaustive enough to cover all situations. We support the notion of defining standard terms to be used in operation personnel communication, but do not believe predetermined script is required in every communication situation, nor do we think it is possible to have a set of scripts that covers all possible cases.</p>
<p><b>Response:</b> The SAR's detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p>			
ITC Transco		<input checked="" type="checkbox"/>	<p>The SAR scope needs to be clear in that it refers to specific protocols for communication, and not to "scripted" responses for every situation. Although the SAR discusses the use of protocols, other context of the remaining passages in the SAR lead one to believe otherwise.</p>
<p><b>Response:</b> The SAR's detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p>			
KCPL		<input checked="" type="checkbox"/>	<p>The SAR description suggests establishment of "protocols shall define a rigorous script" to be followed. It would be impracticable to presume to think through every operating condition that scripting would require. Although the notion of everyone using the same terms or phrases sounds good, the development of such an operating "dictionary" is not practicable. Who will be the final word on terminology the industry must adopt that changes the way in which operating entities have described their adopted practices and procedures for decades?</p> <p>The scope of the SAR should limit itself to the principles of effective communication for operating entities to follow and not so prescriptive such as pre-definition of terms. Operating entities are smart enough to be able to use effective communication principles in a standard to determine and document communication protocols and terminology between them that provides effective communication. The same should apply between Reliability Coordinators. Follow the basic standards development: a standard should not say how something should be done, it should say what the required outcome should be.</p>
<p><b>Response:</b> The SAR's detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p>			

**Consideration of Comments — SAR for Operating Personnel Communications Protocols**

Question #2			
Commenter	Yes	No	Comment
Manitoba Hydro		<input checked="" type="checkbox"/>	<p>The scope of this SAR is much to far reaching. It appears that the intention is for the this Standard to reach into the intra region operation. This could become a safety issue as Utility Safety Rule Books could be in conflict with terminology being proposed by the standard writer. Getting this standard accepted by the industry at large will be a major hurdle to jump.</p> <p><b>Response:</b> The SAR's detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p> <p>The coordination between RC and TOP/BA is addressed in a separate NERC Project 2006-6 entitled Reliability Coordination and is not part of this SAR.</p> <p>It is not the intent of the standard to define terms that may conflict with other programs but rather to prescribe essential elements (not necessarily specific terms) in communications protocols such that information is efficiently conveyed and mutually understood.</p>
Midwest SCG		<input checked="" type="checkbox"/>	<p>The recommendation from the blackout report is overly broad and vague. Tightening does not sound like a complete overhaul but rather tweaking the existing protocols and documenting them if they are informal. This may not even require a standard across all functional entities. For instance, establishing a common lexicon makes sense at face value; however, it may not be needed for communications between neighboring BAs. BAs and TOPs in a given region have long history of communication and differing terms are already understood. However, for communications that occur between regional areas, there may be a need for common terms.</p> <p>We do not agree with the concept of a rigorous script for communications. This sounds like it would require the team to identify any operational situation that could ever occur and then establish a script. If this were possible, it would be great. However, it is not possible. This is why we have trained (yes there is a training standard) operators to make decisions when new operational situations occur.</p> <p>The SAR also proposes that any reliability impacts beyond a Reliability Coordinator's area must be coordinated and approved by the impacted Reliability Coordinator. This is certainly a laudable goal but is not reasonable in all cases. If there is an IROL violation in RC A's area and the action the RC would take would impact the area of RC B, RC A could not take action until RC B approved the action. Let's assume the impact on RC B is</p>

Consideration of Comments — SAR for Operating Personnel Communications Protocols

Question #2			
Commenter	Yes	No	Comment
			that a small load would be radialized when RC A opens a circuit to correct the IROL. This seems like a small risk to subject to RC B since the action will immediately correct the IROL. After the IROL is corrected, then RC A and RC B could begin determining other options. With the proposed language in the SAR, RC A would have violated this standard even though they eliminated that risk of more widespread outages.
<p><b>Response:</b> The SAR's detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p> <p>The coordination between RC and TOP/BA is addressed in a separate NERC Project 2006-6 entitled Reliability Coordination and is not part of this SAR.</p>			
MRO Members		<input checked="" type="checkbox"/>	<p>The scope need not be so expansive , it should start at a high level with no scripted message.</p> <p>We do not agree with the concept of a rigorous script for communications. This sounds like it would require the team to identify any operational situation that could ever occur and then establish a script. If this were possible, it would be great. However, it is not possible. This is why we have trained (yes there is a training standard) operators to make decisions when new operational situations occur.</p> <p>The Communication Training can be made part of Operator Training Procedures.</p>
<p><b>Response:</b> The SAR's detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p> <p>The SAR DT agrees that training is essential.</p>			
NYISO		<input checked="" type="checkbox"/>	<p>The NYISO is concerned that the scope of "... the protocol shall define a rigorous script for the Sender and Receiver of information" is too prescriptive yet not exhaustive enough to cover all situations. We support the notion of defining standard terms to be used in operation personnel communication, but do not believe predetermined script is required in every communication situation, nor do we think it is possible to have a set of scripts that covers all possible cases.</p>
<p><b>Response:</b> The SAR's detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p>			

## Consideration of Comments — SAR for Operating Personnel Communications Protocols

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Question #2			
Commenter	Yes	No	Comment
We Energies		<input checked="" type="checkbox"/>	The scope should be limited to communications between entities and should not prescribe communication protocols for communication within an organization. Intra-company communications are most appropriately addressed by internal policies and procedures tailored to an entity's specific needs and characteristics.
<b>Response:</b> The SAR DT agrees — that the scope of this standard does not apply to internal non-reliability related company communications; however it does apply to separate functional entities within a single company.			

**Consideration of Comments — SAR for Operating Personnel Communications Protocols**

3. The proposed standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators and Distribution Providers. Do you agree with the proposed applicability? If “No,” please explain why

**Summary Consideration:** The majority of the commenters agreed that the proposed requirements should be applicable to the RC, BA, TOP, GO and DP functional entities.

Question #3			
Commenter	Yes	No	Comment
Ameren Services	<input checked="" type="checkbox"/>		
BPA	<input checked="" type="checkbox"/>		
Constellation	<input checked="" type="checkbox"/>		
Entergy Services	<input checked="" type="checkbox"/>		
ERCOT	<input checked="" type="checkbox"/>		
FirstEnergy	<input checked="" type="checkbox"/>		
Hydro-Québec TransÉnergie	<input checked="" type="checkbox"/>		
IESO	<input checked="" type="checkbox"/>		
IRC SRC	<input checked="" type="checkbox"/>		
ISO-NE	<input checked="" type="checkbox"/>		
ITC Transco	<input checked="" type="checkbox"/>		
KCPL	<input checked="" type="checkbox"/>		
Manitoba Hydro	<input checked="" type="checkbox"/>		
NPCC CP9	<input checked="" type="checkbox"/>		
NYISO	<input checked="" type="checkbox"/>		
PSC of South Carolina	<input checked="" type="checkbox"/>		
<p><b>Response:</b> The SAR DT acknowledges the commenters’ affirmative response to this question and appreciates their submission.</p>			



Consideration of Comments — SAR for Operating Personnel Communications Protocols

Question #3			
Commenter	Yes	No	Comment
Southern Company Transmission	<input checked="" type="checkbox"/>		However, there is only one "real time" requirement that is applicable to the DP. It is contained in TOP-001-1, R4.  <b>Response:</b> The SAR DT agrees that the DP comply with direction from TOP. This standard does not conflict with that requirement but is intended to ensure quick, clear and mutual understanding of any directives from the TOP to the DP.
WECC RCCWG	<input checked="" type="checkbox"/>		The WECC RCCWG generally agrees, but some questions remain. The standard will apply to TO, BA, GO, DP; however, the SAR (Applicability Section #2) states that all those entities "will be required to adopt and employ directives that use pre-defined terms, and will require entities that receive those directives to respond to the reliability coordinator using pre-defined terms." Entities that receive those directives should respond to the entity issuing the directives using pre-defined terms. Additionally, the WECC RCCWG believes that the SAR drafting committee should consider adopting the term "directive" for reliability coordinator issue only and adopt another term, such as "operating instructions" for those actions directed by other than the reliability coordinator to distinguish between the two terms.  <b>Response:</b> The SAR's detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.  The SAR DT believes that limiting the use of the word directive by RC's only is not within the scope of this standard. The use of the word "directive" occurs throughout several NERC standards.
ATC LLC		<input checked="" type="checkbox"/>	<b>Issue 1:</b> The recommendation from the blackout report is overly broad and vague. Tightening does not sound like a complete overhaul but rather tweaking the existing protocols and documenting them if they are informal. This may not even require a standard across all functional entities. TOPs and BAs in a given region have long history of communication and differing terms are already understood. However, for communications that occur between regional areas, there may be a need for common terms.  ATC does not agree with the concept of a rigorous script for communications. This may sound like it would require the team to identify any operational situation that could ever occur and then establish a script. If this were possible, it would be great. However, it is not possible. This is why we have trained operators to make decisions when new operational situations occur.

Consideration of Comments — SAR for Operating Personnel Communications Protocols

Question #3			
Commenter	Yes	No	Comment
			<p><b>Issue 2:</b>                      The SAR needs to include local control center’s system operators. The inclusion of this group of system operators will not be simple because local control centers are not an identified entity in NERC’s functional model. Never the less if the SDT is going to create a common lexicon and procedures it’s important that these system operators are required to follow the standard. ATC believes that the purpose behind this SAR would be better address through NERC’s CEH program then through reliability standards.</p> <p>SAR Scope:</p> <p>“The scope of the proposed standard or reviewed standards is to establish a common lexicon of communications protocols and communications paths such that all operators and users of the North American bulk electric system have the same understanding as to its meaning, usage and take pre-determined action in response.”</p> <p><b>PER FERC Final Rule RM06-</b>                      “1343. Clearly, in a region where an RTO or ISO performs the transmission operator function, its personnel with primary responsibility for real-time operations must receive formal training pursuant to PER-002-0. IN addition, personnel who are responsible for implementing instructions at a local control center also affect the reliability of the Bulk Power System. These entities may take independent action under certain circumstances, for example, to protect assets, personnel safety and during system restorations. Whether the RTO or the local control center is ultimately responsible for compliance is a separate issue addressed above, but regardless of which entity registers for that responsibility, these local control center employees must receive formal training consistent with their roles, responsibilities and tasks. Thus, while we direct the ERO to develop modifications to PER-002-0 to include formal training for local control center personnel, that training should be tailored to the needs of the positions.”</p> <p>“1345. Another organization structure, typically representative of relative smaller entities, consists of a single control center that implements operating instructions from its transmission operator, e.g., an RTO, ISO or pooled resources. Similar to the discussion above, operators at these control centers also may take independent action to protect assets, safety and system restoration. Such control center personnel must also receive formal training pursuant to PER-002-0.”</p>

Consideration of Comments — SAR for Operating Personnel Communications Protocols

Question #3			
Commenter	Yes	No	Comment
			Because NERC has been order to create training plans for local control center’s system operator any common lexicon and communications protocols could be dealt with for all entities most effectively in NERC’s CEH program.
<b>Response:</b> See previous responses to Questions 1 and 2.			
Midwest SCG		<input checked="" type="checkbox"/>	We agree that these functional entities should be considered for applicability; however, it is possible that the final standard should not apply to all of them. Further examination of the reason for the recommendation of the from the blackout report would help determine this.
<b>Response:</b> The SAR DT view is all of the applicable entities, RC, BA, TOP, GO, DP should be guided by communication protocols to ensure quick, clear and mutual understanding of information between them in real time. The specific reasons identified in the Blackout report are addressed by this SAR but is not limited by them.			
MRO Members		<input checked="" type="checkbox"/>	We agree that these functional entities should be considered for applicability; and in addition it should apply to Interchange Coordinator Function.
<b>Response:</b> The SAR DT believes the Interchange Authority function is under the BA function. The IA does ‘receive’ info from other entities and may, under some circumstances relay that info to others – see FM V3 P32, Real-time #7.			
We Energies		<input checked="" type="checkbox"/>	Scope should be limited to communication among separate entities/organizations. For example, the standard should not address communication protocols between a Balancing Authority, Generaotr Operator and a Distribution Provider tha are the same corporate entity. The requirement to maintain situational awareness within a given entiy is addressed by other standards.
<b>Response:</b> The SAR DT agrees that the scope of this standard does not apply to internal non-reliability related company communications protocols, however it does apply to separate functional entities within a single company.			

**Consideration of Comments — SAR for Operating Personnel Communications Protocols**

4. The SAR includes a list of standards that include requirements that involve the issuing or receipt of real-time communications. If you are aware of additional requirements, beyond those listed on pages 8-9, please identify them here.

**Summary Consideration:** Based on stakeholder comments, the SAR DT modified the SAR to clarify that EOP-001-0 Attachment 1 should be addressed by the standard drafting team.

Question #4				
Commenter	Yes	No	Requirement	Comment
Southern Company Transmission	<input checked="" type="checkbox"/>		IRO-016-1, R1	We do not recommend bringing the requirement over to this SAR. It is better to leave in the IRO standards.
<b>Response:</b> The SAR DT would like the Standard DT to consider communication-related requirements in other standards for duplication, conflicts and consolidation.				
BPA				None identified.
Hydro-Québec TransÉnergie				No others.
ISO-NE				No others.
Manitoba Hydro				If it is the intention of the standard writer to re write these requirements into scripts than we see problems, especially if it is intended to push these scripts into the entities' intra region operating procedures.
<b>Response:</b> The SAR DT does not intend to re-write any requirements into scripts.				
MRO Members	<input checked="" type="checkbox"/>			EOP-001-0 Attachment 1
<b>Response:</b> The SAR DT agrees with the commenter.				
NPCC CP9				No others.

**Consideration of Comments — SAR for Operating Personnel Communications Protocols**

5. Please provide any other comments (that you have not already provided in response to the first four questions on this form) that you have on the revised SAR.

**Summary Consideration:** Based on stakeholder comments, the SAR DT modified the SAR to clarify that three-part communications will be included in the proposed requirements.

Question #5			
Commenter	Yes	No	Comment
PSC of South Carolina			The PSCSC believes the SAR should specifically acknowledge the power and effectiveness of three-part communications in ensuring common understanding of verbal exchanges. Three-part communications include the sender giving the information, the receiver repeating the information back, and the sender acknowledging the correctness of the repeated information. This form of communication is used in nuclear plant communications and in other industries where it is critical that everyone involved has a common understanding of the intended message.
<b>Response:</b> The SAR DT thanks the commenter for this item and has incorporated the use of three-part communications into the scope of the SAR.			
Southern Company Transmission			<p>*Under FERC staff's Preliminary Assessment contained on page 7 of the SAR (items i and ii), item ii should not be addressed in this SAR. There are numerous requirements in the IRO standards already that adequately cover communications to other RCs for situations in which a reliability impact may go beyond a RC's area of view. In particular, the following standard requirements address the 2<sup>nd</sup> part (ii): IRO-001-1, Req. 7; IRO-003-2, Req.1; IRO-004-1, Req.2; IRO-014-1, Req.1,2,3; IRO-015-1, Req.1,2; IRO-016-1, Req.1;</p> <p>*If the SAR drafting team removes the requirements of the standards referenced in the "Related Standards" section of this SAR and move them to this SAR, it will become difficult for a Reliability Coordinator to know where to go for standards applicable to them. For example, currently most of the requirements related to real time actions taken by a RC are contained in the IRO standards. If the 4 IRO standard requirements are removed from the IRO standards and placed into this SAR, the RC system operators will now have to refer to more standards to find requirements related to their responsibilities. This same scenario also applies to the other standard drafting teams who are considering the same actions.</p> <p>It would be helpful if NERC were to provide on the Standards Homepage a listing of</p>

Consideration of Comments — SAR for Operating Personnel Communications Protocols

Question #5			
Commenter	Yes	No	Comment
			standards by Function: RC, BA, TOP, etc. Then the RC could review the RC function and know all standards that are applicable to them in a quick and easy fashion.
<p><b>Response:</b> The SAR DT would like the Standard DT to consider communication-related requirements in other standards for duplication, conflicts and consolidation.</p> <p>There is a link to a document "Version 0 and Version 1 Matrix of Requirements by Function" on the NERC Standards website. The link may be found on the "BOT Approved Standards" webpage in the center of the page. Many standards include requirements that are applicable to more than one functional entity.</p>			
FirstEnergy			No additional comments.
Manitoba Hydro			<p>We believe that there is a need to clean up the communication protocol in as far as full name identification of all parties for all communications between entities and three part communication: the sender giving the information or direction, the receiver repeating the information or direction back as to his understanding, and the receiver confirming or correcting the repeated statement. If there is a correction than the process is repeated.</p> <p>A glossary of terms for industry standard operating terms is essential. This glossary with input from the entities should be an integral part of this SAR.</p>
<p><b>Response:</b> The SAR DT thanks the commenter for the item regarding three part communications and have incorporated it into the scope of the SAR.</p> <p>The SAR's detailed description was revised to delete the sentence that indicated the standard would require scripts to be used. The SAR DT's intent is for the standard to require that communications include essential elements or protocols such that information is efficiently conveyed and mutually understood.</p>			
MRO Members			<p>Proof of the pudding is in tightly defining the Requirements and stipulating the Severity Levels and VRFs accurately so that the penalties are commensurate with the severity level and the VRF.</p> <p>Is there a consistent methodology between IRO-014-1 R1.1 footnote 1 and CIP-008-1 R1.2?</p> <p>Is IRO-001-1 R3 a repeat of IRO-005-2 R3?</p> <p>There is an overlapping request for requirements for communication facilities for use during emergencies. These requests are made in this SAR (Operating Personnel Communications Protocols Project 2007-02) and in the SAR for Project 2006-06 Reliability Coordination-Attachment 1. Perhaps both the associated drafting teams could</p>

Consideration of Comments — SAR for Operating Personnel Communications Protocols

Question #5			
Commenter	Yes	No	Comment
			work together so that there are no overlapping requirements among developed standards. We do not see the purpose behind not including the recommendation regarding the upgrade to communication system hardware in this SAR. This SAR should include , if need be, the recommendations to upgrade communication system hardware.
<p><b>Response:</b> The Standard DT and Compliance Elements DT will work together to ensure the VRF and VSL assignments are appropriate.</p> <p>The SAR DT will endeavor to eliminate any duplication and/or contradictions with other reliability standards.</p> <p>COM-001 addresses hardware requirements and continue to be in effect until it is formally retired. The retirement can occur all at once or can occur on a requirement by requirement basis.</p>			
NPCC CP9			NPCC participating members agree with the concepts in the SAR.
SRP			The SAR is a proposal for protocols to be used over "pre-established communications paths". This is good as far as it goes. When Operations sits down to write up these protocols with their peers, I recommend that they have a Communications person from at least one of the utilities on the panel to initially clearly delineate what the recommended path(s) are between the subject utilities. This will be based on use of private systems first with the possibility of widespread unavailability of commercial services, etc.
<p><b>Response:</b> Thank you for your comment, the scope of this SAR concerns itself with communication protocols (verbal, written and visual) and not with telecommunications systems. (See COM-001-1)</p>			

## Standard Authorization Request Form

Title of Proposed Standard:	Operating Personnel Communications Protocols
Request Date:	March 1, 2007
Revised Date:	June 8, 2007

### ***SAR Requester Information***

Name: Lloyd Snyder	SAR Type (Check one box.)
Company: Georgia System Operations Corp.	<input checked="" type="checkbox"/> New Standard
Telephone: 770-270-7418	<input checked="" type="checkbox"/> Revision to Existing Standard
Fax: 770-270-7672	<input type="checkbox"/> Withdrawal of Existing Standard
E-mail: Lloyd.snyder@gasoc.com	<input type="checkbox"/> Urgent Action



## Standards Authorization Request Form

Purpose (Describe the purpose of the proposed standard - what the standard will achieve in support of reliability.)

Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The purpose of this standard is to:

1. Provide an adequate level of reliability for the North American bulk power systems - by ensuring that the standards are complete and the requirements are set at an appropriate level to ensure reliability.
2. Ensure the standard or standards are enforceable as mandatory reliability standards with financial penalties - the applicability to bulk power system owners, operators, and users, are clearly defined; the purpose, requirements, and measures are results-focused and unambiguous; the consequences of violating the requirements are clear.
3. Consider other general improvements described in the standards development work plan.
4. Consider stakeholder comments received during the initial development of the standards and other comments received from Electric Reliability Organization (ERO) regulatory authorities, as noted in the attached review sheets.
5. Satisfy the standards procedure requirement for five-year review of the standards.

Industry Need (Provide a detailed statement justifying the need for the proposed standard, along with any supporting documentation.)

The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Blackout Recommendation #26 is: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." (Note that this SAR does not include the second part of this recommendation regarding the upgrade to communication system hardware.)

## Standards Authorization Request Form

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Brief Description (Describe the proposed standard in sufficient detail to clearly define the scope in a manner that can be easily understood by others.)

This standard will require the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions. The standard will be applicable to transmission operators, transmission owners balancing authorities, reliability coordinators, generator operators and distribution providers.

Requirements will ensure that communications include essential elements such that information is efficiently conveyed and mutually understood for communicating changes to real-time operating conditions and responding to operating directives.

The project may involve moving some requirements that address communications protocols from existing standards into this new standard and will involve adding new requirements that more fully address communications protocols under various operating conditions.

**Standards Authorization Request Form**

***Reliability Functions***

<b>The Standard will Apply to the Following Functions</b> <i>(Check all applicable boxes.)</i>		
<input checked="" type="checkbox"/>	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
<input checked="" type="checkbox"/>	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports Interconnection frequency in real time.
<input type="checkbox"/>	Interchange Coordinator	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
<input type="checkbox"/>	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
<input type="checkbox"/>	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator area.
<input type="checkbox"/>	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.
<input type="checkbox"/>	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
<input checked="" type="checkbox"/>	Transmission Owner	Owns and maintains transmission facilities.
<input checked="" type="checkbox"/>	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
<input checked="" type="checkbox"/>	Distribution Provider	Delivers electrical energy to the End-use customer.
<input type="checkbox"/>	Generator Owner	Owns and maintains generation facilities.
<input checked="" type="checkbox"/>	Generator Operator	Operates generation unit(s) to provide real and reactive power.
<input type="checkbox"/>	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
<input type="checkbox"/>	Market Operator	Interface point for reliability functions with commercial functions.

**Reliability and Market Interface Principles**

Applicable Reliability Principles ( <i>Check all boxes that apply.</i> )	
<input checked="" type="checkbox"/>	1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
<input type="checkbox"/>	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
<input type="checkbox"/>	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
<input type="checkbox"/>	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained, and implemented.
<input type="checkbox"/>	5. Facilities for communication, monitoring, and control shall be provided, used, and maintained for the reliability of interconnected bulk power systems.
<input type="checkbox"/>	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
<input type="checkbox"/>	7. The reliability of the interconnected bulk power systems shall be assessed, monitored, and maintained on a wide-area basis.
<input type="checkbox"/>	8. Bulk power systems shall be protected from malicious physical or cyber attacks.
<b>Does the proposed Standard comply with all of the following Market Interface Principles?</b> ( <i>Select 'yes' or 'no' from the drop-down box.</i> )	
Recognizing that reliability is an essential requirement of a robust North American economy:	
1. A reliability standard shall not give any market participant an unfair competitive advantage. Yes	
2. A reliability standard shall neither mandate nor prohibit any specific market structure. Yes	
3. A reliability standard shall not preclude market solutions to achieving compliance with that standard. Yes	
4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

## Standards Authorization Request Form

**Detailed Description** (Provide enough detail so that an independent entity familiar with the industry could draft a standard based on this description.)

### Scope

The scope of the proposed standard is to establish essential elements of communications protocols and communications paths such that operators and users of the North American bulk electric system will efficiently convey information and ensure mutual understanding. The August 2003 Blackout Recommendation Number 26 calls for a tightening of communications protocols. This standard is to ensure that effective communication is practiced and delivered in clear language via pre-established communications paths among pre-identified operating entities. References to communication protocols in other NERC Standards may be moved to this new standard. The standard drafting team shall consider incorporating the use of Alert Level Guidelines and three-part communications in developing this new standard to achieve high level consistency across regions.

### Applicability

Medical, law enforcement, air traffic control and other fields routinely use mutually defined and understood terminology or codes. Clear and mutually established communications protocols used during real time operations under normal and emergency conditions ensure universal understanding of terms and reduce errors.

Communications protocols shall precisely define terms, codes, phrases, words, etc. as to their connotation, conditions for use, context of use and expected responses in reply to these terms, codes, phrases, words, etc. Effective communications with proper communications protocols among the operating entities are essential for maintaining reliable system operations.

The standard will include requirements for the following:

1. Real-time system operators will be required to use specific communications protocols under normal, abnormal and emergency conditions to relay critical reliability-related information in a timely and effective manner.
2. Reliability Coordinators, Balancing Authorities, Generation Operators, Transmission Operators, Transmission Owners and Distribution Providers will be required to comply with this standard.
3. The standard will include requirements for entities that experience abnormal conditions to use pre-defined terms such as proposed in the "Alert Level Guideline" (attached) to communicate the operating condition to other entities that are in a position to either assist in resolving the operating condition or to entities that are impacted by the operating condition.

## Standards Authorization Request Form

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4. The standard may include other requirements that involve communications protocols for real-time system operators.

The standard should address directives 1 and 3 of the FERC Order 693 Mandatory Reliability Standards, paragraph 540 which contains (directive 1 will also be addressed in Project 2006-06; directive 2 will be addressed in Project 2006-06):

“...the Commission identified concerns regarding COM-002-2, the proposed Reliability Standard serves an important purpose by requiring users, owners and operators to implement the necessary communications and coordination among entities. Accordingly, the Commission approves Reliability Standard COM-002-2 as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to COM-002-2 through the Reliability Standards development process that: (1) expands the applicability to include distribution providers as applicable entities; (2) includes a new Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area view of a transmission operator or balancing authority and (3) requires tightened communications protocols, especially for communications during alerts and emergencies. Alternatively, with respect to this final issue, the ERO may develop a new Reliability Standard that responds to Blackout Report Recommendation No. 26 in the manner described above. Finally, we direct the ERO to include APPA’s suggestions to complete the Measures and Levels of Non-Compliance in its modification of COM-002-2 through the Reliability Standards development process.”

## Standards Authorization Request Form

### ***Related Standards***

Standard No.	Explanation – these requirements may need to be modified or moved to the new standard
COM-001-1	R4 is a requirement for the Reliability Coordinator's, Transmission Operator's, and Balancing Authority's real-time operating personnel to use English when communicating between entities.
COM-002-2	R1.1 is a requirement for the Balancing Authority and Transmission Operator to make notifications when there is a threat to reliability.  R2 is a requirement for the Reliability Coordinator, Transmission Operator and Balancing Authority relative to issuing and receiving operating directives.
EOP-001-0	R4.1 includes a requirement for the Transmission Operator and Balancing Authority to have communications protocols for use during emergencies (and Attachment 1-EOP-001-0)
EOP-002-2	R6.5 and R7.2 require the Balancing Authority to ask the Reliability Coordinator to declare an Energy Emergency or an Energy Emergency Alert under certain conditions  R8 requires the Reliability Coordinator to issue an Energy Emergency Alert under certain conditions  R9.1 requires the Load-serving Entity to ask the Reliability Coordinator to declare an Energy Emergency Alert under certain conditions
EOP-006-1	R4 requires the Reliability Coordinator to disseminate information regarding restoration to neighboring Reliability Coordinators and Transmission Operators or Balancing Authorities  R5 requires the Reliability Coordinator to approve, communicate, and coordinate the re-synchronizing of major system islands or synchronizing points
CIP-001-1	R1 and R2 require operating entities to have procedures for communicating information relative to sabotage of bulk power system facilities
CIP-008-1	R1.2 requires the responsible entity to have a communication plan for response to a cyber security incident
IRO-001-1	R3 requires the Reliability Coordinator to direct entities to act and R8 requires entities to respond to the Reliability Coordinator's directives
IRO-004-1	R6 requires the Reliability Coordinator to direct entities to act and R7 requires entities to respond to the Reliability Coordinator's directives
IRO-005-2	R4 requires the Reliability Coordinator to issue an Energy Emergency Alert under certain conditions  R3, R5, R8, R11, R15, and R17 require the Reliability Coordinator to direct actions to alleviate various types of abnormal or emergency situations
IRO-014-1	R1.1 requires Reliability Coordinators to have procedures processes or plans that address communications and notifications made between Reliability Coordinators under various operating scenarios
PRC-001-1	R6 requires the Transmission Operator and Balancing Authority to make notifications when there is a change in the status of a special protection system
TOP-001-1	R3 requires some responsible entities to comply with the Reliability Coordinator's and Transmission Operator's directives  R4 requires some responsible entities to comply with the Transmission Operator's directives  R5 requires the Transmission Operator to notify its Reliability Coordinator of certain emergency situations

**Standards Authorization Request Form**

TOP-002-2	R14, R16 and R17 require responsible entities to notify their Reliability Coordinator of various changes to operating parameters R18 requires the use of uniform line identifiers when referring to transmission facilities of an interconnected network
TOP-007-0	R1 requires the Transmission Operator to notify its Reliability Coordinator when it exceeds an SOL or IROL R4 requires the Reliability Coordinator to direct entities to take actions to restore the system to within SOLs or IROLs
TOP-008-1	R3 requires the Transmission Operator to make notifications if it disconnects an overloaded facility
VAR-001-1	R8 and R12 require the Transmission Operator to direct actions to maintain voltage within limits and to prevent voltage collapse
VAR-002-1	R2.2 and R5.1 require the Generator Operator to comply with directives R3 requires the Generator Operator to notify the Transmission Operator of various status or capability changes

***Related SARs***

SAR ID	Explanation
Project 2006-06	Reliability Coordination SAR
Project 2007-08	Emergency Operations

***Regional Variances***

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
RFC	
SERC	
SPP	
WECC	



## Guideline for Operating State Alert Levels

### Background

System operators need common definitions for normal, alert, and emergency conditions to enable them to act appropriately and predictably as system conditions change. On August 14, 2003, the principal entities involved in the blackout did not have a shared understanding of whether the grid was in an emergency condition, nor did they have a common understanding of the functions, responsibilities, capabilities, and authorities of reliability coordinators and control areas under emergency or near-emergency conditions.

*The U.S./Canada Task Force Recommendation 20 recommends the establishment of clear definitions of normal, alert, and emergency operational system conditions, and to clarify the roles, responsibilities, and authorities of reliability coordinators and control areas under each condition.*

At its May 2006 meeting, the NERC Reliability Coordinator WG approved a motion to implement a pilot program that defined normal, alert, and emergency operating conditions as they relate to Transmission Loading and Security. The intent is to align the definitions for Transmission Loading and Security with the conditions identified in the Emergency Energy Alert states. In an effort to clarify the application of the definitions being used in the pilot program this guideline has been created. ***In the event of a conflict between the pilot program and applicable NERC Standards the Standards should always be applied first.***

Condition Level >>>>	Normal	Alert Level 1	Alert Level 2	Alert Level 3
Threat Level>>>>	Low	Elevated	High	Severe
Condition/Threat Color >>>>	Green	Yellow	Orange	Red
Generating/capacity	EEA 0 No Energy Deficiencies	EEA 1 all available resources in use	EEA 2 Load management procedures in effect	EEA 3 Firm load interruption imminent or in progress
Transmission	TEA 0 Respecting all IROLs	TEA 1 All available resources committed to respecting IROLs	TEA 2 Load Mgmt procedures in effect to respect IROLs	TEA 3 Firm Load Curtailments in effect to respect IROLs
Security	SEA 0 No cyber threat identified; No known threats on control center or grid assets (lines, substations, generators)	SEA 1 Cyber threat identified or is imminent, OR verified physical threat against control center or grid assets	SEA 2 Cyber event is affecting control center EMS capability, OR physical attack at <i>single</i> site (control center or grid assets- lines, substations, generators)	SEA 3 Cyber event has shut down control center EMS capability, OR physical attack at <i>multiple</i> sites (control center or grid assets- lines, substations, generators)

## Transmission Emergency Alert (TEA) Levels

### Introduction

This Attachment provides the procedures by which a Transmission Operator or Reliability Coordinator can advise of actions taken to manage potential or actual Interconnected Reliability Operating Limit (IROL) violations.

All three operating alert states (EEAs, TEAs and SEAs) are independent of each other and should be declared independently but they may also be declared concurrently.

### A. General Requirements

**1. Initiation by Reliability Coordinator.** A Transmission Emergency Alert (TEA) may be initiated only by a Reliability Coordinator at:

- 1) the Reliability Coordinator's own request, or
- 2) upon the request of a Transmission Operator

**1.1. Situations for initiating alert.** A Transmission Emergency Alert may be initiated for the following reasons:

- When all the available resources have been committed to respect an IROL in the pre-contingency state.
- When load curtailment procedures have been implemented to respect an IROL.

**2. Notification.** A Reliability Coordinator who declares a Transmission Emergency Alert shall notify all Transmission Operators and Balancing Authorities in its Reliability Area. The Reliability Coordinator shall also notify Reliability Coordinators of the situation via the Reliability Coordinator Information System (RCIS) using the "System Emergency" category. Additionally, conference calls between Reliability Coordinators shall be held as necessary to communicate system conditions. The Reliability Coordinator shall also notify all Transmission Operators and Balancing Authorities in its Reliability Area and Reliability Coordinators when the alert has ended.

### B. Transmission Emergency Alert Levels

#### Introduction

To ensure that all Reliability Coordinators clearly understand potential and actual actions taken to manage IROLs on the Interconnection, NERC has established three levels of Transmission Alerts. The Reliability Coordinators will use these terms when explaining actions taken to manage IROLs to each other. A Transmission Emergency Alert is an emergency procedure, not a daily operating practice, and is not intended as an alternative to compliance with NERC reliability standards.. The Reliability Coordinator may declare whatever alert level is appropriate, and need not proceed through the alerts sequentially.

## 1. Transmission Emergency Alert 1 (TEA 1) – All available resources committed to respecting IROLs.

### Circumstances:

- The Reliability Coordinator or Transmission Operator foresees or is experiencing conditions where all available resources are committed to respect the IROL and is concerned about its ability to respect the IROL.

## 2. Transmission Emergency Alert 2 (TEA 2) — Load management procedures in effect to respect IROLs.

### Circumstances:

- The Reliability Coordinator or Transmission Operator foresees or has implemented procedures up to, but excluding, interruption of firm load commitments. When time permits, these procedures may include, but are not limited to:
  - Public appeals to reduce demand.
  - Voltage reduction.
  - Interruption of non-firm end use loads in accordance with applicable contracts (for emergency purposes, not economic reasons).
  - Demand-side management.
  - Utility load conservation measures
  - TLR 6

Note: TLR 5 would normally be implemented in advance of this alert state. Under some circumstances TLRs may not be available or effective and would not be called prior to this alert state.

During TEA 2, Reliability Coordinators and Transmission Operators have the following responsibilities:

**2.1 Declaration period.** The declaring Reliability Coordinator shall update the RCIS (under “System Emergency”) at a minimum of every hour until the TEA 2 is terminated.

**2.4 Evaluating and mitigating transmission limitations.** The Reliability Coordinators shall review all System Operating Limits (SOLs) and Interconnection Reliability Operating Limits (IROLs) and transmission loading relief procedures in effect that may be contributing to the alert level. *Where appropriate*, the Reliability Coordinators shall inform the Transmission Operators under their purview of the pending Transmission Emergency Alert and request that they increase their ATC by actions such as restoring transmission elements that are out of service, reconfiguring their transmission system, adjusting phase angle regulator tap positions, implementing emergency operating procedures and redispatching generation.

**2.4.1 Notification of ATC adjustments.** Resulting increases in ATCs shall be communicated to the market via posting on the appropriate OASIS websites by the Transmission Providers.

**2.4.2 Availability of generation redispatch options.** Available generation redispatch options shall be immediately communicated to the declaring Reliability Coordinator.

**2.4.3 Evaluating impact of current transmission loading relief events.** The Reliability Coordinators shall evaluate the impact of any current transmission loading relief events on the ability to supply emergency assistance to the declaring entity. This

evaluation shall include analysis of system reliability and involve close communication among Reliability Coordinators.

**2.4.4 Initiating inquiries on re-evaluating SOLs and IROLs.** The Reliability Coordinators shall consult with the Balancing Authorities and Transmission Providers in their Reliability Areas about the possibility of re-evaluating and revising SOLs or IROLs.

**2.5 Coordination of emergency responses.** The Reliability Coordinator shall communicate and coordinate the implementation of emergency operating responses.

**2.6 Actions Prior to Declaration of TEA 3.** Before declaring a TEA 3, all available resources must be committed. This includes but is not limited to:

**2.6.1 All available generation units are on-line.** All generation capable of being on-line in the time frame of the emergency is on-line including quick-start and peaking units, regardless of cost.

**2.6.2 Purchases made regardless of cost.** All firm and non-firm purchases have been made, regardless of cost.

**2.6.3 Non-firm sales recalled and contractually interruptible loads and demand-side management curtailed.** All non-firm sales have been recalled, contractually interruptible retail loads curtailed, and demand-side management activated within provisions of the agreements.

**2.6.4 Operating Reserves.** Operating reserves are being utilized such that the declaring entity may be carrying reserves below the required minimum or has initiated emergency assistance through its operating reserve sharing program.

### **3. Transmission Emergency Alert 3 (TEA 3) — Firm load curtailment in effect to respect IROLs.**

#### **Circumstances:**

The Reliability Coordinator or Transmission Operator foresees or has implemented firm load obligation interruption to respect an IROL.

**3.1 Continue actions from TEA 2.** The Reliability Coordinators and the declaring entity shall continue to take all actions initiated during TEA 2.

**3.2 Declaration Period.** The declaring Reliability Coordinator shall update the RCIS under “System Emergency” at a minimum of every hour until the TEA 3 is terminated.

**3.3 Use of Transmission short-time limits.** The Reliability Coordinators shall request the appropriate Transmission Providers within their Reliability Area to utilize available short-time transmission limits or other emergency operating procedures in order to increase transfer capabilities.

**3.4 Re-evaluating and revising SOLs and IROLs.** The Reliability Coordinator of the declaring entity shall evaluate the risks of revising SOLs and IROLs on the reliability of the overall transmission system. Re-evaluation of SOLs and IROLs shall be coordinated with other Reliability Coordinators and only with the agreement of the Transmission Operator whose equipment would be affected. The resulting increases in transfer capabilities shall only be made

available to the declaring entity who has requested a TEA 3 condition. SOLs and IROLs shall only be revised as long as a TEA 3 condition exists or as allowed by the Transmission Operator whose equipment is at risk. The following are minimum requirements that must be met before SOLs or IROLs are revised:

**3.4.2 Mitigation of cascading failures.** The Reliability Coordinator shall use its best efforts to ensure that revising SOLs or IROLs would not result in any cascading failures within the Interconnection.

**3.5 Returning to pre-emergency SOLs and IROLs.** Whenever the transmission systems can be returned to their pre-emergency SOLs or IROLs, the declaring Entity shall notify its respective Reliability Coordinator.

**3.5.1 Notification of other parties.** Upon notification from the declaring entity that an alert has been downgraded, the Reliability Coordinator shall notify the affected Reliability Coordinators (via the RCIS), Transmission Operators and Balancing Authorities that their systems can be returned to their normal limits.

#### **4. Transmission Emergency Alert 0 (TEA 0) - Termination.**

When the declaring Entity is able to respect IROL requirements and is no longer concerned with its ability to respect IROLs, it shall request its Reliability Coordinator to terminate the alert.

**4.1. Notification.** The Reliability Coordinator shall notify Reliability Coordinators via the RCIS of the termination. The Reliability Coordinator shall also notify the affected Transmission Operators and Balancing Authorities. The TEA 0 shall also be posted on the NERC website if the original alert was so posted.

## Security Emergency Alerts (SEA)

### Introduction

This Attachment provides the procedures by which a Reliability Coordinator, Transmission Operator or Balancing Authority can communicate the physical and cyber security status of their facilities.

All three operating alert states (EEAs, TEAs and SEAs) are independent of each other and should be declared independently but they may also be declared concurrently.

### A. General Requirements

**1. Initiation by Reliability Coordinator.** A Security Emergency Alert may be initiated only by a Reliability Coordinator at

- 1) The Reliability Coordinator's own request, or
- 2) Upon the request of a Transmission Operator, or
- 3) Upon the request of a Balancing Authority

**1.1. Situations for initiating alert.** A Security Emergency Alert may be initiated for the following reasons:

- A Cyber threat affecting a control center, grid or generator assets has been identified or is imminent.
- A physical threat affecting a control center, grid or generator assets has been identified or is imminent.

### 2. Notification.

A Reliability Coordinator who initiates a Security Emergency Alert shall notify all Transmission Operators and Balancing Authorities in its Reliability Area. The Reliability Coordinator shall also notify Reliability Coordinators of the situation via the Reliability Coordinator Information System (RCIS) using the "CIP" category. Additionally, conference calls between Reliability Coordinators shall be held as necessary to communicate system conditions. The Reliability Coordinator shall also notify all Transmission Operators and Balancing Authorities in its Reliability Area and other Reliability Coordinators when the alert has ended

### B. Security Emergency Alert (SEA) Levels

To ensure that all Reliability Coordinators clearly understand potential and actual Security Emergency Alerts, NERC has established three levels of Security Emergency Alerts. The Reliability Coordinators will use these terms when explaining security alerts to each other. A Security Emergency Alert is an emergency procedure, not a daily operating practice, and is not intended as an alternative to compliance with NERC reliability standards. The Reliability Coordinator may declare whatever alert level is necessary, and need not proceed through the alerts sequentially.

#### 1. Security Emergency Alert 1 (SEA 1) – Cyber or Physical threat is identified or imminent

**Circumstances:**

- The Reliability Co-ordinator, Transmission Operator or Balancing Authority has identified an actual or imminent cyber or physical threat to one of its facilities including but not limited to:

- Control Centers
- Generating facilities
- Substations
- Transmission Lines

## 2. Security Emergency Alert 2 (SEA 2) – Cyber event *impacts* control center EMS or physical attack at a *single site*

### Circumstances:

- The Reliability Coordinator, Transmission Operator or Balancing Authority has identified an actual cyber threat event that is affecting control center EMS capability.
- The Reliability Coordinator, Transmission Operator or Balancing Authority has identified a physical attack at a single site.

During Security Emergency Alert 2, Reliability Coordinators, Transmission Operators and Balancing Authorities have the following responsibilities:

### 2.1 Notifying other Reliability Coordinators, Transmission Operators and Balancing Authorities

The Reliability Coordinator shall post the declaration of the alert level along with the location of the affected facility on the RCIS under “CIP”.

### 2.2 Declaration period.

The declaring Entity shall update its Reliability Coordinator of the situation at a minimum of every hour until the SEA 2 is terminated. The Reliability Coordinator shall update the RCIS as changes occur and pass this information on to the affected Reliability Coordinators, Transmission Operators and Balancing Authorities.

## 3. Security Emergency Alert 3 (SEA 3) – Cyber event *shuts down* control center EMS or physical attack at *multiple sites*

### Circumstances:

- The Reliability Coordinator, Transmission Operator or Balancing Authority has identified an actual cyber threat event that has shutdown a control center EMS capability.
- The Reliability Coordinator, Transmission Operator or Balancing Authority has identified a physical attack at a multiple sites

### **3.1. Notifying other Reliability Coordinators, Balancing Authorities and Transmission Operators**

The Reliability Coordinator shall post the declaration of the alert level along with the locations of the affect facilities on the RCIS under “CIP”.

### **3.2. Declaration period**

The declaring Entity shall update its Reliability Coordinator of the situation at a minimum of every hour until the SEA 3 is terminated. The Reliability Coordinator shall update the RCIS as changes occur and pass this information on to the affected Reliability Coordinators, Transmission Operators and Balancing Authorities.

## **4. Security Emergency Alert 0 (SEA 0) – Termination of alert level**

When the declaring entity believes it is no longer under threat, it shall request its Reliability Coordinator to terminate the SEA.

### **4.1. Notification**

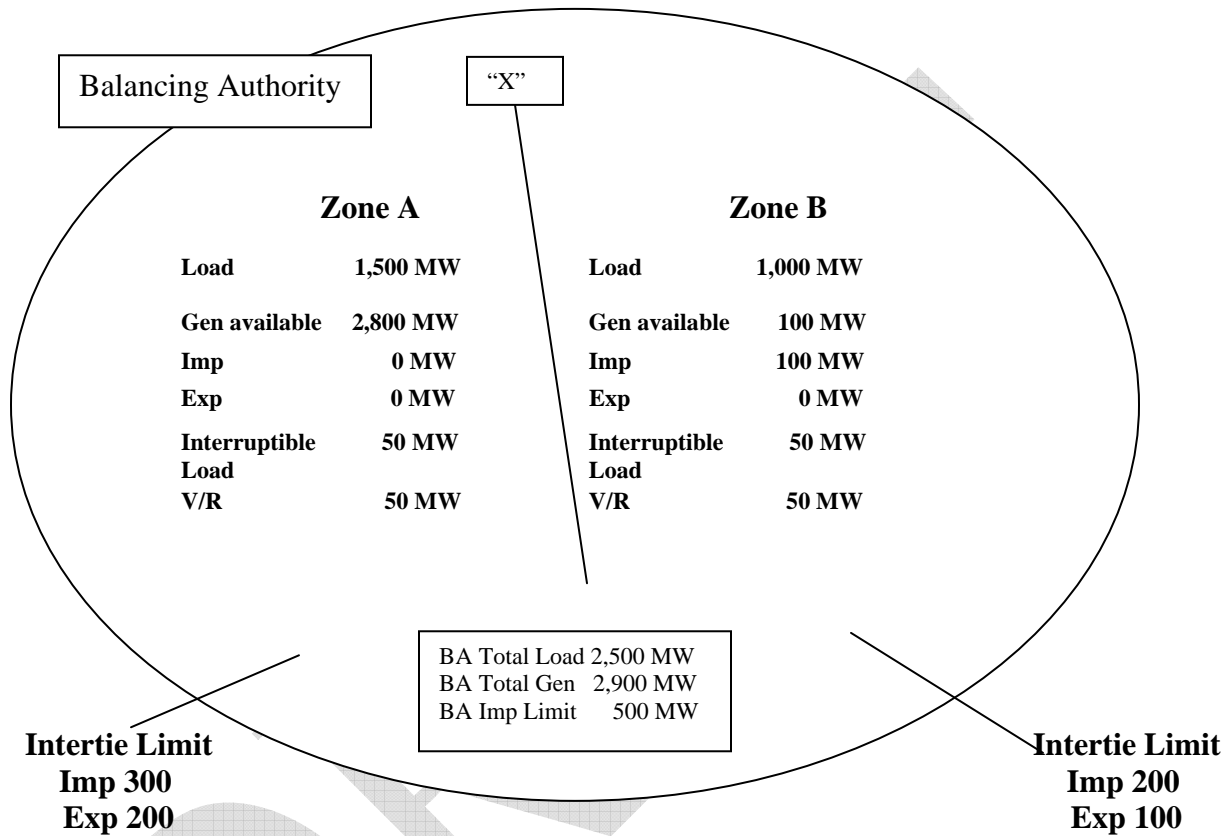
The Reliability Coordinator shall notify all other Reliability Coordinators via the RCIS of the termination. The Reliability Coordinator shall also notify the affected Transmission Operators and Balancing Authorities



**Example #1**

**IROL violation on "X"  
No Global Adequacy Concerns**

**IROL "X"  
500 MW - A to B  
300 MW - B to A**



- EEA** 1 No  
2 No  
3 No
- TEA** 1 Yes  
2 Yes  
3 Yes

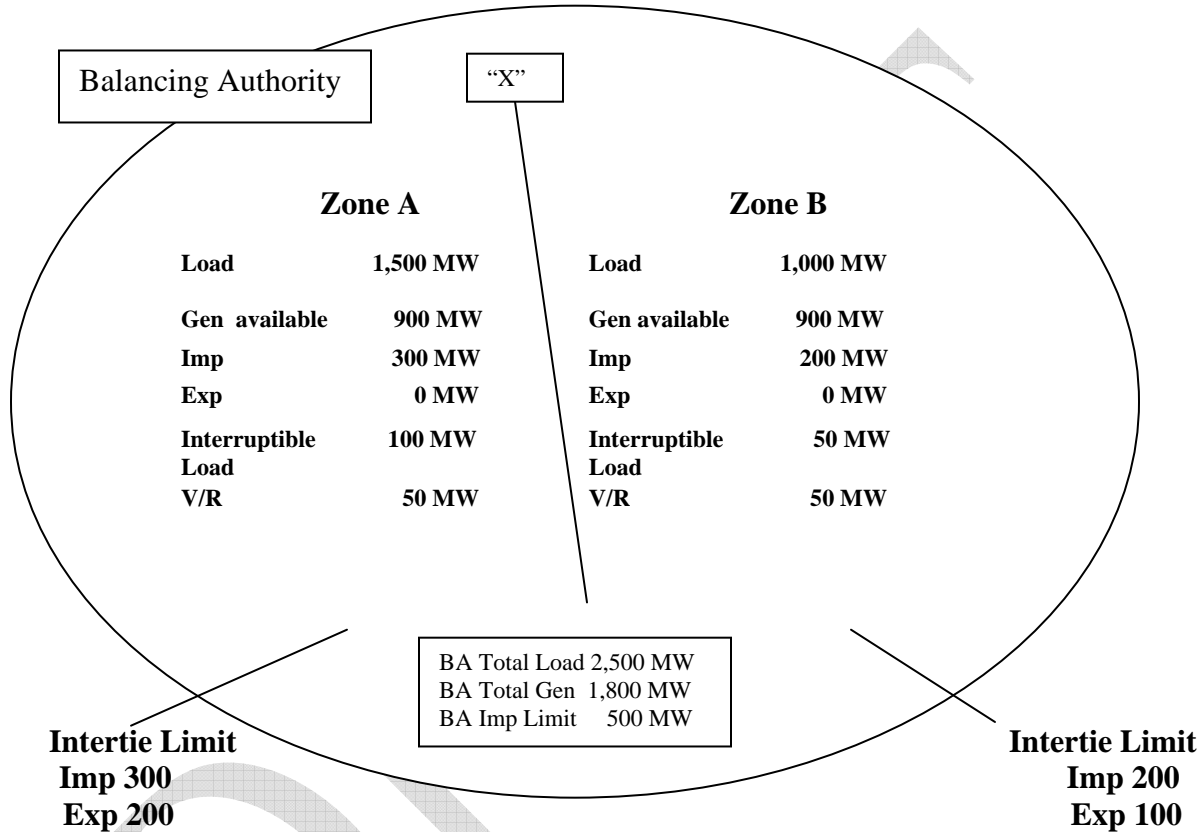
In this example the available generation in A is in excess of its load requirements. The available generation in B is less than its load requirements. Area B will be relying on the full transfer capability of the interface "X" plus an additional import of 100 MW to the maximum limit on the intertie in Area B. With the implementation of the interruptible load and V/R the firm load requirements in B cannot be met without the use of Firm load shedding.

- In this scenario an EEA is not required as the BA is able to meet its global load/generation requirements.
- When this situation is forecast a TEA 1 should be issued to indicate the potential concerns with the ability to respect the IROL limit "X" without the use of load management procedures.
- When load management procedures are implemented in Real Time to respect the IROL "X", a TEA 2 should be issued.
- When Firm load is curtailed to respect the limit a TEA 3 should be issued.

**Example #2**

**Global Adequacy Deficiency  
No IROL Violation**

**IROL "X"**  
**500 MW - A to B**  
**300 MW - B to A**



- EEA** 1 Yes  
 2 Yes  
 3 No
- TEA** 1 No  
 2 No  
 3 No

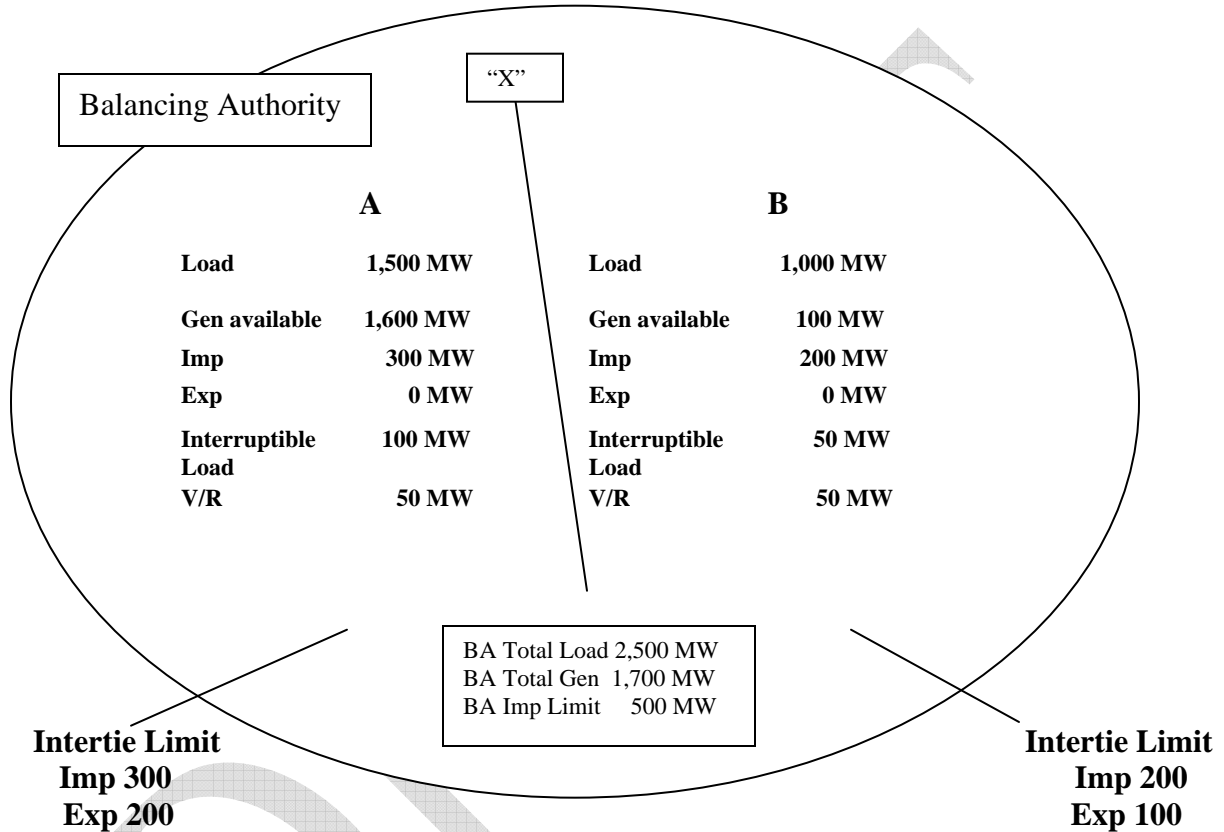
In this example the available generation in A is less than its load requirements. The available generation in B is less than its load requirements. There is a Global Adequacy deficiency after considering full import capability and utilization of interruptible load and V/R.

- EEA procedures should be followed
- There is no need for a TEA to be issued

**Example #3**

**Global Adequacy Deficiency  
IROL Violation**

**IROL "X"**  
**500 MW - A to B**  
**300 MW - B to A**



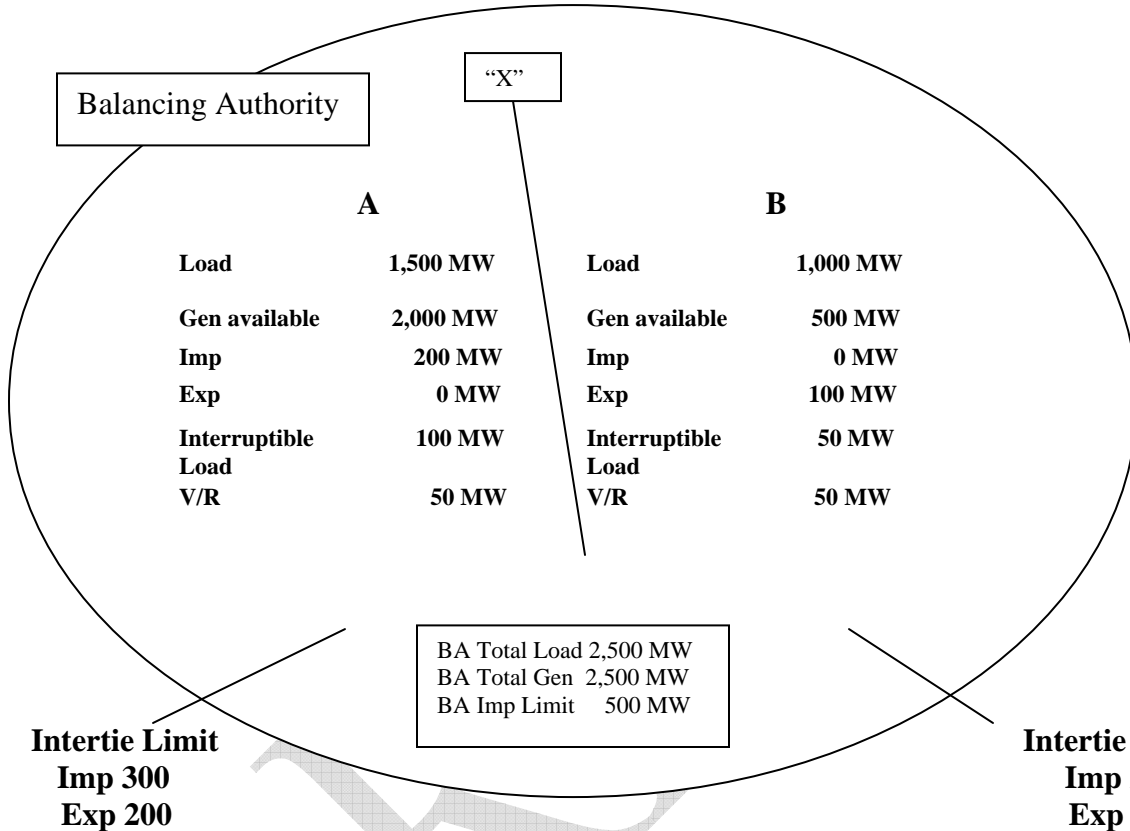
<b>EEA</b>	1	<b>Yes</b>	In this example the available generation in A meets its load requirements. The available generation in B is less than its load requirements. There is a Global Adequacy deficiency after considering full import capability. There is also an IROL violation at "X" in the direction of A to B to meet the load requirements in B depending on where load management procedures are implemented.
	2	<b>Yes</b>	
	3	<b>No</b>	
<b>TEA</b>	1	<b>Yes</b>	
	2	<b>Yes</b>	
	3	<b>Yes</b>	

- An EEA 1 and a TEA 1 should be issued to identify the potential issues
- When load management procedures are implemented to manage the transfer from A to B a TEA 2 should be issued (assumes B will be deficient before the global deficiency occurs).
- An EEA 2 should be issued when load management procedures are being implemented in A to manage global requirements.
- TEA 3 should also be issued when Firm load is shed in B to meet the load requirements in B while respecting the IROL.

**Example #4**

**Transaction Curtailments**

**IROL "X"**  
**500 MW - A to B**  
**300 MW - B to A**



- EEA** 1 No
- 2 No
- 3 No
- TEA** 1 No
- 2 No
- 3 No

In this example there are no global adequacy concerns. There is an export transaction in B that is causing a limit concern on "X" in the A to B direction. With the available generation in B plus the transfer capability there is no concern for violating the IROL limit. The transaction is creating a situation where it will be required curtailed at some point to prevent the IROL violation. Assuming the TLR procedure would be effective at relieving this constraint regardless of the TLR level (at either the TLR 3 or 5 level) no TEA

would be required as there is no concern that the IROL can't be respected with control actions that don't involve load management procedures.



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

## Standard Authorization Request Form

Title of Proposed Standard:	Operating Personnel Communications Protocols
Request Date:	March 1, 2007
Revised Date:	<u>June 8, 2007</u>

### SAR Requester Information

<b>Name :</b> <del>Harry Tom</del> <del>to be replaced with SAR Drafting Team Chair when SAR Drafting Team is appointed</del> <u>Lloyd Snyder</u>	SAR Type (Check one box.)
Company: <del>NERC</del> <u>Georgia System Operations Corp.</u>	<input checked="" type="checkbox"/> New Standard
Telephone: <del>609-452-8060</del> <u>770-270-7418</u>	<input checked="" type="checkbox"/> Revision to Existing Standard
Fax: <del>609-452-9550</del> <u>770-270-7672</u>	<input type="checkbox"/> Withdrawal of Existing Standard
E-mail: <del>harry.tom@nerc.net</del> <u>Lloyd.snyder@gas</u> <u>oc.com</u>	<input type="checkbox"/> Urgent Action

116-390 Village Boulevard, Princeton, New Jersey 08540-5721

Phone: 609.452.8060 • Fax: 609.452.9550 • www.nerc.com

## Standards Authorization Request Form

Purpose (Describe the purpose of the proposed standard - what the standard will achieve in support of reliability.)

Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The purpose of ~~revising and expanding the existing requirements that address real-time system operator communication~~this standard is to:

1. Provide an adequate level of reliability for the North American bulk power systems - by ensuring that the standards are complete and the requirements are set at an appropriate level to ensure reliability.
2. Ensure the standard or standards are enforceable as mandatory reliability standards with financial penalties - the applicability to bulk power system owners, operators, and users, are clearly defined; the purpose, requirements, and measures are results-focused and unambiguous; the consequences of violating the requirements are clear.
3. Consider other general improvements described in the standards development work plan.
4. Consider stakeholder comments received during the initial development of the standards and other comments received from Electric Reliability Organization (ERO) regulatory authorities, as noted in the attached review sheets.
5. Satisfy the standards procedure requirement for five-year review of the standards.

Industry Need (Provide a detailed statement justifying the need for the proposed standard, along with any supporting documentation.)

The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Blackout Recommendation #26 is: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." (Note that this SAR does not include the second part of this recommendation regarding the upgrade to communication system hardware.)

## Standards Authorization Request Form

Brief Description (Describe the proposed standard in sufficient detail to clearly define the scope in a manner that can be easily understood by others.)

This standard will require the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions~~especially for communications during alerts and emergencies~~. The standard will be applicable to transmission operators, transmission owners balancing authorities, reliability coordinators, generator operators and distribution providers.

Requirements will ensure that communications include essential elements such that information is efficiently conveyed and mutually understood ~~include protocols~~ for communicating changes to real-time operating ~~states~~conditions and ~~protocols for issuing and~~ responding to operating directives.

The project may involve moving some requirements that address communications protocols from existing standards into this new standard and will involve adding new requirements that more fully address communications protocols under various operating ~~scenarios~~conditions.

**Standards Authorization Request Form**

***Reliability Functions***

The Standard will Apply to the Following Functions ( <i>Check all applicable boxes.</i> )		
<input checked="" type="checkbox"/>	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
<input checked="" type="checkbox"/>	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports Interconnection frequency in real time.
<input type="checkbox"/>	Interchange Coordinator	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
<input type="checkbox"/>	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
<input type="checkbox"/>	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator area.
<input type="checkbox"/>	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.
<input type="checkbox"/>	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
<input checked="" type="checkbox"/> <input type="checkbox"/>	Transmission Owner	Owns and maintains transmission facilities.
<input checked="" type="checkbox"/>	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
<input checked="" type="checkbox"/>	Distribution Provider	Delivers electrical energy to the End-use customer.
<input type="checkbox"/>	Generator Owner	Owns and maintains generation facilities.
<input checked="" type="checkbox"/>	Generator Operator	Operates generation unit(s) to provide real and reactive power.
<input type="checkbox"/>	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
<input type="checkbox"/>	Market Operator	Interface point for reliability functions with commercial functions.



**Reliability and Market Interface Principles**

Applicable Reliability Principles ( <i>Check all boxes that apply.</i> )	
<input checked="" type="checkbox"/>	1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
<input type="checkbox"/>	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
<input type="checkbox"/>	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
<input type="checkbox"/>	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained, and implemented.
<input type="checkbox"/>	5. Facilities for communication, monitoring, and control shall be provided, used, and maintained for the reliability of interconnected bulk power systems.
<input type="checkbox"/>	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
<input type="checkbox"/>	7. The reliability of the interconnected bulk power systems shall be assessed, monitored, and maintained on a wide-area basis.
<input type="checkbox"/>	8. Bulk power systems shall be protected from malicious physical or cyber attacks.
<b>Does the proposed Standard comply with all of the following Market Interface Principles?</b> ( <i>Select 'yes' or 'no' from the drop-down box.</i> )	
Recognizing that reliability is an essential requirement of a robust North American economy:	
1. A reliability standard shall not give any market participant an unfair competitive advantage. Yes	
2. A reliability standard shall neither mandate nor prohibit any specific market structure. Yes	
3. A reliability standard shall not preclude market solutions to achieving compliance with that standard. Yes	
4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

## Standards Authorization Request Form

**Detailed Description** (Provide enough detail so that an independent entity familiar with the industry could draft a standard based on this description.)

### **Scope**

The scope of the proposed standard ~~or revised standards~~ is to establish ~~a common lexicon~~ essential elements of communications protocols and communications paths such that ~~all~~ operators and users of the North American bulk electric system ~~will have the same understanding as to its meaning, usage and take pre-determined action in response~~ efficiently convey information and ensure mutual understanding. The August 2003 Blackout Recommendation Number 26 calls for a tightening of communications protocols. This standard is to ensure that effective communication is practiced and delivered in clear language via pre-established communications paths among pre-identified operating entities. References to communication protocols in other NERC Standards may be moved to this new standard. The standard drafting team shall consider incorporating the use of Alert Level Guidelines and three-part communications in developing this new standard to achieve high level consistency across regions.

### **Applicability**

Medical, law enforcement, air traffic control and other fields routinely use mutually defined and understood terminology or codes. Clear and mutually established communications protocols used during real time operations under normal and emergency conditions ensure universal understanding of terms and reduce errors.

Communications protocols shall precisely define terms, codes, phrases, words, etc. as to their connotation, conditions for use, context of use and expected responses in reply to these terms, codes, phrases, words, etc. ~~Furthermore the protocols shall define a rigorous script for the Sender and Receiver of information.~~ Effective communications with proper communications protocols among the operating entities are essential for maintaining reliable system operations.

The standard will include requirements for the following:

1. Real-time system operators will be required to use specific communications protocols under normal, abnormal and emergency conditions to ~~quickly~~ relay critical reliability-related information in a timely and effective manner.
2. Reliability Coordinators, Balancing Authorities, Generation Operators, Transmission Operators, Transmission Owners and Distribution Providers will be required to ~~adopt and employ~~ comply with this standard ~~directives that use pre-defined terms, and will require entities that receive those directives to respond to the reliability coordinator using pre-defined terms.~~
3. The standard will include requirements for entities that experience abnormal conditions to use pre-defined terms such as

## Standards Authorization Request Form

proposed in the "Alert Level Guideline" (attached) to communicate the operating ~~conditions~~situation to other entities that are in a position to either assist in resolving the operating ~~situation~~ ~~condition~~ or to entities that are impacted by the operating ~~condi~~situation.

4. The standard may include other requirements that involve communications protocols for real-time system operators.

~~The standard should consider address directives 1 and 3 of the FERC staff's Preliminary Assessment of NERC Standards (dated May 11, 2006) in which the FERC staff cited various Blackout Report excerpts pertaining to ineffective communications as a factor common to the August 14 blackout and other previous major outages in North America. The Commission staff interprets Blackout Report recommendation #26 that urges "effective communications" with "tightened communications protocols" among operating entities to include two key components:~~

- ~~(i) Effective communications that are delivered in clear language via pre-established communications paths among pre-identified operating entities, and~~
- ~~(ii) Communications protocols which clearly identify that any operating actions with reliability impact beyond a local area or beyond a Reliability Coordinator's area must be communicated to the appropriate Reliability Coordinator for assessment and approval prior to their implementation to ensure reliability of the interconnected systems.~~

~~The communications protocols may be developed and then distributed to relevant standards and/or may be developed and retained in one or more specialized standards. Order 693 Mandatory Reliability Standards, paragraph 540 which contains (directive 1 will also be addressed in Project 2006-06; directive 2 will be addressed in Project 2006-06):~~

"...the Commission identified concerns regarding COM-002-2, the proposed Reliability Standard serves an important purpose by requiring users, owners and operators to implement the necessary communications and coordination among entities. Accordingly, the Commission approves Reliability Standard COM-002-2 as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to COM-002-2 through the Reliability Standards development process that: (1) expands the applicability to include distribution providers as applicable entities; (2) includes a new Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area view of a transmission operator or balancing authority and (3) requires tightened communications protocols, especially for communications during alerts and emergencies. Alternatively, with respect to this final issue, the ERO may develop a new Reliability Standard that responds to Blackout Report Recommendation No. 26 in the manner described above. Finally, we direct the ERO to include APPA's suggestions to complete the Measures and Levels of Non-Compliance in its modification of COM-002-2 through the Reliability Standards development process."

**Standards Authorization Request Form**

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**Standards Authorization Request Form**

***Related Standards***

Standard No.	Explanation - these requirements may need to be modified or moved to the new standard
COM-001-1	R4 is a requirement for the Reliability Coordinator's, Transmission Operator's, and Balancing Authority's real-time operating personnel to use English when communicating between entities.
COM-002-2	R1.1 is a requirement for the Balancing Authority and Transmission Operator to make notifications when there is a threat to reliability.  R2 is a requirement for the Reliability Coordinator, Transmission Operator and Balancing Authority relative to issuing and receiving operating directives.
EOP-001-90	R4.1 includes a requirement for the Transmission Operator and Balancing Authority to have communications protocols for use during emergencies <u>(and Attachment 1-EOP-001-0)</u>
EOP-002-2	R6.5 and R7.2 require the Balancing Authority to ask the Reliability Coordinator to declare an Energy Emergency or an Energy Emergency Alert under certain conditions  R8 requires the Reliability Coordinator to issue an Energy Emergency Alert under certain conditions  R9.1 requires the Load-serving Entity to ask the Reliability Coordinator to declare an Energy Emergency Alert under certain conditions
EOP-006-1	R4 requires the Reliability Coordinator to disseminate information regarding restoration to neighboring Reliability Coordinators and Transmission Operators or Balancing Authorities  R5 requires the Reliability Coordinator to approve, communicate, and coordinate the re-synchronizing of major system islands or synchronizing points
CIP-001-1	R1 and R2 require operating entities to have procedures for communicating information relative to sabotage of bulk power system facilities
CIP-008-1	R1.2 requires the responsible entity to have a communication plan for response to a cyber security incident
IRO-001-1	R3 requires the Reliability Coordinator to direct entities to act and R8 requires entities to respond to the Reliability Coordinator's directives
IRO-004-1	R6 requires the Reliability Coordinator to direct entities to act and R7 requires entities to respond to the Reliability Coordinator's directives
IRO-005-2	R4 requires the Reliability Coordinator to issue an Energy Emergency Alert under certain conditions  R3, R5, R8, R11, R15, and R17 require the Reliability Coordinator to direct actions to alleviate various types of abnormal or emergency situations
IRO-014-1	R1.1 requires Reliability Coordinators to have procedures processes or plans that address communications and notifications made between Reliability Coordinators under various operating scenarios
PRC-001-1	R6 requires the Transmission Operator and Balancing Authority to make notifications when there is a change in the status of a special protection system
TOP-001-1	R3 requires some responsible entities to comply with the Reliability Coordinator's and Transmission Operator's directives  R4 requires some responsible entities to comply with the Transmission Operator's directives  R5 requires the Transmission Operator to notify its Reliability Coordinator of certain emergency situations

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TOP-002-2	R14, R16 and R17 require responsible entities to notify their Reliability Coordinator of various changes to operating parameters R18 requires the use of uniform line identifiers when referring to transmission facilities of an interconnected network
TOP-007-0	R1 requires the Transmission Operator to notify its Reliability Coordinator when it exceeds an SOL or IROL R4 requires the Reliability Coordinator to direct entities to take actions to restore the system to within SOLs or IROLs
TOP-008-1	R3 requires the Transmission Operator to make notifications if it disconnects an overloaded facility
VAR-001-1	R8 and R12 require the Transmission Operator to direct actions to maintain voltage within limits and to prevent voltage collapse
VAR-002-1	R2.2 and R5.1 require the Generator Operator to comply with directives R3 requires the Generator Operator to notify the Transmission Operator of various status or capability changes

***Related SARs***

SAR ID	Explanation
<del>_____</del> <u>Project 2006-06</u>	<del>_____</del> <u>Reliability Coordination SAR</u>
<del>_____</del> <u>Project 2007-08</u>	<del>_____</del> <u>Emergency Operations</u>

***Regional Variances***

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
RFC	
SERC	
SPP	
WECC	

## Guideline for Operating State Alert Levels

### Background

System operators need common definitions for normal, alert, and emergency conditions to enable them to act appropriately and predictably as system conditions change. On August 14, 2003, the principal entities involved in the blackout did not have a shared understanding of whether the grid was in an emergency condition, nor did they have a common understanding of the functions, responsibilities, capabilities, and authorities of reliability coordinators and control areas under emergency or near-emergency conditions.

*The U.S./Canada Task Force Recommendation 20 recommends the establishment of clear definitions of normal, alert, and emergency operational system conditions, and to clarify the roles, responsibilities, and authorities of reliability coordinators and control areas under each condition.*

At its May 2006 meeting, the NERC Reliability Coordinator WG approved a motion to implement a pilot program that defined normal, alert, and emergency operating conditions as they relate to Transmission Loading and Security. The intent is to align the definitions for Transmission Loading and Security with the conditions identified in the Emergency Energy Alert states. In an effort to clarify the application of the definitions being used in the pilot program this guideline has been created. ***In the event of a conflict between the pilot program and applicable NERC Standards the Standards should always be applied first.***

Condition Level >>>>	Normal	Alert Level 1	Alert Level 2	Alert Level 3
Threat Level>>>>	Low	Elevated	High	Severe
Condition/Threat Color >>>>	Green	Yellow	Orange	Red
Generating/capacity	EEA 0 No Energy Deficiencies	EEA 1 all available resources in use	EEA 2 Load management procedures in effect	EEA 3 Firm load interruption imminent or in progress
Transmission	TEA 0 Respecting all IROLs	TEA 1 All available resources committed to respecting IROLs	TEA 2 Load Mgmt procedures in effect to respect IROLs	TEA 3 Firm Load Curtailments in effect to respect IROLs
Security	SEA 0 No cyber threat identified; No known threats on control center or grid assets (lines, substations, generators)	SEA 1 Cyber threat identified or is imminent, OR verified physical threat against control center or grid assets	SEA 2 Cyber event is affecting control center EMS capability, OR physical attack at <b>single</b> site (control center or grid assets- lines, substations, generators)	SEA 3 Cyber event has shut down control center EMS capability, OR physical attack at <b>multiple</b> sites (control center or grid assets- lines, substations, generators)

## Transmission Emergency Alert (TEA) Levels

### Introduction

This Attachment provides the procedures by which a Transmission Operator or Reliability Coordinator can advise of actions taken to manage potential or actual Interconnected Reliability Operating Limit (IROL) violations.

All three operating alert states (EEAs, TEAs and SEAs) are independent of each other and should be declared independently but they may also be declared concurrently.

### A. General Requirements

**1. Initiation by Reliability Coordinator.** A Transmission Emergency Alert (TEA) may be initiated only by a Reliability Coordinator at:

- 1) the Reliability Coordinator's own request, or
- 2) upon the request of a Transmission Operator

**1.1. Situations for initiating alert.** A Transmission Emergency Alert may be initiated for the following reasons:

- When all the available resources have been committed to respect an IROL in the pre-contingency state.
- When load curtailment procedures have been implemented to respect an IROL.

**2. Notification.** A Reliability Coordinator who declares a Transmission Emergency Alert shall notify all Transmission Operators and Balancing Authorities in its Reliability Area. The Reliability Coordinator shall also notify Reliability Coordinators of the situation via the Reliability Coordinator Information System (RCIS) using the "System Emergency" category. Additionally, conference calls between Reliability Coordinators shall be held as necessary to communicate system conditions. The Reliability Coordinator shall also notify all Transmission Operators and Balancing Authorities in its Reliability Area and Reliability Coordinators when the alert has ended.

### B. Transmission Emergency Alert Levels

#### Introduction

To ensure that all Reliability Coordinators clearly understand potential and actual actions taken to manage IROLs on the Interconnection, NERC has established three levels of Transmission Alerts. The Reliability Coordinators will use these terms when explaining actions taken to manage IROLs to each other. A Transmission Emergency Alert is an emergency procedure, not a daily operating practice, and is not intended as an alternative to compliance with NERC reliability standards.. The Reliability Coordinator may declare whatever alert level is appropriate, and need not proceed through the alerts sequentially.



## 1. Transmission Emergency Alert 1 (TEA 1) – All available resources committed to respecting IROLs.

### Circumstances:

- The Reliability Coordinator or Transmission Operator foresees or is experiencing conditions where all available resources are committed to respect the IROL and is concerned about its ability to respect the IROL.

## 2. Transmission Emergency Alert 2 (TEA 2) — Load management procedures in effect to respect IROLs.

### Circumstances:

- The Reliability Coordinator or Transmission Operator foresees or has implemented procedures up to, but excluding, interruption of firm load commitments. When time permits, these procedures may include, but are not limited to:
  - Public appeals to reduce demand.
  - Voltage reduction.
  - Interruption of non-firm end use loads in accordance with applicable contracts (for emergency purposes, not economic reasons).
  - Demand-side management.
  - Utility load conservation measures
  - TLR 6

Note: TLR 5 would normally be implemented in advance of this alert state. Under some circumstances TLRs may not be available or effective and would not be called prior to this alert state.

During TEA 2, Reliability Coordinators and Transmission Operators have the following responsibilities:

**2.1 Declaration period.** The declaring Reliability Coordinator shall update the RCIS (under “System Emergency”) at a minimum of every hour until the TEA 2 is terminated.

**2.4 Evaluating and mitigating transmission limitations.** The Reliability Coordinators shall review all System Operating Limits (SOLs) and Interconnection Reliability Operating Limits (IROLs) and transmission loading relief procedures in effect that may be contributing to the alert level. *Where appropriate*, the Reliability Coordinators shall inform the Transmission Operators under their purview of the pending Transmission Emergency Alert and request that they increase their ATC by actions such as restoring transmission elements that are out of service, reconfiguring their transmission system, adjusting phase angle regulator tap positions, implementing emergency operating procedures and redispatching generation.

**2.4.1 Notification of ATC adjustments.** Resulting increases in ATCs shall be communicated to the market via posting on the appropriate OASIS websites by the Transmission Providers.

**2.4.2 Availability of generation redispatch options.** Available generation redispatch options shall be immediately communicated to the declaring Reliability Coordinator.

**2.4.3 Evaluating impact of current transmission loading relief events.** The Reliability Coordinators shall evaluate the impact of any current transmission loading relief events on the ability to supply emergency assistance to the declaring entity. This

evaluation shall include analysis of system reliability and involve close communication among Reliability Coordinators.

**2.4.4 Initiating inquiries on re-evaluating SOLs and IROLs.** The Reliability Coordinators shall consult with the Balancing Authorities and Transmission Providers in their Reliability Areas about the possibility of re-evaluating and revising SOLs or IROLs.

**2.5 Coordination of emergency responses.** The Reliability Coordinator shall communicate and coordinate the implementation of emergency operating responses.

**2.6 Actions Prior to Declaration of TEA 3.** Before declaring a TEA 3, all available resources must be committed. This includes but is not limited to:

**2.6.1 All available generation units are on-line.** All generation capable of being on-line in the time frame of the emergency is on-line including quick-start and peaking units, regardless of cost.

**2.6.2 Purchases made regardless of cost.** All firm and non-firm purchases have been made, regardless of cost.

**2.6.3 Non-firm sales recalled and contractually interruptible loads and demand-side management curtailed.** All non-firm sales have been recalled, contractually interruptible retail loads curtailed, and demand-side management activated within provisions of the agreements.

**2.6.4 Operating Reserves.** Operating reserves are being utilized such that the declaring entity may be carrying reserves below the required minimum or has initiated emergency assistance through its operating reserve sharing program.

### **3. Transmission Emergency Alert 3 (TEA 3) — Firm load curtailment in effect to respect IROLs.**

#### **Circumstances:**

The Reliability Coordinator or Transmission Operator foresees or has implemented firm load obligation interruption to respect an IROL.

**3.1 Continue actions from TEA 2.** The Reliability Coordinators and the declaring entity shall continue to take all actions initiated during TEA 2.

**3.2 Declaration Period.** The declaring Reliability Coordinator shall update the RCIS under “System Emergency” at a minimum of every hour until the TEA 3 is terminated.

**3.3 Use of Transmission short-time limits.** The Reliability Coordinators shall request the appropriate Transmission Providers within their Reliability Area to utilize available short-time transmission limits or other emergency operating procedures in order to increase transfer capabilities.

**3.4 Re-evaluating and revising SOLs and IROLs.** The Reliability Coordinator of the declaring entity shall evaluate the risks of revising SOLs and IROLs on the reliability of the overall transmission system. Re-evaluation of SOLs and IROLs shall be coordinated with other Reliability Coordinators and only with the agreement of the Transmission Operator whose equipment would be affected. The resulting increases in transfer capabilities shall only be made

available to the declaring entity who has requested a TEA 3 condition. SOLs and IROLs shall only be revised as long as a TEA 3 condition exists or as allowed by the Transmission Operator whose equipment is at risk. The following are minimum requirements that must be met before SOLs or IROLs are revised:

**3.4.2 Mitigation of cascading failures.** The Reliability Coordinator shall use its best efforts to ensure that revising SOLs or IROLs would not result in any cascading failures within the Interconnection.

**3.5 Returning to pre-emergency SOLs and IROLs.** Whenever the transmission systems can be returned to their pre-emergency SOLs or IROLs, the declaring Entity shall notify its respective Reliability Coordinator.

**3.5.1 Notification of other parties.** Upon notification from the declaring entity that an alert has been downgraded, the Reliability Coordinator shall notify the affected Reliability Coordinators (via the RCIS), Transmission Operators and Balancing Authorities that their systems can be returned to their normal limits.

#### **4. Transmission Emergency Alert 0 (TEA 0) - Termination.**

When the declaring Entity is able to respect IROL requirements and is no longer concerned with its ability to respect IROLs, it shall request its Reliability Coordinator to terminate the alert.

**4.1. Notification.** The Reliability Coordinator shall notify Reliability Coordinators via the RCIS of the termination. The Reliability Coordinator shall also notify the affected Transmission Operators and Balancing Authorities. The TEA 0 shall also be posted on the NERC website if the original alert was so posted.

## Security Emergency Alerts (SEA)

### Introduction

This Attachment provides the procedures by which a Reliability Coordinator, Transmission Operator or Balancing Authority can communicate the physical and cyber security status of their facilities.

All three operating alert states (EEAs, TEAs and SEAs) are independent of each other and should be declared independently but they may also be declared concurrently.

### A. General Requirements

**1. Initiation by Reliability Coordinator.** A Security Emergency Alert may be initiated only by a Reliability Coordinator at

- 1) The Reliability Coordinator's own request, or
- 2) Upon the request of a Transmission Operator, or
- 3) Upon the request of a Balancing Authority

**1.1. Situations for initiating alert.** A Security Emergency Alert may be initiated for the following reasons:

- A Cyber threat affecting a control center, grid or generator assets has been identified or is imminent.
- A physical threat affecting a control center, grid or generator assets has been identified or is imminent.

### 2. Notification.

A Reliability Coordinator who initiates a Security Emergency Alert shall notify all Transmission Operators and Balancing Authorities in its Reliability Area. The Reliability Coordinator shall also notify Reliability Coordinators of the situation via the Reliability Coordinator Information System (RCIS) using the "CIP" category. Additionally, conference calls between Reliability Coordinators shall be held as necessary to communicate system conditions. The Reliability Coordinator shall also notify all Transmission Operators and Balancing Authorities in its Reliability Area and other Reliability Coordinators when the alert has ended

### B. Security Emergency Alert (SEA) Levels

To ensure that all Reliability Coordinators clearly understand potential and actual Security Emergency Alerts, NERC has established three levels of Security Emergency Alerts. The Reliability Coordinators will use these terms when explaining security alerts to each other. A Security Emergency Alert is an emergency procedure, not a daily operating practice, and is not intended as an alternative to compliance with NERC reliability standards. The Reliability Coordinator may declare whatever alert level is necessary, and need not proceed through the alerts sequentially.

#### 1. Security Emergency Alert 1 (SEA 1) – Cyber or Physical threat is identified or imminent

**Circumstances:**

- The Reliability Co-ordinator, Transmission Operator or Balancing Authority has identified an actual or imminent cyber or physical threat to one of its facilities including but not limited to:

- Control Centers
- Generating facilities
- Substations
- Transmission Lines

**2. Security Emergency Alert 2 (SEA 2) – Cyber event *impacts* control center EMS or physical attack at a *single site***

**Circumstances:**

- The Reliability Coordinator, Transmission Operator or Balancing Authority has identified an actual cyber threat event that is affecting control center EMS capability.
- The Reliability Coordinator, Transmission Operator or Balancing Authority has identified a physical attack at a single site.

During Security Emergency Alert 2, Reliability Coordinators, Transmission Operators and Balancing Authorities have the following responsibilities:

**2.1 Notifying other Reliability Coordinators, Transmission Operators and Balancing Authorities**

The Reliability Coordinator shall post the declaration of the alert level along with the location of the affected facility on the RCIS under “CIP”.

**2.2 Declaration period.**

The declaring Entity shall update its Reliability Coordinator of the situation at a minimum of every hour until the SEA 2 is terminated. The Reliability Coordinator shall update the RCIS as changes occur and pass this information on to the affected Reliability Coordinators, Transmission Operators and Balancing Authorities.

**3. Security Emergency Alert 3 (SEA 3) – Cyber event *shuts down* control center EMS or physical attack at *multiple sites***

**Circumstances:**

- The Reliability Coordinator, Transmission Operator or Balancing Authority has identified an actual cyber threat event that has shutdown a control center EMS capability.
- The Reliability Coordinator, Transmission Operator or Balancing Authority has identified a physical attack at a multiple sites

### **3.1. Notifying other Reliability Coordinators, Balancing Authorities and Transmission Operators**

The Reliability Coordinator shall post the declaration of the alert level along with the locations of the affect facilities on the RCIS under “CIP”.

### **3.2. Declaration period**

The declaring Entity shall update its Reliability Coordinator of the situation at a minimum of every hour until the SEA 3 is terminated. The Reliability Coordinator shall update the RCIS as changes occur and pass this information on to the affected Reliability Coordinators, Transmission Operators and Balancing Authorities.

## **4. Security Emergency Alert 0 (SEA 0) – Termination of alert level**

When the declaring entity believes it is no longer under threat, it shall request its Reliability Coordinator to terminate the SEA.

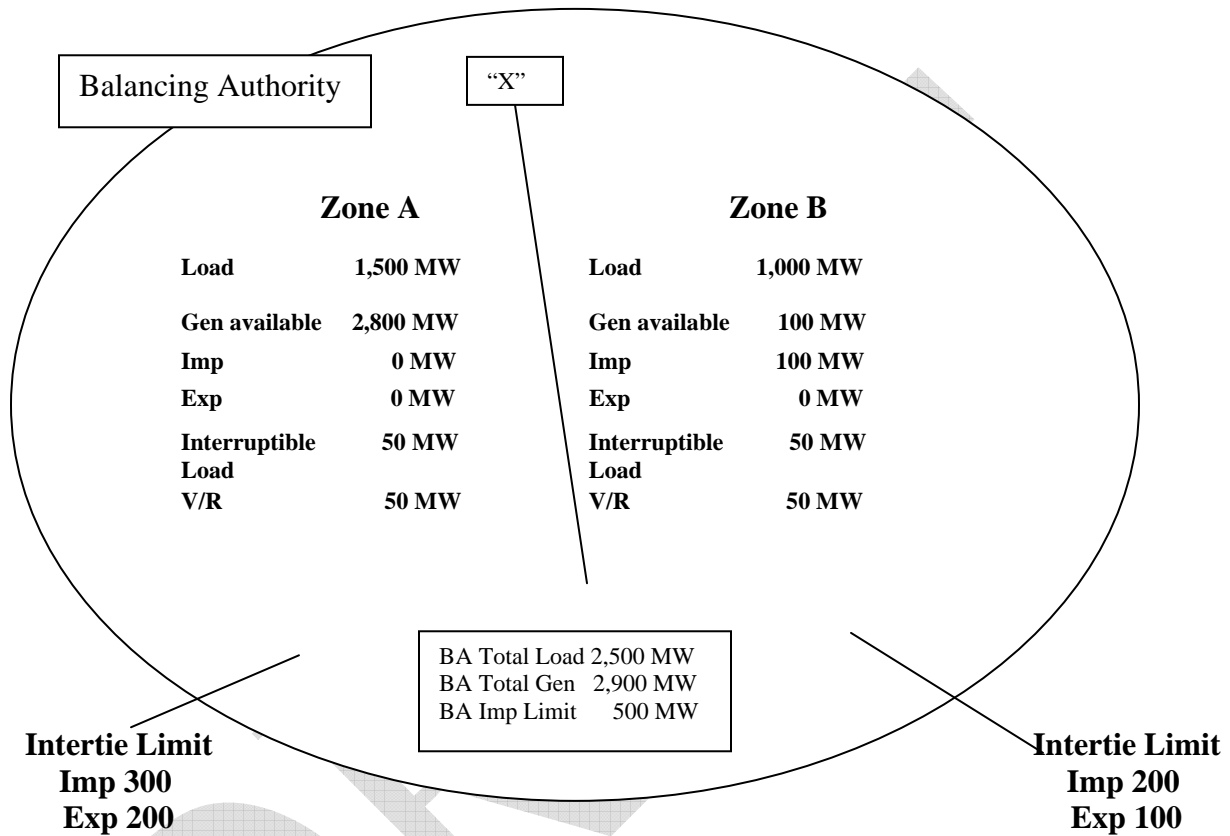
### **4.1. Notification**

The Reliability Coordinator shall notify all other Reliability Coordinators via the RCIS of the termination. The Reliability Coordinator shall also notify the affected Transmission Operators and Balancing Authorities

**Example #1**

**IROL violation on “X”  
No Global Adequacy Concerns**

**IROL “X”  
500 MW - A to B  
300 MW - B to A**



- EEA** 1 No
- 2 No
- 3 No
- TEA** 1 Yes
- 2 Yes
- 3 Yes

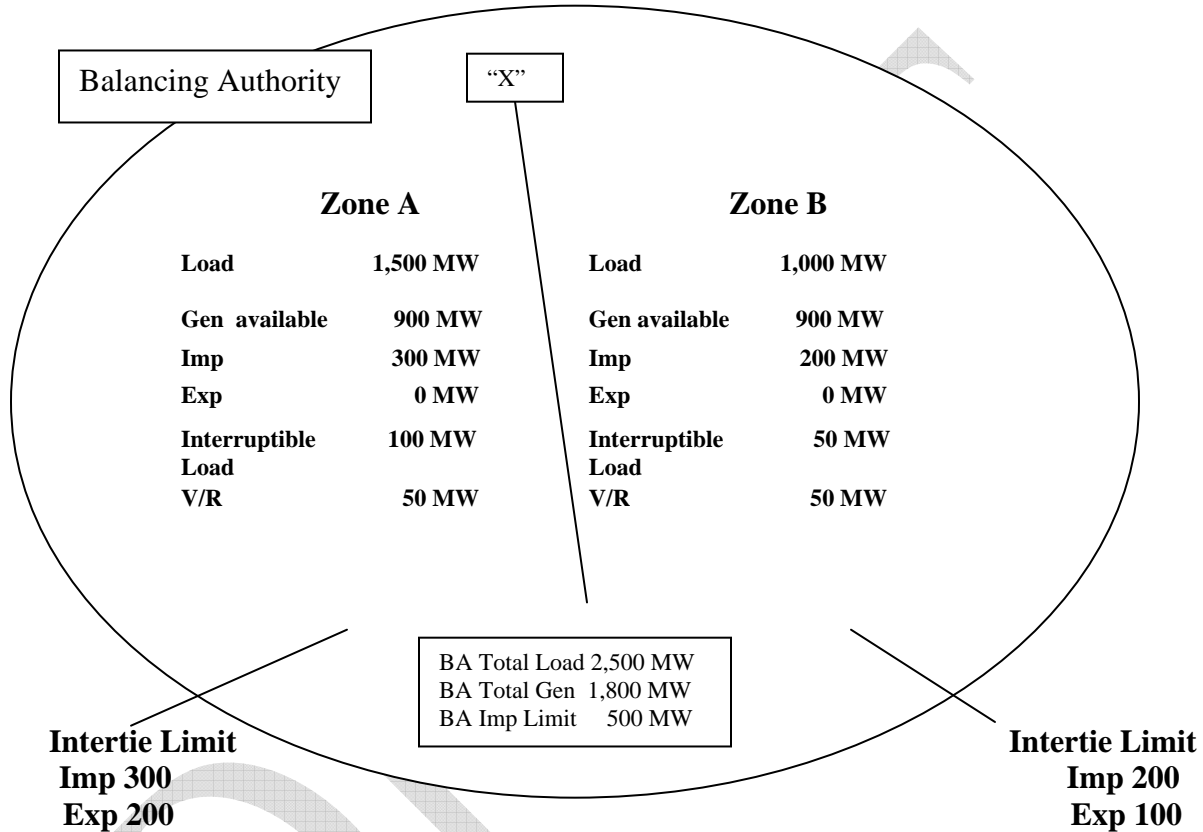
In this example the available generation in A is in excess of its load requirements. The available generation in B is less than its load requirements. Area B will be relying on the full transfer capability of the interface “X” plus an additional import of 100 MW to the maximum limit on the intertie in Area B. With the implementation of the interruptible load and V/R the firm load requirements in B cannot be met without the use of Firm load shedding.

- In this scenario an EEA is not required as the BA is able to meet its global load/generation requirements.
- When this situation is forecast a TEA 1 should be issued to indicate the potential concerns with the ability to respect the IROL limit “X” without the use of load management procedures.
- When load management procedures are implemented in Real Time to respect the IROL “X”, a TEA 2 should be issued.
- When Firm load is curtailed to respect the limit a TEA 3 should be issued.

**Example #2**

**Global Adequacy Deficiency  
No IROL Violation**

**IROL "X"**  
**500 MW - A to B**  
**300 MW - B to A**



- EEA** 1 Yes  
 2 Yes  
 3 No
- TEA** 1 No  
 2 No  
 3 No

In this example the available generation in A is less than its load requirements. The available generation in B is less than its load requirements. There is a Global Adequacy deficiency after considering full import capability and utilization of interruptible load and V/R.

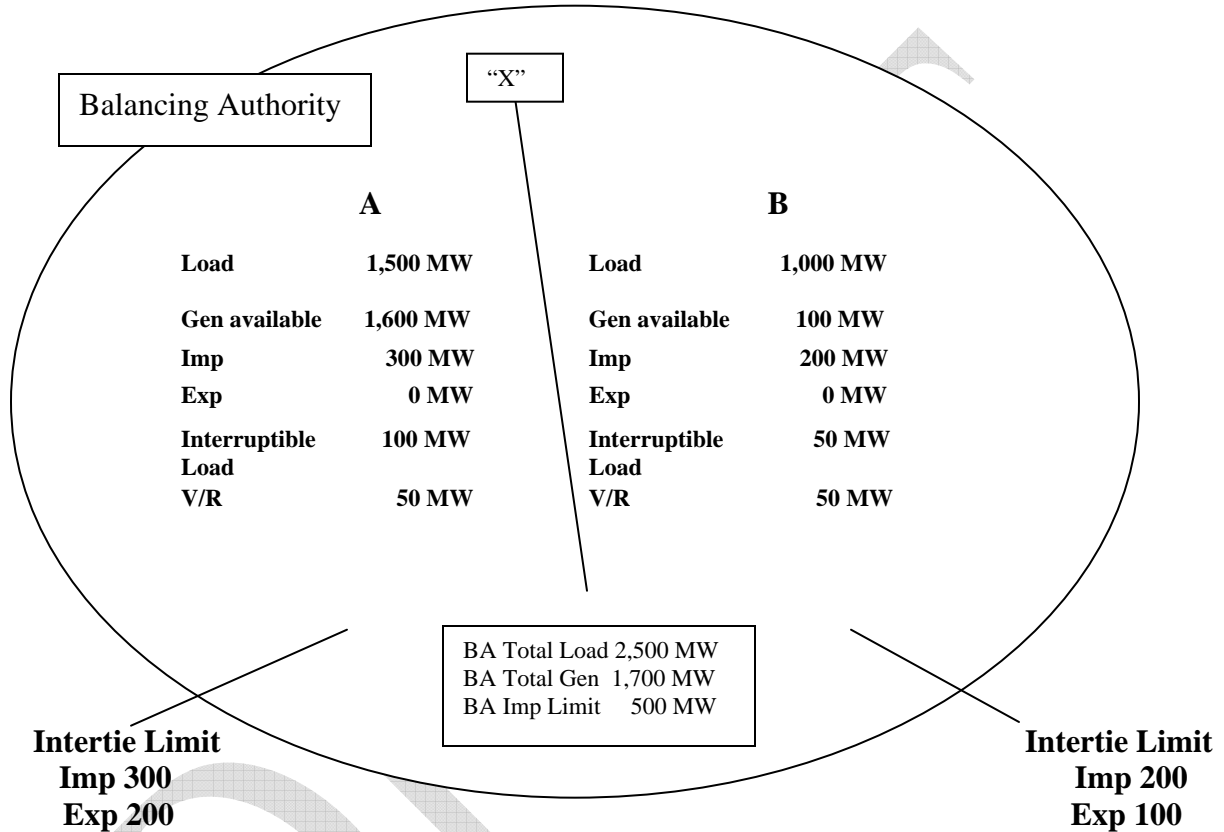
- EEA procedures should be followed
- There is no need for a TEA to be issued



**Example #3**

**Global Adequacy Deficiency  
IROL Violation**

**IROL "X"**  
**500 MW - A to B**  
**300 MW - B to A**



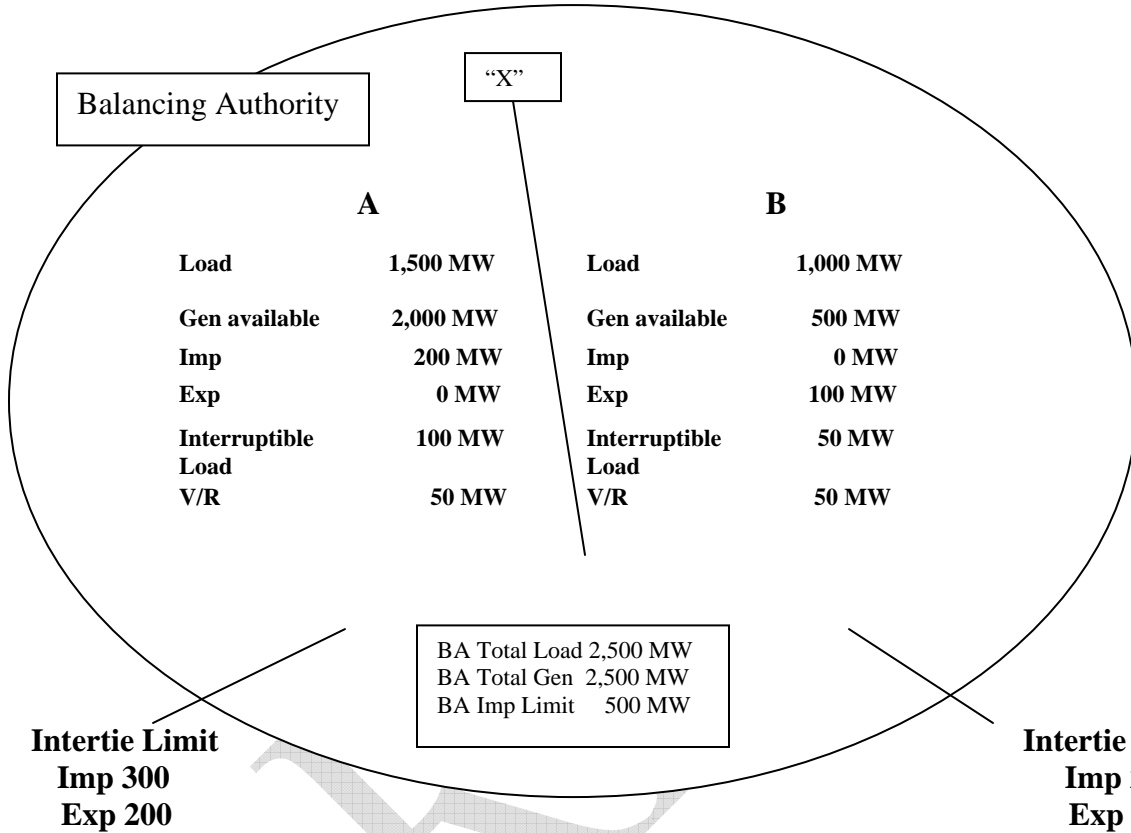
<b>EEA</b>	1	<b>Yes</b>	In this example the available generation in A meets its load requirements. The available generation in B is less than its load requirements. There is a Global Adequacy deficiency after considering full import capability. There is also an IROL violation at "X" in the direction of A to B to meet the load requirements in B depending on where load management procedures are implemented.
	2	<b>Yes</b>	
	3	<b>No</b>	
<b>TEA</b>	1	<b>Yes</b>	
	2	<b>Yes</b>	
	3	<b>Yes</b>	

- An EEA 1 and a TEA 1 should be issued to identify the potential issues
- When load management procedures are implemented to manage the transfer from A to B a TEA 2 should be issued (assumes B will be deficient before the global deficiency occurs).
- An EEA 2 should be issued when load management procedures are being implemented in A to manage global requirements.
- TEA 3 should also be issued when Firm load is shed in B to meet the load requirements in B while respecting the IROL.

**Example #4**

**Transaction Curtailments**

**IROL "X"**  
**500 MW - A to B**  
**300 MW - B to A**



- EEA** 1 No
- 2 No
- 3 No
- TEA** 1 No
- 2 No
- 3 No

In this example there are no global adequacy concerns. There is an export transaction in B that is causing a limit concern on "X" in the A to B direction. With the available generation in B plus the transfer capability there is no concern for violating the IROL limit. The transaction is creating a situation where it will be required curtailed at some point to prevent the IROL violation. Assuming the TLR procedure would be effective at relieving this constraint regardless of the TLR level (at either the TLR 3 or 5 level) no TEA

would be required as there is no concern that the IROL can't be respected with control actions that don't involve load management procedures.

April 18, 2007

TO: REGISTERED BALLOT BODY

Ladies and Gentlemen:

**Announcement**  
**Nomination Periods Open for Three Drafting Teams**

**The Standards Committee (SC) announces the following standards actions:**

**Nominations for Project 2007-09 Generator Verifications SAR Drafting Team (April 18–May 2, 2007)**

The Standards Committee is seeking industry experts to serve on the [Generator Verification](#) SAR Drafting Team. This project calls for completing the final four Phase III & IV standards (PRC-019, PRC-024, MOD-026, and MOD-027) and for refinement of two standards that were approved in 2005 (MOD-024 and MOD-025).

- PRC-019 — Coordination of Generator Voltage Regulator Controls with Unit Capabilities and Protection
- PRC-024 — Generator Performance During Frequency and Voltage Excursions
- MOD-024 — Verification of Generator Gross and Net Real Power Capability
- MOD-025 — Verification of Generator Gross and Net Reactive Power Capability
- MOD-026 — Verification of Models and Data for Generator Excitation System Functions
- MOD-027 — Verification of Generator Unit Frequency Response

The set of six standards all require generator verifications — either to ensure that generators will not trip off line during specified voltage and frequency excursions or as a result of improper coordination between generator protective relays and generator voltage regulator controls and limit functions or to ensure that generator models accurately reflect the generator's capabilities and operating characteristics.

If you are interested in serving on this team, please complete this [nomination form](#) and return it to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with “GEN VER SARDT Nomination” in the subject line, no later than **May 2, 2007**.

**Nominations for Project 2006-03 System Restoration and Blackstart Standard Drafting Team (April 18–May 2, 2007)**

The Standards Committee is seeking additional industry experts to serve on the [System Restoration and Blackstart](#) Standard Drafting Team. This project calls for the modification of the following standards:

- EOP-005 — System Restoration Plans
- EOP-006 — Reliability Coordination — System Restoration
- EOP-007 — Establish, Maintain, and Document a Regional Blackstart Capability Plan
- EOP-009 — Documentation of Blackstart Generating Unit Test Results

REGISTERED BALLOT BODY

April 18, 2007

Page Two

This project involves upgrading the overall quality of the four standards; eliminating some gaps in the requirements; eliminating some ambiguity; and eliminating some “fill-in-the-blank” components. The Standards Committee has appointed the initial standard drafting team, but is seeking additional members, particularly from within the SPP and WECC regions.

If you are interested in serving on this team, please complete this [nomination form](#) and return it to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with “SRBS SDT Nomination” in the subject line, no later than **May 2, 2007**.

**Nominations for Project 2007-02 Operating Personnel Communications Protocols SAR Drafting Team (April 18–May 2, 2007)**

The Standards Committee is seeking additional industry experts to serve on the [Operating Personnel Communications Protocols](#) SAR Drafting Team. This SAR calls for the development of communications protocols for use by real-time system operators to improve situational awareness and shorten response time. The Standards Committee has appointed an initial SAR Drafting Team but is seeking additional nominations, particularly from the FRCC, NPCC, and SPP regions, from Canada, and from the generation and load-serving entity segments that will be affected by the proposed standard.

If you are interested in serving on this team, please complete this [nomination form](#) and return it to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with “OPS COM SARDT Nomination” in the subject line, no later than **May 2, 2007**.

**Standards Development Process**

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. If you have any questions, please contact me at 813-468-5998 or [maureen.long@nerc.net](mailto:maureen.long@nerc.net).

Sincerely,

*Maureen E. Long*

cc: Registered Ballot Body Registered Users  
Standards Mailing List  
NERC Roster

## Standard Development Roadmap

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

### Development Steps Completed:

1. The Standards Committee (SC) approved the Standard Authorization Request (SAR) for posting on March 1, 2007.
2. The SAR was posted for comment from March 19 through April 17, 2007.
3. The SC sought SAR drafting team nominations April 18 through May 2, 2007.
4. The SAR drafting team posted reply comments to industry comments received on the first posting SAR on June 8, 2007
5. Standard drafting team appointed by SC Executive Committee on June 28, 2007

### Description of Current Draft:

This is the first draft of a new standard requiring the use of standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The drafting team requests posting for a 45-day comment period.

### Future Development Plan:

Anticipated Actions	Anticipated Date
1. Drafting team considers comments, makes conforming changes, posts for 30-day comment period.	March 16 to April 15, 2010
2. Drafting team considers comments, makes conforming changes, requests SC approval to proceed to pre-ballot comment period.	May 15, 2010
3. First ballot of standards.	June 2010
4. Recirculation ballot of standards.	July 2010
5. Board adopts standards.	August or November 2010

## Definitions of Terms Used in Standard

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

*When using terms or phrases contained in the Reliability Standards Glossary of Terms for communications it should be cited as the source. When used in written communications, terms or phrases contained in the Reliability Standards Glossary of Terms are capitalized.*

**Communications Protocol** — A framework of rules that govern how verbal and written information is exchanged.

**Three-part Communication** — A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct by the party who initiated the communication.

**Interoperability Communication** — Communication between two or more entities to exchange reliability-related information to be used by the entities to change the state or status of an element or facility of the Bulk Electric System.

## Introduction

1. **Title:** Operating Personnel Communications Protocols
2. **Number:** COM-003-1
3. **Purpose:** To timely convey reliability-related information effectively, accurately, and consistently in order to ensure mutual understanding by all key parties, especially during alerts and emergencies.
4. **Applicability:**
  - 4.1. Transmission Operator
  - 4.2. Transmission Owner
  - 4.3. Balancing Authority
  - 4.4. Reliability Coordinator
  - 4.5. Generator Operator
  - 4.6. Distribution Provider
  - 4.7. Transmission Service Provider
  - 4.8. Load Serving Entity
5. **(Proposed) Effective Date:**

First day of first calendar quarter, one calendar year following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter a year from the date of Board of Trustee adoption.

## Requirements

- R1.** Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall develop a written Communications Protocol Operating Procedure (CPOP) for Interoperability Communications among personnel responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System. The CPOP shall include but is not limited to all elements described in Requirements R2 through R7 to ensure effective Interoperability Communications.  
*[Violation Risk Factor: Low][Time Horizon: Long Term Planning]*
- R2.** Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall use pre-defined system condition terminology as defined in Attachment 1-COM-003-1 for verbal and written Interoperability Communications.  
*[Violation Risk Factor: High][Time Horizon: Real Time]*
- R3.** Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall use the English language for verbal and written Interoperability Communications. Responsible Entities may use an alternate language for internal communications. *[Violation Risk Factor: High][Time Horizon: Real time]*
- R4.** Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall use Central Standard Time (24 hour format) as the common

time zone for verbal and written Interoperability Communications. *[Violation Risk Factor: High][Time Horizon: Real time]*

- R5.** Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall use Three-part Communications when issuing a directive during verbal Interoperability Communications. *[Violation Risk Factor: High][Time Horizon: Real time]*
- R6.** Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall use the North American Treaty Organization (NATO) phonetic alphabet as identified in Attachment 2-COM-003-1 when issuing directives, notifications, directions, instructions, orders or other reliability related operating information that involves alpha-numeric information during verbal Interoperability Communications. *[Violation Risk Factor: High][Time Horizon: Real time]*
- R7.** Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall use pre-determined, mutually agreed upon line and equipment identifiers for verbal and written Interoperability Communications. *[Violation Risk Factor: High][Time Horizon: Real time]*

## **Measures**

- M1.** Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall have and provide for review, its written CPOP that includes all elements described in Requirements R2 through R7.
- M2.** Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall have and provide evidence that pre-defined system condition terminology contained in Attachment 1-COM-003-1 was used for verbal and written Interoperability Communications. Evidence may include but is not limited to voice recordings, transcripts, operating logs, or on site observations.
- M3.** Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall have and provide evidence that the English language was used for verbal and written Interoperability Communications. Responsible Entities may use an alternate language for internal operations. Evidence may include but is not limited to voice recordings, transcripts, operating logs, or on site observations.
- M4.** Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall provide evidence that the Central Time Zone was used for verbal and written Interoperability Communications. Evidence may include but is not limited to voice recordings, transcripts, operating logs, or on site observation.
- M5.** Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall provide evidence that Three-part Communications was used



when issuing directives during verbal Interoperability Communications. Evidence may include but is not limited to voice recordings, transcripts, operating logs, or on site observations.

- M6.** Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider provides evidence that the NATO phonetic alphabet was used when issuing directives, notifications, directions, instructions, orders or other reliability related operating information that involves alpha-numeric information or for clarification during verbal Interoperability Communications. Evidence may include but is not limited to voice recordings, transcripts, operating logs, or on site observations.
- M7.** Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider provides documented evidence such as a list or a one-line diagram acknowledged and used by the affected parties that confirms there is mutual agreement on the names/identifiers of lines and equipment. Evidence of use may include but is not limited to voice recordings, transcripts, operating logs, or on site observations.

## **Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance Enforcement Authority**

Regional Entity

#### **1.2. Compliance Monitoring Period and Reset**

Not Applicable

#### **1.3. Compliance Monitoring and Enforcement Processes:**

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

#### **1.4. Data Retention**

Each Transmission Operator, Transmission Owner, Balancing Authority, Reliability Coordinator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- Each Transmission Operator, Transmission Owner, Balancing Authority, Reliability Coordinator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall retain its current, in force

document and any documents in force for Requirement 1, Measure 1 since the last compliance audit.

- Each Transmission Operator, Transmission Owner, Balancing Authority, Reliability Coordinator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall retain for Requirement 2 through 7, Measure 2 through 7, dated operator logs for the most recent 12 months and voice recordings or transcripts of voice recordings for the most recent 3 months.

If a Transmission Operator, Transmission Owner, Balancing Authority, Reliability Coordinator, Generator Operator, Transmission Service Provider, Load Serving Entity or Distribution Provider is found non-compliant, it shall keep information related to the non-compliance until found compliant.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

#### **1.5. Additional Compliance Information**

None.

2. Violation Severity Levels

R #	VRF	Lower	Moderate	High	Severe
R1	Low		The responsible entity developed a CPOP but failed to incorporate one of the elements contained in R2 through R7.	The responsible entity developed a CPOP but failed to incorporate two or more elements contained in R2 through R7.	The responsible entity failed to develop a written CPOP.
R2	High				The responsible entity failed to use pre-defined system condition terminology (Attachment 1-COM-003-1) for verbal and written Interoperability Communications.
R3	High				The responsible entity failed to use the English language for verbal and written Interoperability Communications.
R4	High				The responsible entity failed to use Central Standard Time (24 hour format) as the common time zone for verbal and written Interoperability Communications.
R5	High				The responsible entity failed to use Three-part Communications when issuing a directive during verbal Interoperability Communications.
R6	High				The responsible entity failed to use the North American Treaty Organization (NATO) phonetic alphabet when issuing notifications, directions, instructions, orders and other reliability related operating information that involves alpha-numeric information or for clarification during verbal Interoperability Communications.
R7	High				The responsible entity failed to use pre-determined, mutually understood line and equipment identifiers for verbal and written Interoperability Communications.

**Regional Variances**

None

**Version History**

Version	Date	Action	Change Tracking

Attachment 1 — COM-003-1 — Operating State Alert Levels

This Attachment 1-COM-003-1 defines normal, alert, and emergency operating conditions as they relate to Transmission Loading, Physical and Cyber Security. These definitions for Transmission Loading, Physical and Cyber Security Alert states align with the Emergency Energy Alert (EEA) states (as already described in NERC Reliability Standard EOP-002-2.1). The time frame for declaration of these Alert states shall be consistent with the approach used to declare EEAs and would normally apply to Real Time declarations and not forecast conditions.

Reliability Coordinator Notifications for Physical Security Emergency Alerts		
<p><b>Condition YELLOW:</b> The Reliability Coordinator is notified of a verified actual or imminent physical threat affecting any ONE site within the RC Area:</p> <ul style="list-style-type: none"> <li>▪ Control center</li> <li>▪ Generating facility</li> <li>▪ Substation</li> <li>▪ Transmission line</li> </ul>	<p><b>Condition ORANGE:</b> The Reliability Coordinator is notified of a physical attack at any ONE site within the RC Area:</p> <ul style="list-style-type: none"> <li>▪ Control center</li> <li>▪ Generating facility</li> <li>▪ Substation</li> <li>▪ Transmission line</li> </ul>	<p><b>Condition RED:</b> The Reliability Coordinator is notified of a physical attack at multiple sites within the RC Area:</p> <ul style="list-style-type: none"> <li>▪ Control center</li> <li>▪ Generating facility</li> <li>▪ Substation</li> <li>▪ Transmission line</li> </ul>
<p><b>Make Initial Notifications:</b> “This is the Reliability Coordinator. At (insert time) there is a Physical Security Emergency Alert – PSEA Level One within (identify RC, TOP or BA area)”</p>	<p><b>Make Initial Notifications:</b> “This is the Reliability Coordinator. At (insert time) there is a Physical Security Emergency Alert – PSEA Level Two within (identify RC, TOP, or BA area)”</p>	<p><b>Make Initial Notifications:</b> “This is the Reliability Coordinator. At (insert time) there is a Physical Security Emergency Alert – PSEA Level Three within (identify RC, TOP, or BA area)”</p>
<p><b>Notify all the following functional entities within the Reliability Coordinator Area:</b></p> <ul style="list-style-type: none"> <li>▪ Balancing Authorities</li> <li>▪ Distribution Service Providers</li> <li>▪ Generator Operators</li> <li>▪ Transmission Operators</li> <li>▪ Transmission Owners</li> </ul>		
<p><b>Notify the following functional entities outside the Reliability Coordinator Area:</b></p> <ul style="list-style-type: none"> <li>▪ All Reliability Coordinators using “CIP Free Form” category of RCIS</li> </ul>		
<p><b>Notify the following entities:</b></p> <ul style="list-style-type: none"> <li>▪ NERC (ES-ISAC) via the RCIS. Under “External Links” use “ES-ISAC Site”.</li> </ul>		
<p><b>Additional Communications:</b></p> <ul style="list-style-type: none"> <li>▪ Post the declaration of the alert level along with the location of the affected facility to other parties as required by internal communication procedure, OE-417 Form, law enforcement, etc.</li> </ul>		

<p><b>Make Final Notifications:</b>                  “At (insert time) the Physical Security Emergency Alert – PSEA <b>Level One (identify RC, BA or TOP Area)</b> has been curtailed”</p>	<p><b>Make Final Notifications:</b>                  “At (insert time) the Physical Security Emergency Alert – PSEA <b>Level Two</b> within <b>(identify RC, TOP or BA Area)</b> has been curtailed”</p>	<p><b>Make Final Notifications:</b>                  “At (insert time) the Physical Security Emergency Alert – PSEA <b>Level Three</b> within <b>(identify RC, TOP, or BA Area)</b> has been curtailed</p>
<p><b>Notify all the following within the Reliability Coordinator Area:</b></p> <ul style="list-style-type: none"> <li>▪ Balancing Authorities</li> <li>▪ Distribution Service Providers</li> <li>▪ Generator Operators</li> <li>▪ Transmission Operators</li> <li>▪ Transmission Owners</li> </ul>		
<p><b>Notify the following outside the Reliability Coordinator Area:</b>                  All Reliability Coordinators using “CIP Free Form” category of RCIS. Notify ES-ISAC of end of Alert and any other entities initially notified.</p>		
<p><b>Additional Communications:</b></p> <ul style="list-style-type: none"> <li>▪ Remove the declaration of the alert level from the RCIS and other entities initially notified.</li> </ul>		

Attachment 1 — COM-003-1 — Operating State Alert Levels (continued)

Reliability Coordinator Notifications for Cyber Security Emergency Alerts		
<p><b>Condition YELLOW:</b> The Reliability Coordinator is notified of a identified actual or imminent cyber threat affecting any ONE site within the RC Area:</p> <ul style="list-style-type: none"> <li>▪ Control center</li> <li>▪ Generating facility</li> <li>▪ Substation</li> <li>▪ Transmission line</li> </ul>	<p><b>Condition ORANGE:</b> The Reliability Coordinator is notified of a cyber attack at any ONE site within the RC Area:</p> <ul style="list-style-type: none"> <li>▪ Control center</li> <li>▪ Generating facility</li> <li>▪ Substation</li> <li>▪ Transmission line</li> </ul>	<p><b>Condition RED:</b> The Reliability Coordinator is notified of a cyber attack at multiple sites within the RC Area:</p> <ul style="list-style-type: none"> <li>▪ Control center</li> <li>▪ Generating facility</li> <li>▪ Substation</li> <li>▪ Transmission line</li> </ul>
<p><b>Make Initial Notifications:</b> “This is the Reliability Coordinator. At (insert time) there is a Cyber Security Emergency Alert – CEA <b>Level One</b> within (<b>identify RC, TOP or BA area</b>)”</p>	<p><b>Make Initial Notifications:</b> “This is the Reliability Coordinator. At (insert time) there is a Cyber Security Emergency Alert – CEA <b>Level Two</b> within (<b>identify RC, TOP, or BA area</b>)”</p>	<p><b>Make Initial Notifications:</b> “This is the Reliability Coordinator. At (insert time) there is a Cyber Security Emergency Alert – CEA <b>Level Three</b> within (<b>identify RC, TOP, or BA area</b>)”</p>
<p><b>Notify all the following functional entities within the Reliability Coordinator Area:</b></p> <ul style="list-style-type: none"> <li>▪ Balancing Authorities</li> <li>▪ Distribution Service Providers</li> <li>▪ Generator Operators</li> <li>▪ Transmission Operators</li> <li>▪ Transmission Owners</li> </ul>		
<p><b>Notify the following functional entities outside the Reliability Coordinator Area:</b></p> <ul style="list-style-type: none"> <li>▪ All Reliability Coordinators and CIP Participants using “CIP Free Form” category of RCIS.</li> </ul>		
<p><b>Notify the following entities:</b></p> <ul style="list-style-type: none"> <li>▪ NERC (ES-ISAC) via the RCIS. Under “External Links” use “ES-ISAC Site”.</li> </ul>		
<p><b>Additional Communications:</b></p> <ul style="list-style-type: none"> <li>▪ Post the declaration of the alert level along with the location of the affected facility to other parties as required by internal communication procedure, OE-417 Form, law enforcement, etc.</li> </ul>		
<p><b>Make Final Notifications:</b> “At (insert time) the Cyber Security Emergency Alert – CEA <b>Level One (identify RC, BA or TOP Area)</b> has been curtailed”</p>	<p><b>Make Final Notifications:</b> “At (insert time) the Cyber Security Emergency Alert – CEA <b>Level Two</b> within (<b>identify RC, TOP or BA Area</b>) has been curtailed”</p>	<p><b>Make Final Notifications:</b> “At (insert time) the Cyber Security Emergency Alert – CEA <b>Level Three</b> within (<b>identify RC, TOP, or BA Area</b>)” has been curtailed</p>
<p><b>Notify all the following within the Reliability Coordinator Area:</b></p> <ul style="list-style-type: none"> <li>▪ Balancing Authorities</li> </ul>		

- Distribution Service Providers
- Generator Operators
- Transmission Operators
- Transmission Owners

**Notify the following outside the Reliability Coordinator Area:**

All Reliability Coordinators and CIP Participants using “CIP Free Form” category of RCIS. Notify ES-ISAC of end of Alert and any other entities initially notified

**Additional Communications:**

- Remove the declaration of the alert level from the RCIS and any other entities initially notified.



Attachment 1 — COM-003-1 — Operating State Alert Levels (continued)

Reliability Coordinator Notifications for Transmission Emergency Alerts		
<p><b>Condition YELLOW:</b> The Reliability Coordinator or Transmission Operator foresees or is experiencing conditions where all available generation resources are committed to respect the IROL and/or is concerned about its ability to respect the IROL.</p>	<p><b>Condition ORANGE:</b> The Reliability Coordinator or Transmission Operator foresees or has implemented procedures up to, but excluding, interruption of firm load commitments.</p>	<p><b>Condition RED:</b> The Reliability Coordinator or Transmission Operator foresees or has implemented firm load obligation interruption to respect an IROL.</p>
<p><b>Make Initial Notifications:</b> “This is the Reliability Coordinator. At (insert time) there is a Transmission Emergency Alert – TEA <b>Level One</b> affecting the <i>(name of the interface; monitored and contingency element)</i>”</p>	<p><b>Make Initial Notifications:</b> “This is the Reliability Coordinator. At (insert time) there is a Transmission Emergency Alert – TEA <b>Level Two</b> affecting the <i>(name of the interface; monitored and contingency elements; amount of MW relief; type of load management procedures that have been or expected to be implemented i.e., voltage reduction, curtailable load reductions; relief that has been (or is expected) to be implemented to respect the limit; any actions that are expected to last the next (length of time – hours/days).</i></p>	<p><b>Make Initial Notifications:</b> “This is the Reliability Coordinator. At (insert time) there is a Transmission Emergency Alert – TEA <b>Level Three</b> affecting the <i>(name of the interface; monitored and contingency elements; amount of MW relief; amount of Firm Load curtailments that have been (or is expected) implemented to respect the limit; any actions that are expected to last the next (length of time – hours/days).</i>”</p>
<p><b>Notify all the following functional entities within the Reliability Coordinator Area:</b></p> <ul style="list-style-type: none"> <li>▪ Balancing Authorities</li> <li>▪ Distribution Service Providers</li> <li>▪ Generator Operators</li> <li>▪ Transmission Operators</li> <li>▪ Transmission Owners</li> </ul>		
<p><b>Notify the following functional entities outside the Reliability Coordinator Area:</b></p> <ul style="list-style-type: none"> <li>▪ All Reliability Coordinators using “Free Form” category of RCIS.</li> </ul>		
<p><b>Notify the following entities:</b></p> <ul style="list-style-type: none"> <li>▪</li> </ul>		
<p><b>Additional Communications:</b></p> <ul style="list-style-type: none"> <li>▪ Post the declaration of the alert level along with the location of the affected facility to other parties as required by internal communication procedure, etc.</li> </ul>		
<p><b>Make Final Notifications:</b> “At (insert time) the Transmission Emergency Alert – TEA <b>Level One (identify RC, BA or TOP</b></p>	<p><b>Make Final Notifications:</b> “At (insert time) the Transmission Emergency Alert – TEA <b>Level Two</b> within <b>(identify RC,</b></p>	<p><b>Make Final Notifications:</b> “At (insert time) the Transmission Emergency Alert – TEA <b>Level Three</b> within <b>(identify RC, TOP, or BA Area)</b>” has</p>

Area) has been curtailed"	TOP or BA Area) has been curtailed"	been curtailed
<p><b>Notify all the following within the Reliability Coordinator Area:</b></p> <ul style="list-style-type: none"><li>▪ Balancing Authorities</li><li>▪ Distribution Service Providers</li><li>▪ Generator Operators</li><li>▪ Transmission Operators</li><li>▪ Transmission Owners</li></ul>		
<p><b>Notify the following outside the Reliability Coordinator Area:</b> All Reliability Coordinators using "Free Form" category of RCIS</p>		
<p><b>Additional Communications:</b></p> <ul style="list-style-type: none"><li>▪ Remove the declaration of the alert level from the RCIS and any other parties initially notified.</li></ul>		

Attachment 2 — COM-003-1

NATO Phonetic Alphabet or International Radiotelephony Spelling Alphabet

Character	Telephony	Pronunciation
A	Alpha	(al-fah)
B	Bravo	(brah-voh)
C	Charlie	(char-lee)
D	Delta	(dell-tah)
E	Echo	(eck-oh)
F	Foxtrot	(foks-trot)
G	Golf	(golf)
H	Hotel	(hoh-tel)
I	India	(in-dee-ah)
J	Juliet	(jew-lee-ett)
K	Kilo	(key-loh)
L	Lima	(lee-mah)
M	Mike	(mike)
N	November	(no-vem-ber)
O	Oscar	(oss-ker)
P	Papa	(pah-pah)
Q	Quebec	(keh-beck)
R	Romeo	(row-me-oh)
S	Sierra	(see-air-rah)
T	Tango	(tang-go)
U	Uniform	(you-nee-form)
V	Victor	(vik-ter)
W	Whiskey	(wiss-key)
X	X-Ray	(ecks-ray)
Y	Yankee	(yang-key)
Z	Zulu	(zoo-loo)
1	One	(wun)

Character	Telephony	Pronunciation
2	Two	(too)
3	Three	(tree)
4	Four	(fow-er)
5	Five	(fife)
6	Six	(six)
7	Seven	(sev-en)
8	Eight	(ait)
9	Nine	(nin-er)
0	Zero	(zee-row)

## Implementation Plan for COM-003-1 — Operating Personnel Communications Protocols

### Prerequisite Approvals

None

### Conforming Changes to Requirements in Already Approved Standards

- Remove R4 from COM-001-1
- Move R2 (or subsequent replacements) from COM-002-3 into COM-003-1 and retire COM-002-3

### Standard Summary

The OPCP SDT developed this new standard and is proposing removing requirements R4 from COM-001-1 and R2 (or subsequent replacements) from COM-002-3 for inclusion in this standard. This standard addresses part of Blackout Recommendation #26 and issues in FERC Order 693.

### Compliance with Standards

Once these standards become effective, the responsible entities identified in the Applicability section of the standard must comply with the requirements. These include:

- Reliability Coordinator
- Balancing Authority
- Transmission Owner
- Transmission Operator
- Generator Operator
- Distribution Provider
- Transmission Service Provider
- Load Serving Entity

### Effective Date

The proposed effective date for this standard is the first day of the third calendar quarter after applicable regulatory approvals have been received (or the Reliability Standard otherwise becomes effective the first day of the third calendar quarter after BOT adoption in those jurisdictions where regulatory approval is not required).

**Disposition of Requirements Identified in the SAR for Operations Communications Protocols as Possibly Needing either Modification or Movement**

Standard No.	Requirement(s) identified in the SAR as possibly needing to be modified or moved to the new standard	SDT Disposition/Explanation
COM-001-1	R4 is a requirement for the Reliability Coordinator's, Transmission Operator's, and Balancing Authority's real-time operating personnel to use English when communicating between entities.	<i>Requirement R4 from COM-001 has been incorporated as Requirement R3 of draft COM-003-1.</i>
COM-002-2	<p><i>R1.1 is a requirement for the Balancing Authority and Transmission Operator to make notifications when there is a threat to reliability.</i></p> <p><i>R2 is a requirement for the Reliability Coordinator, Transmission Operator and Balancing Authority relative to issuing and receiving operating directives.</i></p>	<p><i>Regarding R1.1, the SDT decided to focus on requirements that specify protocols on "How to" communicate <u>rather than</u> specified scenarios of "to Whom" or "When to" communicate (albeit COM-003 communication protocols are expected to be used when conveying real-time, reliability-related information in a high level, generic sense).</i></p> <p><i>The SDT believes this requirement focuses on predetermined communication paths / communications hardware. It does not appear to be appropriate to relocate this requirement.</i></p> <p><i>Requirement R2 to use Three-part Communication is currently in the scope of work for Project 2006-06. This Project includes a new Glossary term Reliability Directive. Upon completion of the Project 2006-06 development, the revisions to COM-002-3 will be moved to COM-003-1 and COM-002-3 will be retired.</i></p>
EOP-001-0	R4.1 includes a requirement for the Transmission Operator and Balancing Authority to have communications protocols for use during emergencies (and Attachment 1-EOP-001-0)	<i>R4.1 and EOP-001 as a whole requires "plans" for mitigating emergencies. These communication protocols differ from COM-003 protocols in that R4.1 involves actions and tasks for mitigating operational emergencies and for coordinating activities; not how to communicate.</i>
EOP-002-2	<p>R6.5 and R7.2 require the Balancing Authority to ask the Reliability Coordinator to declare an Energy Emergency or an Energy Emergency Alert under certain conditions</p> <p>R8 requires the Reliability Coordinator to issue an Energy Emergency Alert under certain conditions</p> <p>R9.1 requires the Load-serving Entity to ask the Reliability Coordinator</p>	<p><i>R6.5 and R7.2 prescriptively provide detail in the standard for remedies to capacity emergencies. These requirements specify the "when", "who" and "what" to communicate not "how" to communicate. Relocating or modifying these requirements is not appropriate.</i></p> <p><i>R8 of EOP-002 likewise specifies the "when" for an RC to declare an emergency alert; not "how" to communicate.</i></p> <p><i>R9.1 of EOP-002 likewise specifies the "when" for an LSE to request its RC to declare an emergency alert; not "how" to communicate.</i></p>

**Disposition of Requirements Identified in the SAR for Operations Communications Protocols as Possibly Needing either Modification or Movement**

Standard No.	Requirement(s) identified in the SAR as possibly needing to be modified or moved to the new standard	SDT Disposition/Explanation
	to declare an Energy Emergency Alert under certain conditions	
EOP-006-1	<p>R4 requires the Reliability Coordinator to disseminate information regarding restoration to neighboring Reliability Coordinators and Transmission Operators or Balancing Authorities</p> <p>R5 requires the Reliability Coordinator to approve, communicate, and coordinate the re-synchronizing of major system islands or synchronizing points</p>	<p><i>The SDT decided to focus on requirements that specify protocols on “How to” communicate rather than “to Whom” or “When to” communicate. The SDT believes these requirements involve information/content and/or timing of certain communications and therefore these requirements should not be duplicated or relocated to COM-003-1 Standard because it would reduce the effectiveness of the existing standard or requirement.</i></p> <p><i>COM-003-1 is complementary to EOP-006-1 and must be complied with in conjunction with each other during emergencies.</i></p>
CIP-001-1	R1 and R2 require operating entities to have procedures for communicating information relative to sabotage of bulk power system facilities	<p><i>These requirements require procedures to be followed during emergency situations such as sabotage/security events. COM-003-1 requires protocols for ensuring understanding and conveying information in a generic sense regardless of the specific information.</i></p> <p><i>COM-003-1 is complementary to CIP-001-1 and must be complied with in conjunction with each other during sabotage emergencies.</i></p>
CIP-008-1	R1.2 requires the responsible entity to have a communication plan for response to a cyber security incident	<p><i>This requirement requires a plan, not how to ensure understanding of reliability-related information.</i></p> <p><i>COM-003-1 is complementary to CIP-008-2 R1.2 and must be complied with in conjunction with each other during Cyber Security emergencies.</i></p>
IRO-001-1	R3 requires the Reliability Coordinator to direct entities to act and R8 requires entities to respond to the Reliability Coordinator’s directives	<p><i>The purpose of this standard and its requirements is to specifically ensure IROs are mitigated within 30 minutes to ensure reliability of the BES per the direction of the Reliability Coordinator.</i></p> <p><i>The generic communication protocols of COM-003-1 can be used but removing any of the words from IRO-001-1 would dilute that standard.</i></p> <p><i>The SDT decided to focus on requirements that specify protocols on “How to” communicate rather than “to Whom” or “When to” communicate. The SDT believes the requirements R3 and R8 of IRO-001-1 involve information/content and/or timing of certain communications and therefore these requirements should not be duplicated or relocated to COM-003-1 Standard because it would</i></p>

**Disposition of Requirements Identified in the SAR for Operations Communications Protocols as Possibly Needing either Modification or Movement**

Standard No.	Requirement(s) identified in the SAR as possibly needing to be modified or moved to the new standard	SDT Disposition/Explanation
		<p><i>reduce the effectiveness of the existing standard or requirement.</i></p> <p><i>COM-003-1 is complementary to IRO-001-1 R3 and R8; and must be complied with in conjunction with each other to preserve the integrity and reliability of the Bulk Electric System.</i></p>
IRO-004-1	R6 requires the Reliability Coordinator to direct entities to act and R7 requires entities to respond to the Reliability Coordinator's directives	<p><i>These requirements provide direction as to actions that should be taken when the results of next-day system studies reveal potential IROL and SOL violations within the system and not how to communicate.</i></p>
IRO-005-2	<p>R4 requires the Reliability Coordinator to issue an Energy Emergency Alert under certain conditions</p> <p>R3, R5, R8, R11, R15, and R17 require the Reliability Coordinator to direct actions to alleviate various types of abnormal or emergency situations</p>	<p><i>These requirements tell the RC "when" to take certain actions.</i></p> <p><i>R4 prescriptively provide detail in the standard for remedies to operating reserve in order to meet CPS and DCS requirements. Requirement R4 specify the "when", "who" and "what" to communicate not "how" to communicate. Relocating or modifying these requirements is not appropriate.</i></p> <p><i>R3, R5 R8, R11, R15 and R17 of IRO-005-2 specifies the "what" and "when" for RCs to mitigate potential IROL violations and CPS/DCS violations; not "how" to communicate.</i></p>
IRO-014-1	R1.1 requires Reliability Coordinators to have procedures processes or plans that address communications and notifications made between Reliability Coordinators under various operating scenarios	<p><i>This requirement specifies the contents of plans that are needed to be pre-established as well as the process to follow but not necessarily the "how" as prescribed in COM-003.</i></p> <p><i>COM-003-1 is complementary to IRO-0014-1 R1.1; and must be complied with in conjunction with each other to ensure that each Reliability Coordinator's operations are coordinated.</i></p>
PRC-001-1	R6 requires the Transmission Operator and Balancing Authority to make notifications when there is a change in the status of a special protection system	<p><i>R6 specifies that when a Special Protection System's status has changed the BA/TOP shall notify affected BA/TOPs of such a change. This is a "when" to communicate issue. COM-003-1 is complementary to PRC-001-1 R6.</i></p>
TOP-001-1	<p>R3 requires some responsible entities to comply with the Reliability Coordinator's and Transmission Operator's directives</p> <p>R4 requires some responsible entities to comply with the Transmission Operator's directives</p>	<p><i>These are "when" to communicate requirements and should not be relocated.</i></p> <p><i>COM-003-1 is complementary to TOP-001-1 and must be complied with in conjunction with each other to ensure that directives are</i></p>



**Disposition of Requirements Identified in the SAR for Operations Communications Protocols as Possibly Needing either Modification or Movement**

Standard No.	Requirement(s) identified in the SAR as possibly needing to be modified or moved to the new standard	SDT Disposition/Explanation
	R5 requires the Transmission Operator to notify its Reliability Coordinator of certain emergency situations	<i>understood and coordinated.</i>
TOP-002-2	R14, R16 and R17 require responsible entities to notify their Reliability Coordinator of various changes to operating parameters  R18 requires the use of uniform line identifiers when referring to transmission facilities of an interconnected network	<i>These are “when” to communicate requirements and should not be relocated.  COM-003-1 is complementary to TOP-002-2 and must be complied with in conjunction with each other.  The SDT recommends that TOP-002-2 R18 be retired and to add applicability to LSE and TSP in the COM-003-1 Standard.</i>
TOP-007-0	R1 requires the Transmission Operator to notify its Reliability Coordinator when it exceeds an SOL or IROL  R4 requires the Reliability Coordinator to direct entities to take actions to restore the system to within SOLs or IROLs	<i>These are “when” to communicate requirements and should not be relocated.  COM-003-1 is complementary to TOP-007-0 and must be complied with in conjunction with each other.</i>
TOP-008-1	R3 requires the Transmission Operator to make notifications if it disconnects an overloaded facility	<i>This is a “when” and a “what” to communicate requirement and should not be relocated.  COM-003-1 is complementary to TOP-008-1 and must be complied with in conjunction with each other.</i>
VAR-001-1	R8 and R12 require the Transmission Operator to direct actions to maintain voltage within limits and to prevent voltage collapse	<i>This is a “when” and a “what” to communicate requirement and should not be relocated.  COM-003-1 is complementary to VAR-001-1 and must be complied with in conjunction with each other.</i>
VAR-002-1	R2.2 and R5.1 require the Generator Operator to comply with directives  R3 requires the Generator Operator to notify the Transmission Operator of various status or capability changes	<i>This is a “when” and a “what” to communicate requirement and should not be relocated.  COM-003-1 is complementary to VAR-002-1 and must be complied with in conjunction with each other.</i>

## Unofficial Comment Form for Project 2007-02 Operating Personnel Communications Protocols — Standard COM-003-1 —Operating Personnel Communications Protocols

Please **DO NOT** use this form. Please use the [electronic comment form](#) located at the link below to submit comments on the proposed draft COM-003-1 Operating Personnel Communications Protocols standard. Comments must be submitted by **January 15, 2010**. If you have questions please contact Harry Tom at [harry.tom@nerc.net](mailto:harry.tom@nerc.net) or by telephone at 609-452-8060.

[http://www.nerc.com/filez/standards/Op\\_Comm\\_Protocol\\_Project\\_2007-02.html](http://www.nerc.com/filez/standards/Op_Comm_Protocol_Project_2007-02.html)

### **Background Information:**

Effective communication is critical for real time operations. Failure to successfully communicate can lead to negative consequences.

The Standard Authorization Request (SAR) for this project was initiated on March 1, 2007 and approved by the Standards Committee on June 8, 2007. It established the scope of work to be done for Project 2007-02 Operating Personnel Communications Protocols (OPCP SDT). The scope described in the SAR is to establish essential elements of communications protocols and communications paths such that operators and users of the North American Bulk Electric System will efficiently convey information and ensure mutual understanding. The August 2003 Blackout Recommendation Number 26 calls for a tightening of communications protocols. This proposed standard is to ensure that effective communication is practiced and delivered in clear language via pre-established communications paths among pre-identified operating entities.

The SAR indicated that references to communication protocols in other NERC Reliability Standards may be moved to this new standard. The SAR instructed the standard drafting team to consider incorporating the use of Alert Level Guidelines and three-part communications in developing this new standard to achieve high level consistency across regions.

The upgrade of communication system hardware where appropriate is not included in this project (it is included in NERC Project 2007-08 Emergency Operations).

The standard will be applicable to Transmission Operators, Transmission Owners, Balancing Authorities, Reliability Coordinators, Generator Operators, Transmission Service Providers, Load Serving Entities and Distribution Providers. These requirements ensure that communications include essential elements such that information is efficiently conveyed and mutually understood for communicating changes to real-time operating conditions and responding to directives, notifications, directions, instructions, orders, or other reliability related operating information.

The Purpose statement of this standard states: "To ensure that reliability-related information is conveyed effectively, accurately, consistently, and timely to ensure mutual understanding by all key parties, especially during alerts and emergencies."

The team developed a table to show each communications-related requirement identified in the SAR and the conclusion of the OPCS SDT with respect to whether each of these requirements should be modified or moved as part of this project. In summary, the OPCS SDT is recommending that three of the identified requirements be incorporated into the new

COM-003-1 Operating Personnel Communications Protocols standard and that the other requirements remain in their respective standards. Please review the table showing the disposition of related requirements identified in the SAR to see if you agree with the team. The OPCP SDT is seeking industry comment on a number a specific issues related to Project 2007-02 Operating Personnel Communications Protocols as identified in the questions below. The OPCP SDT is seeking industry input on:

- **New NERC Glossary terms:** Communications Protocol, Three-part Communication and Interoperability Communication. These terms are proposed for addition to the NERC Glossary to establish their meaning and usage within the electricity industry.
- **Addition of Transmission Service Provider and Load Serving Entity** as applicable under this new standard. The SDT believes incorporating Requirement R18 from TOP-002-2 as Requirement R7 of this draft COM-003-1 is appropriate. The applicability for R18 includes the Transmission Service Provider and Load Serving Entity; therefore the OPCP SDT proposes to add them to the Applicability section of COM-003-1.
- **Communication Protocol Operating Procedure (CPOP):** Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall develop a written CPOP in order to formally establish a set of Communication Protocols for use during real-time operations (R2 through R7). The SDT seeks feedback on whether this requirement is needed.
- **Pre-defined system condition terminology:** The Alert Level Guide document is work that was originally prepared by the Reliability Coordinator Working Group (RCWG) in accordance with a U.S./Canada Task Force Recommendation. Recommendation #20 called for the establishment of clear definitions of normal, alert, and emergency operational system conditions, and to clarify the roles, responsibilities, and authorities of Reliability Coordinators and other responsible entities under each condition.

The SDT recognizes the Alert Level Guide as an important tool for the clear and efficient communication of system condition levels regarding Physical Security, Cyber Security, Transmission Emergencies and Energy Emergencies. The SDT has incorporated the Alert Level Guide into Attachment 1-COM-003-1.

The SDT proposes four system condition alerts instead of the initial three in the RCWG version. The main criterion for splitting the Security Energy Alert (SEA) into two separate system condition alerts (Cyber and Physical) is based on feedback from Field Test participants that recommended separation.

Energy Emergency Alert requirements currently exist in NERC Standard EOP-002-2.1.

There is an ongoing Field Test of the Alert Level Guide among Reliability Coordinators, Balancing Authorities and Transmission Operators. The OPCP SDT is interested in receiving feedback from participants in the Field Test with respect to potential improvements to the Alert Level Guide.

- **Common time zone:** The SDT believes that Interoperability Communications would be enhanced with the use of a common time zone. Central Standard Time was chosen as it is already in use for NERC Time Error Corrections. The Blackout Report cited the need to tighten communication protocols and the SAR includes

consideration of a common time zone to minimize mis-matched time signature issues between control systems especially during an emergency.

- **Three-part Communication:** The SDT will move the existing Requirement R2 of COM-002-2 to this new standard when the RCSDT has completed their development and the industry has approved the revisions. The COM-003-1 Standard proposes to require the use of Three-part Communication whenever a directive is issued during verbal Interoperability Communications. The SDT seeks industry feedback on this proposal.
- **NATO Phonetic Alphabet:** The SDT proposes the standardized use of the NATO Phonetic Alphabet when issuing directives, notifications, directions, instructions, orders or other reliability related operating information that involves alpha-numeric information during verbal Interoperability Communications. During spoken communications certain sounds become difficult to discern because they are audibly similar. The use of the NATO Phonetic Alphabet is not intended for all verbal communications but is required for Interoperability Communications.
- **Pre-determined Line and Equipment Identifiers:** COM-003-1 requires the use of predetermined line and equipment identifiers in Requirement R7 however the Requirement does not stipulate a single/unique identifier as long as all parties mutually agree on the identifier for the line or equipment. The mutual agreement shall be reached in advance of the use of the identifiers as described in the functional entity's CPOP.

The SDT is proposing to retire Requirement R4 from COM-001 and incorporate it into Requirement R2 of this draft COM-003-1. The SDT is proposing to retire COM-002-3 (requiring the use of Three-part Communication) upon the completion of Project 2006-06 Reliability Coordination and incorporate it into Requirement R4 of this draft of COM-003-1. Since Requirement R4 from COM-001-1 carries over unchanged there is no specific question related to it in this Comment Form.

The choice of VRFs was made on the basis of the impact on the Bulk Electric System of a miscommunication especially during an emergency situation. Requirements R2 through R7 are assigned a High Violation Risk Factor due to their potential direct impact on BES reliability. Requirement R1 is assigned a Low VRF due to its administrative nature.

Time Horizons were selected to reflect the period within which the requirements applied. Requirements R2 through R7 must be implemented in real time operations and therefore were assigned a Time Horizon of Real time. A violation of Requirement R1 can be addressed before it has a direct effect on the BES over a longer period and as such the SDT assigned R1 a Time Horizon of Long Term Planning.

The drafting team is posting the standard for industry comment for a 45-day comment period.

The Operating Personnel Communications Protocols Drafting Team would like to receive industry comments on this draft standard. Accordingly, we request that you include your comments on this form by **January 15, 2010**.

**\*Please use the [electronic comment form](#) to submit your final comments to NERC.**

1. Do you agree with the adoption of the following new terms for inclusion in the NERC Glossary and their proposed definitions: Communications Protocol, Three-part Communication, and Interoperability Communication? If not, please explain in the comment area.

Yes

No

Comments:

2. The SDT incorporated TOP-002-2 Requirement R18 into this new standard COM-003-1 as Requirement R7. In TOP-002-2, Requirement R18 applies to the Transmission Service Provider and Load Serving Entity. These entities are now added to COM-003-1. Do you agree with this proposal? If not, please explain in the comment area.

Yes

No

Comments:

3. Requirement R1 of the draft COM-003-1 states, "Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall develop a written Communications Protocol Operating Procedure (CPOP) for Interoperability Communications among personnel responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System. The CPOP shall include but is not limited to all elements described in Requirements R2 through R7 to ensure effective Interoperability Communications." Do you agree with this proposal? If not, please explain in the comment area.

Yes

No

Comments:

4. Requirement R2 of the draft COM-003-1 states, "Each Responsible Entity shall use pre-defined system condition terminology as defined in Attachment 1-COM-003-1 for all verbal and written Interoperability Communications." Do you agree with this proposal? If not, please explain in the comment area.

Yes

No

Comments:

5. Requirement R4 of the draft COM-003-1 states, "Each Responsible Entity shall use Central Standard Time (24 hour format) as the common time zone for all

verbal and written Interoperability Communications.” Do you agree with this proposal? If not, please explain in the comment area.

Yes

No

Comments:

**6. Requirement R5 of the draft COM-003-1 states, “Each Responsible Entity shall use Three-part Communications when issuing a directive during verbal Interoperability Communications.” Do you agree with this proposal? If not, please explain in the comment area.**

Yes

No

Comments:

**7. Requirement R6 of the draft COM-003-1 states, “Each Responsible Entity shall use the North American Treaty Organization (NATO) phonetic alphabet as identified in Attachment 2-COM-003-1 when issuing directives, notifications, directions, instructions, orders or other reliability related operating information that involves alpha-numeric information during verbal Interoperability Communications.” Do you agree with this proposal? If not, please explain in the comment area.**

Yes

No

Comments:

**8. Requirement R7 of the draft COM-003-1 states, “Each Responsible Entity shall use pre-determined, mutually agreed upon line and equipment identifiers during for all verbal and written Interoperability Communications.” Do you agree with this proposal? If not, please explain in the comment area.**

Yes

No

Comments:

**9. Attachment 1-COM-003-1 is based upon work performed by the Reliability Coordinator Working Group (RCWG). Do you have any concerns or suggestions for improvement of the attachment? If yes, please provide in the comment area. (If you are involved in the field testing of the Alert Level Guide please share any comments regarding the use of the guideline as it relates to the field test.)**

Yes

No

Comments:

**10. Are you aware of any regional variances that would be required as a result of this standard? If yes, please identify the regional variance.**

Yes

No

Comments:

**11. Are you aware of any conflicts between the proposed standard and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement? If yes, please identify the conflict.**

Yes

No

Comments:

**12. Do you have any other comments to improve the draft standard? If yes, please elaborate in the comment area.**

Yes

No

Comments:



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

## Standards Announcement

Comment Period Open

November 30, 2009–January 15, 2010

Now available at: [http://www.nerc.com/filez/standards/Op\\_Comm\\_Protocol\\_Project\\_2007-02.html](http://www.nerc.com/filez/standards/Op_Comm_Protocol_Project_2007-02.html)

### Project 2007-02: Operating Personnel Communications Protocols

The Operating Personnel Communications Protocols Standard Drafting Team is seeking comments on the following documents **until 8 p.m. EDT on January 15, 2010**:

- Standard COM-003-1 — Operating Personnel Communications Protocols
- Implementation plan
- Disposition of Related Requirements Identified in Standard Authorization Request (SAR)

### Instructions

Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Lauren Koller at [Lauren.Koller@nerc.net](mailto:Lauren.Koller@nerc.net). An off-line, unofficial copy of the comment form is posted on the project page: [http://www.nerc.com/filez/standards/Op\\_Comm\\_Protocol\\_Project\\_2007-02.html](http://www.nerc.com/filez/standards/Op_Comm_Protocol_Project_2007-02.html)

### Next Steps

The drafting team will draft and post responses to comments received during this period. The drafting team will also determine whether to post the standard for an additional comment period or seek approval from the Standards Committee to proceed to balloting.

### Project Background

The purpose of this project is to require that real-time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.

In the development of this proposed standard (as requested in the SAR), the drafting team reviewed communication protocols in other NERC standards and considered the use of alert level guidelines and three-part communications to achieve consistency across regions. The proposed standard is designed to ensure that reliability-related information is conveyed effectively, accurately, consistently, and timely to ensure mutual understanding by all key parties, especially during alerts and emergencies.

### Applicability of Standards in Project

Transmission Operator  
Transmission Owner  
Balancing Authority  
Reliability Coordinator  
Generator Operator  
Distribution Provider  
Transmission Service Provider  
Load Serving Entity

### Proposed Glossary of Terms Change (new definitions)



Communications Protocol  
Three-part Communication  
Interoperability Communication

### **Standards Development Process**

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance,  
please contact Shaun Streeter at [shaun.streeter@nerc.net](mailto:shaun.streeter@nerc.net) or at 609.452.8060.*

**Individual or group. (71 Responses)**  
**Name (44 Responses)**  
**Organization (44 Responses)**  
**Group Name (27 Responses)**  
**Lead Contact (27 Responses)**  
**Question 1 (68 Responses)**  
**Question 1 Comments (71 Responses)**  
**Question 2 (67 Responses)**  
**Question 2 Comments (71 Responses)**  
**Question 3 (70 Responses)**  
**Question 3 Comments (71 Responses)**  
**Question 4 (67 Responses)**  
**Question 4 Comments (71 Responses)**  
**Question 5 (68 Responses)**  
**Question 5 Comments (71 Responses)**  
**Question 6 (67 Responses)**  
**Question 6 Comments (71 Responses)**  
**Question 7 (68 Responses)**  
**Question 7 Comments (71 Responses)**  
**Question 8 (66 Responses)**  
**Question 8 Comments (71 Responses)**  
**Question 9 (58 Responses)**  
**Question 9 Comments (71 Responses)**  
**Question 10 (57 Responses)**  
**Question 10 Comments (71 Responses)**  
**Question 11 (57 Responses)**  
**Question 11 Comments (71 Responses)**  
**Question 12 (63 Responses)**  
**Question 12 Comments (71 Responses)**

Group
E.ON U.S. LLC
Brent Ingebrigtsen
Disagree
For the Communication Protocol definition, please clarify if "written" includes electronic (email.) Change the definition of "Interoperability" to "Emergency" Entities should not be required to use 3 part communications on a routine basis, only on emergency issues.
Disagree
As the requirement already exists it is redundant to incorporate it into COM-003. The incorporation not only exposes a responsible entity to double jeopardy, it now exposes Transmission Service Providers and LSEs to COM-003 requirements that should not apply to these entities. TOP-002 addresses planning ahead of the operating hour whereas COM-003 addresses communication during real-time operations. In the absence of evidence that the lack of common identifiers is an imminent and continuing risk to BES reliability, it does not make sense to have operators addressing urgent, real-time situations bear significant penalty risk should they refer a BES element by something other than a newly established common identifier. Is it the intent of the requirement that the common identifiers be the same for all neighboring parties, all of whom must "agree" to the identification? If not, then an element might be referred to by one identifier with Party A, another with Party B etc. which might well defeat the purpose of the requirement. If it is required that there be a single identifier, then all neighbors would have to agree upon the identifier constrained as each may be by, for example, the formatting limitation of their respective SCADA/EMS systems. Cost to modify software to accommodate common identifiers could be significant and NERC should weigh these costs and the aforementioned operational risks against the perceived incremental improvements to the BES reliability.
Disagree
Requiring production of a document that merely repeats Requirement 2-7 of COM-003 does not further BES reliability. Requirements R2-R7 set forth all that such a document would contain. Stating

that the CPOP should include but not be limited to R2-R7 is nonsensical. What additional issues should the CPOP be required to address and why aren't those issues the subject of a COM-003 requirement?
Disagree
The attachment adds a whole new lexicon for BES operators. E.ON U.S. suggests integrating attachment 1 and the relative alert levels into the EOP standards. The purpose of COM-003 indicates this standard is to ensure understanding of information during emergency alerts and emergency situations and not to establish the conditions, required notification, or levels of emergency alerts. While the attachment has been identified as a product of the RCWG it is unclear whether it has been reviewed and approved through the normal NERC and industry vetting.
Disagree
If it is the intent that the requirements of this standard apply not only to control room operators but field personnel (line crews, substation crews, etc.) then E ON US is not in favor of using a common time zone nation-wide. The confusion that this change could create in real-time operations outweighs the BES reliability benefit E.ON US would also like clarification that this requirement does not apply to control systems or elements thereof that may log equipment operations. The background information above suggests this possible interpretation.
Disagree
E ON US believes more specificity is required as to what constitutes a "directive". Moreover, this requirement is redundant in light of COM-002 R2 for normal operations. If COM-003 is only applicable to emergencies, then this R5 would appear reasonable. E.ON U.S. suggests editing R5 and M5 as follows: Each Responsible Entity shall use Three-part Communications when issuing and/or receiving a directive during verbal Interoperability Communications
Disagree
The entire standard should only apply to emergency operations, not all communications. If it is the intent that the requirements of this standard apply not only to control room operators but also field personnel (line crews, substation crews, etc.) then E ON U.S. is not in favor of using the NATO phonetic alphabet. The confusion that this change could create in real-time operations outweighs the BES reliability benefit. E ON U.S. suggests that if the objective is to avoid confusion over similarly pronounced words, use of an ad-hoc phonetic alphabet would more easily address the concern. E ON U.S. is also concerned that the attention paid to "how" orders are given and acknowledged may well detract from "what" it is responsible entities are attempting to do. Are responsible entities supposed to spell out each number and word using the phonetic alphabet? The drafting team should be more specific as to what is meant by "alpha-numeric information."
Disagree
In the absence of evidence that the lack of common identifiers is an imminent and continuing risk to BES reliability, it does not make sense to have operators addressing urgent, real-time situations that bear significant penalty risk should they refer to a BES element by something other than the common identifier. The operator focus at such times should be on resolving the situation not avoiding penalties over nomenclature. Is it the intent of the requirement that the common identifiers be the same for all neighboring parties, all of whom must "agree" to the identification? If not, then an element might be referred to by one identifier with Party A, another with Party B, and so on, which might well defeat the purpose of the requirement. If it is required that there be a single identifier, then all neighbors would have to agree upon the identifier constrained as each may be by, for example, the formatting limitation of their respective SCADA/EMS systems. Cost to modify software to accommodate common identifiers could be significant and NERC should weigh these costs and the aforementioned operational risks against the perceived incremental improvements to the BES reliability.
Disagree
E.ON U.S. has many concerns with this proposed attachment. The use of color coding and multiple types of alerts adds unnecessary levels of complexity. Any proposed alert level should be consistent throughout the suite of reliability standards, e.g level 1,2,3. Also, as previously noted in our comment to question 4 above, E.ON U.S. suggests integrating attachment 1 and the relative alert levels into the EOP standards and focusing the COM standards on the requirements of communications protocol.
Disagree

Disagree
If the requisite protocols are intended to be followed by all field personnel, applicability of these requirements to Distribution Providers could run afoul of FPA Section 215(a) codified in 18CFR39.1.
Disagree
This standard should only apply to alerts and emergencies. E.ON U.S. suggests eliminating "especially" in the purpose statement of COM-003-1. During emergency situations, operational focus on the semantics of how communications are to occur does little to enhance the reliability of the system. High VRFs with Severe VSLs may add stress and distraction to operation personnel during times of emergency thus potentially harming, not improving reliability.
Individual
James Sharpe
South Carolina Electric and Gas
Agree
Agree
Agree
Agree
We agree with the proposal, however we feel that the color system should be evaluated to better distinguish the type of attack for example using P-YELLOW for physical vs. C-YELLOW for cyber instead of just "YELLOW" for both.
Disagree
We feel that time zones should be consistent throughout all standards and regulatory reporting requirements(eg. TADS)
Disagree
The term "directive" should be changed to "Reliability Directive" as defined in COM-002-3.
Disagree
We believe this should only be required when issuing Reliability Directives.
Agree
Agree
See question 4.
Disagree
Disagree
Agree
The SDT should consider vertically integrated utilities, where communication between functional entities is internal.
Group
Electric Market Policy
Mike Garton
Disagree
We do not agree with the adaptation of the proposed term "Interoperability Communication". As defined, it is limited to the communication of information to be used to change the state or status of a BES element or facility. That definition is too limiting in that there are many types of reliability-related information that need to be clearly communicated that do not lead to changing the state of a BES facility. For example; information related to ratings, information related to the results of studies, information related to data errors or loss of data, etc. If the term "Interoperability

Communication" is to be retained, we strongly suggest a name change. The word "interoperability" is widely used to refer to the ability of a system to work with or use the parts or equipment of another system. For example please see the current standards development efforts identified in the NIST Framework and Roadmap for Smart Grid Interoperability Standards available at [http://www.nist.gov/public\\_affairs/releases/smartgrid\\_interoperability.pdf](http://www.nist.gov/public_affairs/releases/smartgrid_interoperability.pdf). Using the term "interoperability" to refer to reliability-related human communications could be confusing to regulators, compliance personnel, auditors, and many others who have to deal with a variety of standards.

Disagree

In our experience, neither the TSP nor the LSE provide or receive information about specific lines or equipment in real-time. Therefore, requirement R7 should not apply to them absent clear evidence that a realistic (not hypothetical) threat to reliability would exist if they are omitted. We do not think that such a threat would exist. Applying R7 to TSPs and LSEs would only cause them grief and further burden the compliance staffs of the regional entities for no appreciable benefit.

Disagree

We agree that communications procedures are necessary, but we do not agree with several of the requirements proposed to be addressed in the elements of the CPOP. See our comments on specific requirements elsewhere in our responses. We do not see the need to create a CPOP that includes requirements R2 through R7 given that each requirement spells out how and what is to be communicated. We could agree that a CPOP may be needed for Interoperability Communications that are not addressed in R2-7.

Disagree

We object due to the following reasons; 1 - There are 3 versions of Attachment 1-COM-003-1 which is potentially confusing. We suggest separating into 3 attachments, one for each type of notification. 2 – The level(s) identified in the notification text are at odds with the condition (color vs numerical). It is suggested that the standard either use to Condition (color) or the level (numerical). 3 – None of the Operating State Alert Levels in Attachment 1 appears to address Energy Emergency Alerts (EEAs). The note in the "Attachment 1-COM-003-1 defines normal, alert, and emergency operating conditions as they relate to Transmission Loading, Physical and Cyber Security. These definitions for Transmission Loading, Physical and Cyber Security Alert states align with the Emergency Energy Alert (EEA) states (as already described in NERC Reliability Standard EOP-002-2.1). The time frame for declaration of these Alert states shall be consistent with the approach used to declare EEAs and would normally apply to Real Time declarations and not forecast conditions." This seems to limit use of Interoperability Communications to only events where there exists either a physical or cyber threat, or where an IROL can't be mitigated. This emphasizes the confusion as described in item 2 above where the EEA levels in EOP-002-2.1 uses numerical values (i.e. EEA Level 1) without the colored conditions. We recommend adding a new section to Attachment 1 'Operating State Alert Levels' as: 'Reliability Coordinator Notifications for Energy Emergency Alerts.' 4-Attachment 1 pertains specifically to Operating State Alert Levels and says nothing about the communication of information to be used to change the state or status of a BES element or facility (which is the SDT's proposed definition of Interoperability Communications). Therefore, it is not appropriate to require that all verbal and written Interoperability Communications use the pre-defined terminology in Attachment 1. Only those communications concerning Operating State Alert Levels should be required to use that terminology. By the proposed definition, such communications are not Interoperability Communications since the information is not used to change the state or status of a BES element or facility. The SDT needs to revise this requirement to clarify that it pertains only to communicating the Operating State Alert Levels and nothing more.

Disagree

Any confusion about what time is being verbally communicated should be cleared up by three-part communications. There should be no confusion about what time is being communicated in writing as long as the time zone and AM/PM designation are included. Besides, many entities exchange written information via web-enabled applications that allow the users to configure their interface to show time in whatever format and time zone they prefer. This eliminates confusion. Operators will continue to use local time in their communications with field personnel, support staff, and management, and we see no demonstrable reliability-related need to require every operator in North America to have to convert their local time to CST in their communications with other

operators. However, if the SDT feels a standard time must be adopted, it should be GMT as this is the time that used by all 'true time' devices.
Agree
As currently defined, Three-part Communications presumes the second party will repeat the information back "correctly." Failure to do so is assigned a High VRF and a Severe VSL. The practical application of Three-part Communication involves a sender communicating information, a receiver repeating back the information, and the sender verifying the repeat back is either correct or incorrect. If the repeat back is incorrect, the process repeats until both parties have the same understanding of what is being communicated. This iterative process needs to be addressed within the definition of Three-part Communications.
Disagree
Use of this adds a lot to verbal communication but has little value. Where either the issuing or receiving party is unsure as to which letter was used, their choice of word to associate with the alphabet need not be dictated by a specific phonetic alphabet. If I am unclear, whether I ask "did you say 'F' as in Frank or 'F' as in Foxtrot, it is my belief that we will both know that I heard the letter F not the letter S. Using Frank instead of Foxtrot will result in a violation of Requirement R6 which carries a High VRF and a Severe VSL; even though there would be no impact on effective communication. There is no compelling reason to require every operator in North America to learn and use the NATO phonetic alphabet. It would be overkill to do so, and it could create some really bizarre conversations. For example, consider a TOP in the eastern time zone who calls his RC (also in the eastern time zone) at 10:00 A.M. to confirm that a line that tripped earlier that morning will be ready to switch back in service at 10:35. Taken to the extreme, a strict interpretation of R6 and R4 (the CST requirement) would say that the TOP operator would have to state the estimated time of restoration as "niner tree fife, Alpha Mike, Charlie Sierra Tango". There is no need for that.
Agree
While we agree conceptually, it is our experience that Interoperability Communications concerning BES elements do not usually specifically identify the element or facility when the BA, RC or TOP is communicating with the TSP, LSE or GOP. This may have to do with concerns about Standards/Codes of Conduct or may be because specific identification of the element or facility isn't required in order to communicate action(s) that entity is required to take.
Agree
See response to question 4. In addition, there seems to be an inconsistency between the inclusion of Attachment 1 and what is stated in the document posted with the standard entitled Disposition of Requirements Identified in the SAR for Operations Communications Protocols as Possibly Needing either Modification or Movement. The document states that the standard focuses on "how to" communicate rather than on specified scenarios of "to whom" or "when to" communicate; however, Attachment 1 does just the opposite.
Agree
Some ISO/RTOs have market rules which allow participants to elect NOT to follow instructions issued by their market operator (who may also perform BA, TOP and/or RC entity functions) unless an Emergency exists.
Agree
PJM members are only required to comply during an Emergency.
Agree
The VRFs for R2-R7 are all "High", and the VSLs are all "Severe". That is too harsh. Failing to comply with one of the requirements does not automatically mean that a miscommunication occurred that caused a reliability problem. There should be a "Moderate" VSL for failure to comply with a requirement but no miscommunication occurred. There should be a "High" VSL for failure to comply with a requirement that caused a miscommunication but resulted in no violation of another reliability standard. The "Severe" VSL should only apply to failures to comply with a requirement that caused a miscommunication that lead to a violation of another reliability standard. If approved, this standard will require a number of distracting things be added to each entity's control center with little value added. Clock – set to the 'standard time' Attachment 1 – COM-003 (all 3 versions) Attachment 2 – COM-003
Individual

Martin Bauer
Bureau of Reclamation
Agree
Agree
Agree
Disagree
Reclamation does not agree with the Attachment 1 condition color coding as it will conflict with the DHS system of notification of change in threat condition. The three color system is unique to the notifications issued by DHS. Use of that color system is reserved by the DHS. Federal agencies are required to perform specific tasks when DHS issues alerts or changes the threat condition. Only DHS can change the threat condition. The concept needs to be revised considerably to avoid the conflict or create a potential security issue.
Agree
Agree
Agree
Agree
Agree
Agree
Disagree
As indicated in the previous response the standard conflicts with DHS notifications.
Agree
Group
Midwest ISO Standards Collaborators
Jason L. Marshall
Disagree
The definition of Three-part Communication applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct. We suggest the definition be revised as follows: "A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it." These principles are included in Requirements R2 and R3 in the recently issued draft Standard COM-002-3 in Project 2006-06. We believe the term "Interoperability Communication" creates confusion within the industry and contradicts the work by RTO and RC SDT in Project 2006-06 that limits the requirement to use three-part communications when issuing Reliability Directives (defined in Project 2006-06) that address anticipated and actual emergency conditions. Additionally, it appears that this definition would encompass all verbal

communications and, as such, we question the need for such definition. While using three-part communications during routine operations may be a best operating practice, we do not believe that it is so critical to reliability that it becomes an enforceable requirement for routine operating instructions. Rather we believe the enforceable requirement should be limited to require three-part communications during actual emergency and anticipated emergency conditions only. Both element and facility are used in the Interoperability Communication definition and are NERC defined terms. Did the drafting team intend that the NERC definitions should apply? Then the terms need to be capitalized. In addition, the term "entities" is confusing and needs to be defined.

Disagree

The SDT actually expanded Requirement R18 of TOP-002-2 by adding the term "equipment". In any event, this Requirement represents a "how" and not a "what". In general, standards should be focused on "what" not how. The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the use of three-part communication protocol until the message has been correctly spoken and comprehended.

Disagree

This proposed communication protocol is redundant to Requirements R2-R7 and should not be included in this Standard. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions. The NERC BOT has approved pursuing the Performance-based Reliability Standard Task Force's recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to eliminate administrative requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. We – and the industry as a whole based on the response to the Task Force – do not support such an approach. We suggest deleting this Requirement from the Standard.

Disagree

It is not clear what value there is in identifying these alert levels. There does not appear to be any differentiation in actions taken based on the alert levels. Why not just state the number of substations attacked, etc? Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the listed entities such as Distribution Providers and Generator Operators cannot have access to these systems due FERC standards of conduct requirements. Attachment 1 and R2 are not consistent with the definition of Interoperability Communications. By definition, Interoperability Communication pertains to all communications about how entities change the state of the BES (not just about physical or cyber attacks). Attachment 1 is only about notifying of what physical and cyber attacks and transmission emergencies have already happened to the BES.

Disagree

There is no reliability need to use a common time zone for communications. There is already a requirement to use hour ending for scheduling purposes, inadvertent accounting, CPS and other standards where needed. There is no additional reliability need to use a common time zone. The time zone should be identified in the communication. Use of CST will actually cause confusion and significant, unnecessary costs with no foreseeable reliability benefit. Some of the costs will arise to change systems such as RCIS, IDC, scheduling and E-Tag systems, etc.

Disagree

Based on the definition of Interoperability Communications, R5 implies that three-part communications is required to communicate routine operating instructions. We believe this Requirement contradicts the work that has been done and substantially progressed through two other SDTs and creates confusion within the industry. We believe this Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion. We support the work being done by the RC SDT and RTO SDT in Project 2006-06 which would define a Reliability Directive based on the determination of the person giving such an order. We believe it should be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger and



easily auditable and measureable. R5 is not consistent with the Functional Model. Only the RC, BA, and TOP can issue directives.

Disagree

While this Requirement may represent a good utility practice in certain situations, it is not necessary to be used in all verbal Interoperability Communications and is certainly not necessary to be included as an enforceable Requirement. Imagine the situation in which an operator says "A as in apple" instead of using the NATO Alpha. Even though the listener should clearly be able to discern the correct meaning, the speaker's company could be sanctioned even if the correct actions were taken as a result of the clear communication. There is no reliability need for this Requirement.

Disagree

This may represent a good utility practice but it is not necessary to be included as a Requirement. The key question is: "Do the companies' personnel understand one another?" If I know that my company refers to a tie-line as Alpha and my neighboring company calls it Beta, I know what he means when communicating to me. That is all that matters. This is a "how" based Requirement that should be eliminated.

Disagree

It is not clear what value is realized by declaring an alert status particularly with regard to cyber and physical attacks. There does not appear to be any differing actions taken based on the alert status. Given that no differing actions are taken for cyber and physical attacks, it seems it would be more beneficial to use specific information such as 12 substations have been physically or cyber attacked. This is more meaningful than issuing a red alert that would only indicate more than one site has been attacked. Furthermore, we question the value of communicating the physical and cyber alerts. How does this notification help the BES reliability? Consider the following example. One BA in Oklahoma is 34,323 sq miles. Communicating that an attack occurred in the BA and RC tells other operators that somewhere in Oklahoma an attack occurred. This notification does not present any information that could require actions on the operators' parts and will only generate phone calls for more information. Furthermore, PSE and CSE is a type of sabotage which is reported in CIP-001 R2 already. TEA Alerts are already covered in IRO-006-East-1, IRO-009, IRO-010, IRO-014.01 R2. Attachment 1 contains a conflict. The last sentence of the opening paragraph of Attachment 1 reads, "The time frame for declaration of these Alert states shall be consistent with the approach used to declare EEAs and would normally apply to Real Time declarations and not forecast conditions." In Transmission Emergency Alerts Condition Yellow, Orange and RED: The Reliability Coordinator or Transmission Operator foresees or is experiencing conditions where all available generation resources are committed to respect the IROL and/or is concerned about its ability to respect the IROL. Foresees is a forecast condition. In condition Orange and Red for TEA Level Two/Three, the initial notification requirements are redundant with IRO-006-East-1 R3.2. Under the Make Final Notifications, is curtailed intended to mean canceled or terminated? The term Curtailed in operations generally means cuts for schedules/tags. EEA's use terminated. We recommend using terminated. Distribution Service Providers should be Distribution Providers to be consistent with the Functional Model.

Disagree

Disagree

Disagree

Disagree

Agree

We believe that the existing standard COM-002 is better than this proposed Standard. This Standard actually causes more confusion and ambiguity and creates unnecessary or overly cumbersome requirements that add little or no value to reliability. Additionally, we cannot understand how all requirements but R1 have been determined to have a HIGH VRF when, many of them are dictating HOW communications should take place and not when and why or what. COM-002 retirement does not appear to be consistent with the direction of the RC SDT in Project 2006-06. The RC SDT is adding requirements. More coordination is certainly required between these two teams. In addition, as stated earlier, this Standard focuses on "how" certain tasks should be performed and conflicts with NERC's position of pursuing performance based and results based Standards. Based on these considerations, we suggest that work on this Standard be stopped until work on Project 2006-06 has been completed and approved. This approach is consistent with the August 2003 Blackout

Recommendation #26 which actually focused on communications during emergencies which is the scope of Project 2006-06. After Project 2006-06 is completed, a determination can be made if this Standard is even required.

Individual

Kasia Mihalchuk

Manitoba Hydro

Disagree

Comments: Agree to the adoption, but not the definitions as defined. 1. Communication Protocol - Remove "written" from this definition. Create a new standard that defines "written" protocol, i.e.: express "24 hour format", common date format, etc. a) Using "written" in this definition and which is also used in COM-003-1 R2, R3, R4 and R7 clouds both the Definition and the Standard. The majority of COM-003-1 requirements also focus on the spoken word, such as the use of English, Phonetics and Three-way Communication. b) "Communications" in the Definition infers verbal communication especially when examining the COM-003-1 Standard where its purpose is "timely information in alerts and emergencies". c) When COM-001-1 R4 "English" and COM-002-2 R2 "Three-way" requirements are amalgamated into COM-003-1, the COM-003-1 standard will now strengthen the focus on the process of verbal communications. d) COM-003-1 R2 "Uniform Line Identifiers" This requirement would be used in real time reliability situations, alerts and emergencies. The "written" communications would be used after the fact and therefore "written" does not belong in the definition. e) In COM-003-1 R3 "use English" The purpose of this standard is convey information effectively during alerts and emergencies. "Written" would be used after the fact and therefore does not belong here. f) In COM-003-1 R4 "24 hour format" "Written" could be reserved for a new standard, which could which define "24 hour format" along with a common date format which is also needed. g) In COM-003-1 R5 "Three-part Communication" Focuses entirely on the spoken word and appears appropriate that "written" is not used here. h) In COM-003-1 R6 "Phonetics" Focus on the spoken word and would never be used to empathize a written word and is appropriate that is not used here. i) COM-003-1 R7 states "Operating State Levels" All communications for broadcasting these alerts would typically be verbal. "Written" communications would be after the fact. 2. Three-part Communication - Use COM-002-2 R2 requirement as an improved basis for the "Three-part Communication" glossary term and define each part of the three parts separately. a) This new NERC Glossary term is better defined in the COM-002-2 R2 "Three-part communication" requirement. "Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall issue directives in a clear, concise, and definitive manner; shall ensure the recipient of the directive repeats the information back correctly; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings." b) The current glossary term is overwhelming and confusing with the "back and forth" exchange of responsibilities. More thought process is consumed trying to break down the definition into usable portions, then comprehending the definition itself. c) The glossary term should be more clearly defined by specifying each of the three part communication protocol; i. An initiating party verbally issues directives in a clear, concise and definitive manner. ii. The receiving party shall replicate the intent of the directive and iii. The initiating party shall acknowledge to their satisfaction that the receiving party fully understands and is capable of caring out the directive. 3. Interoperability Communication - Define further and/or define entities. Expand "interoperability" and add and define "entity" a) Using "interoperability" and "entities" in same glossary term, clouds the definition especially when this glossary term is used to help clarify requirements in COM-003-1. There are at least three possible levels of "Interoperability" from a Control Center point of view; i. Internally, within a utility. -Communication between the Balancing Authority and Transmission for reliability purposes (within control center). -Between BA, TO, TOP, GO, TSP, LSE and DP, such as between the sending and receiving end of an HVDC terminal. ii. Externally, between neighbouring utilities. iii. Externally, between the Balancing Authority and their Reliability Coordinator. For a Reliability Coordinator two more levels of "Interoperability" could be added: iv. Communication between Reliability Organizations. v. Communication between the three major interconnections. b) Though the glossary definition surely includes all of the above, it does not clarify that and becomes immediately clouded when interpreting COM-003-1 R1 where "personnel" is used for real time control for effective Interoperability Communication. 1. Personnel – individual responsible for the operation of the interconnected bulk electrical system (real time, planning, etc) c) Adding and defining Entity in the glossary as per suggestions; i. "Entities" are used commonly in the Reliability Standards and

encompasses a lot of different contexts. ii. "Entity" defined by a dictionary includes a comprehensive range such as: -body -Unit -Group -Thing -Article iii. Entity in a interoperable power system: - BA, TO, GO, TSP, LSE, etc - Neighbouring BA, Control Area, Neighbour (Utility) - Reliability Coordinator, MISO, Reserve sharing Group, etc - NERC, MRO, WECC, NPCC, ERCOT, etc - Western Interconnection, Eastern Interconnection, ERCOT.

Disagree

Leave TOP-002-2 R18 in its original location. 1)"Mutual line and equipment identifiers" should not be moved from TOP-002-2 and placed in COM-003-1 R7. TOP-002-2 Standard's focus is "Planning, coordination and procedures" whereas: • R1 is "Maintain current Plans" • R2 is "Participate in planning and design" • R3 is "LSE coordinate with Host" • R4 is "BA coordinate with neighbours" • R5 is "plan to meet schedules" • R6 is "plan to meet N-1" • R7 is "plan to meet capacity and reserves" • R8 is "plan to meet VAR limits" • R9 is "plan to meet interchange" • R10 is "plan to meet IROL, SOL's" • R11 is "perform studies for SOL's" and "utilize identical SOL's for common facilities" • R12 is "include known SOLs or IROLs" • R13 is "GO shall verify generation capability" • R14 is "GO shall notify of changes" • R15 is "GO shall provide generation forecast" • R16 is "shall notify RC of changes" • R17 is "notify RC of R1 to R16" • R18 is "shall use uniform identifiers" • R19 is "maintain computer models for planning" 2)TOP-002-2 R18 "shall use uniform identifies" appears to be more strongly related to where it already exists and would have more impact to have it moved between R2 and R3. 3)Uniform identifiers are determined in the planning stages and are common knowledge to entities by the time they are in service and not a real time communication issue. a.Having TOP-002-2 R18 moved to COM-003-1 R7, takes the purpose of the COM-003 standard outside its context of "timely convey reliability information . . . especially during alerts and emergencies". b.COM-003-1's purpose and all its requirements directly relate to real time communication. 4)TOP-002-2 R11 "identical SOL's for common facilities" complements R18 "shall use uniform identifiers" and again are both planning requirements. 5)The unofficial comment for "Pre-determined Line and Equipment Identifiers" indicates that mutual agreement of these identifiers are to be reached in advance, thus agreeing with above. Leave R18 in TOP-002-2, but possibly move it between R2 and R3, thus R2 in COM-003-1 would be removed. Regarding adding TSP and LSE, no comment added.

Agree

Yes, with comments 1)In this requirement "Interoperability Communications between personnel responsible for real time" becomes clouded when compared to the "Interoperability Communications" definition that states "exchange information between entities". a.Improving the "Interoperability Communication" definition as per early suggestion should clarify this. 2)Changing the order of requirements would make the flow of the standard smoother. a.Since this standard is mostly designed for real time communication, the requirements should pyramid down. • R1 is fine. • R2 should be "English" • R3 should be "NATO" • R4 should be "Time" • R5 should be "Three-part communications" • R6 reserved for "Full name identification" (See below for clarification) Conclusion: This requirement is acceptable as long as the enclosed comments are considered.

Disagree

Move this new requirement R1.2 in COM-002-2. 1)COM-003-1 R2 "Pre-defined system condition terminology" are all planned definitions. a.COM-003-1 purpose is to "convey information effectively" meaning the use of English, NATO, three-part communication, 24 time format are all verbal aspects to accomplish this purpose and not suited to pre-defined or planned items. 2)COM-003-1 R2 appears more appropriate and relevant placed in COM-002-2. COM-002-2's Purpose is "capabilities for addressing real time emergencies and to ensure communications by personnel are effective". a.Placing "Pre-defined system condition terminology" in COM-002-2 after R1.1 as R1.2 appears to have more of a chronological approach. i.R1.1 states "conditions that could threaten" ii.R1.2 use "pre defined system conditions" Conclusion: Remove COM-003-1 R2 and replace in COM-002-2 as R1.2

Disagree

As per below. 1)The 24 hour format will certainly reduce the confusion of AM and PM and at present seems to be the current best practice for all entities so should not be a major change. 2)Examining the definition of "Interoperability Communications" means that there is and will be real time communications with entities in other times zones, thus it is assumed that this being an NERC standard is enforcing that all other time zones (PST, MST, EST) will be using CST when communicating with interoperability. a.If this is the case, it appears that the other time zones (PST, MST and EST) must make effort to modify their local time to synchronize with CST. b.This brings to

point that when interoperability communication is used, this fact must be mentioned, instead of 13:53, it should be 13:53 CST. 3)Adding CST to verbal time formats will be difficult to implement, so maybe a statement confirming the time zone should be appropriate each time interoperability communications is used when required. Conclusion: 24 hour format is fine, further clarify that all other time zones must use CST.

Move requirement as planned but keep Three-part Communication definition as stated originally in COM-002-2 R2. 1)Reading the "Disposition/Explanation" it appears that COM-002-2 R2 will eventually be moved into COM-003 R5. This appears logical as COM-002-2 ensures staffing and communication capabilities. a.The statement in COM-002 R2 is reasonably descriptive, but loses its depiction when replaced with statement found in COM-003-0 R5. 2)Regarding COM-002-2 R2, Manitoba Hydro interprets part 2 (repeat back correctly) of Three-part Communication to mean; that the party receiving the directive has clearly received it in its full form and understands completely what is expected of him and to convey this to the sender; i.We delineated "repeating back correctly" to mean any of the three protocols as acceptable: 1.Actually repeating back the directives correctly. 2.The recipient verifies the issued directive(s) are identical to a copy they have at hand. Example for clarification: "The steps you have read are identical to what I have here on Order Number 1234, Revision 5 and I understand I can proceed with steps 3,4 and 5". 3.The recipient summarizes the issued directive(s) to a copy they have at hand. Example for clarification: "I will do step 8, open all 115 kV disconnects as read to me and are identical to the order 1234 Revision 5 that I have at hand". 4.This all could be resolved by using the term "repeat back the intent of the directive". This statement could allow the operator to determine if the recipient fully understands and is capable of carrying out the directive, by the method of the recipient reply (any literate person can read back a written statement, but do they understand what they are doing and the consequences). ii.The purpose of protocols 2 and 3 are to alleviate potential of "lose of attention" due to the tedious receptiveness of long written directives. Summarizing or verifying these types of written orders will maintain the interest and attention to the detail. iii.Verbally detailing a directive at least once in any single conversation by either party should be sufficient to fulfill the first two parts of Three-part Communications (Clear and concise, repeat back). iv.Part 3 (acknowledge to satisfaction of the originator) could ensure that the person receiving the directive is capable and competent of carrying out the directive. v.None written (changes, revisions, real time emergency switching) and radio communication directives are a must for repeating back and are covered by other local policies. Part Two "Three Part Identification" 3)This new Standard COM-003-1 should contain a requirement for "Three Part Identification" or more commonly known as "Full Name Identification". This is not addressed fully anywhere in the NERC standards. 4)We have defined "Three Part Identification" based loosely on common industry best practice into three parts: 1.Location – Company Name, Control Room Name, etc. 2.Area of responsibility or authority (function) – The operator at the desk must identify his position such as Balancing Authority or Distribution Operate, etc. 3.Identification – Unique identifier such as first and last Name.

Disagree

To using NATO full time 1)Being trained or being familiar with NATO Phonetics is a great idea, but should only be implemented, in bad communication connections, or upon request due to accents, quiet voice, fast talk, too loud, unusual request, etc. 2)Communication technology for the most part is exceptionally clear, and the regular use of NATO Phonetics would be difficult to implement and time consuming to use. The RC and neighbouring entities are familiar with common terminology between each other.

Disagree

Move this new requirement R1.3 in COM-002-2. This is similar to Question 4 and should be treated in the same way: (This requirement is moved from TOP-002-2 R18) 1)COM-003-1 R7 "Pre-determined, mutually agreed upon line and equipment identifiers" are all planned definitions. 2)COM-003-1 purpose is to "convey information effectively" meaning the use of English, NATO, three-part communication, 24 time format are all verbal aspects to accomplish this purpose and not suited to pre-determined or planned items. a.COM-003-1 R7 appears more appropriate and relevant placed in COM-002-2. COM-002-2's Purpose is "capabilities for addressing real time emergencies and to ensure communications by personnel are effective". 3)Placing "Pre-determined, mutually agreed upon line and equipment identifiers" in COM-002-2 after R1.1 as R1.3 appears to have more of a chronological approach. i. R1.1 states "conditions that could threaten" ii. R1.2 use "pre defined

system conditions" iii. R1.3 use "pre determined equipment identifiers" Conclusion: Remove COM-003-1 R7 and replace in COM-002-2 as R1.3

Disagree

1)Attachment 1-COM-003-1 qualifies for all three requirements stated below and would be better suited in this Standard. a.CIP-001-1 Purpose: "sabotage to be reported to appropriate bodies" and includes the following requirements; R1. Procedure for recognition R2. Procedure for communication R3. Response guideline 2)OR COM-003-1 Attachment 1 could also be placed in COM-002-2. COM-002-2's Purpose is "capabilities for addressing real time emergencies and to ensure communications by personnel are effective". 3)COM-003-1 purpose is to "convey information effectively" meaning the use of English, NATO, three-part communication, 24 time format are all verbal aspects to accomplish this purpose and not suited to pre-defined or planned items. 4)COM-003-1 Attachment 1 also defines Physical Security threats and notifications which fulfills the purpose of COM-002-2 more thoroughly (then in COM-003-1) and could even be made as an requirement.

Disagree

Disagree

Disagree

Group

Transmission Owner

Silvia Parada-Mitchell

Agree

Disagree

This requirement is already covered by TOP-002. If the TOP-002 standard is deemed deficient because certain entities have been excluded or language appears to be missing, the changes need to occur to TOP-002 as opposed to copying and revising the existing requirement elsewhere. This would ensure that compliance oversight, understanding, and adherence goals are unencumbered by unnecessary redundancies. Moreover, this would ensure that the industry continues to re-enforce standards with changes that are within the scope of their original reliability purpose. The latter is in line with one of the core objectives of the Performance-based Reliability Standards Task Force's recommendations to focus on identifying and aggregating duplicated requirements.

Disagree

FPL agrees with the reliability goal of establishing a set of agreed upon communication standards to ensure consistent communications particularly for actual and anticipated emergency coordination needs. FPL also believes that existing coordination/communication standards already fulfill this objective and that it might be of "training" or "reference" value to aggregate those requirements to a single document or view. However, FPL is not convinced that this requirement, largely administrative in nature, will result in marked improvement in reliability. Organizations tend to take the path of least resistance and unless forced out of that path with extensive and granular guidance on what CPOPs should contain above and beyond existing standards or contract language, CPOPs would likely become a simple patchwork of requirements constructed out of existing NERC standard language and contract language. Standards need to be clearly implementable before they are approved yet important implementation questions do not appear to have been answered. (1) What if parties cannot reach agreement? (2) Is it enough to have attempted to coordinate? (3) What if parties already have agreed upon procedures such as NPIRs, or those stated in Interconnection Agreements – do they take precedent or must they be redesigned/relegated? (4) What if CPOPs differ greatly across interconnections because of differing parties? (One might conclude that by formalizing these different practices, as opposed to mandating standard practices, the goal of more reliable coordination may not have been achieved) (5) What level of evidence constitutes "agreement" especially in circumstances where entities may be remiss to agree? (6) What if CPOPs are simply a patchwork of requirements constructed out of existing NERC standard language and contract language – does that achieve the CPOP goal?

Disagree

FPL agrees that standard system condition terminology could be beneficial in communications but this requirement introduces alert level conventions with no clarity on what the corresponding associated actions for such levels are and as a result, aside from the value derived from have improvement in terminology during communications, it is unclear what reliability improvements this will achieve in carrying out instructions since details on what sort of tasks need to be carried out for each level have not been defined. Also, this requirement should clearly indicate that this alerting system and any communication conventions be required for emergency conditions.

Disagree

Existing market and reliability communication methods already ensure that time-zone adjustments occur. It is critical that the feasibility, impact, and logistical aspects of implementing this change be rigorously reviewing and understood to inform this standard's development. Any implementation or transition gaps between the time format and references used by reliability coordinators, their corresponding systems, and the interfaced systems of market participants would be extremely detrimental to system stability and ongoing market operations.

Disagree

The term "directive" as of yet has not been explicitly defined. Furthermore, FPL believes that by associating the "3-part communication" method with "directives" this standard drafting team could be at risk of unintentionally defining a directive as anything that takes the 3-part communication form. We would encourage the standard drafting team to continue to use the terms already employed in the draft standard: "... three-part communication be used when issue instructions related to "actual or expected emergency conditions."

Disagree

FPL believes that though aspiring to use a single strict phonetic alphabet is important, it is more important to ensure that ease of communication takes precedence especially under emergency conditions. As such, this requirement should be written more as a best practice or guideline. FPL believes this requirement could be improved by stating that under such emergency conditions, the NATO phonetic alphabet can be used as a base-line reference but that usage of ad-hoc phonetic alternatives that achieve the same real-time communication goal can also be used.

Disagree

FPL believes that R7 should be withdrawn as it repeats TOP-002 R18 requirements. Please refer to comments on Q3.

Disagree

Disagree

Disagree

Agree

In the case of nuclear plant operations, NRC communication requirements and the requirements of NERC NUC-001 for nuclear facilities more than adequately cover communication requirements. COM-003 should not be applicable to Nuclear Generator Operators since doing so will introduce an additional, unnecessary, and potentially conflicting level of requirements. Measures: FPL suggests that the SDT clarify the periodicity of providing evidence of compliance and on what constitutes sufficient evidence of CPOP acceptance. Violation Severity Levels: FPL encourages the SDT to revisit the violation severity levels. In the case of most of the requirements it is unreasonable to levy severe penalties in instances where the operator may have deviated from the requirements but the communication occurred in an unencumbered and successful manner as evidenced by the use/acknowledgement outcomes of three-part communication.

Individual

Tim Hattaway

PowerSouth Energy

Disagree

Inoperability definition is too broad and not clear.

Agree

Disagree
It's not clear as to who is being targeted as the "personnel responsible for real-time generation control and real-time operation of the BES". Is this just the system operator or is this the generator unit operator or the field switchman?
Disagree
This requirement is unnecessary.
Disagree
This requirement will be too confusing and could lead to compliance violations because someone stated the wrong time during the conversation.
Disagree
The term interoperability communications is not clear.
Disagree
Completely unnecessary to require each operator to learn and use the NATO alphabet for situations that may occur on a very limited basis.
Agree
Individual
Joylyn Stover
Consumers Energy
Disagree
Communications Protocol and Three Part Communications have been used in the industry and are acceptable. There seems to be a better way of stating "informational" communications since Directives are already discussed.
Disagree
There is no reason to move R18 from TOP-002 to COM-003. There is also no reason to utilize a shotgun blast method of coverage for this standard. Also, regardless of technical accuracy, TOP-002-2 R18 should not be moved to COM-003-1 without a simultaneous and corresponding change to TOP-002-2, lest an entity be found non-compliant with both standards for a compliance violation.
Disagree
I agree written Communication Protocols should be in place. Since we do not agree with all of the requirements mentioned we can not agree with this statement. Furthermore, since these protocols will have to be between Functional Entities and most likely multiple companies, a methodology needs to be in place to prevent duplication of efforts and double jeopardy in the audit process.
Disagree
The COM Standards should put forth the methodology of communication, not provide communication for each event. For example, CIP-001 describes the communication to take place for CIP attacks, be they physical or cyber, EOP-002 describes the process for Generation and Capacity Emergencies. Utilizing the similar sounding vernacular (EEA,CEA,PSEA,TEA) is not prudent.
Disagree
Common Time Zone has been discussed for decades. There was little or no evidence a common time zone standard would have prevented any of the system disturbances experienced since 1996 let alone the blackout of 2003.
Agree
Agree

Disagree
This requirement is better served under the TOP Standards. The TOP standards already require this (TOP-002-2 R18), and the requirement should not be duplicated.
None.
None.
None.
Agree
Amplification of the communication process is needed but this draft reaches beyond Communication to the start of drafting procedures for three separate emergency conditions while it leaves one alone. Focusing on the communication process is in order.
Group
PacifiCorp
Sandra Shaffer
Agree
Agree
Agree
Agree
Disagree
The sole use of Central Standard time Time would add confusion to thefor Interoperability communication Communications process that would detract would have the unintended consequence of creating more confusion, particularly during emergency communications. While PacifiCorp appreciates the need for minimizing mis-matched time signatures between control systems, it believes that mandating one time zone for all Interoperability Communications will create more confusion during an emergency that it will prevent.
Agree
Agree
Agree
Disagree
Disagree
Disagree
Currently, PacifiCorp's Open asis Access Same-Time Information System (OASIS) allows time to be showndisplays time in Pacific standard Standard timeTime. Mandating all Interoperability Communications to be held in Central Standard Time may cause confusion with regard to transactions and activities conducted on OASIS – which ultimately relate to real-time operations.
Disagree
Group
Northeast Power Coordinating Council
Guy Zito
Disagree
The way the definition of "Three-part Communication" is worded applies only when the communication is understood by the listener the first time. The RC SDT requirement which includes



"and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings" is more complete. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct. A suggested revision to the definition: A Real-Time Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it. These principles are included in Requirements R2 and R3 in the recently issued draft Standard COM-002-3 in Project 2006-06. An alternative suggestion to the definition of Three-part Communication: A Real-Time Operating Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct by the party who initiated the communication. A suggestion to the definition of Communications Protocol: The term "Interoperability Communication" creates confusion within the industry, and contradicts the work by RTO and RC SDT in Project 2006-06 that limits the requirement to use three-part communications when issuing Reliability Directives (defined in Project 2006-06) that address anticipated and actual emergency conditions, and do not agree with its definition. What also must be considered is that the RC SDT has stated that when someone "says", it is a directive--operating conditions are not distinguished. This definition unnecessarily and counterproductively encompasses all verbal communications and, as such, is not needed. It is not so critical to reliability that it should become an enforceable requirement for routine operating instructions. The enforceable requirement should be limited to require three-part communications, and be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger, and be auditable and measurable. Virtually all communications in a control room environment deal with changing the state or status of an element of facility, as such there is not a need to define this communication protocol. Both element and facility are used in the Interoperability Communication definition and are NERC defined terms. Did the drafting team intend that the NERC definitions should apply? If so, the terms need to be capitalized. The term "entities" is confusing and needs to be defined.

Disagree

The SDT expanded Requirement R18 of TOP-002-2 by adding the term "equipment". This Requirement represents a "how" and not a "what". In general, standards should be focused on "what" not how. The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the use of three-part communication protocol until the message has been correctly spoken and understood. LSEs and TSPs do not own or operate equipment, and as such in a market environment should not fall under the mandates of this requirement. Neither the TSP nor the LSE provide or receive information about specific lines or equipment in real-time. Therefore, requirement R7 should not apply to them absent clear evidence that a realistic (not hypothetical) threat to reliability would exist if they are omitted. We do not think that such a threat would exist.

Disagree

This proposed communication protocol is redundant to Requirements R2-R7, and should not be included in this Standard. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions. The NERC BOT has approved pursuing the Results-based Reliability Standard Task Force's recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to eliminate administrative requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. The industry as a whole, based on the response to the Task Force, does not support such an approach. This Requirement should be deleted from the Standard. There is no need to create a CPOP that includes requirements R2 through R7 given that

each requirement spells out how and what is to be communicated. A CPOP may be needed for Interoperability Communications that are not addressed in R2-7.

Disagree

It is not clear what value there is in identifying these alert levels. There does not appear to be any differentiation in actions taken based on the alert levels. Just stating the severity and details of the incident should suffice. Further, the "pre-defined" system conditions and alert levels are too detailed and overly prescriptive. System operators will need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task does not lend itself to promptly and effectively deal with the emergency situation. The level(s) identified in the notification text are at odds with the condition (color versus numerical). Suggest that the standard either use Condition (color) or the level (numerical). Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the listed entities such as Distribution Provider and Generator Operator cannot have access to these systems due FERC standards of conduct requirements. Attachment 1 and R2 are not consistent with the definition of Interoperability Communications. By definition, Interoperability Communication pertains to all communications about how entities change the state of the BES (not just physical or cyber attacks). Attachment 1 is about notifying of what physical and cyber attacks have already happened to the BES. It is not clear in the context of Interoperability Communications what the recipient of a specific notification is expected to do when there is a change of state or status of an element or facility of the Bulk Electric System. Attachment 1 pertains specifically to Operating State Alert Levels and says nothing about the communication of information to be used to change the state or status of a BES element or facility (which is the SDT's proposed definition of Interoperability Communications). Therefore, it is not appropriate to require that all verbal and written Interoperability Communications use the pre-defined terminology in Attachment 1. Only those communications concerning Operating State Alert Levels should be required to use that terminology. By the proposed definition, such communications are not Interoperability Communications since the information is not used to change the state or status of a BES element or facility. The SDT needs to revise this requirement to clarify that it pertains only to communicating the Operating State Alert Levels and nothing more. None of the examples in either of the attachments appear to address EEAs (EEA is mentioned in the top paragraph of page 9 that is included in EOP-002-2.1) or SOLs. This limits the use of Interoperability Communications to only events where there exists either a physical or cyber threat, or where an IROL can't be mitigated. The requirements should focus on what is required, not how. The RC and encompassed entities should be required to define terms that will be used in communications. This would allow for the use of terms that are well understood in an area, rather than having to add new terms. The Background Information in this Comment Form introductory section mentions "The SDT proposes four system condition alerts instead of initial three in the RCWG version." However, Attachment 1 only mentions 3 alerts – Physical Security, Cyber Security, and Transmission Emergency Alerts leading to confusion.

Disagree

There is no reliability need to use a common time zone for communications. There is already a requirement to use hour ending for scheduling purposes, inadvertent accounting, CPS and other standards where needed. There is no additional reliability need to use a common time zone. The time zone should be identified in the communication. Not only does this requirement attempt to determine HOW entities operate within their various footprints, it would significantly change the way many markets are structured. To implement this into existing Markets would cost significant time, money and resources while not enhancing reliability in these areas. When operating across time-zones, simply referencing "Central Standard Time" or "Eastern Standard Time" is sufficient for operating entities to reliably operate. The time zone adopted by the respective Reliability Coordinator (RC) and their area control center, e.g., NYISO Eastern Standard Time (EST), should be used. If each entity in the area and the RC are all using EST (or daylight savings), then why would a time zone be used that is foreign to all parties in the area? This can lead to considerable confusion. What cannot be ignored is how many entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We are strongly opposed to this requirement. The requirement should be that those entities which need to communicate and are in different time zones define which time they will use for communications. Any confusion about what time is being verbally communicated should be cleared up through three-part communications. There should be no confusion about what time is being communicated as long as the time zone

(where applicable), and the 24 hour format designations are included. Besides, many entities exchange written information via web-enabled applications that allow the users to configure their interface to show time in whatever format and time zone they prefer. This eliminates confusion.

Disagree

Based on the definition of Interoperability Communications, R5 implies that three-part communications is required to communicate routine operating instructions, or during operational strategic discussions as well as other "non-action" oriented communications. This Requirement contradicts the work that has been done and substantially progressed through two other SDTs and creates confusion within the industry. This Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion. The work being done by the RC SDT and RTO SDT in Project 2006-06 defines a Reliability Directive based on the determination of the person giving such an order. The entity that needs the action to be taken should establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger, auditable, and measureable. R5 is not consistent with the Functional Model. Only the RC, BA, and TOP can issue directives. Outside of allowing the individual who NEEDS the action to be taken, this is an auditable or measureable requirement whether it be for 3-part communications or for the receiving entity to actually take said action. By definition, Three-part Communications presumes the second party will repeat the information back "correctly." Failure to do so is assigned a High VRF and a Severe VSL. The practical application of Three-part Communication involves a sender communicating information, a receiver repeating back the information, and the sender verifying the repeat back is either correct or incorrect. If the repeat back is incorrect, the process repeats until both parties have the same understanding of what is being communicated.

Disagree

While this Requirement may represent a good utility practice in certain situations, it is not necessary to be used in all verbal Interoperability Communications, and is certainly not necessary to be included as an enforceable Requirement. For example, a situation in which an operator says "A as in apple" instead of using the NATO Alpha. Even though the listener should clearly be able to discern the correct meaning, the speaker's company could be sanctioned even if the correct actions were taken as a result of the clear communication. The objective of good communications is to assure that the parties understand each other. The statement "... shall use the NATO phonetic alphabet" doesn't make sense for North America. If the Real-Time Operator states "breaker 6-North," under the NATO phonetic alphabet that would be unacceptable, because the operator did not use the appropriate NATO term "breaker 6-November," even though the "N" on the one line diagram refers to the "North" breaker and not the "South" breaker. Many organizations may have established communications protocols which are working well. Making a change may actually hinder reliable operations by introducing unnecessary confusion and questioning. Not only does this requirement attempt to determine HOW entities operate with their various footprints, it may change the way many Markets are structured. What is the difference between using the word "Zebra" instead of "Zulu" to signify the letter "Z"? And, why would this be enforceable. Perhaps this should be a guideline document rather than an enforceable Requirement. There is no reliability need for this Requirement.

Agree

Agree

It is not clear what value is realized by declaring an alert status particularly with regard to cyber and physical attacks. There do not appear to be any differing actions taken based on the alert status. Given that no differing actions are taken for cyber and physical attacks, it seems it would be more beneficial to use specific information, for example 12 substations have been physically or cyber attacked. This is more meaningful than issuing a red alert that would only indicate more than one site has been attacked. Furthermore, we question the value of communicating the physical and cyber alerts. How does this notification help the BES reliability? Consider the following example. One BA in Oklahoma is 34,323 sq miles. Communicating that an attack occurred in the BA and RC tells other operators that somewhere in Oklahoma an attack occurred. This notification does not present any information that could require actions on the operators' parts, and will only generate phone calls

for more information. Furthermore, PSE and CSE is a type of sabotage already reported in CIP-001 R2. TEA Alerts are already covered in IRO-006-East-1, IRO-009, IRO-010, IRO-014.01 R2. Also it has been the experience of several entities during the field test of these Alert Levels that there are inconsistencies as to when to implement various stages of Alerts, and this introduces more confusion than exists today. Reliability has not been enhanced. Attachment 1 contains a conflict. The last sentence of the opening paragraph of Attachment 1 reads, "The time frame for declaration of these Alert states shall be consistent with the approach used to declare EEAs and would normally apply to Real Time declarations and not forecast conditions." In Transmission Emergency Alerts Condition Yellow, Orange and RED: The Reliability Coordinator or Transmission Operator foresees or is experiencing conditions where all available generation resources are committed to respect the IROL and/or is concerned about its ability to respect the IROL. Foresees is a forecast condition. There is an inconsistency between the inclusion of Attachment 1 and what is stated in the document posted with the standard entitled Disposition of Requirements Identified in the SAR for Operations Communications Protocols as Possibly Needing either Modification or Movement. The document states that the standard focuses on "how to" communicate rather than on specified scenarios of "to whom" or "when to" communicate; however, Attachment 1 does just the opposite. In condition Orange and Red for TEA Level Two/Three, the initial notification requirements are redundant with IRO-006-East-1 R3.2. Under the Make Final Notifications, is curtailed intended to mean canceled or terminated? The term Curtailed in operations generally means cuts for schedules/tags. EEA's use terminated. Terminated is the preferred term. Distribution Service Providers should be Distribution Provider to be consistent with the Functional Model. Refer to the response to Question #4.

Agree

Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the parties such as Distribution Provider and Generation Operator cannot have access to these systems due FERC standards of conduct requirements. Requirement 2 and the listing of functional entities required to be notified within the RC footprint in Attachment 1 creates a de facto requirement for them to have RCIS access or an unnecessary burden to communicate with all functional entities listed separately. Having to communicate to all functional entities in that list verbally and individually would create that unnecessary burden, and distract the RC from actual system operation. This is a detriment to reliability. Some ISO/RTOs have market rules which allow participants to elect NOT to follow instructions issued by their market operator (who may also perform BA, TOP and/or RC entity functions) unless an Emergency exists. In the Province of Québec, the use of French is mandatory, according to law, for communication within the Province. R3 should include: Within the Québec Interconnection, the French language shall be used for verbal and written interoperability communication between entities (RC, BA, TO, TOP, GOP, TSP, LSE and DP). For their interoperability communication with entities outside of the Québec Interconnection, they shall use the English language.

Agree

In some market structures, TSPs and LSE do not own or operate equipment. Thus, including them in the requirements is an unnecessary burden for these areas. The requirement to use CST attempts to determine HOW entities operate within their various footprints and it would significantly change the way many Markets are structured. To implement this into existing Markets would cost significant time, and resources while not enhancing reliability in these areas. When operating across time-zones, simply referencing "Central Standard Time" or "Eastern Standard Time" is sufficient for other operating entities to reliably operate. Many entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We are strongly opposed to this requirement.

Agree

The existing standard COM-002 is better than this proposed Standard. This Standard actually causes more confusion and ambiguity, and creates unnecessary or overly cumbersome requirements that add little or no value to reliability. All requirements with the exception of R1 have been determined to have a HIGH VRF, when many of them are dictating HOW communications should take place and not when, why, or what. COM-002 retirement does not appear to be consistent with the direction of the RC SDT in Project 2006-06. The RC SDT is adding requirements. More coordination is required between the Standard Drafting Teams. Again, we support the work being done by the RC SDT and RTO SDT and do not believe this adds more necessary requirements. Many of the requirement proposed in this posting either reiterate the drafts as posted (i.e. English language) or introduce

confusion when compared to the drafts as posted. The SDTs should limit their scope to R2 and R7, so as not to duplicate or contradict the on-going work of other SDTs. The SDT appears to have adopted severe violations for every infraction. There should be some gradations, using increasing severity based on the number of or severity of any infractions. Definitions: The standard should define other terms, as well, including the following: • reliability-related information, • "... state or status of an element or facility of the BES ..." The standard should also have provision to include the boundaries (components) of an "element," and the meaning of the terms "state or status" in the written communication protocol. For example, is the gas compressor of a 345kV breaker considered part of this element, and so would a change in its "state or status" be covered? Similarly, is the heat trace inside a 345kV breaker control cabinet part of this element or not? The VRFs for R2-R7 are all "High", and the VSLs are all "Severe" are too harsh. Failing to comply with one of the requirements does not automatically mean that a miscommunication occurred that caused a reliability problem. There should be a "Moderate" VSL for failure to comply with a requirement, but no miscommunication occurred. There should be a "High" VSL for failure to comply with a requirement that caused a miscommunication but resulted in no violation of another reliability standard. The "Severe" VSL should only apply to failures to comply with a requirement that caused a miscommunication that lead to a violation of another reliability standard, or caused a reliability problem. In addition, as stated earlier, this Standard focuses on "how" certain tasks should be performed and conflicts with NERC's position of pursuing performance based and results based Standards. Based on these considerations, work on this Standard should be stopped until work on Project 2006-06 has been completed and approved. This approach is consistent with the August 2003 Blackout Recommendation #26 "failure to identify emergency conditions and communicate that status to neighboring systems, and upgrade communication system hardware where appropriate" which actually focused on communications during emergencies, which is the scope of Project 2006-06. After Project 2006-06 is completed, a determination can be made on the disposition of this Standard. This Standard should be effective uniformly continent-wide.

Group

SERC OC&SOS Standards Review Group

Margaret Stambach

Disagree

We feel that the definition of Interoperability Communication is much too broad and is inconsistent with the effort to develop results-based standards. Adherence to such results-based standards would have a measurable and observable effect on the reliability of the bulk electric system. The definition of Interoperability Communication, as written, can include virtually any information exchange/instruction between entities, both routine and emergency. Such communication may or may not have a measurable and observable effect on bulk system reliability. The concern is that, since the broad term Interoperability Communication is used in every requirement in COM-003-1, entities will be required to use the English language, the central time zone, and 3-part communication in even the most routine exchanges of information. This could create a burden on operating personnel and a distraction from their reliability duties. This group does not feel the need for a definition of Interoperability Communication, since the term Reliability Directive has been defined in draft standard COM-002-3, which is currently posted for review. The Reliability Directive term is emergency-focused and consistent with the results-based standards process. In addition, the definition of Three-part Communication in this standard does not match the three-part communication requirements stated in COM-002-3. In COM-002-3, the requirements for three-part communication (state – repeat - acknowledge) apply to Reliability Directives, while in COM-003-1 the definition of Three-part Communication refers to "information" in general. If, as stated in the Disposition of Requirements, the revisions to COM-002-3 will be moved to COM-003-1, the definition of Three-part Communication in this draft standard should be consistent with the requirements of COM-002-3.

Disagree

TSPs and LSEs are not typically included in real-time communications and should not be included in COM-003-1. The intent of requirement R18 in TOP-002-2 pertained to communications between neighboring BAs and TOPs. Adding LSEs and TSPs to the applicability of this standard doesn't make sense, and this change should not be made.

Disagree

This group feels that there should not be a requirement in the standard to have a “procedure”. It is our understanding that, to be auditably compliant with a standard, the responsible entity must develop a procedure, train on that procedure, and be able to demonstrate compliance via documents, data, logs, records, etc. If Requirements R2 – R7 are included in this standard, the entity will need to develop a procedure to be compliant. Therefore, we feel that requirement R1 is redundant and should not be included.

Disagree

The Alert Level Guides in Attachment 1 are not consistent with the proposed definitions of reliability-related communications. Both the Reliability Directive and Interoperability Communication, as currently defined, require some emergency action or change of equipment status. Yet the Alert Level Guides were intended for announcement, not actions. Requiring system operators to use the color-coded system condition terminology during communication adds a layer of responsibility that will distract from the operator’s real-time reliability-related tasks. We do not feel that these Alert Level Guides apply to all the responsible entities identified under Applicability in the draft standard – for example, TSPs and LSEs are not included in the list of notifications. There is also some redundancy in the Alert Level Guides – for example, the CIP-001 standard requires notification of sabotage events – it should not be repeated in this standard.

Disagree

We feel that this requirement of a common time zone is overly prescriptive. The requirement should be that entities operating in different time zones agree on how to best eliminate any confusion regarding the time difference. Entities that routinely operate in different time zones already have an effective system for dealing with time differences. There seems to be no incentive to change a system that already works quite well, and the cost of updating computer systems could prove prohibitive. For instance, the requirement to use the central time zone for logging the time of an alert is problematic in that all communication tools, such as the RCIS, will need to be re-vamped. We question whether there will be a measurable reliability benefit by so doing. This group feels that mandating a common time zone across all of North America can only lead to confusion and increased reliability issues.

Disagree

As suggested in Question 1 above, the term Reliability Directive (as defined in COM-002-3) should be used in place of Interoperability Communication, since the directive is specific to emergency operations. The requirement should read: “Each responsible entity shall use Three-part Communication when issuing a Reliability Directive”. In addition, this requirement should apply only to BAs, TOPs & RCs. The other entities listed in the draft standard under Applicability do not issue Reliability Directives.

Disagree

First, please note that “NATO” does not stand for North American Treaty Organization; it stands for North Atlantic Treaty Organization. Use of the NATO phonetic alphabet should be considered a “best practice” and should not be included as a requirement in a reliability standard. One failure, such as saying “Baker” instead of “Bravo”, results in a severe violation without any impact on system reliability. This group is concerned that operating personnel will be focused on using the correct word rather than managing the power system.

Disagree

Requirement R7 in draft COM-003-1 came from TOP-002-2, Requirement R18. The original requirement intended that neighboring Balancing Authorities use uniform line identifiers when communicating information about their tie lines. This requirement drops that clarification and introduces the additional requirement to use pre-determined “equipment” identifiers. Having to mutually agree in advance on identifiers for every switch & transformer is another example of a prescriptive requirement whose violation will not affect system reliability, yet will expose entities to large fines.

Agree

Our concern is that the Alert Level Guides of Attachment 1 were written for Reliability Coordinators, not the industry as a whole, and now they are being incorporated into an industry-wide standard. This attachment is very prescriptive as to how the notifications take place, such as through the RCIS. If the RCIS is not functioning and the hotline is used instead, is the entity vulnerable to a violation by virtue of the fact that these alert guides are included in the standard? We believe that

the color-coded system condition terminology should be defined/required externally to the COM standards. The use of clear & consistent alert level terminology, while important, does not fit in well with the reliability-related communication standards, especially at these high violation severity levels. It is our suggestion that the Alert Level Guides be balloted separately, and include the Energy Emergency Alerts (EEA) as well. EEA requirements currently exist in NERC Standard EOP-002-2.1

Disagree

No, we are not aware of any regional variances.

Agree

We do see a potential conflict with the Energy Policy Act of 2005, which set the framework for the Electric Reliability Organization (ERO). The ERO's mission is to oversee and protect the reliability of the Bulk Electric System. This standard seems to cross the line between reliability-related activities and other types of operating actions. The concern here is that system operators will focus on the letter of the standard rather than on good operating practice. The fear of a violation among operators may have a greater impact on reliability than the violation itself.

Agree

This review group has identified several problems with this standard, as noted above. Other observations include: The effective dates in the draft standard and in the implementation plan do not seem to match. In the standard, the effective date mentions one calendar year following regulatory approval, while the implementation plan refers to the third calendar quarter after regulatory approval. Furthermore, we do not feel that any of the requirements in this standard warrant Violation Risk Factors or Violation Severity Levels in the high or severe category. In summary, this review group feels that COM-003-1 is not yet ready to be acted upon and may have been posted too soon. There does not seem to be sufficient coordination between the drafting teams of all the COM standards, or any attempt to integrate these standards. One example is the inconsistency between COM-003-1 and COM-002-3 regarding the meaning of three-part communication (mentioned in our response to Question 1 above). As noted above, we feel that many of the requirements prescribe specific "how to" methods for compliance rather than focusing on the "what" of the requirement. Overall, COM-003-1 is much too prescriptive to be tied to million dollar-level fines. "The comments expressed herein represent a consensus of the views of the named members of the SERC OC&SOS Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."

Individual

Jonathan Appelbaum

Long Island Power Authority

Disagree

LIPA disagrees with the definition for Three-Part Communication. LIPA prefers the process offered in COM-002-03 (draft). In COM-003 the listener must understand the communication the first time. Failure to understand and repeat back correctly could be a violation of the requirement. The intent three part communication is to have an iterative process whereby the person issuing the message is ultimately satisfied that the recipient understands the information and will perform the required action. It should not be defined as three steps and only three steps. LIPA offers the following definition: A Real-Time Operating Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back to the party that initiated the communication by the second party that received the communication, and the information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it. LIPA disagrees with the definition of Interoperability Communication. LIPA believes the Standard is addressing the communication of the Operating State of BES equipment and facilities. The proposed definition utilizes the phrase "change the state ... of a BES facility" which can be interpreted as the position, e.g. open, close, tap position, etc... thereby extending this Standard into routine switching and operation of the BES. The SAR stated this Standard was "to use specific communications protocols under normal, abnormal and emergency conditions to relay critical reliability-related information in a timely and effective manner". The proposed definition can be interpreted in a manner that extends this to all reliability related information for every BES operation. The drafting team should also consider adding a definition for Directive or acknowledge the definition in draft Com-002-03.

Agree
Disagree
LIPA agrees with the need for CPOP but does not agree that R4 can or should apply to all interoperability communications between entities. Since the examples in Attachment 1 specifically state RC and TOP, this standard should not apply to any other entity except for the RC and TOP. COM-002-03(draft) could require the other entities to utilize three part communication for reliability-related Interoperability communication.
Disagree
LIPA believes the use of "shall" and "all" coupled with the broad applicability of this Standard and the broad definition of Interoperability Communication will result in entities either not complying with R2 or making statements regarding the Operating Alert State when unnecessary. Attachment 1-Com-003 is very prescriptive in the use pre-defined terminology, colors and levels, and what to report on. There is no benefit to specifying the specific terminology. This requirement should require the RC to define the terms/levels/alert states to include within the CPOP that sufficiently communicate the increased levels of Alert or Response encountered/required. Many entities have invested time and training in the existing processes that meet the intent of this requirement. Read strictly, the only predefined alert conditions are Physical security, Cyber security and Transmission Security as it applies to the RC and TOP only. LIPA notes that R2 in the draft Standard does not match R2 in this question. Specifically the word ALL is not in the Standard.
Disagree
This requirement will burden those entities whose operations and communication needs are with other entities in the same time zone, which represents the overwhelming majority of all communications performed. It will increase the likelihood of errors for such entities. Further, some entities are operating both NERC BES elements and non-BES elements from the same control room. This requirement will significantly impact the efficiency and the safety of workers within those entities. LIPA notes that R4 in the draft Standard does not match R2 in this question. Specifically the word ALL is not in the Standard.
Disagree
The SDT should define Directive. Draft Com-002 -3 has a similar requirement to identify a directive and then utilize three-part communication. Also Com-002-3 Three part communication differs from the description of Three-part communication in this Standard. LIPA prefers Com-002-3 usage of the word "intent" in the repeat back. Also see comments to Question 1.
Disagree
While LIPA understands the benefit of utilizing a phonetic alphabet, we question the designation of a specific phonetic alphabet. This prescriptive requirement may result in absurd non-compliance reports, such as, using "Dog" for "D" instead of "Delta". R6 requires the use of the alphabet when issuing information, but not in the repeat back step. This may be an oversight. Also Does the RC in its communication utilize the abbreviation for the threat type, e.g PSEA, or does the RC use the NATO-Alphabet? If NATO, then the example in Attachment 1 should state this need.
Agree
LIPA notes that R7 in the draft Standard does not match R2 in this question. Specifically the word ALL is not in the Standard.
Agree
In addition to the response to Question 4, LIPA does not understand why there are Levels and color designations since only the threat level numeral is being communicated. Attachment 1-Com-003 is very prescriptive in the use pre-defined terminology, colors and levels. There is no benefit to specifying the specific terminology. Requiring system Operators to state Colors and Levels would seem to result in slower and more confused communication.
Disagree
Agree



R1 requires each entity to create a CPOP. There is not a requirement to coordinate CPOP's amongst entities beyond the requirements in the Standard. There is no requirement to exchange CPOP's between entities with an operating relationship. The SDT should consider adding a requirement either that allows entities with operating relationships to request and be provided a copy of the other's CPOP, or a requirement requiring the exchange of CPOP between entities with operating relationships. Additionally, we cannot understand how all requirements but R1 have been determined to have a HIGH VRF when, many of them are dictating HOW communications should take place and not when and why or what. High Risk Factor requirement (a) is one that, if violated, could directly cause or contribute to bulk power system instability, separation, or a cascading sequence of failures, or could place the bulk power system at an unacceptable risk of instability, separation, or cascading failures. LIPA does not believe that any requirement in this Standard if violated would have the results specified in the definition of a High VRF, especially since these requirements are addressing the HOW of communication.

Group

Pacific Northwest Small Utilities Comment Group

Margaret Ryan

Disagree

Communication protocols extend beyond the verbal and written versions. How does the "non-routable (communication) protocol" of CIP-006 fit into or not fit into these definitions?

Our utilities agree with the move in principle, but are concerned about the transition. How will NERC ensure that registered entities are not doubly jeopardized during the time when the same requirement exists in two active standards? The addition of LSE to COM-003 goes way beyond the obligations in TOP-002-2 R18; LSE's are now in every requirement of COM-003.

Disagree

DPs and LSEs are in general users, not owners or operators of interconnected BES equipment per the registry criteria. DPs and LSEs should be removed from this requirement since LSEs typically do not own or operate the interconnected BES equipment

Disagree

The referenced attachment appears to list alert levels for RCs to use in communicating threats to BAs, DPs, GOs, TOPs and TOs. This requirement should apply only to RCs.

Disagree

While our utilities agree that understanding the actual time is important, stating the time zone and summer offset (13:34 PDT) should suffice. As an alternative, UTC might be used since it is clearly distinguishable from local time in all of NERC. As in R1, LSEs and DPs should be removed from this Requirement.

Disagree

Per TOP-001 and IRO-001, only TOs and RCs have the authority to issue reliability directives (per the proposed definition of interoperability communications, such directives would qualify as reliability directives). All other entity types should be removed from this requirement. As in Q2, the transition is a concern. Unless the effective date of COM-003-1 is the same as the date of retirement of COM-002; there will either be a reliability gap where neither active standard requires three-part communication, or there will be a situation where an entity could be doubly jeopardized for a single event. Three-part communication is worthless unless the recipient understands what he/she is parroting and is authorized to take action. For example, many DPs/LSEs do not maintain 24/7 dispatch desks and an afterhours call may go to an answering service. Three-part communication with the answering service operator will only delay the requested action. The entity issuing the directive should be required to ensure their employee reaches someone authorized to take action before delivering the directive via Three-part communication.

Agree

No Comment

Disagree

DPs and LSEs are typically users, not owners or operators of interconnected BES equipment per the registry criteria. DPs and LSEs should be removed from this requirement.

Disagree

Agree
(This is a yes or no questions) Yes, The RC in the WECC region has no communication with any entity other than the sixteen listed in <a href="http://www.bpa.gov/corporate/business/reliability/Docs/2007/PNSC_RE_Data_Letter_2_070723.pdf">http://www.bpa.gov/corporate/business/reliability/Docs/2007/PNSC_RE_Data_Letter_2_070723.pdf</a> . Although the linked document is on PNSC letterhead, WECC as RC continues this policy. Communication paths involving the RC and any other entity in the west other than the sixteen should be exempt from all the requirements in this standard. If DPs and LSEs must be included in this standard, then there should be an agreement in force beforehand between them and their RC, BA and TOP that they may receive directives, or require the RC, BA and TOP to list those DPs and LSEs that would not receive directives.
Agree
(This is a Yes or No Questions) Yes, see our comments to Q2.
Agree
(This is a Yes or No Questions) The proposed standard seems to have just thrown everyone into the pot, and not considered how registered entities interact with the BES or what other standard requirements apply to them. We can not lose sight of the original objective of, not only ERO Compliance, but the "purpose" described in regards to the development of this standard (Posted as background information on Project 2007-02). The stated purpose is, "To ensure that reliability-related information is conveyed effectively, accurately, consistently, and timely to ensure mutual understanding by all key parties, especially during alerts and emergencies." With this said, The BA's, TOP's and RC's are the key registered entities that have the power to take action, they are the key players in the communication of information which "impacts" the BES. We fail to see the value added by including DP's and LSE in most of the requirements of this standard. If anything, we see the opposite affect taking place by adding DP & LSE's. This may be an extra tier of unnecessary communication that would not only slow down this process, but just may contribute to greater inefficiencies. Please note that many DP & LSE in the WECC region are very small utilities that do not have 24 by 7 coverage.
Individual
Richard Appel
Sunflower Electric Power Corp.
Disagree
I feel the use of the NATO phonetic alphabet is over kill. You should use a phonetic alphaner that is in common use in the USA
Agree
Agree
Agree
Agree
Agree
Disagree
I don't feel we should use NATO phonetic alphabet. Use something in common use in the USA
Agree
Use a Phonetic alphaner in common use in the USA

Individual
Kevin Koloini
American Municipal Power
Agree
Please define "directive" as a term.
Agree
Disagree
A written CPOP will place an unnecessary burden on smaller entities without an increase in reliable communications. I feel that the other requirements are somewhat self-explanatory and that an annual review of the phonetics and three-part communications would improve reliability more than having a written CPOP requirement.
Agree
Eliminating lax communications and improving identifiers is one of the cheapest and easiest ways to improve reliability.
Disagree
In other large industries one time zone is usually picked, and the time zone that is usually picked is the EST zone (JP Morgan Chase is an example). I feel that picking a standard time zone is very important, but I have not seen significantly good arguments to use CST. EST, on the other hand, is where the majority of the load for the electric industry resides. I suggest changing the standard to EST but with the 24 hour format.
Agree
I feel that there needs to be a way to verify what has been said. Three-part Communications accomplish the verification that may be required as a result of the communication medium. If a better method is developed I propose that it be used.
Agree
The NATO Phonetic alphabet is easy to learn and use. Most people can learn it on their own much faster than it will take the SDT to read all of the comments for COM-003.
Agree
How many substations have the same name? Unique identifiers easily and inexpensively eliminate confusion and errors.
Agree
Agree
Agree
Agree
Individual
Edward Bedder
Orange and Rockland Utilities, Inc.
Disagree
Clarification must be made to the definition "Interoperability Communication" and to the specific applicability of the term as it translates into the actions and functions both internal and external to the local TO.
Agree
Disagree
R4 - Use of the CST time format would present challenges affecting hardware, software, and training in the ECC and is counter to practices of scheduling, switching execution, and time-stamping of

activities currently executed by the ECC. A more defined definition of "Interoperability Communications" needs to be instituted in conjunction with R4 applicability.
Agree
Disagree
Use of the CST time format would present significant challenges as expressed in the comments of question #3 listed above.
Agree
Disagree
Agree
Disagree
Disagree
Not aware
Disagree
Not aware
Disagree
No additional Comments
Individual
Noman Williams
Sunflower Electric Power Corporation
Agree
Agree
Disagree
We believe that distribution providers (electric cooperatives) should be removed from this standard unless they control a BES segment
Agree
As defined in Attachment 1 - COM-003-1
Agree
General question will time follow central prevailing time (standard/daylight savings)?
Agree
Agree
Agree
Agree
Disagree
Disagree
Disagree

Individual
Mark Ringhausen
Old Dominion Electric Cooperative
Disagree
Comments: We believe that it may be important for entities registered as a Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider , Load Serving Entity and Distribution Provider to have a formalized Communications Protocol Operating Procedure (CPOP) for Interoperability Communications, but this requirement will place an unnecessary burden on the personnel at many of the smaller Load Serving Entities and Distribution Providers on the NERC Compliance Registry. In most real-time scenarios, the BES facilities are not operated nor maintained by the Load Serving Entity or Distribution Provider. As with many standards, entities will be required to demonstrate why the standard/requirement is applicable. We suggest the drafting team consider modifying the applicability of this standard as follows similar to the format used in PRC-OO5: 4. Applicability: 4.1. Transmission Operator 4.2. Transmission Owner 4.3. Balancing Authority 4.4. Reliability Coordinator 4.5. Generator Operator 4.6. Distribution Provider that is responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System 4.7. Transmission Service Provider 4.8. Load Serving Entity that is responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System
Disagree
Comments: We believe that it may be important for entities registered as a Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider , Load Serving Entity and Distribution Provider to have a formalized Communications Protocol Operating Procedure (CPOP) for Interoperability Communications, but this requirement will place an unnecessary burden on the personnel at many of the smaller Load Serving Entities and Distribution Providers on the NERC Compliance Registry. In most real-time scenarios, the BES facilities are not operated nor maintained by the Load Serving Entity or Distribution Provider. As with many standards, entities will be required to demonstrate why the standard/requirement is applicable. We suggest the drafting team consider modifying the applicability of this standard as follows similar to the format used in PRC-OO5: 4. Applicability: 4.1. Transmission Operator 4.2. Transmission Owner 4.3. Balancing Authority 4.4. Reliability Coordinator 4.5. Generator Operator 4.6. Distribution Provider that is responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System 4.7. Transmission Service Provider 4.8. Load Serving Entity that is responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System
Agree
Agree
Agree
Agree
Agree
Individual
Misty Renew
Westar Energy

Disagree
Would like to see the Interoperability Communication definition be more specific.
Agree
Disagree
While I agree that a CPOP is necessary and should include the elements of the requirements, I am not sold on all of the requirements yet as written.
Agree
Agree
Agree
Disagree
One of the more common or ad-hoc phonetic alphabets which are easier to remember could be a better fit since these communications happen infrequently. Having operators potentially struggle to remember the NATO phonetic alphabet during communications rather than focus on the communication itself is in contradiction with the stated purpose of the standard.
Agree
Agree
no suggestions
Agree
not aware
Agree
not aware
Agree
no additional comments
Group
ExxonMobil Research and Engineering
Martin Kaufman
Agree
Agree
Disagree
While recording telephone conversations may be routine for utility companies, many industrial facilities that fall under the jurisdiction of this standard do not currently have the facilities necessary to record the conversations and store them for an extended length of time. If a company does not currently possess the capability to record telephone conversations, is it the intent of this standard to require them to install such facilities? If so, what is the time frame surrounding the installation of the facilities necessary to record and store telephone conversations? Currently, we maintain a log of our communications which includes the question or instruction and our (or in the case of a question the third party's) response. Does this satisfy the requirements for evidence as defined in measures M2 through M7?
Agree
Agree
Agree

Agree
Agree
Disagree
We have no concerns or suggestions for improvement.
Disagree
We are not aware of any regional variances that would be required as a result of this standard.
Disagree
We are not aware of any conflicts.
Agree
Compliance paragraph 1.4 bullet 2 implies that all entities retain 3 months worth of telephone voice recordings through its use of the word 'and' in the statement "Distribution Provider shall retain for Requirement 2 through 7, Measure 2 through 7, dated operator logs for the most recent 12 months and voice recordings or transcripts of voice recordings for the most recent 3 months". While many utility companies employ the use of voice recorders, many industrial facilities do not. When a facility does not currently employ the use of voice recorders, is it the intent of this document to require the facility to install the infrastructure necessary to record and store telephone conversations? If so, what is the time line for deploying the infrastructure necessary to record and store telephone conversations? Currently, we maintain a log of our communications which includes the question or instruction and our (or in the case of a question the third party's) response. Does this satisfy the evidence criteria as defined in measures M2 through M7 of the proposed standard?
Individual
Bob Casey
Georgia Transmission Corp
Disagree
The definition of Interoperability Communication is very broad and has no real benefit.
Agree
Disagree
This is a requirement for an operating procedure which is redundant and would require the entities to document how they met the requirement.
Disagree
Should only include physical security emergency, cyber security emergency, or transmission emergency as stated in Attachment 1 instead of Interoperability Communications.
Agree
Disagree
replace "directive during verbal Interoperability Communications" with "Reliability Directive". replace "Each Responsible Entity" with "TOPs & RCs". The other entities listed in the draft standard under Applicability do not issue Reliability Directives.
Disagree
This is an operational burden and could easily cause a violation by using a different common identifier. If used, it should only apply to Reliability Directives.
Agree
Agree
Disagree
Disagree

Disagree
Individual
Tracy Sliman - System Operations Compliance
Tri-State Generation & Transmission Assoc.
Disagree
The term directive is not defined therefore it is unclear what constitutes a directive.
Disagree
LSE and TSP are not responsible for the reliability of the Bulk Electric System. That responsibility resides with the TOP.
Disagree
DP, LSE and TSP are not responsible for the reliability of the Bulk Electric System. Also, attachment 1 explains Operating State Alert Levels that defines colors that are already in use by the Department of Homeland Security. Re-using these colors presents confusion to the operators of the BES. This places an unnecessary additional burden on Real Time day-to-day operations with a high risk of confusion in an emergency.
Disagree
Attachment 1 explains Operating State Alert Levels that defines colors that are already in use by the Department of Homeland Security. Re-using these colors presents confusion to the operators of the BES. This places an unnecessary additional burden on Real Time day-to-day operations with a high risk of confusion in an emergency. Additionally, this is too complicated and requires a complete retraining of operators in the English language.
Disagree
We have been operating within our individual time zones for many years without incident. Modifying the time zone to which we operate will pose additional confusion and add unnecessary risk in operating the BES.
Disagree
Directive is not defined. This would require issuing a directive for each and every verbal communication between entities, even those that pose no risk to the BES, which is not necessary.
Disagree
Directive is not defined. This poses an undue burden on the operators, which does not improve the reliability of the BES. NERC should only concern themselves with issues related to maintaining the reliability of the BES.
Disagree
This is not NERC's responsibility to define. There are too many lines and too much equipment to identify each as a NERC definition. Definitions are already agreed upon between operating entities.
Agree
The Operating State Alert Levels can be confused with DHS security levels. DSPs should not be included because they are not subject to BES standards because they do not operate the BES, that responsibility resides with the TOP. The title Distribution Service Providers should be changed to Distribution Provider to correlate with the NERC functional model. Under Additional Communication the posting of the alert level should be determined by each entities internal procedure and not included in this standard. This attachment is too invasive and restrictive.
Disagree
Disagree
Agree
This standard should not apply to DPs, LSEs or TSPs as they do not have control over the BES. That responsibility resides entirely with the TOP. Additionally, it is concerning that the term "directive" is not defined. The proposed definition for Interoperability Communication could be interpreted to include all communication between entities. This is too restrictive.



Individual
Joe O'Brien
NIPSCO
Agree
When COM-002-3 is fully incorporated, more definitions such as Reliability Directive will need to be added.
Agree
Agree
Disagree
This may not be necessary.
Agree
I believe we call this "system time" in our area
Disagree
It's not clear whether this is limited to emergency situations. In the Purpose section of this standard the line "especially during alerts and emergencies" seems rather vague. When does this standard exactly apply?
Disagree
This should not be a requirement, but could be a suggested option. If one were recorded using the wrong phonetic would that be a compliance violation? This doesn't seem reasonable.
Disagree
This question includes a mis-statement in quotes. This is not what the requirement says. Furthermore, the word "Neighboring" was removed from the TOP-002 R18 which changes the meaning and intent of the requirement. Why not bring in R18 verbatim?
Disagree
No comment
Disagree
none
Disagree
none
Disagree
This standard is based on COM-002-3 however that standard has not been voted-in or NERC approved yet. I think this COM-003 effort should be put on hold until the 2006-06 project is complete. At that time the term "directive" should be replaced by "Operational Directive" and "Reliability Directive" based on context and all of these terms should be defined in the NERC Glossary of Terms.
Individual
Joe Knight
Great River Energy
Disagree
GRE believes the proposed definition for the term Interoperability Communication is too broad and ambiguous. We recommend the following instead: Communication between two or more Functional Entities to exchange reliability-related information to be used by the entities to change the state or status of Facilities of the Bulk Electric System. The inclusion of the terms Functional Entities and Facilities removes the ambiguity which we believe is contained in the proposed definition. (Both of these terms are defined in NERC's Glossary) The way the definition of Three-part Communication is worded applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct.

We suggest the definition be revised as follows: A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it. GRE believes there should be a definition added for Reliability Directive to ensure consistency across the defined projects for standards development. The Drafting Team working on Project 2006-06 has defined Reliability Directive as: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. GRE recommends use of this definition and the term Reliability Directive as opposed to Directive.

Disagree

TOP-002\_R18 is fundamentally different from the new proposed requirement in COM-003-1\_R7. TOP-002 R18 states that the BA, TOP, GOP TSP and LSE shall use uniform line identifiers when referring to transmission facilities of an interconnected network. COM-003-1\_R7 states that each RC, BA, TO, TOP, GOP, TSP, LSE and DP shall use PRE-DETERMINED, MUTUALLY AGREED UPON line and equipment identifiers for verbal and written Interoperability Communications. GRE believes the TOP-002\_R18 could be included in COM-003-1 but included as stated verbatim in TOP-002.

Disagree

The NERC BOT has approved pursuing the Performance-based Reliability Standard Task Force's recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to eliminate administrative requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. GRE does not support such an approach. GRE suggests deleting this Requirement from the Standard.

Disagree

It is not clear what value there is in identifying these alert levels. There does not appear to be any differentiation in actions taken based on the alert levels. Why not just state the number of substations attacked, etc? Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the listed entities such as Distribution Providers and Generator Operators cannot have access to these systems due FERC standards of conduct requirements. Attachment 1 and R2 are not consistent with the definition of Interoperability Communications. By definition, Interoperability Communication pertains to all communications about how entities change the state of the BES (not just about physical or cyber attacks). Attachment 1 is only about notifying of what physical and cyber attacks and transmission emergencies have already happened to the BES.

Disagree

There is no reliability need to use a common time zone for communications. The prevailing time zone should be used to avoid confusion between operating staff and field personnel. Use of CST will actually cause confusion with no foreseeable reliability benefit.

Disagree

Without defining directive the SDT is leaving the industry in the same situation we are currently in. As discussed in the response to Question #1 above, it is GRE's opinion that the definition of Reliability Directive must be developed and included in the discussion of this standard. The term directive should be as defined in Project 2006-06: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. GRE believes it should be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger and easily auditable and measureable.

Disagree

While this requirement may represent a good utility practice or even a best practice, it is not so necessary to be enforceable through enforceable requirements. The NATO phonetic alphabet does not allow for the use of numbers ten and beyond. An entity WOULD be found non compliant for

saying OPEN SWITCH FOURTEEN BRAVO. GRE does not believe this is reasonable as it adds nothing to the reliability of the BES. It is too prescriptive and all encompassing and could potentially confuse or slow down the communication process especially in an emergency situation.
Disagree
See comments for Question 2
Disagree
Disagree
Agree
GRE believes that the existing standard COM-002 is actually better than this standard. This standard actually causes more confusion and ambiguity and creates unnecessary or overly cumbersome requirements that add little or no value to reliability.
Individual
Fred Meyer
The Empire District Electric Company
Disagree
Replace the proposed COM-003-1 definition of "Three-part Communication with what is used here: Three Part Communication: A communications protocol to be used when a Reliability Directive is initiated verbally, whereby the action to be taken is identified as a Reliability Directive; the recipient repeat the details of the Reliability Directive back to the issuer of the Reliability Directive; and the issuer acknowledges the response from the recipient of the Reliability Directive as correct, or re-issues the Reliability Directive to resolve any misunderstanding.
Disagree
A more efficient method of designation common pre-determined line and equipment identifiers would be through the Reliability Coordinator. Having the Reliability Coordinator establish this would create a single methodology as opposed to several different methodologies that would have to be agreed upon between entities and a significant amount of work for all entities.
Disagree
What benefit to the BES would this provide? Rather I see more confusion by having entities develop different CPOPs. How will this benefit real time operations? This seems to be a requirement by NERC to assist NERC in analysis "after the fact" of an event, but in reality it can hinder daily operations.
Disagree
This attachment is not needed. It is a duplicate of the NERC Alert process that is already established as well as CIP-001 Sabotage reporting requirement R2 along with requirements of EOP-001 R5 and EOP-004 R2 dealing with disturbance reporting. The last thing the industry needs is more paperwork requirements that are redundant when an emergency event happens on the system.
Disagree
In dealing in real time, what possible benefit can be had by this requirement? I see this requirement benefitting NERC analysis after the fact and can lead to more operating mistakes in real time than it benefits. If a situation is occurring in real time and two entities are in communication with each other, the requirement of a common time zone holds no benefit.
Disagree
When and why would a GO, TSP or LSE ever issue a directive? Directives are given by RC's. Use the definition of Third Party Communications provided earlier in this comment form.
Disagree
The NATO phonetic alphabet is too descriptive as a requirement. A common phonetic alphabet where both parties understand the communication should be a better requirement and left up to the parties in communication with each other as common across the USA.
Disagree

I would suggest a more efficient method of designating common pre-determined line and equipment identifiers through the Reliability Coordinator. As similar to the response earlier. A definition of "Equipment" is needed as well.
Disagree
Again this attachment is redundant to the NERC Alert process.
Agree
NO
Disagree
Disagree
This proposed standard seems to be a redundant standard to many other already approved NERC standards such as CIP-001, EOP-001, EOP-004, as well as the NERC alert process. I see little to no benefit from this standard as proposed.
Individual
Ed Davis
Entergy Services
Disagree
The definition for Three-part communication is deficient when compared with the requirements of the recently posted COM-002-3 which describes an interactive process in which the communicating party corrects the recipient in the situation where the repeated message contains inconsistencies. The party receiving the message will not always get the message right the first time. Also, Entergy does not believe that the introduction of the term Interoperability Communications is necessary. In the questions below, we identify specific ways that the requirements could be improved by including the term Reliability Directive as included in the recently posted COM-002-3. The term Interoperability Communications is very broad, covering both normal and emergency communications, creates a new category of communications without providing any real benefit to the industry.
Disagree
TSP and LSE are not typically included in real-time communications and should not be included in this requirement. The intent this requirement in TOP-002-2 pertained to communications between neighboring BAs and TOPs. Adding LSE and TSP to this requirement doesn't make sense, and this change should not be made.
Disagree
Interoperability communications should be removed as recommended in our response to question 1. Creating requirements for the communications protocol will by necessity require entities to document how they meet the requirements. A requirement for an operating procedure is redundant. The requirement to have an operating procedure in effect makes this a "how" requirement. An entity could choose to have more than one procedure that described their communications protocol. This requirement as written could force an entity to put all of their communications procedures into one CPOP, which doesn't improve reliability. Therefore the requirement is not needed and should not be included in the standard.
Disagree
Term Interoperability Communications should be removed from the standard. As written, the actions that fall into interoperability communications are much broader than the set of conditions described in the table in attachment 1. To the extent that the communications are outside of the ones in the table, entities will be non-compliant because their communications are not pre-defined. Recommend that this requirement be changed to indicate that "Any Reliability Coordinator or Transmission Operator experiencing a physical security emergency, cyber security emergency, or transmission emergency will communicate their status using the conditions and processes in Attachment 1."
Disagree
This is also a "how" requirement and not a "what" requirement. If the industry believes that confusion exists pertaining to what time zone different entities are referring to in written and verbal communications, the requirement should be focused on ensuring clear communication of time zone information is included in verbal and written communication. Forcing entities to change to any one

time zone will impose significant effort and expense without a measurable improvement in reliability. However, Entergy is not aware that reliability issues have occurred as a result of entities communicating in written or verbal format in different time zones. Entergy proposes that this requirement be removed from the standard.

Disagree

Should be rewritten to say that "Each Responsible Entity shall use Three-part Communications when issuing a Reliability Directive." This should use the definition of Reliability Directive as proposed in project 2006-06. Entergy recommends not including the definition of Interoperability Communications in this standard or in the R5 Requirement. Also, the list of responsible entities listed in the requirement R5 are not all able to issue Reliability Directives. So this requirement should be limited to Reliability Coordinators, Balancing Authorities and Transmission Operators, who can issue Reliability Directives.

Disagree

Entergy has 2 concerns with this requirement as written. First, the use of the NATO phonetic alphabet is overly prescriptive to convey alpha-numeric information. For instance, if I use the word "baker" instead of "bravo" in my communications, I would have still successfully communicated the letter "B" to the person receiving my communication. My communication may have supported reliable interconnected operations. However, according to this requirement, I would still have violated the standard. Second, the requirement as written is very broad, applying not just to directives, but also to "notifications, directions, instructions, orders and other reliability related operating information". These terms are not defined, so I would assume that this covers Reliability Directives, and everything else. If the industry supports using a phonetic alphabet, it should be limited just to directives containing alpha-numeric information. Again, the requirement to use the NATO phonetic alphabet imposes a significant operational burden, creates a human error trap for operating personnel, and does not improve reliability. It should not be included in the new standard.

Disagree

The requirement as it was written in TOP-002-2 pertained to communication between neighbors for shared lines and facilities. That intent has been lost in this version of the requirement. Also a term "equipment identifiers" has been added, but it is not clear what additional equipment is covered by this requirement, or what reliability concern is being addressed by these changes. Entergy recommends that this requirement be changed to be similar to the language that exists in TOP-002-2 R18 "Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use pre-determined mutually agreed upon line identifiers when referring to transmission facilities of an interconnected network."

Agree

As written, the actions that fall into interoperability communications in requirement 2 are much broader than the set of conditions described in the table in attachment 1. To the extent that the communications are outside of the ones in the table, entities will be non-compliant because their communications are not pre-defined. Recommend that requirement 2 be changed to indicate that "Any Reliability Coordinator or Transmission Operator experiencing a physical security emergency, cyber security emergency, or transmission emergency will communicate their status using the conditions and processes in Attachment 1."

Disagree

Disagree

Disagree

Group

NRECA RTF Members

Patti Metro

Disagree

Comments: We agree with the new terms for inclusion in the NERC Glossary. We are somewhat concerned that in this version of the draft standard there was no definition for "directive" included. We do understand that the term "directive" is no longer capitalized in this version of the standard,

therefore, not required to be included in the NERC Glossary. Since several requirements of this draft standard require certain actions when a "directive" is issued, the term should be defined. It is necessary to define the term "directive" to ensure that just normal conversations between entities are not later "interpreted" to be a "directive".

Agree

Yes, we believe that the use of pre-determined, mutually agreed upon line and equipment identifiers for verbal and written Interoperability Communications enhances the reliable operation of the BES.

Disagree

We believe that it may be important for entities registered as a Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider to have a formalized Communications Protocol Operating Procedure (CPOP) for Interoperability Communications, but this requirement will place an unnecessary burden on the personnel at many of the smaller Load Serving Entities and Distribution Providers on the NERC Compliance Registry. In most real-time scenarios, the BES facilities are not operated nor maintained by the Load Serving Entity or Distribution Provider. As with many standards, entities will be required to demonstrate why the standard/requirement is applicable. We suggest the drafting team consider modifying the applicability of this standard as follows similar to the format used in PRC-005: 4. Applicability: 4.1. Transmission Operator 4.2. Transmission Owner 4.3. Balancing Authority 4.4. Reliability Coordinator 4.5. Generator Operator 4.6. Distribution Provider that is responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System 4.7. Transmission Service Provider 4.8. Load Serving Entity that is responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System

Agree

We believe there is a need to use pre-defined system condition terminology and the ones provided in the attachment are easy to understand.

Disagree

We believe that adding the Central Time zone requirement for all verbal and written Interoperability Communications is unnecessary. For these type of activities there should already be accurate time stamps from equipment such as RTUs, EMS systems etc... for record keeping and documentation activities. In the future, with the implementation of Smart Grid technologies, time stamping will be included in the developed platforms for such technology, therefore, reducing the much of the time stamping errors. Because many of the actions required for Interoperability Communications, are completed by field personnel this requirement is onerous. It could potentially impact reliability since the field personnel might be more focused on documenting the correct time zone, for compliance to the requirement and the potential impact for non-compliance, than completing the required task safely and accurately. If time-stamping is an issue in event analysis, it might be more appropriate that Central Standard Time be utilized by recording devices such as RTUs, EMS systems etc... not for the actual verbal and written communications. In addition, how will daylight savings time be addressed in the proposed requirement of this standard?

Disagree

We agree that Three-part communication is a more accurate form of communication for issuing and responding to a Directive during verbal Interoperability Communications and should remain as a requirement of this standard. However since the term "directive" has not been defined it is unclear when Three-part communication is required.

Disagree

We agree that using the NATO phonetic alphabet is a more accurate form of communication for issuing and responding to a directive during verbal Interoperability Communications. However, other forms of phonetic alphabet communications could be utilized to achieve the same results and entities should not be forced to use only the NATO phonetic alphabet. As stated in question 6 we are concerned about the undefined term "directive". In addition to the NATO alphabet, did the drafting team consider including the 10-Code system many utilities use for verbal communication (ex: 10-4)? If not, why not and if so, why not included?

Agree

We agree using pre-determined, mutually agreed upon line and equipment identifiers during for all verbal and written Interoperability Communications is a more accurate form of communication and should remain as a requirement of this standard.

Agree

POSSIBLE FRCC VARIENCE - FRCC appears to have developed a communication protocol in which "any or all conversations on the phone is considered a directive. If this case, we suggest that the drafting team review the FRCC approach and determine if a regional variance should be included in this standard or consider utilizing the FRCC approach for clearly defining the term "directive" for inclusion in the NERC Glossary.

We recommend replacing the term "Distribution Service Providers" in Attachment 1 with the term "Distribution Provider" as stated in the Applicability of this standard. In addition, please see our response to Question 3 regarding a modification to the Applicability portion of the standard to address concerns about the inclusion of Distribution Providers and Load Serving Entities. We are concerned with the onerous communication requirements for Load Serving Entities and Distribution Providers with field personnel that have rare or possibly no opportunities to communicate with personnel working at an entity registered as a Transmission Operator, Transmission Owner, Balancing Authority, Reliability Coordinator, Generator Operator or Transmission Service Provider.

Individual

Gordon Rawlings

British Columbia Transmission Corporation

Agree

Agree

Disagree

BCTC agrees with R1, R2, R3, R5 and R7 but strongly objects to R4 and R6. As a majority of the Interoperability Communications is within our time zone the is no advantage in using Central Standard Time as this will only make the communications more difficult as both parties are required to change time, R4 is unreasonable. R6 requiring the use of North American Treaty Organization (NATO) phonetic alphabet adds no value and will only cause confusion presently an instruction would be issued as: "At Kelly Lake open 5CB4" R6 it will now become "At Kelly Lake open Fife Charlie Bravo Fow-er"

Agree

Disagree

BCTC's position: as a majority of the Interoperability Communications is within our time zone there is no advantage in using Central Standard Time as this will only make the communications more difficult as both parties are required to change time, R4 is unreasonable.

Agree

Disagree

BCTC's position: R6 requiring the use of North American Treaty Organization (NATO) phonetic alphabet adds no value and will only cause confusion. Presently an instruction would be issued as: "At Kelly Lake open 5CB4" R6 it will now become: "At Kelly Lake open Fife Charlie Bravo Fow-er"

Agree

Agree

Should a move to a standard time be required then the move should be to Universal Time

Disagree

Disagree

Disagree
Group
PJM
Mike Bryson
Disagree
<p>We feel that the definition of Interoperability Communication is much too broad and is inconsistent with the effort to develop results-based standards which would have a measurable and observable effect on the reliability of the bulk electric system. The definition of Interoperability Communication, as written, can include virtually any information exchange/instruction between entities, both routine and emergency. Such communication may or may not have a measurable and observable effect on bulk system reliability. Since the broad term Interoperability Communication is used in every requirement in COM-003-1, entities will be required to use the English language, the central time zone, and 3-part communication in even the most routine exchanges of information. This could create a burden on operating personnel and a distraction from their reliability duties. This group does not feel the need for a definition of Interoperability Communication, since the term Reliability Directive has been defined in draft standard COM-002-3, which is currently posted for review. The Reliability Directive term is emergency-focused and consistent with the results-based standards process. In addition, the definition of Three-part Communication in this standard does not match the three-part communication requirements stated in COM-002-3. In COM-002-3, the requirements for three-part communication (state – repeat - acknowledge) apply to Reliability Directives, while in COM-003-1 the definition of Three-part Communication refers to “information” in general. If, as stated in the Disposition of Requirements, the revisions to COM-002-3 will be moved to COM-003-1, the definition of Three-part Communication in this draft standard should be consistent with the requirements of COM-002-3. The way the definition of Three-part Communication is worded applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct. We suggest the definition be revised as follows: “A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.” Both element and facility are used in the Interoperability Communication definition and are NERC defined terms. Did the drafting team intend that the NERC definitions should apply? Then the terms need to be capitalized.</p>
Disagree
<p>Requirement R7, regarding the use of pre-determined line &amp; equipment identifiers, applies to TSPs &amp; LSEs. However, the other requirements of this standard do not seem to apply to these entities. For instance, most of the reliability-related alerts are communicated through the Reliability Coordinator Information System (RCIS). TSPs do not have access to this real-time communication tool, so the TSP should not be included in the applicability for the entire standard. Furthermore, Requirement R18 in TOP-002-2 mandated that neighboring Balancing Authorities use the uniform line identifiers. In COM-003-1, this requirement is lost, since Requirement R7 makes no mention of neighboring BAs. This requirement represents a “how” and not a “what”. In general, standards should be focused on “what” not how. The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the use of three-part communication protocol until the message has been correctly spoken and comprehended.</p>
Disagree
<p>It is not clear what the purpose of this communication protocol is or what should even be included in the protocol. This standard only needs to focus on requiring three-part communications during</p>



actual and anticipated emergency conditions. We feel that there should not be a requirement in the standard to have a "procedure". It is our understanding that, to be auditably compliant with a standard, the responsible entity must develop a procedure, train on that procedure, and be able to demonstrate compliance via documents, data, logs, records, etc. If Requirements R2 – R7 are included in this standard, the entity will need to develop a procedure to be compliant. In other words, the procedure itself will become the focus rather than the actual communications protocol. Therefore, we feel that requirement R1 is redundant and should not be included. The NERC BOT has approved pursuing the Performance-based Reliability Standard Task Force's recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to delineate actionable reliability requirements from record/documentation requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. We – and the industry as a whole based on the response to the Task Force – do not support such an approach. We suggest deleting this Requirement from the Standard. Furthermore, the establishment of R2-R7 as elements of the CPOP required in R1 appears to contradict the recent shift in direction that NERC has taken regarding defining criteria as bullets under a requirement. See NERC's August 10th informational filing regarding assignment of violation risk factors and violation severity levels in regards to dockets RM08-11-000, RR08-4-000, RR07-9-000, and RR07-10-000 Furthermore, R2 appears to define Interoperability Communications for attachment 1 communications only. Is this the intent of the drafting team?

Disagree

The Alert Level Guides in Attachment 1 are not consistent with the proposed definitions of reliability-related communications. Both the Reliability Directive and Interoperability Communication, as currently defined, require some emergency action or change of equipment status. Yet the Alert Level Guides were intended for announcement, not actions. Further, the "pre-defined" system conditions and alert levels are too detailed and overly prescriptive. System operators need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task does not lend itself to promptly and effectively deal with the emergency situation. We also do not feel that these Alert Level Guides apply to all the responsible entities identified under Applicability in the draft standard – for example, TSPs and LSEs are not included in the list of notifications. The requirement to use the central time zone for logging the time of an alert is problematic in that all communication tools, such as the RCIS, will need to be re-vamped. We question whether there will be a measurable reliability benefit by doing so. There is also some redundancy in the Alert Level Guides – for example, the CIP-001 standard requires notification of sabotage events – it should not be repeated in this standard. This also needs to be reconciled with EOP-004 and CIP-001 and the SAR formed to address those redundancies. It is not clear what value there is in identifying alert levels. There does not appear to be any differentiation in actions taken based on the alert levels. Why not just state the number of substations attacked, etc? Attachment 1 and R2 do not appear to be in synch primarily due to the definition of Interoperability Communications. By definition, Interoperability Communication is about how entities change the state of the BES and Attachment 1 is about notifying of what already happened to the BES.

Disagree

We feel that this requirement of a common time zone is overly prescriptive. The requirement should be that entities operating in different time zones agree on how to best eliminate any confusion regarding the time difference. Entities that routinely operate in different time zones already have an effective system for dealing with time differences. There seems to be no incentive to change a system that already works quite well, and the cost of updating computer systems could prove prohibitive. This group feels that mandating a common time zone across all of North America can only lead to confusion and increased reliability issues.

Disagree

As suggested in Question 1 above, the term Reliability Directive (as defined in COM-002-3) should be used in place of Interoperability Communication, since the directive is specific to emergency operations. The requirement should read: "Each responsible entity shall use Three-part Communication when issuing a Reliability Directive". In addition, this requirement should apply only to entities which issue reliability directives - BAs, TOPs & RCs. The other entities listed in the draft standard under Applicability do not issue Reliability Directives.

Disagree

Use of the NATO phonetic alphabet should be considered a "best practice" and should not be included as a requirement in a reliability standard. One failure, such as saying "Baker" instead of "Bravo", results in a severe violation without any impact on system reliability. This group is concerned that operating personnel will be focused on using the correct word rather than managing the power system. Also, many organizations may have established communications protocols which are functioning properly and making a change may actually hinder reliable operations by introducing unnecessary confusion.

Disagree

Requirement R7 in draft COM-003-1 came from TOP-002-2, Requirement R18. The original requirement intended that neighboring Balancing Authorities use uniform line identifiers when communicating information about their tie lines. This requirement drops that clarification and introduces the additional requirement to use pre-determined "equipment" identifiers. Having to mutually agree in advance on identifiers for every switch & transformer is another example of a prescriptive requirement whose violation will not affect system reliability, yet will expose entities to large fines. The key question is: "Do the companies' personnel understand one another?"

Agree

Our concern is that the Alert Level Guides of Attachment 1 were written for Reliability Coordinators, not the industry as a whole, and now they are being incorporated into an industry-wide standard. This attachment is very prescriptive as to how the notifications take place, such as through the RCIS. If the RCIS is not functioning and the hotline is used instead, is the entity vulnerable to a violation by virtue of the fact that these alert guides are included in the standard? We believe that the color-coded system condition terminology should be defined/required externally to the COM standards. The use of clear & consistent alert level terminology, while important, does not fit in well with the reliability-related communication standards, especially at these high violation severity levels. It is our suggestion that the Alert Level Guides be balloted separately, and include the Energy Emergency Alerts (EEA) as well. EEA requirements currently exist in NERC Standard EOP-002-2.1 It is not clear what value is realized by declaring an alert status particularly with regard to cyber and physical attacks. There does not appear to be any differing actions taken based on the alert status. Given that no differing actions are taken for cyber and physical attacks, it seems it would be more beneficial to use specific information such as 12 substations have been physically or cyber attacked. This is more meaningful than issuing a red alert that would only indicate more than one site has been attacked. Furthermore, we question the value of communicating the physical and cyber alerts. How does this notification help the BES reliability? Consider the following example. One BA in Oklahoma is 34,323 sq miles. Communicating that an attack occurred in the BA and RC tells other operators that somewhere in Oklahoma an attack occurred. This notification does not present any information that could require actions on the operators' parts and will only generate phone calls for more information. Furthermore, PSE and CSE is a type of sabotage which is reported in CIP-001 R2 already. TEA Alerts are already covered in IRO-006-East-1, IRO-009, IRO-010, IRO-014.01 R2. Attachment 1 contains a conflict. The last sentence of the opening paragraph of Attachment 1 reads, "The time frame for declaration of these Alert states shall be consistent with the approach used to declare EEAs and would normally apply to Real Time declarations and not forecast conditions." In Transmission Emergency Alerts Condition Yellow, Orange and RED: The Reliability Coordinator or Transmission Operator foresees or is experiencing conditions where all available generation resources are committed to respect the IROL and/or is concerned about its ability to respect the IROL. Forsees is a forecast condition. In condition Orange and Red for TEA Level Two/Three, the initial notification requirements are redundant with IRO-006-East-1 R3.2. Under the Make Final Notifications, is curtailed intended to mean canceled or terminated? The term Curtailed in operations generally means cuts for schedules/tags. EEAs use terminated. We recommend using terminated. Distribution Service Providers should be Distribution Provider to be consistent with the Functional Model.

Disagree

Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the parties such as Distribution Provider and Generation Operator cannot have access to these systems due FERC standards of conduct requirements. Requirement 2 and the listing of functional entities required to be notified within the RC footprint in attachment 1 create a de facto requirement for them to have RCIS access or an unnecessary burden to communicate with all functional entities listed separately. Having to communicate to all functional entities in that list

verbally and individually would create an unnecessary burden that distracts the RC from actual system operation and represents a detriment to reliability.

Agree

We do see a potential conflict with the Energy Policy Act 2005, which set the framework for the Electric Reliability Organization (ERO). The ERO’s mission is to oversee and protect the reliability of the Bulk Electric System. This standard seems to cross the line between reliability-related activities and other types of operating actions which may be better suited for NAESB action. The concern here is that system operators will focus on the letter of the standard rather than on good operating practice. The fear of a violation among operators may have a greater impact on reliability than the violation itself. In some market structures, TSPs and LSE do not own or operate equipment. Thus, including them in the requirements is an unnecessary burden for these areas. The requirement to use CST attempts to determine HOW entities operate within their various footprints and it would significantly change the way many Markets are structured. To implement this into existing Markets would cost significant time, money and resources while not enhancing reliability in these areas. We believe that, when operating across time-zones, simply referencing “Central Standard Time” or “Eastern Standard Time” is sufficient for other operating entities to reliably operate; also, let’s not lose sight of HOW MANY entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We are strongly opposed to this requirement.

Agree

We have identified several problems with this standard, as noted above. Other observations include: The effective dates in the draft standard and in the implementation plan do not seem to match. In the standard, the effective date mentions one calendar year following regulatory approval, while the implementation plan refers to the third calendar quarter after regulatory approval. Furthermore, we do not feel that any of the requirements in this standard warrant Violation Risk Factors or Violation Severity Levels in the high or severe category. In summary, this review group feels that COM-003-1 is not yet ready to be acted upon and may have been posted too soon. There does not seem to be sufficient coordination between the drafting teams of all the COM standards, or any attempt to integrate these standards. One example is the inconsistency between COM-003-1 and COM-002-3 regarding the meaning of three-part communication (mentioned in our response to Question 1 above). Recommendation 26 of the August 14, 2003 blackout report is cited as a driver for extending three-part communications. We believe the title of Recommendation 26 is misleading and when reviewed separately from the supporting text of the recommendation and direct and contributing factors in the report results in an incorrect interpretation. “Failure to identify emergency conditions and communicate that status to neighboring systems” is one of the contributing factors and the supporting text of the recommendation clearly refer to shoring up communications during emergency and anticipated emergency conditions and establishing an emergency broadcast communication system to alert regulatory, state and local officials. The supporting text of Recommendation 26 only mentions addressing alerts, emergencies or other critical situations. Some have incorrectly inferred the initial clause of Recommendation 26, “Tighten communication protocols”, means the recommendation applies to all routine communications. As noted above, we feel that many of the requirements prescribe specific “how to” methods for compliance rather than focusing on the “what” of the requirement. Overall, COM-003-1 is much too prescriptive to be tied to million dollar-level fines.

Group

PJM SOS Comments

Mike Bryson

Disagree

We feel that the definition of Interoperability Communication is much too broad and is inconsistent with the effort to develop results-based standards which would have a measurable and observable effect on the reliability of the bulk electric system. The definition of Interoperability Communication, as written, can include virtually any information exchange/instruction between entities, both routine and emergency. Such communication may or may not have a measurable and observable effect on bulk system reliability. Since the broad term Interoperability Communication is used in every requirement in COM-003-1, entities will be required to use the English language, the central time zone, and 3-part communication in even the most routine exchanges of information. This could create a burden on operating personnel and a distraction from their reliability duties. This group does not feel the need for a definition of Interoperability Communication, since the term Reliability

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Agree
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Agree

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Group

New York State Reliability Council

Robert Ganley

Disagree

Comments: NYSRC agrees with the definitions for Communication Protocol. NYSRC disagrees with the definition for Three-Part Communication. NYSRC prefers the process offered in COM-002-03 (draft). In COM-003 the listener must understand the communication the first time. Failure to understand and repeat back correctly could be a violation of the requirement. The intent three part communication is to have an iterative process whereby the person issuing the message is ultimately satisfied that the recipient understands the information and will perform the required action. It should not be defined as three steps and only three steps. NYSRC offers the following definition: A Real-Time Operating Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back to the party that initiated the communication by the second party that received the communication, and the information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it. NYSRC disagrees with the definition of Interoperability Communication. NYSRC believes the Standard is addressing the communication of the Operating State of BES equipment and facilities. The proposed definition utilizes the phrase "change the state ... of a BES facility" which can be interpreted as the position, e.g. open, close, tap position, etc... thereby extending this Standard into routine switching and operation of the BES. The SAR stated this Standard was "to use specific communications protocols under normal, abnormal and emergency conditions to relay critical reliability-related information in a timely and effective manner". The proposed definition can be interpreted in a manner that extends this to all reliability related information for every BES operation. The drafting team should also consider adding a definition for Directive or acknowledge the definition in draft Com-002-03.

Agree

Disagree

Comments: NYSRC agrees with the need for CPOP but does not agree that R4 can or should apply to all interoperability communications between entities. Since the examples in Attachment 1 specifically state RC and TOP, this standard should not apply to any other entity except for the RC and TOP.

COM-002-03(draft) could require the other entities to utilize three part communication for reliability-related Interoperability communication.

Disagree

Comments: NYSRC believes the use of "shall" and "all" coupled with the broad applicability of this Standard and the broad definition of Interoperability Communication will result in entities either not complying with R2 or making statements regarding the Operating Alert State when unnecessary. Attachment 1-Com-003 is very prescriptive in the use pre-defined terminology, colors and levels, and what to report on. There is no benefit to specifying the specific terminology. This requirement should require the RC to define the terms/levels/alert states to include within the CPOP that sufficiently communicate the increased levels of Alert or Response encountered/required. Many entities have invested time and training in the existing processes that meet the intent of this requirement. Read strictly, the only predefined alert conditions are Physical security, Cyber security and Transmission Security as it applies to the RC and TOP only. NYSRC notes that R2 in the draft Standard does not match R2 in this question. Specifically the word ALL is not in the Standard.

Disagree

Comments: This requirement will burden those entities whose operations and communication needs are with other entities in the same time zone, which represents the overwhelming majority of all communications performed. It will increase the likelihood of errors for such entities. Further, some entities are operating both NERC BES elements and non-BES elements from the same control room. This requirement will significantly impact the efficiency and the safety of workers within those entities. NYSRC notes that R4 in the draft Standard does not match R2 in this question. Specifically the word ALL is not in the Standard.

Disagree

Comments: The SDT should define Directive. Draft Com-002 -3 has a similar requirement to identify a directive and then utilize three-part communication. Also Com-002-3 Three part communication differs from the description of Three-part communication in this Standard. NYSRC prefers Com-002-3 usage of the word "intent" in the repeat back. Also see comments to Question 1.

Disagree

Comments: While NYSRC understands the benefit of utilizing a phonetic alphabet, we question the designation of a specific phonetic alphabet. This prescriptive requirement may result in absurd non-compliance reports, such as, using "Dog" for "D" instead of "Delta". R6 requires the use of the alphabet when issuing information, but not in the repeat back step. This may be an oversight. Also Does the RC in its communication utilize the abbreviation for the threat type, e.g PSEA, or does the RC use the NATO-Alphabet? If NATO, then the example in Attachment 1 should state this need.

Agree

Comments: NYSRC notes that R7 in the draft Standard does not match R2 in this question. Specifically the word ALL is not in the Standard.

Agree

Comments: In addition to the response to Question 4, NYSRC does not understand why there are Levels and color designations since only the threat level numeral is being communicated. Attachment 1-Com-003 is very prescriptive in the use pre-defined terminology, colors and levels. There is no benefit to specifying the specific terminology. Requiring system Operators to state Colors and Levels would seem to result in slower and more confused communication.

Disagree

Agree

Comments: R1 requires each entity to create a CPOP. There is not a requirement to coordinate CPOP's amongst entities beyond the requirements in the Standard. There is no requirement to exchange CPOP's between entities with an operating relationship. The SDT should consider adding a requirement either that allows entities with operating relationships to request and be provided a copy of the other's CPOP, or a requirement requiring the exchange of CPOP between entities with operating relationships. Additionally, we cannot understand how all requirements but R1 have been determined to have a HIGH VRF when, many of them are dictating HOW communications should take place and not when and why or what. High Risk Factor requirement (a) is one that, if violated,



could directly cause or contribute to bulk power system instability, separation, or a cascading sequence of failures, or could place the bulk power system at an unacceptable risk of instability, separation, or cascading failures. NYSRC does not believe that any requirement in this Standard if violated would have the results specified in the definition of a High VRF, especially since these requirements are addressing the HOW of communication.

Individual

Greg Rowland

Duke Energy

Disagree

When viewed in the context of its use in R5 and R6, the definition of Interoperability Communication is excessively broad and unclear. R5 refers to the issuing of a "directive" during verbal Interoperability Communications. The term "directive" is undefined. R6 requires the use of the NATO phonetic alphabet during verbal Interoperability communications such as directives, notifications, directions, instructions, orders or other reliability related operating information. This could conceivably encompass all communications. Also, the definition refers to communications between two or more "entities". Does "entities" refer to functional entities or registered entities?

Disagree

We disagree with moving R18 into COM-003-1 and broadening it to include every line and piece of equipment. This would create an enormous amount of effort to implement, and would substantially increase compliance risk, without any increase in reliability. Furthermore, if R18 is moved into COM-003-1, when would it be removed from TOP-002-2? Until R18 is actually removed from TOP-002-2, entities would be subject to compliance double jeopardy.

Disagree

There is no need to have a CPOP to describe how an entity will comply with R2 through R7. A CPOP would just be a restatement of the requirements. If an entity complies with R2 through R7, there's no reliability related benefit to having a CPOP.

Disagree

Attachment 1 is limited to notifications from the RC to other entities regarding Alerts for Physical Security Emergency, Cyber Security Emergency or Transmission Emergency. Also, these types of notifications wouldn't meet the definition of "Interoperability Communications", because they wouldn't necessarily be used to effect a change in the state or status of an element or facility of the Bulk Electric System.

Disagree

We don't agree with this requirement because it would introduce confusion into communications, especially in all communications other than RC to RC. RC's already have protocols in place to deal with time zone differences, and changing that and applying it to all entities would create reliability errors. We think that this is "a solution in search of a problem".

Disagree

We believe that the term "directive" should be defined. This SDT should work with the COM-002 SDT to come up with common phraseology and definition for the term "Directive". Work on COM-003-1 should have begun by defining "directive", and limiting the requirement to use 3-part communications to "directives", and not requiring it for general day-to-day communications. The entity issuing a "directive" should inform the receiving entity that it is a directive and therefore requires the use of 3-part communications.

Disagree

We believe that R6 should be deleted, because it is focused on the details of the "how" rather than the "what" in communications. The key is accurate 3-part communications for "directives", as required by R5. R6 is far too broad in the communications that would be included. Also, we believe that there is no reasonable way to implement, self-certify or audit compliance with this requirement.

Disagree

Delete this requirement. See our response to Question #2 above.

Agree

We support the development of this attachment, but question whether it belongs in this standard, especially since it is under field trial. We think it belongs in the EOP standards. We note the

Attachment 1 is only associated with notifications by the RC, so we question whether these are Interoperability Communications as that term is defined. Also, the introduction on Attachment 1 is very confusing. Attachment 1 states that definitions for Transmission Loading, Physical and Cyber Security Alert states align with the Emergency Energy Alert (EEA) states as already described in Standard EOP-002-2.1. EOP-002-2.1 and associated EEA Levels provides guidance on Energy and Capacity Emergencies rather than Transmission or Physical/Cyber Alerts. Energy Emergency is defined as a condition when a LSE has exhausted all other options and can no longer provide its customers' expected energy requirements. This is a totally different classification of Emergency Alert. We suggest deleting the 2nd and 3rd sentences of the introduction to Attachment 1. In addition, Attachment 1 does not contain four system condition alerts, as the SDT has proposed.

Disagree

Disagree

Agree

As a general comment, all the requirements other than R1 are High VRFS with only Severe VSLs. As this standard is written to apply broadly to routine as well as emergency communications between entities, we believe that failure to meet these requirements would rarely impact the reliability of the Bulk Electric System. For example if in routine switching an operator says "Baker" instead of "Bravo", the entity is subject to FERC's most severe penalty. Clearly the basis for this standard needs to be reassessed. If we use the test that if a requirement or a standard supports/encourages reliability and security, then entities should invest the time and effort to track performance to ensure auditable compliance. For example – Does DCS compliance support/encourage reliability/security? The industry would generally say yes – so the tracking and determination of auditable compliance is justified. But would auditable compliance to this draft of COM-003-1 support/encourage reliability/security? We don't think so, given the vague and general nature of this draft. It certainly would not justify the amount of work and effort it would take to ensure auditable compliance with this COM-003-1 draft, given the amount of effort it would take to monitor all recorded communications that fit within this vague draft standard. Bottom line is that we think COM-003 is not needed. As proposed, it is a "how" and not a "what" based standard that will create more distraction from reliability/security than any value it might add.

Individual

Frank Cumpton

Transmission System Operations

Disagree

The definition of "Interoperability Communication" is not clear. What does the term "reliability-related" information entail? Does "Interoperability Communication" include instructions from a control room to a generator to adjust vars, from the control room to field personnel to direct the changing of transformer taps, from the control room to field personnel to implement switching instructions, etc? What is the definition of "entity"? Does this mean if switching instructions are given from a control room of one company to personnel in its own company (i.e., the same entity), that the interaction would not be classified as "Interoperability Communication"?

Agree

Disagree

We believe the phrase, "but is not limited to" should be deleted. The elements required to be in the CPOP should be well-defined.

Agree

Disagree

We believe that the use of Central Standard Time in non-CST areas would create confusion between the Reliability Coordinator, Transmission Operator, Transmission Owner, Generator Operators, and field personnel.

Disagree

As stated in Question #1, the definition of "Interoperability Communication" needs further clarification. Also, further clarification is needed as to when "Interoperability Communications" is required to be used.
Disagree
As stated in Question #1, the definition of "Interoperability Communication" needs further clarification. Directives, notifications, directions, instructions, orders, and other reliability operating information needs to be clearly defined, including what it consists of and when it is to be utilized.
Agree
Agree
It should be made clear that Attachment 1 applies to the RC's. It is not specifically stated in R2 that it is the RC's responsibility to make notifications. In Attachment 1, we believe the wording under "Initial Notifications" should be changed. For example, on the 2nd row and 1st column of the matrix, it states that the RC makes initial notification and states that "...there is a Physical Emergency Alert, PSEA Level One within...." Nowhere is it ever mentioned that there is a "Condition Yellow". Since it is never mentioned by the RC in the notification that the Condition is "Yellow", what is the use or benefit of having the conditions? It should also be made clear that when the RC states, for example, that "There is a Physical Security Emergency Alert-PSEA Level One within..." that this refers to specific definitions given in Attachment 1 of EOP-002-2.1. This fact is mentioned at the top of the matrix, but the wording of this explanation is not consistent with the wording used in the body of the matrix.
Agree
Refer to Question #5; we do not agree with using Central Standard Time.
Disagree
Agree
We think the SDT should coordinate their work closely with the team of the Reliability Coordination Project 2006-06, especially regarding new definitions related to communications and reliability directives.
Group
We Energies
Howard Rulf
Disagree
Communications Protocol: This defined term appears only in the Three-part Communication definition and in titles. Titles are expected to be capitalized and are not necessarily the defined term. The COM-003-1 Standard title is "Operating Personnel Communications Protocols", but the purpose is not restricted to verbal and written information, so "Communications Protocol" does not seem to refer to the defined term in this title. Similarly, it is not necessarily the defined term in CPOP. It is not clear where this definition is being utilized in the standard. Three-Part Communication: Should be required for "Reliability Directives" only. It seems that this is currently being addressed, and could remain, in an updated version of COM-002-003. This should be coordinated between standards and duplication should be avoided. Interoperability Communication: This definition is excessively broad, and the terminology "reliability related information" is ambiguous and vague. Communication is used elsewhere within the NERC Standards to include voice, data, email, memos, NERCnet, etc. Since communication of any type may be used to change the "state or status" of the Bulk Electric System, this definition seems to pertain to every communication in every form, which could be interpreted to include market information which is continuously used to drive changes to the "state or status". By extension, a CPOP would need to include every communication of any type (voice, data, email, memos, etc.), which is over-reaching and open to conflict with the CPOP's developed independently by other entities. Interoperability Communications should apply only to situations covered in Attachment 1, and definitions should better reflect applicability to communications between separate, distinct entities (not communications within the same organization).
Disagree
Because applicability to a TSP and LSE of this standard stems solely from TOP-002-2 R18, R7 should be the only requirement that applies to a TSP or LSE.

Disagree
It is not clear what the purpose of the CPOP is, or how having it would improve reliability of the Bulk Electric System. This standard, (or alternatively COM-002-003) should focus on requiring Three-Part Communication during Reliability Directives. In addition, the vague and broad nature of the existing definition of Interoperability Communication makes creating CPOP's problematic and open to conflict with the CPOP's developed independently by other entities. As noted in question 2, R1 should not apply to a TSP or LSE.
Disagree
Attempting to mold all possible circumstantial situations into the pre-defined terminologies is overly restrictive and may result in reduced accuracy, unnecessary confusion and misinterpretation. R2 should have the word "all" included (as is stated in this question) in order to restrict the applicability of Interoperability Communications to only those situations defined in Attachment 1. As noted in question 2, R2 should not apply to a TSP or LSE.
Disagree
If requiring one standard time zone, it would seem prudent to specify Greenwich Mean Time (GMT) as a universal standard. That being said, solely utilizing Central Standard Time (CST), or even GMT, as the common time zone may cause undue confusion given that MISO and PJM already operate with established processes and systems that are inconsistent with this, and are based on their own market timing. In addition, many plant personnel and procedures already have a long and engrained history of successful operation under existing timing directions, which are not aligned with market timing. Forcing every plant across multiple time zones to establish a new standard ignores the need for cases of special consideration and historical circumstances. The potential confusion due to the forced timing standard across many entities within a given area is too high a price to pay for the possible clarity by a limited few due to the switch to CST. A preferred alternative would include focusing the standard on requiring very clear communication of the time zone being specified for a given Reliability Directive. Thus, compliance enforcement would only pertain to Reliability Directives.
Disagree
The term "directive" should be replaced with the term "Reliability Directive" as defined by the Drafting Team working on Project 2006-06 which states it as: "A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency". Three-part Communication should be required (with regard to compliance) during emergency situations in which Reliability Directives are being issued. This requirement should not apply to normal or non-emergency situations, and should be enforceable between Functional Entities (distinct entities, not within a given organization). As noted in question 2, R5 should not apply to a TSP or LSE.
Disagree
While R6 could be recommended as a good utility practice when communicating Reliability Directives, it is not appropriate to enforce it as a requirement for all communications. The focus of the standard should be on the achievement of clear communications, with individual organizations retaining some freedom to implement practices appropriate for their own unique situations. If Violation Severity Levels will be "high" as indicated in Attachment 1-COM-003-1, then the standard must be much more specific as to what constitutes "directives, notifications, directions, instructions, orders or other reliability operating information". Assigning a high Violation Severity Level to the failure to use a specific phonetic alphabet (NATO) instead of to a failure to use any phonetic alphabet seems unreasonable and is likely to cause as much confusion as failing to use any sort of phonetic pronunciation. If attachment 2 is utilized, it should only be required for situations where Attachment 1 applies. As noted in question 2, R6 should not apply to a TSP or LSE.
Disagree
TOP-002-2 R18 requires uniform line identifiers. The wording of R7 and the statement by the SDT that "the Requirement does not stipulate a single/unique identifier as long as all parties mutually agree" is in conflict with TOP-002-2 R18. Allowing multiple line and equipment identifiers to be used does not improve reliability or improve communications in an emergency. TOP-002-2 applies to Transmission Facilities of an Interconnected Network...R7 should do the same for clarity. Having the term "mutually agreed upon" in a standard is unworkable, since it allows a non-cooperative party to disrupt the genuine efforts of others and to exploit unfair leverage in discussions or negotiations. A better approach is having the Transmission Owners develop identifiers for transmission, and

Generation Operators develop identifiers for generation. The process should be defined such that comments are solicited and input within a pre-specified convention, and then a specific entity is given the ability to make the final determination. Again, R7 is more appropriate as a best practices recommendation, rather than a requirement.

Agree

Attachment 1 is written for an RC. Usage of Attachment 1 by entities other than an RC should be clarified.

Disagree

Agree

In general, establishing CST as a uniform time zone may conflict with individual Tariffs regarding references to wholesale electric market commercial activities and could cause additional confusion if commercial market time zone references are independent of reliability time zone references.

Agree

Remove "timely" from the Purpose section, since a time period is not part of any requirement. According to the NERC Reliability Standards Development Procedure, Compliance Monitoring Period and Reset are required elements, and should be included. M1 through M7 should indicate which requirement they pertain to. Compliance enforcement should be focused on Reliability Directives only. Rather than proving 100% compliance, it is more practical if each party is obligated to report instances of unclear communication to the other party/parties involved in the Reliability Directive(s). Defining a remediation plan could be part of the requirement, with a measure being whether or not the remediation was implemented. An overall observation is that the intended communication updates could be implemented through modification of existing COM-001 & COM-002 standards without the need for another overlapping standard. Additional industry focus regarding communication protocols could be further emphasized through NERC System Operation Certification Program requirements and training.

Individual

Greg Mason

Dynegy

Disagree

The way the definition of "Three-part Communication" is worded applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct. We suggest the definition be revised as follows: "A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it." It should also be noted that these principles are included in Requirements R2 and R3 in the recently issued draft Standard COM-002-3 in Project 2006-06. This definition in this Standard is not needed. We believe the term "Interoperability Communication" creates confusion within the industry and contradicts the work by RTO and RC SDT in Project 2006-06 that limits the requirement to use three-part communications when issuing Reliability Directives (defined in Project 2006-06) that address anticipated and actual emergency conditions. Additionally, it appears that this definition would encompass all verbal communications and, as such, would be a distraction to Operators. Therefore, there is no reliability need for this definition. While using three-part communications during routine operations may be a best operating practice, we do not believe that it is so critical to reliability that it needs to become an enforceable requirement for routine operating instructions. Rather we believe the enforceable requirement should be limited to require three-part communications during actual emergency and anticipated emergency conditions only. Both element and facility are used in the Interoperability Communication definition and are NERC defined terms.

Did the drafting team intend that the NERC definitions should apply? Then the terms need to be capitalized. In addition, the term “entities” is confusing and needs to be defined.
Disagree
The SDT actually expanded Requirement R18 of TOP-002-2 by adding the term “equipment”. In any event, this Requirement represents a “how” and not a “what”. In general, standards should be focused on “what” not how. The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the use of the three-part communication protocol until the message has been correctly spoken and comprehended.
Disagree
This proposed communication protocol is redundant to Requirements R2-R7 and should not be included in this Standard. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions. The NERC BOT has approved pursuing the Performance-based Reliability Standard Task Force’s recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to eliminate administrative requirements. This proposed Requirement takes the opposite approach and incorporates a new administrative requirement. We – and the industry as a whole based on the response to the Task Force – do not support such an approach. We suggest deleting this Requirement from the Standard.
Disagree
It is not clear what value there is in identifying these alert levels. There does not appear to be any differentiation in actions taken based on the alert levels. Why not just state the number of substations attacked, etc? Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the listed entities such as Distribution Provider and Generator Operator cannot have access to these systems due FERC standards of conduct requirements. Attachment 1 and R2 are not consistent with the definition of Interoperability Communications. By definition, Interoperability Communication pertains to all communications about how entities change the state of the BES (not just about physical or cyber attacks). Attachment 1 is only about notifying of what physical and cyber attacks have already happened to the BES .
Disagree
There is no reliability need to use a common time zone for communications. There is already a requirement to use hour ending for scheduling purposes, inadvertent accounting, CPS and other standards where needed. The time zone should be identified in the communication. Use of CST in all time zones will actually cause confusion and significant and unnecessary costs with no foreseeable reliability benefit. Some of the costs will arise to change systems such as RCIS, IDC, scheduling and E-Tag systems, etc.
Disagree
Based on the definition of Interoperability Communications, R5 implies that three-part communications is required to communicate routine operating instructions. We believe this Requirement contradicts the work that has been done and substantially progressed through two other SDTs and creates confusion within the industry. We believe this Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion. We support the work being done by the RC SDT and RTO SDT in Project 2006-06 which would define a Reliability Directive based on the determination of the person giving such an order. We believe, it should be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger and auditable and measurable. R5 is not consistent with the Functional Model. Only the RC, BA, and TOP can issue directives.
Disagree
While this Requirement may represent a good utility practice in certain situations, it is not necessary to be used in all verbal Interoperability Communications and is certainly not necessary to be included as an enforceable Requirement. Imagine the situation in which an operator says “A as in apple” instead of using the NATO Alpha. Even though the listener should clearly be able to discern

the correct meaning, the speaker's company could be sanctioned even if the correct actions were taken as a result of the clear communication. There is no reliability need for this Requirement.
Disagree
This may represent a good utility practice but it is not necessary to be included as a Requirement. The key question is: "Do the companies' personnel understand one another?" If I know that my company refers to a tie-line as Alpha and my neighboring company calls it Beta, I know what he means when communicating to me. That is all that matters. This is a "how" based Requirement that should be eliminated.
Disagree
It is not clear what value is realized by declaring an alert status particularly with regard to cyber and physical attacks. There does not appear to be any differing actions taken based on the alert status. Given that no differing actions are taken for cyber and physical attacks, it seems it would be more beneficial to use specific information such as 12 substations have been physically or cyber attacked. This is more meaningful than issuing a red alert that would only indicate more than one site has been attacked. Furthermore, we question the value of communicating the physical and cyber alerts. How does this notification help the BES reliability? Consider the following example. One BA in Oklahoma is 34,323 sq miles. Communicating that an attack occurred in the BA and RC tells other operators that somewhere in Oklahoma an attack occurred. This notification does not present any information that could require actions on the operators' parts and will only generate phone calls for more information. Furthermore, PSE and CSE is a type of sabotage which is reported in CIP-001 R2 already. TEA Alerts are already covered in IRO-006-East-1, IRO-009, IRO-010, IRO-014.01 R2. Distribution Service Providers should be Distribution Provider to be consistent with the Functional Model.
Disagree
Disagree
Disagree
Agree
We believe that the existing standard COM-002 is better than this proposed Standard. This Standard actually causes more confusion and ambiguity and creates unnecessary or overly cumbersome requirements that add little or no value to reliability. Additionally, we cannot understand how all requirements but R1 have been determined to have a HIGH VRF when, many of them are dictating HOW communications should take place and not when and why or what. The stated retirement of COM-002 does not appear to be consistent with the direction of the RC SDT in Project 2006-06. The RC SDT is adding requirements. More coordination is certainly required between these two teams. In addition, as stated earlier, this Standard focuses on "how" certain tasks should be performed and conflicts with NERC's position of pursuing performance based and results based Standards.
Individual
Dustin Smith
Washington City Light & Power
Disagree
Disagree
Disagree
We believe that it may be important for entities registered as a Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider to have a formalized Communications Protocol Operating Procedure (CPOP) for Interoperability Communications, but this requirement will place an unnecessary burden on the personnel at many of the smaller Load Serving Entities and Distribution Providers on the NERC Compliance Registry. In most real-time scenarios, the BES facilities are not operated nor maintained by the Load Serving Entity or Distribution Provider. As with many standards, entities will be required to demonstrate why the standard/requirement is applicable.

Individual
Kirit Shah
Ameren
Disagree
The definition for three part implies the exact message must be repeated back. What should be said is the content must be repeated back in original or modified forms such that the originator is sure the recipient understands and can execute the action. As far as Interoperability, what is state or status? Is the dispatch instruction to change from 500 MW to 505 MW such a communication? (which changed, state or status?)
Agree
Disagree
This is a near fill-in-the-blank requirement. The mere inclusion, or recitation, of the R2-7 elements does not assure a meaningful plan. It is easy to say "Our plans includes R3". That does not assure reliable communications. This requirement should describe a functional CPOP.
Disagree
This is an ambiguous reference in all of NERC standards for all but the RC. How would an LSE interpret this in communication between them and a DP. Would there ever be a red condition for issues that affect them? And as it relates to operating, it looks like this is exclusive of EEA type events, i.e. BA type emergencies seem to not be represented. It would seem that the pre-defined conditions should be established for each interaction that each entity might have, e.g. a predefined set for a BA to a TOP, a BA to an LSE, et al. While each entity can certainly address the 3 scenarios in Attachment 1 (RC to entity) those are not the only conditions where communication affects BES reliability.
Disagree
We agree that all inter-entity operability communication should be on common time zone but if said communication includes routine dispatch instructions several RTOs use EST time for market operations, would they then need to change to CST? And while CST seems to have some value because it is used for time error, wouldn't it make more sense to use UTC? It is a world standard and has the benefit of not being associated with daylight savings times as Central time does (may be confusion at some times between CST and CDT)
Agree
Disagree
Requirement should be revised to say that Attachment 2 needs to be used when single alphabetic characters, or when needed for clarity, are needed in communications. If we have a Bee Hollow-51 circuit, that is alpha-numeric information. But we wouldn't support that Bee Hollow needs to be spelled out as Bravo-Echo-Echo-space-Hotel.....
Agree
But how does CMEP process check this "mutually agreed". Much more work needs to be done with this requirement and measures to address this.
Agree



As stated earlier, this is an excellent document for RC interactions. But it is wholly unclear how this impacts other entity-to-entity relationships in pre-defining states. And as mentioned having only Attachment 1 seems to ignore the energy balance alerts/emergencies

We understand the binary function of VSL that forces Severe for most requirements. However, the standard itself seems to offer some hope with the definition to address the VSL issue better. The definition has at the end, "especially during alerts and emergencies" Given that this implies stratification, couldn't Severe VSL be assigned to violations during emergencies, High be assigned to alerts, and moderate to all other system conditions. When emergency conditions exist, entities should have their "A" game on, and failure to communicate during these times is a more severe violation of the communication protocols than during the thousands of daily interactions that are note likely to affect BES, (alternatively, the VRF could be adjusted for the situation)

Individual

Kathleen Goodman

ISO New England Inc.

Disagree

The way the definition of Three-part Communication is worded applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct. We suggest the definition be revised as follows: A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it. We believe the term "Interoperability Communication" contradicts the work by the RTO and RC SDT that limits the requirement to use three-part communications to only those communications that explicitly state that the communication is a Reliability Directive and creates confusion within the industry. Additionally, it appears that this definition would encompass all verbal communications and, as such, we question the need for such definition. While we support using three-part communications during routine operations as a best operating practice, we do not believe that it is so critical to reliability that it becomes an enforceable requirement for routine operating instructions. Rather we believe the enforceable requirement should be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger and auditable and measureable.

Disagree

This requirement represents a "how" and not a "what". In general, standards should be focused on "what" not how. The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the of use three-part communication protocol until the message has been correctly spoken and comprehended.

Disagree

It is not clear what the purpose of this communication protocol is or what should even be included in the protocol. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions. The NERC BOT has approved pursuing the Performance-based Reliability Standard Task Force's recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to delineate actionable reliability requirements from record/documentation requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. We – and the industry as a whole based on the response to the Task Force – do not support such an approach. We suggest deleting this Requirement from the Standard. Furthermore,

the establishment of R2-R7 as elements of the CPOP required in R1 appears to contradict the recent shift in direction that NERC has taken regarding defining criteria as bullets under a requirement. See NERC's August 10th informational filing regarding assignment of violation risk factors and violation severity levels in regards to dockets RM08-11-000, RR08-4-000, RR07-9-000, and RR07-10-000. COM-003 R2 states: "shall use pre-defined system condition terminology as defined in Attachment 1-COM-003-1 for verbal and written Interoperability Communications." Why does R1 establish the requirement for a procedure, when the procedure is essentially defined by R2-R7. If there is such a reliability need to establish these requirements, one could conclude nothing else is so important that it needs to be included because it is not identified in the standard. Furthermore, R2 appears to define Interoperability Communications for attachment 1 communications only. Is this the intent of the drafting team?

Disagree

It is not clear what value there is in identifying alert levels. There does not appear to be any differentiation in actions taken based on the alert levels. Why not just state the number of substations attacked, etc? Further, the "pre-defined" system conditions and alert levels are too detailed and overly prescriptive. System operators need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task does not lend itself to promptly and effectively deal with the emergency situation. Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the parties such as Distribution Provider and Generator Operator cannot have access to these systems due FERC standards of conduct requirements. Attachment 1 and R2 do not appear to be in synch primarily due to the definition of Interoperability Communications. By definition, Interoperability Communication is about how entities change the state of the BES and Attachment 1 is about notifying of what already happened to the BES.

Disagree

There is no need to use a common time zone for communications. There is already a requirement to use hour ending for scheduling purposes, inadvertent accounting, CPS and other standards where needed. There is no demonstrated benefit to reliability to use a common time zone. The time zone should be identified in the communication. Use of CST will cause significant and unnecessary costs and the resulting reliability benefit is not clear. Some of the costs will arise to change systems such as RCIS, IDC, scheduling and E-Tag systems, etc. Not only does this requirement attempt to determine HOW entities operate within their various footprints, it would significantly change the way many markets are structured. To implement this into existing Markets would cost significant time, money and resources while not enhancing reliability in these areas. We believe that, when operating across time-zones, simply referencing "Central Standard Time" or "Eastern Standard Time" is sufficient for other operating entities to reliably operate; also, let's not lose sight of HOW MANY entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We, and our members, are strongly opposed to this requirement.

Disagree

Based on the definition of Interoperability Communications, R5 could imply that three-part communications is required to communicate routine operating instructions. We believe this Requirement contradicts the work that has been done and substantially progressed through two other SDTs and creates confusion within the industry. We believe this Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion. We support the work being done by the RC SDT and RTO SDT which would define a directive based on the determination of the person giving such an order. We believe, it should be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger and auditable and measureable.

Disagree

Not only does this requirement attempt to determine HOW entities operate with their various footprints, it may change the way many Markets are structured. What is the difference between using the word "Zebra" instead of "Zulu" to signify the letter "Z"? And, why would this be enforceable? Perhaps this would be better served as a guideline document rather than and enforceable Requirement. Also, many organizations may have established communications protocols

which are functioning properly and making a change may actually hinder reliable operations by introducing unnecessary confusion.
Agree
We agree that the stipulation of a single/unique identifier is unnecessary as long as all parties mutually agree on the identifier for the line or equipment, and therefore, support this change to the existing Requirement in TOP-002.
Agree
It is not clear what value is realized by declaring an alert status particularly with regard to cyber and physical attacks. There does not appear to be any differing actions taken based on the alert status. Given that no differing actions are taken for cyber and physical attacks, it seems it would be more beneficial to use specific information such as 12 substations have been physically or cyber attacked. This is more meaningful than issuing a red alert that would only indicate more than one site has been attacked. Furthermore, we question the value of communicating the physical and cyber alerts. How does this notification help the BES reliability? Consider the following example. One BA in Oklahoma is 34,323 sq miles. Communicating that an attack occurred in the BA and RC tells other operators that somewhere in Oklahoma an attack occurred. This notification does not present any information that could require actions on the operators' parts and will only generate phone calls for more information. Furthermore, PSE and CSE is a type of sabotage which is reported in CIP-001 R2 already. TEA Alerts are already covered in IRO-006-East-1, IRO-009, IRO-010, IRO-014.01 R2. Also, several entities have observed confusion during the field-test of these Alert Levels because there are inconsistencies in the implementation of various stages of Alerts. It certainly has not enhanced Reliability. Attachment 1 contains a conflict. The last sentence of the opening paragraph of Attachment 1 reads, "The time frame for declaration of these Alert states shall be consistent with the approach used to declare EEAs and would normally apply to Real Time declarations and not forecast conditions." In Transmission Emergency Alerts Condition Yellow, Orange and RED: The Reliability Coordinator or Transmission Operator foresees or is experiencing conditions where all available generation resources are committed to respect the IROL and/or is concerned about its ability to respect the IROL. "Foresees" is a forecast condition. In condition Orange and Red for TEA Level Two/Three, the initial notification requirements are redundant with IRO-006-East-1 R3.2. Under the Make Final Notifications, is curtailed intended to mean canceled or terminated? The term Curtailed in operations generally means cuts for schedules/tags. EEA's use terminated. We recommend using terminated. Distribution Service Providers should be Distribution Provider to be consistent with the Functional Model.
Agree
Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the parties such as Distribution Provider and Generation Operator cannot have access to these systems due FERC standards of conduct requirements. Requirement 2 and the listing of functional entities required to be notified within the RC footprint in attachment 1 create a de facto requirement for them to have RCIS access or an unnecessary burden to communicate with all functional entities listed separately. Having to communicate to all functional entities in that list verbally and individually would create an unnecessary burden that distracts the RC from actual system operation and represents a detriment to reliability.
Agree
In some market structures, TSPs and LSE do not own or operate equipment. Thus, including them in the requirements is an unnecessary burden for these areas. The requirement to use CST attempts to determine HOW entities operate within their various footprints and it would significantly change the way many Markets are structured. To implement this into existing Markets would cost significant time, money and resources while not enhancing reliability in these areas. We believe that, when operating across time-zones, simply referencing "Central Standard Time" or "Eastern Standard Time" is sufficient for other operating entities to reliably operate; also, let's not lose sight of HOW MANY entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We are strongly opposed to this requirement.
Agree
We believe that the existing standard COM-002 is actually better than this standard. This standard causes more confusion and ambiguity and creates unnecessary or overly cumbersome requirements that add little or no value to reliability. Additionally, we cannot understand how all requirements but

R1 have been determined to have a HIGH VRF when, many of them are dictating HOW communications should take place and not when and why or what. COM-002 retirement does not appear to be consistent with the direction of the RC SDT. The RC SDT appears to be adding requirements. More coordination is requirement between these two teams. Recommendation 26 of the August 14, 2003 blackout report is cited as a driver for extending three-part communications. We believe the title of Recommendation 26 is misleading and when reviewed separately from the supporting text of the recommendation and direct and contributing factors in the report results in an incorrect interpretation. "Failure to identify emergency conditions and communicate that status to neighboring systems" is one of the contributing factors and the supporting text of the recommendation clearly refer to shoring up communications during emergency and anticipated emergency conditions and establishing an emergency broadcast communication system to alert regulatory, state and local officials. The supporting text of Recommendation 26 only mentions addressing alerts, emergencies or other critical situations. Some have incorrectly inferred the initial clause of Recommendation 26, "Tighten communication protocols", means the recommendation applies to all routine communications. Lastly, this on-line submittal asks many questions that are YES/NO in nature (i.e. "do you have any concerns with...", or "if, yes, please explain...") but the radial selections are "agree/disagree" which may be taken out of context. We suggest changing the on-line submittal back to YES/NO.

Group

ATC and ITC

Jason Shaver

Disagree

ATC believes that the proposed definition for the term "Interoperability Communication" is too broad and ambiguous. We recommend the following: "Communication between two or more Functional Entities (not within the same organization) to exchange reliability-related information to be used by the entities to change the state or status of Facilities of the Bulk Electric System." The inclusion of the terms "Functional Entities" and "Facilities" removes the ambiguity which we believe is contained in the proposed definition. (Both of these terms are defined in NERC's Glossary) In addition, the inclusion of the phrase "not within the same organization" clarifies that the focus of definition is to address communication between different Functional Entities. ATC understands that this Drafting Team is working closely with the Drafting Team working on Project 2006-06 and believes that this team needs to use the term "Reliability Directive" as a replacement for the term "directive" which is currently being used. The Drafting Team working on Project 2006-06 has defined Reliability Directive as: "A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency."

Disagree

TOP-002 R18 states that BA, TOP, GOP TSP and LSE shall use uniform line identifiers when referring to transmission facilities of an interconnected network. COM-003 R7 states that each RC, BA, TO, TOP, GOP, TSP, LSE and DP shall use pre-determined, mutually agreed upon line and equipment identifiers for verbal and written Interoperability Communications. TOP-002 allowed the TOP to communicate what the line identifiers were via a list and use during communications. The new requirement implies that the parties must agree upon the line identifiers and that agreement must be documented. ATC believes that the requirement should state that "mutual agreement" allows for multiple identifiers. We believe that this is needed in order to avoid the following issues. 1) This clarification will avoid any need for arbitration or formal dispute resolution steps. 2) If the standard does not allow for this provision entities will be forced to deviate from their own line naming convention and will result in entities to modify their drawings, field signs, and SCADA systems.

Disagree

: Based upon the concerns that we have with R2-R7 we would not support this requirement. We would support the requirement if it stopped after the first sentence and then merely listed the minimum requirements that should be included in the Procedure such as; (1) time zone, (2) language spoken, (3) when phonetic alphabet will be used, etc.. This will allow the Entities to draft their own CPOP per the intent of the requirement and avoid the concerns that we have documented for the remainder of the requirements.

Disagree

The Attachment pertains to requirements of the RC, not all entities. Either the attachment should be changed or the requirement should be changed for accurate accountabilities.
Disagree
ATC is in the Central Standard Time zone, and would not be directly impacted by this requirement. With that being said we are concerned that forcing an organization to refer to a time zone that is not local may result in an increase of errors and a decrease in reliability. See comments for question #3.
Disagree
ATC believes that the term "directive" should be replaced with the term "Reliability Directive" which is being developed under Project 2006-06. It is important for BES reliability that NERC use clearly defined term which will identify the circumstances under which this requirement is enforceable. We provide the definition for "Reliability Directive", as it appears in the latest posting for Project 2006-06, in our response to question 1. It is our understanding and interpretation that the intent of this requirement is to require entities to use Three-Part Communication during emergency situations in which "Reliability Directives" are being issued. In other words this requirement as proposed does not apply to normal (non-emergency) day-to-day switching. The replacement of the term "directive" with "Reliability Directive" provides the additional clarity around an entity's compliance obligation.
Disagree
The use of the phonetic alphabet should be documented in the Entities CPOP per our comments to question #3. We do not agree that it needs to be included in Requirement 5 because it is too prescriptive and all encompassing and could potentially confuse or slow down the communication process. As we recommended in question 6 the term "directive" should be replaced with "Reliability Directive".
Disagree
TOP-002 R18 states that BA, TOP, GOP TSP and LSE shall use uniform line identifiers when referring to transmission facilities of an interconnected network. COM-003 R7 states that each RC, BA, TO, TOP, GOP, TSP, LSE and DP shall use pre-determined, mutually agreed upon line and equipment identifiers for verbal and written Interoperability Communications. TOP-002 allowed the TOP to communicate what the line identifiers were via a list and use during communications. The new requirement implies that the parties must agree upon the line identifiers and that agreement must be documented. ATC believes that the requirement should state that "mutual agreement" allows for multiple identifiers. We believe that this is needed in order to avoid the following issues. 1) This clarification will avoid any need for arbitration or formal dispute resolution steps. 2) If the standard does not allow for this provision entities will be forced to deviate from their own line naming convention and will result in entities to modify their drawings, field signs, and SCADA systems.
Disagree
See question #4.
Disagree
Disagree
Disagree
Group
FirstEnergy
Sam Ciccone
Disagree
Three-part Communication ♦ The phrase "the information is repeated back correctly" may pose compliance problems if the second party does not repeat the information back correctly the first time. We suggest the definition be revised as follows: "A Communications Protocol where information is verbally stated by one person to a second person whereby communication is initiated, the second person repeats the information back to the first person as means to verify the communication. The initiating party either confirms the response as correct or repeats the original statement and resolves any misunderstandings." Interoperability Communication ♦ We recommend

this definition be removed and be incorporated into the RCSDT's proposed definition of Reliability Directive. Please see our comments in Question 6 for a complete explanation.

Agree

Disagree

We feel that procedures are beneficial for entities to have as far as internal training of new personnel and as a reference guide for all personnel, but we do not agree that it should be a requirement of a reliability standard. It is not appropriate to subject an entity to monetary fines for not having a procedure even if that entity has fully complied with all the other requirements (R2 through R7) of this standard that the procedure is referencing. Although this requirement may fall into the category of best practices and administrative requirements, it certainly does not rise to the level of performance-based, risk-based, or competency-based requirements. The real evidence of an entity implementing R2 through R7 is by evaluating the measures of those requirements and a variety of information could be used by an entity such as training records, procedures, voice recordings etc. Having a procedure does not need to be a stand alone requirement.

Disagree

We do not support R2 and its referenced attachment and feel that they should be removed. The requirement and attachment are too convoluted, create confusion among system operators, and not necessary with regard to the goal of this standard. This standard mandates proper three-part communication in all reliability-related communication (including alert level situations). Other standards should define and mandate rules associated with the specifics surrounding urgent action situations (i.e. CIP, TOP, EOP standards). Together these standards will arrive at proper communication between entities during alerts.

Disagree

Using a specific time zone that is subject to adjustments for daylight savings introduces additional complexity for an operator and has potential to introduce additional reliability issues. A significant portion of the Eastern Interconnection transmission operators have dealings with entities that do not span multiple time zones and are solely within the Eastern Time Zone. We do not feel that it is appropriate for this standard to mandate how time is communicated during three-part communication. Operating communication can deal with several different subjects and data during a conversation, and it would be inappropriate to mandate all the possible subjects and data through standard requirements. As a best practice, and not as a mandated requirement, it would be appropriate for operators to state the time zone they are in if necessary for the situation or if requested by an entity.

Disagree

Although we agree that proper communication should be used during actions that affect the reliability of the BES, we do not agree with this requirement as written. The following contains our rationale and suggestions: 1. The lower case term "directive" is ambiguous, not defined, and confusing. This is especially true in light of the proposal of the RCSDT to modify COM-002-3 to include a definition of "Reliability Directive" and their plan to use this defined term to invoke 3-part communication. Since the plan of this OPCPSDT is to eventually incorporate the COM-002-3 requirements into this new COM-003-1 standard, we feel the definition of Reliability Directive should be moved to this standard now (instead of later) and the term should be broadened to include any actions that affect the BES reliability. Essentially then, the current proposed R1 of COM-002-3 can be moved to this COM-003-1 standard. 2. Our proposal for the term Reliability Directive in item 1 above incorporates the verbiage of the proposed Interoperability Communication definition. Therefore, the proposed term Interoperability Communication is no longer required and can be eliminated. 3. Once the term Reliability Directive and proposed R1 from COM-002-3 are moved to this COM-003-1 standard, the current R5 of COM-003-1 requiring the use of Three-Part Communication could then be revised to require three-part when a Reliability Directive is issued and continue until the operating condition that invoked the Reliability Directive is resolved, mitigated, or ended. 4. With respect to the proposed R2 and R3 of COM-002-3 which essentially discuss three-part communication, these requirements could be eliminated and would be covered by COM-003-1. As a result, the COM-002-3 requirements being proposed by the RCSDT can be eliminated in their entirety since we have now incorporated all of them into this new COM-003-1. 5. Since COM-002-3 included the Purchasing-Selling Entity as an applicable entity, since they could be the recipient of a

Reliability Related Directive and since, with our proposed changes, COM-002-3 can be retired; the Purchasing-Selling Entity can be added to the applicability section of and incorporated into this new COM-003-1 standard as recommended below. In conclusion, we suggest the following changes/additions to COM-003-1: A. Move a revised version of the term "Reliability Directive" from COM-002-3 to this new COM-003-1 standard and define it as follows: "A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where the recipient is directed to change the state or report the status of an Element or Facility of the Bulk Electric System." B. Delete proposed definition "Interoperability Communication". C. Delete R2 and R3 of COM-002-3 as suggested in item 4 above. D. Insert a New Requirement R4, renumbered as R2, into new standard COM-003-1 taken from COM-002-3 R1: "When a Reliability Coordinator, Transmission Operator or Balancing Authority issues a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]" E. Revise Requirement R5 and renumber as R3: "Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall use Three-part Communication for all communications concerning a Reliability Directive that was issued per Requirement R1 and continuing until the actions or status reporting identified in the Reliability Directive has been completed. [Violation Risk Factor: High][Time Horizon: Real time]" F. Add the Purchasing-Selling Entity as an applicable entity to COM-003-1.

Disagree

While we agree that using the NATO phonetic alphabet may be a best practice, we feel that it is not practical to regulate its use. This requirement is too prescriptive. The focus should be on the correct understanding of verbal communication which will be accomplished via Three-party Communication, whether an entity uses NATO or "A as in Apple, B as in Boy", this should not be codified within the standard. Substantiating compliance with this requirement is not reasonable to expect, practical to prove, nor does it produce an improvement in reliability.

Disagree

Although we agree with moving this current TOP-002 R18 requirement to this standard, we question the use of the phrase "mutually agreed upon". It is not clear how the line and equipment identifiers will be mutually agreed upon and how this will be measured. We suggest using similar wording from the current TOP-002 R18 and reword COM-003-1 R7 as follows: "Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall use uniform line and equipment identifiers for verbal and written communications."

Disagree

We do not support Att. 1 and feel that it should be removed. This attachment is too convoluted, creates confusion among system operators, and not necessary with regard to the goal of this standard. This standard mandates proper three-part communication in all reliability-related communication. Other standards should define and mandate rules associated with the specifics surrounding urgent action situations (i.e. CIP, TOP, EOP standards). Together these standards will arrive at proper communication between entities during alert level situations.

Not aware of any

Not aware of any

Agree

Coordination of SDT Efforts – We feel that the NERC Standards Committee should direct the Reliability Coordination SDT to hand over COM-002 to this OPCPSDT since those requirements will eventually be moved to COM-003-1. It is difficult to coordinate all these changes on a separate basis and moving the development to one SDT would help better coordinate these efforts. The current path forward is inefficient and causes confusion, not only for industry but also for the two drafting teams. Purpose Statement – We feel the phrase "especially during alerts and emergencies" implies that using proper communications protocol during normal operating situations is not as important as during emergencies. It is not appropriate to include this phrase in the purpose statement of a standard, and we suggest it be removed. Also, we suggest removing the word "timely" since this standard does not mandate time limits on communications. Compliance Section 1.4 Data Retention – We do not agree with the following statement for data retention "If a Transmission Operator,

<p>Transmission Owner, Balancing Authority, Reliability Coordinator, Generator Operator, Transmission Service Provider, Load Serving Entity or Distribution Provider is found non-compliant, it shall keep information related to the non-compliance until found compliant." We feel that this is not appropriate in a reliability standard since it is already mandated through Compliance Violation Investigations (CVI). Also, we feel that it is more applicable to NERC's Rules of Procedure. Therefore, we suggest it be removed from the standard.</p>
Group
Pepco Holdings, Inc. - Affiliates
Richard Kafka
Disagree
PHI believes the proposed definition for the term Interoperability Communication is too broad and ambiguous. It is inconsistent with the effort to develop results based standards which would have an effect in the reliability of bulk electric system. Additionally, PHI does not see the need of a definition of Interoperability Communication now that the term Reliability Directive has been defined in draft standard COM-002-3 which is currently posted for review.
Agree
Disagree
PHI agrees that communications procedures are necessary. We do not see the need to create a CPOP that includes requirements R2 through R7 given that each requirement defines how and what is to be communicated. This requirement as written could force entities to incorporate all of their communication procedures into a CPOP which will not improve reliability.
Disagree
Requiring system operators to use the color-coded system condition terminology during communication adds a layer of responsibility that will distract from the operator's real-time reliability-related tasks.
Disagree
PHI believes that mandating one time zone for all Interoperability Communications will create more confusion during an emergency that it will prevent and may contribute to increased reliability issues.
Disagree
: As mentioned in Question 1 above, the term Reliability Directive has been defined in the draft standard COM-002-3 and should be considered in place of Interoperability Communication since the directive is specific to emergency operations. PHI recommends that the requirement changed to read "Each responsible entity shall use Three Part Communication when issuing or receiving a Reliability Directive".
Disagree
Having system operators potentially struggle to remember the NATO phonetic alphabet during communications rather than focus on the communication and managing the bulk electric system itself is in contradiction with the purpose of the standard. Use of the NATO phonetic alphabet should be considered a "best practice" and should not be included as a requirement in a reliability standard. One failure, such as saying "Baker" instead of "Bravo", results in a severe violation without any impact on system reliability.
Disagree
This requirement came from TOP-002 R18 and is fundamentally different from the new proposed requirement in COM-003-1 R7. TOP-002 R18 states that the BA, TOP, GO, LSE and TSP shall use uniform line identifiers when referring to transmission facilities of an interconnected network. The requirement in COM-003-1 R7 introduces an additional requirement to use pre-determined "equipment" identifiers is another example of a prescriptive requirement that will not impact bulk electric system reliability and will expose entities to large fines. PHI believes the TOP-002 R18 could be included in COM-003-1 but included as defined in TOP-002 R18.
Agree
As noted in our comments to Question 4, Attachment 1 has examples for Reliability Coordinators only. It is not a good guide for other Interoperability Communications. Additionally, Attachment 1 identifies the Level 1, Level 2 and Level 3 communications by color codes that are not referenced in



the sample messages. PHI finds the addition of color codes to not be helpful and possibly confused with national security Alert Levels. The color coding should be eliminated and examples for entities in addition to the Reliability Coordinator should be included.

Agree

PHI asserts that WECC would say NO to Central Standard Time.

Disagree

Disagree

Individual

Henry Masti

NYSEG

Disagree

The definition for Interoperability Communication needs to be further explained. The current definition would appear to include not only communication between two control centers, but also between a control center and field personnel for all normal and routine switching, which we do not believe is the intent of the Standard. Communication Protocol as a separate definition does not appear to be necessary. The provided definition describes the term in a simple and generic way and is not specific enough to provide anymore guidance than is already provided in a general understanding of the word "communication" or "protocol". Three-part communication should be revised as follows: An iterative process where verbal communication from a sender to receiver is repeated back to the sender by the receiver to eventually ensure correct and accurate transmission of the entire message. We believe this definition is more consistent with COM-002 R2, which is proposed to be retired once COM-003-1 is approved and Three-part Communication is adopted.

Agree

Disagree

It is not clear when the Interoperability Communication is required to be used. Is it only for communications between registered entities (inter) or internal to a registered entity (intra)? And is it required for all communications or used only in certain circumstances (i.e. emergency (if emergency, it needs to be defined what constitutes an emergency))?

Disagree

R2 indicates the need to use pre-defined system condition terminology for all verbal and written Interoperability Communications yet Attachment 1 only defines transmission loading and physical and cyber security threats. Either need to rewrite the Requirement to include only these circumstances, or define every possible system condition used in Interoperability Communications. Additionally, there does not appear to be any benefit in attempting to pre-define transmission loading, and physical and cyber alert system conditions since the actions associated with each are similar, if not the same, for almost all conditions.

Disagree

Unless the communication is across time zones, there is no benefit to using Central Standard Time, nor is it sensible. Entire system infrastructures and business processes are driven by current, local standard time and it is far more safe, reliable, and practical to use the established current time for system operations. If there is a compelling need for definitive time notation across time zones then the requirement should dictate the addition of the time zone when referring to a specific clock time (i.e., 1400 CST, 1400 EST, 1400 ED[aylight]T, etc.).

Disagree

The definition of Three-part Communications and Interoperability Communications needs to be revised as explained above.

Disagree

While it is perhaps a good practice to include the use of phonetics to avoid miscommunications, it should be left up to each entity to determine the appropriateness of adopting such a practice (e.g., field switching, internal instructions, etc.) and should not be included in the Requirement, especially if Interoperability is not further clarified/defined.

Agree
COM-003-1 R7 is more clearly defined than TOP-002 R18 in that R7 and associated M7 speak only to written and verbal Interoperability Communication, where TOP-002 R18 and M10 dictate a more extensive use of the identifier. The adoption of a more narrow purpose is preferred.
Agree
There does not appear to be any compelling practical or reliability reason to adopt the Attachment.
Disagree
Disagree
Disagree
Individual
Jose Medina
NextEra Energy Resources, LLC
Agree
Disagree
This requirement is already covered by TOP-002. If the TOP-002 standard is deemed deficient because certain entities have been excluded or language appears to be missing, the changes need to occur to TOP-002 as opposed to copying and revising the existing requirement elsewhere. This would ensure that compliance oversight, understanding, and adherence goals are unencumbered by unnecessary redundancies. Moreover, this would ensure that the industry continues to re-enforce standards with changes that are within the scope of their original reliability purpose. The latter is in line with one of the core objectives of the Performance-based Reliability Standards Task Force's recommendations to focus on identifying and minimizing duplicated requirements.
Disagree
NextEra agrees with the reliability goal of establishing a set of agreed upon communication standards to ensure consistent communications particularly for actual and anticipated emergency coordination needs. NextEra believes that existing coordination/communication standards already fulfill this objective and that it might be of "training" or "reference" value to aggregate those requirements to a single document or view. However, NextEra is not convinced that this requirement, largely administrative in nature, will result in marked improvement in reliability. Organizations tend to take the path of least resistance and unless forced out of that path with extensive and granular guidance on what CPOPs should contain above and beyond existing standards or contract language, CPOPs would likely become a simple patchwork of requirements constructed out of existing NERC standard language and contract language. Standards need to be clearly implementable before they are approved yet important implementation questions do not appear to have been answered. (1) What if parties cannot reach agreement? (2) Is it enough to have attempted to coordinate? (3) What if parties already have agreed upon procedures such as NPIRs, or those stated in Interconnection Agreements – do they take precedent or must they be redesigned/relegated? (4) What if CPOPs differ greatly across interconnections because of differing parties? (One might conclude that by formalizing these different practices, as opposed to mandating standard practices, the goal of more reliable coordination may not have been achieved) (5) What level of evidence constitutes "agreement" especially in circumstances where entities may be remiss to agree? (6) What if CPOPs are simply a patchwork of requirements constructed out of existing NERC standard language and contract language – does that achieve the CPOP goal?
Disagree
NextEra agrees that standard system condition terminology could be beneficial in communications but this requirement introduces alert level conventions with no clarity on what the corresponding associated actions for such levels are and as a result, aside from the value derived from having improvement in terminology during communications, it is unclear what reliability improvements this will achieve in carrying out instructions.
Disagree

Existing market and reliability communication methods already ensure that time-zone adjustments occur. It is critical that the feasibility, impact, and logistical aspects of implementing this change be rigorously reviewed and understood to inform this standard's development. Conceivably, the result of that analysis could expose significant risks outweighing the purported benefits of implementing a single time-zone policy. Any implementation or transition gaps between the time format and references used by reliability coordinators, their corresponding systems, and the interfaced systems of market participants would be extremely detrimental to system stability and ongoing market operations.

Disagree

NextEra believes that by associating the "3-part communication" method with "directives" this standard drafting team could be at risk of unintentionally defining a directive as anything that takes the 3-part communication form. We would encourage the standard drafting team to continue to use the terms already employed in the draft standard: "... three-part communication be used when issuing instructions related to actual or expected emergency conditions."

Disagree

NextEra believes that though aspiring to use a single strict phonetic alphabet may be beneficial it is more important to ensure that ease of communication takes precedent especially under emergency conditions. The requirement for 3-part communication already ensures that understanding between two parties occurs. Moreover, it is overly burdensome to require that the phonetic alphabet be used in all communications which would include communications related to mundane interactions between interconnected parties and that might broadly fit the mold of the "interoperability" definition but not truly require the formality or rigor commanded by a phonetic approach.

Disagree

NextEra believes that R7 should be withdrawn as it repeats TOP-002 R18 requirements. Please refer to comments on Q3.

Disagree

None at this time.

Disagree

None at this time.

Disagree

None at this time.

Agree

In the case of nuclear plant operations, NRC communication requirements and the requirements of NERC NUC-001 for nuclear facilities more than adequately cover communication requirements. COM-003 should not be applicable to Nuclear Generator Operators since doing so will introduce an additional, unnecessary, and potentially conflicting level of requirements. Measures: NextEra suggests that the SDT clarify the periodicity of providing evidence of compliance and on what constitutes sufficient evidence of CPOP acceptance. Violation Severity Levels: NextEra encourages the SDT to revisit the violation severity levels. In the case of most of the requirements it is unreasonable to levy Severe penalties in instances where the operator may have deviated from the requirements but the communication occurred in an unencumbered and successful manner as evidenced by the use/acknowledgement outcomes of three-part communication.

Individual

Dan Rochester

Independent Electricity System Operator

Disagree

The way the definition of Three-part Communication is worded seems to only apply when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation. The definition should, rather, reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct. We suggest the definition be revised as follows: A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back to the party that initiated the communication by a second party that received the communication, and the information is verbally confirmed to be correct or

corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.
Disagree
This requirement represents a “how” and not a “what”. In general, standards should be focused on “what” not how. The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also use three-part communication protocol until the message’s correct understanding is confirmed.
Disagree
It is not clear what the purpose of this communication protocol is or what should even be included in the protocol. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions without inclusion of the elements to be communicated as they cover a wide range of conditions which can vary among the communicating parties.
Disagree
It is not clear what value there is in identifying alert levels. There does not appear to be any differentiation in actions taken based on the alert levels. Why not just state the number of substations attacked, etc? Further, the “pre-defined” system conditions and alert levels are too detailed and overly prescriptive. System operators need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task, in and of itself, does not ensure nor improve reliability and does not lend itself to promptly and effectively deal with the emergency situation.
Agree
Disagree
3-part communication should be used for communicating a directive that must be complied with. The “must be complied with” is needed to distinguish between an “instruction type” of directive and a “need to perform type” of directive. We believe it is the latter that should require 3-part communication.
Disagree
While this requirement may represent a good utility practice or even a best practice, it is not so necessary to be enforceable through sanctionable requirements. Similar to R2, having to use the NATO phonetic alphabet is overly prescriptive and forces system operators to learn and remember “languages” in addition to the power system language. System operators should not be penalized for using some means other than the NATO phonetic alphabet to communicate equally effectively. We see no short coming in operations that would require these additional requirements and that the added complexity and additional training requirements may deteriorate reliability.
Disagree
This may represent a good utility practice but it is not necessary to be a requirement. The key is whether or not operation personnel understand one another. Similar comments as in Q4 and Q7 also apply here.
Agree
It is not clear what value is realized by declaring an alert status particularly with cyber and physical attacks. There does not appear to be any differing actions taken based on the alert status. Given that no differing actions are taken for cyber and physical attacks, it seems it would be more beneficial to use specific information such as the number of substations that have been physically or cyber attacked, etc. This is more meaningful than issuing a red alert that would only indicate more than one site has been attacked. Also, please see our comments under Q4.
Disagree
Disagree
Agree
We believe that the existing standard COM-002 can be simply modified to cover the 3-part communication requirement. This COM-003 standard actually causes more confusion and ambiguity,

and creates unnecessary or overly cumbersome requirements that add little or no value to reliability. This standard is not needed.

Individual

Daryl Curtis

Oncor Electric Delivery

Agree

Agree

Agree

Agree

Agree

Agree

Agree

Agree

Disagree

Disagree

Disagree

Disagree

Individual

Brady Baker

City Of Greenfield

Disagree

Listed as an LSE & DP, we are a small municipal utility that does not own nor operate any generation or transmission equipment. Therefore this standard is not applicable to our facility. Keep in mind, not all LSE's & DP's operate generation or transmission equipment. There are several small utilities that this standard would not be applicable to. LSE's & DP's should be put into class sizes depending on the size of the company or utility. Example: Class #1 LSE & DP : Companies that own & operate generation & transmission Class #2 LSE & DP : Companies that do not own or operate generation & transmission. (municipals, co-ops, etc)

Group
Southern Company Transmission
JT Wood
Disagree
<p>Southern Company supports the SERC SOS comments. SERC SOS comments: We feel that the definition of Interoperability Communication is much too broad and is inconsistent with the effort to develop results-based standards. Adherence to such results-based standards would have a measurable and observable effect on the reliability of the bulk electric system. The definition of Interoperability Communication, as written, can include virtually any information exchange/instruction between entities, both routine and emergency. Such communication may or may not have a measurable and observable effect on bulk system reliability. The concern is that, since the broad term Interoperability Communication is used in every requirement in COM-003-1, entities will be required to use the English language, the central time zone, and 3-part communication in even the most routine exchanges of information. This could create a burden on operating personnel and a distraction from their reliability duties. This group does not feel the need for a definition of Interoperability Communication, since the term Reliability Directive has been defined in draft standard COM-002-3, which is currently posted for review. The Reliability Directive term is emergency-focused and consistent with the results-based standards process. In addition, the definition of Three-part Communication in this standard does not match the three-part communication requirements stated in COM-002-3. In COM-002-3, the requirements for three-part communication (state – repeat - acknowledge) apply to Reliability Directives, while in COM-003-1 the definition of Three-part Communication refers to “information” in general. If, as stated in the Disposition of Requirements, the revisions to COM-002-3 will be moved to COM-003-1, the definition of Three-part Communication in this draft standard should be consistent with the requirements of COM-002-3. Southern Company comments: Interoperability Communication — Communication between two or more entities to exchange reliability-related information regarding the Bulk Electric System. Why is a change in state or status required to make a communication between two entities an Interoperability Communication? What term should be used when a conference call is made to all of the RCs in an Interconnection to discuss low frequency?</p>
Disagree
<p>Southern Company supports SERC SOS comments. SERC SOS comments: Requirement R7, regarding the use of pre-determined line &amp; equipment identifiers, applies to TSPs &amp; LSEs. However, the other requirements of this standard do not seem to apply to these entities. For instance, most of the reliability-related alerts are communicated through the Reliability Coordinator Information System (RCIS). TSPs do not have access to this real-time communication tool, so the TSP should not be included in the applicability for the entire standard. Furthermore, Requirement R18 in TOP-002-2 mandated that neighboring Balancing Authorities use the uniform line identifiers. In COM-003-1, this requirement is lost, since Requirement R7 makes no mention of neighboring BAs. Southern Company comments: No proposed revision to remove R18 from TOP-002-2 has been provided in this SDT proposal. If this standard is adopted and TOP-002-2 is not revised at the same time the same requirement will be in two reliability standards.</p>
Disagree
<p>Southern Company supports the SERC SOS comments. SERC SOS comments: This group feels that there should not be a requirement in the standard to have a “procedure”. It is our understanding that, to be auditably compliant with a standard, the responsible entity must develop a procedure, train on that procedure, and be able to demonstrate compliance via documents, data, logs, records, etc. If Requirements R2 – R7 are included in this standard, the entity will need to develop a procedure to be compliant. Therefore, we feel that requirement R1 is redundant and should not be included. Southern company comments: The VSF for not having a written procedure is Severe. If an entity does not have a written procedure but complies with the other requirements in this standard has the reliability of the Bulk Electric System been affected? If the reliability of the Bulk Electric System is not affected by not having a written procedure why is this requirement in a Reliability Standard?</p>
Disagree

Southern Company supports the SERC SOS comments. SERC SOS comments: The Alert Level Guides in Attachment 1 are not consistent with the proposed definitions of reliability-related communications. Both the Reliability Directive and Interoperability Communication, as currently defined, require some emergency action or change of equipment status. Yet the Alert Level Guides were intended for announcement, not actions. Requiring system operators to use the color-coded system condition terminology during communication adds a layer of responsibility that will distract from the operator's real-time reliability-related tasks. We also do not feel that these Alert Level Guides apply to all the responsible entities identified under Applicability in the draft standard – for example, TSPs and LSEs are not included in the list of notifications. The requirement to use the central time zone for logging the time of an alert is problematic in that all communication tools, such as the RCIS, will need to be re-vamped. We question whether there will be a measurable reliability benefit by so doing. There is also some redundancy in the Alert Level Guides – for example, the CIP-001 standard requires notification of sabotage events – it should not be repeated in this standard.

Disagree

Southern Company supports the SERC SOS comments. SERC SOS comments: We feel that this requirement of a common time zone is overly prescriptive. The requirement should be that entities operating in different time zones agree on how to best eliminate any confusion regarding the time difference. Entities that routinely operate in different time zones already have an effective system for dealing with time differences. There seems to be no incentive to change a system that already works quite well, and the cost of updating computer systems could prove prohibitive. This group feels that mandating a common time zone across all of North America can only lead to confusion and increased reliability issues.

Disagree

Southern Company supports the SERC SOS comments. SERC SOS comments: As suggested in Question 1 above, the term Reliability Directive (as defined in COM-002-3) should be used in place of Interoperability Communication, since the directive is specific to emergency operations. The requirement should read: "Each responsible entity shall use Three-part Communication when issuing a Reliability Directive". In addition, this requirement should apply only to BAs, TOPs & RCs. The other entities listed in the draft standard under Applicability do not issue Reliability Directives. Southern Company comments: conditional on if the definition of directive is not routine operational instruction.

Disagree

Southern Company supports the SERC SOS comments. SERC SOS comments: Use of the NATO phonetic alphabet should be considered a "best practice" and should not be included as a requirement in a reliability standard. One failure, such as saying "Baker" instead of "Bravo", results in a severe violation without any impact on system reliability. This group is concerned that operating personnel will be focused on using the correct word rather than managing the power system. Southern Company comments: This requirement should be removed from the standard. Requirement 5 requires understanding by both parties during communication. Requirement 6 requires common identifiers which will enhance the chances of both parties understanding communications. Although using the phonetic alphabet may be necessary some times in order to gain understanding between two parties it should not be required. If both parties understand A as well as they do Alpha the reliability of the system has not been affected. No entity should be found in non-compliance of a Reliability Standard if reliability was not affected.

Disagree

Southern Company supports the SERC SOS comments. SERC SOS comments: Requirement R7 in draft COM-003-1 came from TOP-002-2, Requirement R18. The original requirement intended that neighboring Balancing Authorities use uniform line identifiers when communicating information about their tie lines. This requirement drops that clarification and introduces the additional requirement to use pre-determined "equipment" identifiers. Having to mutually agree in advance on identifiers for every switch & transformer is another example of a prescriptive requirement whose violation will not affect system reliability, yet will expose entities to large fines.

Agree

Southern Company supports the SERC SOS comments. SERC SOS comments: Our concern is that the Alert Level Guides of Attachment 1 were written for Reliability Coordinators, not the industry as a whole, and now they are being incorporated into an industry-wide standard. This attachment is

very prescriptive as to how the notifications take place, such as through the RCIS. If the RCIS is not functioning and the hotline is used instead, is the entity vulnerable to a violation by virtue of the fact that these alert guides are included in the standard? We believe that the color-coded system condition terminology should be defined/required externally to the COM standards. The use of clear & consistent alert level terminology, while important, does not fit in well with the reliability-related communication standards, especially at these high violation severity levels. It is our suggestion that the Alert Level Guides be balloted separately, and include the Energy Emergency Alerts (EEA) as well. EEA requirements currently exist in NERC Standard EOP-002-2.1

Disagree

Agree

Southern Company supports the SERC SOS comments. SERC SOS comments: We do see a potential conflict with the Energy Policy Act 2005, which set the framework for the Electric Reliability Organization (ERO). The ERO’s mission is to oversee and protect the reliability of the Bulk Electric System. This standard seems to cross the line between reliability-related activities and other types of operating actions. The concern here is that system operators will focus on the letter of the standard rather than on good operating practice. The fear of a violation among operators may have a greater impact on reliability than the violation itself.

Agree

Southern Company supports SERC SOS comments. SERC SOS comments: This review group has identified several problems with this standard, as noted above. Other observations include: The effective dates in the draft standard and in the implementation plan do not seem to match. In the standard, the effective date mentions one calendar year following regulatory approval, while the implementation plan refers to the third calendar quarter after regulatory approval. Furthermore, we do not feel that any of the requirements in this standard warrant Violation Risk Factors or Violation Severity Levels in the high or severe category. In summary, this review group feels that COM-003-1 is not yet ready to be acted upon and may have been posted too soon. There does not seem to be sufficient coordination between the drafting teams of all the COM standards, or any attempt to integrate these standards. One example is the inconsistency between COM-003-1 and COM-002-3 regarding the meaning of three-part communication (mentioned in our response to Question 1 above). As noted above, we feel that many of the requirements prescribe specific “how to” methods for compliance rather than focusing on the “what” of the requirement. Overall, COM-003-1 is much too prescriptive to be tied to million dollar-level fines. Southern Company comments: There are possible inconsistencies with the references to the term “CIP Free Form” and a more generic term “Free Form” in the tables described in Attachment 1 – COM-003-1 – Operating State Alert Levels. Reference the fields where functional entities “outside” the Reliability Coordinator Area are identified for both the initial alert notification and the end of alert notification. For Physical Security, the field mentions only RC’s using the “CIP Free Form.” For Cyber Security, the field mentions RC’s and CIP Participants using the “CIP Free Form.” For Transmission Emergency Alerts, the field mentions only RC’s using the generic “Free Form.” Is there a distinction between the two forms? Is it consistent to reference CIP Participants only for Cyber Security alerts and not for Physical or Transmission? Although this standard is well intentioned it is not ready for presentation to the ballot body. When this standard is applicable is in question just by the way the Title and Purpose are written. The Purpose needs to make it absolutely clear to all parties, complying entities as well as compliance enforcement, when the standard is applicable. For example, the Purpose of the standard is subject to interpretation. Does this standard apply all of the time or just during Alerts and Emergencies? Or does the word especially mean that a non-compliance during an emergency is more severe? Is the phonetic alphabet required when an alert is declared or just after the alert is declared?

Group

PSEG Companies

Kenneth D. Brown

Disagree

The PSEG Companies agree with the concerns expressed in the comments filed by the PJM System Operations Subcommittee (SOS) Group.

Disagree



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Disagree
The PSEG Companies agree with the concerns expressed in the comments filed by the PJM System Operations Subcommittee (SOS) Group.
Agree
Yes. The PSEG Companies agree with the concerns and suggestions expressed in the comments filed by the PJM System Operations Subcommittee (SOS) Group.
Disagree
No regional variances would be required to the best of PSEG's knowledge.
Agree
Yes. The PSEG Companies agree with the concerns expressed in the comments filed by the PJM System Operations Subcommittee (SOS) Group.
Agree
Yes. The PSEG Companies agree with the concerns expressed in the comments filed by the PJM System Operations Subcommittee (SOS) Group.
Individual
James H. Sorrels, Jr.
American Electric Power
Disagree
Given that Three-part Communications is required when using a directive, a "directive" must be clearly defined. Without this determination, the definitions are incomplete. There are undefined conditions, such as conference calls with multiple parties. Does each participant repeat back in three-part? Also, the definitions do not address communication of directives that are made in a non-oral format. This is an important area to address in this standard. Lastly, please expand "entities" in the Interoperability Communication definition to be "NERC registered functional entities." We are concerned that the definition is much too broad and may expand the scope of required communication beyond alerts and emergencies.
Disagree
Based on definitions provided in the functional model, the inclusion of the TSP and LSE in this standard is inappropriate. These entities manage the relationship with the end-use customer and are not responsible for the operation or maintenance of BES facilities.
Disagree
While having a procedure is important and the responsible entities should have a procedure to be compliant, there is not necessary to establish this requirement to have a procedure. We need to stay focused on what the purpose of the standard is to be and not dilute its effectiveness by focusing on documented procedures. Furthermore, if the extent of communication concerns warrants the extensive effort to establish pre-defined line and equipment identifiers, then this should be

established in a uniform manner and not left to result in multitudes of approaches. There will likely need to be system modifications to address character limitations with respect to line and equipment identifiers.

Disagree

AEP suggests that RCIS be expanded to include the additional parties necessary to support Interoperability Communications. Without such an expansion, the communication requirements for the RC are burdensome and the effectiveness may be compromised by the volume of parties that will need to be included. Is it practical for RFC to communicate across some 60 parties or should this be limited to only those that need to know? Attachment 1 does not seem consistent with the stated purpose of this standard as Attachment seems to focus on defining the operating condition, not communication during alerts and emergencies. The SDT should consider if the scope of the standard is appropriate to resolve this discrepancy. To the extent that it gets mandated, Attachment 1 could be administered through the addition of "check boxes" on the expanded RCIS.

Disagree

AEP believes that the significant efforts and significant system changes necessary to support a common time zone does not provide a significant enough reliability benefit. In fact, the focus on a common time may divert attention away from more pressing operational reliability needs.

Disagree

Is a "directive" from the RC a "directive" all the way through the communication process, including down to the plant orders? Again, based on definitions provided in the functional model, the inclusion of the TSP and LSE in this standard is inappropriate. These entities manage the relationship with the end-use customer and are not responsible for the operation or maintenance of BES facilities. Consequently, when would such entities be responsible for issuing "directives?"

Disagree

AEP does not believe that this should be a requirement. It is understood that three-part communications represent best practices, but it is not necessary to mandate the NATO phonetic alphabet. We are not aware of an instance where the use of "Ed" rather than "Echo" has resulted in a reliability compliance breakdown.

Disagree

AEP does not believe it is appropriate for the standard to have been edited to remove the clarification that neighboring BAs use uniform line identifiers when communicating information about their lines and to add the addition requirement of using pre-determined "equipment" identifiers.

Agree

"Transmission Loading" should be replaced with "IROLs." The attachment is very prescriptive as to the notifications are to take place, but not on conveyance of information to be communicated during alerts and emergencies. The attachment is not a good fit in this standard.

Disagree

Disagree

Agree

Unfortunately, the standard seems to be losing its value as the emphasis overly focusing on procedures while missing the intent. The SDT should reconsider the standard in the context of "what" rather than "how." Lastly, we do not believe that this standard is ready to advance and needs significant re-working before the revised draft is posted. The SDT should attempt to better coordinate with the necessary other drafting teams as these standards are integrated.

Individual

Alice Murdock

Xcel Energy

Agree

Agree

Disagree
We agree with the structure of the standard, however we have issues with several of the CPOP elements being proposed. (See detail comments in following questions.)
Disagree
The use of Yellow, Orange and Red, as related to the various alert levels, may conflict with existing color requirements that entities already have in use. We recommend instead only refer to the PSEA, CEA and TEA levels. Additionally, it is unclear how R2 applies to anyone other than the RC. Attachment 1 seems to only apply to the RC. If this is correct, then why would the other entities listed in R2 have to incorporate that terminology into their CPOP? If this is not correct, please clarify the requirement so that the other entities can clearly understand what is expected.
Disagree
Do not agree with the requirement to use CST. By requiring the use of CST it may actually introduce an element of error for those who do not routinely operate in that time zone and must make mental corrections for the time zone they are in. Additionally, some agreements already exist that stipulate what time zone is to be used.
Disagree
The way the standard is written, the term "directive" is still open to interpretation and could be inconsistently applied. The term "directive" should be defined.
Disagree
Use of the NATO phonetic alphabet should be a best practice not a reliability requirement. We are not convinced that there is any threat to reliability if someone were to use a different phonetic than what is indicated. Additionally, we do not feel that it is necessary to use the phonetic alphabet unless there is an indication that the initial communication has been misunderstood. If the drafting team feels this requirement should remain in the standard, we feel it should be modified to address: 1) there should be an exception for approved acronyms, such as NERC, FERC, etc., 2) it should only be required upon repeat-back, when the first communication was misunderstood, and 3) any phonetic alphabet should be acceptable for use, such as military or police, not just NATO's.
Disagree
We feel this requirement needs clarification, particularly regarding how granular an entity would have to go into the various pieces of equipment/lines. We would also recommend that R7 be modified to not require mutual agreement. We feel the owner (or majority owner) of the line or equipment should be the one setting the identifiers. For example, R7 could instead read like this: "Owner-determined line and equipment identifiers shall be used for all verbal and written Interoperability Communications."
Agree
Please see our response to question 4.
Disagree
Disagree
Agree
1) Recommend removal of the references to measures in the data retention section of the standard. It is only necessary to refer to the requirements, which is already included. 2) The data retention section should also be modified to refer generically to evidence, instead of "dated operator logs... and voice recordings or transcripts of voice recordings...". This is because the measures specifically allow for other types of evidence, as stated: "Evidence of use may include but is not limited to voice recordings, transcripts, operating logs, or on site observations."
Individual
Laura Zotter
ERCOT ISO
Disagree
The purpose of the standard is for timely communication of reliability-related information "especially during alerts and emergencies". The definition and use of Interoperability Communication in this standard expands the intended scope of the standard beyond alerts and emergencies. Guidance

should be provided for verbal communications with respect to hot-line calls (one party to many) and how three-part communication should be handled. This definition assumes a one on one communication.

Agree

Disagree

This approach of an administrative type requirement is in conflict with the NERC BOT approval of pursuing the development of standards to support reliability performance and eliminate administrative requirements. It is not necessary to have a separate CPOP document to insure operating personnel communicate effectively.

Disagree

This is an administrative task and prescribes how something should be done. Written Interoperability Communications are typically done through automated systems, in which time zone conversion should not be an issue. Verbal communication should be thorough enough to confirm the conversion. If the industry is in favor of this requirement, then perhaps consideration should be to use Central Prevailing Time to alleviate potential confusion with changes with Daylight Savings Time.

Disagree

The requirement, based on the definitions of the terms, introduces ambiguity or even conflict. Three part communication should be required for emergency situations and with the issuance of Reliability Directives (term not yet formally defined – in the works by the Reliability Coordination SDT). Interoperability communications refer to any communications in which a status of a facility or element is to be changed, which means not specifically related to emergencies.

Disagree

ERCOT ISO does not agree with this approach, which seems to be overly prescriptive (“directives, notifications, directions, instructions, orders, or other reliability related information”), which goes beyond the purpose of “during alerts and emergencies”. This is an administrative requirement that would increase communication timing and possibly negatively affect reliability. If using a common language and three part communication for directives is effective this is not required.

Disagree

Does the phrase ‘mutually agreed upon line and equipment identifiers’ mean that identifiers do not have to be identical, but that all parties understand the equipment discussed? If this is the general understanding, then no further comment, otherwise, please clarify. Although the related bullet item in the Background Information section describes that they do not have to be identical, many auditors many only look at the requirement language.

Agree

The intent is for a simple way to look and know the high-level status of an area. This goes way too far into HOW to do it instead of stating what must be done.

Disagree

Disagree

Agree

Individual

Leland McMillan

NorthWestern Energy

Agree

Disagree

COM-001 and COM-002 standards, along with Operator Training, adequately address this issue. Therefore there is no need for this additional requirement.

Disagree
Attachment 1 seems too overly complicated for emergency Operating circumstances and provides an additional burden for Real Time personnel who are stressed with difficult decisions already.
Disagree
NorthWestern appreciates the opportunity to comment. We believe the requirement to use Central Standard Time will cause unnecessary confusion (translating to a different time zone and possibly to a different time reckoning – standard or daylight) at a time when the need for clarity is critical. NorthWestern suggests that each entity use their local time zone when issuing switching orders. Each entity should state the time zone they are using when giving any time reference (e.g., 15:20 Mountain Daylight Time) if necessary.
Agree
Disagree
NorthWestern appreciates the opportunity to comment. The requirement, as drafted, appears to open the possibility of sanctions for incorrect use of the NATO phonetic alphabet during any verbal communication between entities. The use of the NATO phonetic alphabet would be difficult when performing local switching orders to field personnel. NorthWestern suggests that the requirement be reworded to state that entities “shall use a phonetic code (e.g., the NATO phonetic alphabet) when necessary, to verify accurate reception of alpha-numeric information.”
Disagree
Agree
NorthWestern feels that the current communication standards are sufficient for reliable BES Operations.
Individual
Saurabh Saksena
National Grid
Disagree
Interoperability Communication: Virtually all communications in a control room environment deal with changing the state or status of an element of facility, as such there is not a need to define this communication protocol. However, addition of “real time communication” in the definition will to an extent address the issue. The definition should be revised as follows: Real Time Communication between two or more entities to exchange reliability-related information to be used by the entities to change the state or status of an element or facility of the Bulk Electric System. Three-part Communication: The way the definition of Three-part Communication is worded applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct. We suggest the definition be revised as follows: A Real-Time Operating Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.
National Grid has no specific stand either ways. However, please refer to response to Question 8 for issues pertaining to the language of the requirement.
Disagree

It is not clear what the purpose of this communication protocol is or what should even be included in the protocol. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions.

Disagree

Defining specific wording per Attachment 1 is overly prescriptive. The requirements should focus on what is required not how. The RC and encompassing entities should be required to define terms that will be used in communications. This would allow for the use of terms that are well understood in an area rather than adding new terms. Also, System operators need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task does not lend itself to promptly and effectively deal with the emergency situation. There is still plenty of grey area in Attachment 1 and there does not appear to be any differentiation in actions taken based on the alert levels. Finally, the section Background Information in the Comments form mentions "The SDT proposes four system condition alerts instead of initial three in the RCWG version." However, Attachment 1 only mentions 3 alerts – Physical Security, Cyber Security, and Transmission Emergency Alerts leading to confusion.

Disagree

The use of central time is unnecessary and may cause more confusion when converting times. The requirement should be that those entities which need to communicate and are in different time zones, define which time they will use for communications.

Disagree

Based on the definition of Interoperability Communications, this would require 3- part communication to be used during virtually all control room communications. The definition of Interoperability Communications should be revised as proposed in response to Question 1.

Disagree

Using the NATO phonetic alphabet is useful, but to what extent? Does it apply to facility identifications, key words, or every letter of every word? Is it upto the judgment of the operators? If so how will compliance be monitored? If during a communication, personnel used a term different than that in the NATO alphabet i.e. D as in Dog rather than Delta however, the listener understood the message and the correct action was taken would there still be the possibility of a compliance violation?

Disagree

The way this and TOP-002 R18 requirements are written they could be interpreted to mean that the line identifiers have to be unique. The requirement should be written similar to the bullet on page 7 of the comment form also listed below. "TOP-002 R18. Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network." "Pre-determined Line and Equipment Identifiers: COM-003-1 requires the use of predetermined line and equipment identifiers in Requirement R7 however the Requirement does not stipulate a single/unique identifier as long as all parties mutually agree on the identifier for the line or equipment. The mutual agreement shall be reached in advance of the use of the identifiers as described in the functional entity's CPOP"

Disagree

Please see response to Question 4.

Disagree

None

Disagree

None

Agree

We believe that the existing standard COM-002 is actually better than this standard. This standard actually causes more confusion and ambiguity and creates unnecessary or overly cumbersome requirements that add little or no value to reliability. Additionally, we cannot understand how all requirements but R1 have been determined to have a HIGH VRF when, many of them are dictating HOW communications should take place and not when and why or what. COM-002 retirement does not appear to be consistent with the direction of the RC SDT. The RC SDT appears to be adding requirements. More coordination is required between these two teams.

Group
NERC Staff
Howard Gugel
Disagree
<p>NERC staff recommends that the term “Communications Protocol” be removed from the definition section because the term is only used in the title and in another definition. In addition, the definition adds no additional clarity than can be provided by a commonly used definition of the terms. Similarly, the term “Three-part Communication” can be removed since it is used in only one requirement, and the definition can be incorporated in the requirement. Furthermore, Three-part Communication refers to a process or procedure, not a term. NERC staff recommends that the term “Interoperability Communication” be modified to “Operating Communication” with the definition of “communication with the intent to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.” This captures all communication that affects BES reliability, not just communication between function entities.</p>
Disagree
<p>NERC staff agrees with the proposal, but would offer the following modification in order to add clarity. We recommend that the phrase “when issuing directives, notifications, directions, instructions, orders or other reliability related operating information that involves alpha-numeric information during verbal Interoperability Communications” be replaced with “when verbal Operating Communications with alpha-numeric information is involved.” This would utilize the definition of Operating Communications offered in the response to Question 1. This will hopefully eliminate the need to further define what communication is or is not included in the phrase “directives, notifications, directions, instructions, orders or other reliability related operating information.”</p>
Disagree
<p>NERC staff recommends that Requirement R1 be deleted because it is strictly an administrative requirement that is not necessary. It is not results-based, and is redundant given the imbedded reference to Requirements R2 to R7. If an entity can demonstrate compliance with the other requirements, Requirement R1 performs no additional reliability enhancement. A Requirement should state a performance outcome or a risk to be mitigated. If there is a need to document something, the appropriate location for that is in the Measures section of the standard. A distinction should be made here that producing a document containing specific content necessary for reliability, such as a system restoration procedure, can be an effective requirement used to minimize risk. However, documentation that does not stand on its own as a result necessary for reliability should not be made into a requirement. Such documentation requirements should either be eliminated or moved to an administrative, informational section of the standards. An example of a weak requirement is “the Responsible Entity shall document the implementation of security patches”. The requirement that directly contributes to a risk reduction outcome is to implement applicable cyber security patches. Documentation of the implementation is simply a vehicle for demonstrating compliance. The NERC staff does not find that the CPOP satisfies the criterion of reducing risk.</p>
Disagree
<p>NERC staff agrees with the principle behind Requirement R2. However, it appears that two separate communication actions are being performed, the action to notify the Reliability Coordinator, and the action by the Reliability Coordinator to communicate the alert level to affected functional entities. Therefore, we recommend that that Requirement R2 be split into two requirements and offer the following wording: A Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall notify its Reliability Coordinator when it becomes aware that there is a situation involving the facilities under its control that meets the criteria for an alert, as specified in Attachment 1 – Operating State Alert Levels, to keep the Reliability Coordinator informed on the initial and subsequent status of the situation. When a Reliability Coordinator is notified (or becomes aware) that there is a situation within its Reliability Coordinator Area that meets conditions specified in Attachment 1 – Operating State Alert Levels, the Reliability Coordinator shall use the phraseology when making the notifications specified in Attachment 1 to keep others informed on the initial and subsequent status of the situation. The NERC staff recommends that the SDT review the content of the Attachment for consistency, clarity and omissions (such as found in the table on page 14 of the draft – the cell, “Notify the following entities:” is blank).</p>

Disagree

In the "Background Information" section of this Comment Form, you state, "The SDT believes that Interoperability Communications would be enhanced with the use of a common time zone. Central Standard Time was chosen as it is already in use for NERC Time Error Corrections. The Blackout Report cited the need to tighten communication protocols and the SAR includes consideration of a common time zone to minimize mis-matched time signature issues between control systems especially during an emergency." NERC staff would like to see more detailed justification on how reliability would be enhanced with this requirement. This appears to solve issues for communications between time zones, but may add additional confusion for all additional communications that exist within a common time zone.

Disagree

NERC staff agrees with the principle behind Requirement R5. We recommended in Question 1 that the term "Three-part Communication" be removed since it is only used in this requirement. We feel that this requirement should be split into two requirements so that the sender and receiver each have responsibility in the communication. Therefore, we offer the following as suggested replacement language for Requirement R5: Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider that receives a verbal Operating Communication shall repeat the communication to the initiator. Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider that initiates a verbal Operating Communication shall ensure that the receiving party has repeated the communication, and shall verbally confirm the communication to be correct or reinitiate the communication.

Disagree

As stated in response to Question 2, NERC staff agrees with the proposal, but would offer the following modification in order to add clarity. We recommend that the phrase "when issuing directives, notifications, directions, instructions, orders or other reliability related operating information that involves alpha-numeric information during verbal Interoperability Communications" be replaced with "when verbal Operating Communications with alpha-numeric information is involved." This would require using the definition of Operating Communications offered in the response to Question 1. This will hopefully eliminate the need to further define what communication is or is not included in the phrase "directives, notifications, directions, instructions, orders or other reliability related operating information."

Disagree

NERC staff is unaware of any instance where not having a mutually agreed upon nomenclature has led to an adverse reliability event. Rather than requiring a national database for all line and equipment identifiers, it appears that restricting the list to jointly-owned facilities and tie-line would accomplish the team's goal. We recommend that the phrase "Interoperability Communications" be replaced with "Operating Communications involving jointly-owned Facilities and tie lines."

Agree

NERC staff recommends that a line be added to each table that provides the expectation for entities communicating events to the Reliability Coordinator. Using the existing tables, all expectations and requirements rest solely on the Reliability Coordinator. We also recommend eliminating the color designations of yellow, orange, red and the Alerts be changed to Level One, Two and Three for consistency. The use of colors does not appear to add anything to the clarity or effectiveness in conveying the content of an Alert and may be inconsistent with the Department of Homeland Security's threat level system. Additionally, the team should update Attachment 1 to include the criteria and notifications for Energy Emergency Alerts.

Agree

Although no questions were asked about Requirement R3, NERC staff is aware that some areas in North America require a language other than English for official communication. In addition, it may be hard to define what "internal communications" are. NERC staff recommends that the phrase "Interoperability Communications. Responsible Entities may use an alternate language for internal communications" be replaced with "Operating Communications between functional entities, unless prohibited by law." In addition, regions that exist solely in one time zone may ask for a variance from the requirement to use CST for communication.



Agree

Although no questions were asked about Requirement R3, NERC staff is aware that some areas in North America require a language other than English for official communication. In addition, it may be hard to define what "internal communications" are. NERC staff recommends that the phrase "Interoperability Communications. Responsible Entities may use an alternate language for internal communications" be replaced with "Operating Communications between functional entities, unless prohibited by law."

Agree

NERC staff questions whether this standard applies to the Transmission Service Provider and the Transmission Owner. It is unclear from the functional model where they would be involved in real-time operations communications. It is also unclear why the Violation Risk Factor for every requirement is High, and the Violation Severity Level for all but the first requirement is Severe. This automatically elevates any violation of any of these requirements to the highest penalty level that is imposed. The NERC staff recommends that the SDT review the latest guidelines for assignment of VSLs and consider alternatives that could expand/graduate the VSLs to account for varying severity of non-compliances.

Individual

Roger Champagne

Hydro-Québec TransÉnergie

Disagree

The way the definition of "Three-part Communication" is worded applies only when the communication is understood by the listener the first time. The RC SDT requirement which includes "and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings" is more complete. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct. A suggested revision to the definition: A Real-Time Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back to the party that initiated the communication by the second party that received the communication, and the information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it. These principles are included in Requirements R2 and R3 in the recently issued draft Standard COM-002-3 in Project 2006-06. An alternative suggestion to the definition of Three-part Communication: A Real-Time Operating Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the information is verbally confirmed to be correct by the party who initiated the communication. In the definition of Communications Protocol, the term "Interoperability Communication" creates confusion within the industry, and contradicts the work by RTO and RC SDT in Project 2006-06 that limits the requirement to use three-part communications when issuing Reliability Directives (defined in Project 2006-06) that address anticipated and actual emergency conditions, and do not agree with its definition. What also must be considered is that the RC SDT has stated that when someone "says", it is a directive--operating conditions are not distinguished. This definition unnecessarily and counterproductively encompasses all verbal communications and, as such, is not needed. It is not so critical to reliability that it should become an enforceable requirement for routine operating instructions. The enforceable requirement should be limited to require three-part communications, and be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger, and be auditable and measurable. Virtually all communications in a control room environment deal with changing the state or status of an element of facility, as such there is not a need to define this communication protocol. Both element and facility are used in the Interoperability Communication definition and are NERC defined terms. Did the drafting team intend that the NERC definitions should apply? If so, the terms need to be capitalized. The term "entities" is confusing and needs to be defined.

Disagree

The SDT expanded Requirement R18 of TOP-002-2 by adding the term "equipment". This Requirement represents a "how" and not a "what". In general, standards should be focused on "what" not how. The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the use of three-part communication protocol until the message has been correctly spoken and understood. LSEs and TSPs do not own or operate equipment, and as such should not fall under the mandates of this requirement. Neither the TSP nor the LSE provide or receive information about specific lines or equipment in real-time. Therefore, requirement R7 should not apply to them absent clear evidence that a realistic (not hypothetical) threat to reliability would exist if they are omitted. We do not think that such a threat would exist.

Disagree

This proposed communication protocol is redundant to Requirements R2-R7, and should not be included in this Standard. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions for all entities involved in real time operations. The NERC BOT has approved pursuing the Results-based Reliability Standard Task Force's recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to eliminate administrative requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. The industry as a whole, based on the response to the Task Force, does not support such an approach. This Requirement should be deleted from the Standard. There is no need to create a CPOP that includes requirements R2 through R7 given that each requirement spells out how and what is to be communicated. A CPOP may be needed for Interoperability Communications that are not addressed in R2-7.

Disagree

It is not clear what value there is in identifying these alert levels. There does not appear to be any differentiation in actions taken based on the alert levels. Just stating the severity and details of the incident should suffice. Further, the "pre-defined" system conditions and alert levels are too detailed and overly prescriptive. System operators will need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task does not lend itself to promptly and effectively deal with the emergency situation. The level(s) identified in the notification text are at odds with the condition (color versus numerical). Suggest that the standard either use Condition (color) or the level (numerical). Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the listed entities such as Distribution Provider and Generator Operator cannot have access to these systems due FERC standards of conduct requirements. Attachment 1 and R2 are not consistent with the definition of Interoperability Communications. By definition, Interoperability Communication pertains to all communications about how entities change the state of the BES (not just physical or cyber attacks). Attachment 1 is about notifying of what physical and cyber attacks have already happened to the BES. It is not clear in the context of Interoperability Communications what the recipient of a specific notification is expected to do when there is a change of state or status of an element or facility of the Bulk Electric System. Attachment 1 pertains specifically to Operating State Alert Levels and says nothing about the communication of information to be used to change the state or status of a BES element or facility (which is the SDT's proposed definition of Interoperability Communications). Therefore, it is not appropriate to require that all verbal and written Interoperability Communications use the pre-defined terminology in Attachment 1. Only those communications concerning Operating State Alert Levels should be required to use that terminology. By the proposed definition, such communications are not Interoperability Communications since the information is not used to change the state or status of a BES element or facility. The SDT needs to revise this requirement to clarify that it pertains only to communicating the Operating State Alert Levels and nothing more. None of the examples in either of the attachments appear to address EEAs (EEA is mentioned in the top paragraph of page 9 that is included in EOP-002-2.1) or SOLs. This limits the use of Interoperability Communications to only events where there exists either a physical or cyber threat, or where an IROL can't be mitigated. The requirements should focus on what is required, not how. The RC and encompassed entities should be required to define terms that will be used in communications. This would allow for the use of terms that are well understood in an area, rather than having to add new terms. The Background Information in this Comment Form introductory section mentions "The SDT proposes four system

condition alerts instead of initial three in the RCWG version." However, Attachment 1 only mentions 3 alerts – Physical Security, Cyber Security, and Transmission Emergency Alerts leading to confusion. Finally, Attachment should only be used as a guide.

Disagree

HQT agrees with using 24 hour format. However, there is no reliability need to use a common time zone for communications. There is already a requirement to use hour ending for scheduling purposes, inadvertent accounting, CPS and other standards where needed. There is no additional reliability need to use a common time zone. The time zone should be identified in the communication. Not only does this requirement attempt to determine HOW entities operate within their various footprints, it would significantly change the way many markets are structured. To implement this into existing Markets would cost significant time, money and resources while not enhancing reliability in these areas. When operating across time-zones, simply referencing "Central Standard Time" or "Eastern Standard Time" is sufficient for operating entities to reliably operate. The time zone adopted by the respective Reliability Coordinator (RC) and their area control center, e.g., NYISO Eastern Standard Time (EST), should be used. If each entity in the area and the RC are all using EST (or daylight savings), then why would a time zone be used that is foreign to all parties in the area? This can lead to considerable confusion. What cannot be ignored is how many entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We are strongly opposed to this requirement. The requirement should be that those entities which need to communicate and are in different time zones define which time they will use for communications. Any confusion about what time is being verbally communicated should be cleared up through three-part communications. There should be no confusion about what time is being communicated as long as the time zone (where applicable), and the 24 hour format designations are included. Besides, many entities exchange written information via web-enabled applications that allow the users to configure their interface to show time in whatever format and time zone they prefer. This eliminates confusion.

Disagree

Based on the definition of Interoperability Communications, R5 implies that three-part communications is required to communicate routine operating instructions, or during operational strategic discussions as well as other "non-action" oriented communications. This Requirement contradicts the work that has been done and substantially progressed through two other SDTs and creates confusion within the industry. This Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion. The work being done by the RC SDT and RTO SDT in Project 2006-06 defines a Reliability Directive based on the determination of the person giving such an order. The entity that needs the action to be taken should establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger, auditable, and measureable. R5 is not consistent with the Functional Model. Only the RC, BA, and TOP can issue directives. Outside of allowing the individual who NEEDS the action to be taken, this is an auditable or measureable requirement whether it be for 3-part communications or for the receiving entity to actually take said action. By definition, Three-part Communications presumes the second party will repeat the information back "correctly." Failure to do so is assigned a High VRF and a Severe VSL. The practical application of Three-part Communication involves a sender communicating information, a receiver repeating back the information, and the sender verifying the repeat back is either correct or incorrect. If the repeat back is incorrect, the process repeats until both parties have the same understanding of what is being communicated.

Disagree

While this Requirement may represent a good utility practice in certain situations, it is not necessary to be used in all verbal Interoperability Communications, and is certainly not necessary to be included as an enforceable Requirement. For example, a situation in which an operator says "A as in apple" instead of using the NATO Alpha. Even though the listener should clearly be able to discern the correct meaning, the speaker's company could be sanctioned even if the correct actions were taken as a result of the clear communication. The objective of good communications is to assure that the parties understand each other. The statement "... shall use the NATO phonetic alphabet" doesn't make sense for North America. If the Real-Time Operator states "breaker 6-North," under

the NATO phonetic alphabet that would be unacceptable, because the operator did not use the appropriate NATO term "breaker 6-November," even though the "N" on the one line diagram refers to the "North" breaker and not the "South" breaker. Many organizations may have established communications protocols which are working well. Making a change may actually hinder reliable operations by introducing unnecessary confusion and questioning. Not only does this requirement attempt to determine HOW entities operate with their various footprints, it may change the way many Markets are structured. What is the difference between using the word "Zebra" instead of "Zulu" to signify the letter "Z"? And, why would this be enforceable. Perhaps this should be a guideline document rather than an enforceable Requirement. There is no reliability need for this Requirement. Furthermore, the use of three part communication eliminates the need for a mandatory use of NATO phonetic alphabet.

Agree

Agree

It is not clear what value is realized by declaring an alert status particularly with regard to cyber and physical attacks. There do not appear to be any differing actions taken based on the alert status. Given that no differing actions are taken for cyber and physical attacks, it seems it would be more beneficial to use specific information, for example 12 substations have been physically or cyber attacked. This is more meaningful than issuing a red alert that would only indicate more than one site has been attacked. Furthermore, we question the value of communicating the physical and cyber alerts. How does this notification help the BES reliability? Consider the following example. One BA in Oklahoma is 34,323 sq miles. Communicating that an attack occurred in the BA and RC tells other operators that somewhere in Oklahoma an attack occurred. This notification does not present any information that could require actions on the operators' parts, and will only generate phone calls for more information. Furthermore, PSE and CSE is a type of sabotage already reported in CIP-001 R2. TEA Alerts are already covered in IRO-006-East-1, IRO-009, IRO-010, IRO-014.01 R2. Also it has been the experience of several entities during the field test of these Alert Levels that there are inconsistencies as to when to implement various stages of Alerts, and this introduces more confusion than exists today. Reliability has not been enhanced. Attachment 1 contains a conflict. The last sentence of the opening paragraph of Attachment 1 reads, "The time frame for declaration of these Alert states shall be consistent with the approach used to declare EEAs and would normally apply to Real Time declarations and not forecast conditions." In Transmission Emergency Alerts Condition Yellow, Orange and RED: The Reliability Coordinator or Transmission Operator foresees or is experiencing conditions where all available generation resources are committed to respect the IROL and/or is concerned about its ability to respect the IROL. Foresees is a forecast condition. There is an inconsistency between the inclusion of Attachment 1 and what is stated in the document posted with the standard entitled Disposition of Requirements Identified in the SAR for Operations Communications Protocols as Possibly Needing either Modification or Movement. The document states that the standard focuses on "how to" communicate rather than on specified scenarios of "to whom" or "when to" communicate; however, Attachment 1 does just the opposite. In condition Orange and Red for TEA Level Two/Three, the initial notification requirements are redundant with IRO-006-East-1 R3.2. Under the Make Final Notifications, is curtailed intended to mean canceled or terminated? The term Curtailed in operations generally means cuts for schedules/tags. EEA's use terminated. Terminated is the preferred term. Distribution Service Providers should be Distribution Provider to be consistent with the Functional Model. Refer to the response to Question #4.

Agree

In the Province of Québec, the use of French is mandatory, according to law, for communication within the Province. R3 should include: Within the Québec Interconnection, the French language shall be used for verbal and written interoperability communication between entities (RC, BA, TO, TOP, GOP, TSP, LSE and DP). For their interoperability communication with entities outside of the Québec Interconnection, they shall use the English language.

Agree

In some market structures, TSPs and LSE do not own or operate equipment. Thus, including them in the requirements is an unnecessary burden for these areas. The requirement to use CST attempts to determine HOW entities operate within their various footprints and it would significantly change the way many Markets are structured. To implement this into existing Markets would cost significant time, and resources while not enhancing reliability in these areas. When operating across time-

zones, simply referencing "Central Standard Time" or "Eastern Standard Time" is sufficient for other operating entities to reliably operate. Many entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We are strongly opposed to this requirement.

Agree

The existing standard COM-002 is better than this proposed Standard. This Standard actually causes more confusion and ambiguity, and creates unnecessary or overly cumbersome requirements that add little or no value to reliability. All requirements with the exception of R1 have been determined to have a HIGH VRF, when many of them are dictating HOW communications should take place and not when, why, or what. COM-002 retirement does not appear to be consistent with the direction of the RC SDT in Project 2006-06. The RC SDT is adding requirements. More coordination is required between the Standard Drafting Teams. Again, we support the work being done by the RC SDT and RTO SDT and do not believe this adds more necessary requirements. Many of the requirements proposed in this posting either reiterate the drafts as posted (i.e. English language) or introduce confusion when compared to the drafts as posted. The SDTs should limit their scope to R2 and R7, so as not to duplicate or contradict the on-going work of other SDTs. The SDT appears to have adopted severe violations for every infraction. There should be some gradations, using increasing severity based on the number of or severity of any infractions. Definitions: The standard should define other terms, as well, including the following: • reliability-related information, • "... state or status of an element or facility of the BES ..." The standard should also have provision to include the boundaries (components) of an "element," and the meaning of the terms "state or status" in the written communication protocol. For example, is the gas compressor of a 345kV breaker considered part of this element, and so would a change in its "state or status" be covered? The VRFs for R2-R7 are all "High", and the VSLs are all "Severe" are too harsh. Failing to comply with one of the requirements does not automatically mean that a miscommunication occurred that caused a reliability problem. There should be a "Moderate" VSL for failure to comply with a requirement, but no miscommunication occurred. There should be a "High" VSL for failure to comply with a requirement that caused a miscommunication but resulted in no violation of another reliability standard. The "Severe" VSL should only apply to failures to comply with a requirement that caused a miscommunication that lead to a violation of another reliability standard, or caused a reliability problem. In addition, as stated earlier, this Standard focuses on "how" certain tasks should be performed and conflicts with NERC's position of pursuing performance based and results based Standards. Based on these considerations, work on this Standard should be stopped until work on Project 2006-06 has been completed and approved. This approach is consistent with the August 2003 Blackout Recommendation #26 "failure to identify emergency conditions and communicate that status to neighboring systems, and upgrade communication system hardware where appropriate" which actually focused on communications during emergencies, which is the scope of Project 2006-06. After Project 2006-06 is completed, a determination can be made on the disposition of this Standard. This Standard should be effective uniformly continent-wide.

Group

Santee Cooper

Terry L. Blackwell

Disagree

The definition of Interoperability Communication needs to be clarified. What is the intent of the word "entities" in this definition? This definition may no longer be needed with the recent definition of a Reliability Directive. Three-part Communication should be required when issuing and receiving a Reliability Directive. This term has recently been defined by a SDT.

Disagree

A TSP and LSE should not be subjected to other requirements within the COM003 Standard such as Three-part Communications. In addition, R18 of TOP002-2 required the use of uniform line identifiers among neighboring BAs. As this requirement (R7) is now written in COM003 it is not clear that this is when the use of uniform line identifiers is required. As currently written, it could be interpreted that the use of uniform line identifiers is required for all communication which is more restricting.

Disagree

We believe that a company's documentation demonstrating compliance for R2 through R7 would eliminate the need for a CPOP document.
Disagree
Utilization of a color-coded system for all verbal and written Interoperability Communications adds a layer of complexity to the System Operator that is not necessary.
Disagree
A common time zone is not necessary and is overly prescriptive. Companies should not have to worry about self-reporting or receiving a compliance violation if someone states the wrong time during a conversation.
Disagree
The SDT should consider using the now defined term Reliability Directive in place of Interoperability Communications. Typically, only BAs, TOPs, or RCs issue Reliability Directives so this requirement should only be applicable to those entities.
Disagree
Use of the NATO phonetic alphabet should not be a requirement of this standard. This also adds a layer of complexity to the system operator position that is not necessary.
Disagree
See previous comment on Question 2. In addition the use of the words "equipment identifiers" could be interpreted to include all pieces of equipment within a line.
Disagree
Disagree
Agree
A lot of the requirements in this standard could be considered a "best practice" for the industry rather than reliability related.
Agree
The SDT has put a lot of work into this standard and we appreciate their effort. The SDT of COM-002 and COM-003 may need to integrate the reliability related requirements of these two standards into one standard that the industry can approve. This standard as written could lead to some extremely high dollar fines when in reality the reliability of the bulk electric system has not been affected at all.
Group
Bonneville Power Administration
Denise Koehn
Disagree
BPA does not agree with the aspects of Interoperability Communications. We do not need a common time standard. Why use the NATO Standard. This could add a lot of time to a directive that needs to be given immediately. The 3 part communication is already used by BPA.
Disagree
BPA Would like further clarification about what is meant by "pre-determined, mutually agreed upon line and equipment identifiers". Is it a specified format no matter which part of the system is being used, or is it only for 115 kV and above as it applies to LSE's and TSP's. If it only refers to Transmission equipment above 115 kV, then BPA would likely agree.
Disagree
BPA does not agree with the one time zone or the NATO Standard. We believe the protocols are unnecessary and in fact will add more confusion to the process. We also do not agree, if this requires creating a brand new documented procedure just to address this standard, when elements are already covered in a different standard (common language in TOP).
Agree
In Attachment #1 - Operating State Alert Levels, for the Transmission Emergency Alert (TEA) Level 2 definition, a "why" needs to be incorporated into the definition. It appears that the reason we're going to TEA 2 is to avoid violation of an SOL but it needs to be called out.

Disagree
This creates a communication barrier between the utility and it's customers and the local population. Do not go ahead with this provision. The very last thing that we want to do is to create confusion and this approach, given that the country itself is using different time zones, will do just that. With 3-part communications with specified time zones in Interoperability Communications as required and a common English language, the matter is covered.
Agree
Suggest that each entity is also required to use the full station name in verbal communications.
Disagree
Disagree
BPA Would like further clarification about what is meant by "pre-determined, mutually agreed upon line and equipment identifiers". Is it a specified format no matter which part of the system is being used, or is it only for 115 kV and above as it applies to LSE's and TSP's. If it only refers to Transmission equipment above 115 kV, then BPA would likely agree.
Agree
In Attachment #1 - Operating State Alert Levels, for the Transmission Emergency Alert (TEA) Level 2 definition, a "why" needs to be incorporated into the definition. It appears that the reason we're going to TEA 2 is to avoid violation of an SOL but it needs to be called out. The color scheme may be confusing with (DHS) Homeland Security's terrorist alert levels. (The RC makes the notifications to all based upon the Operator's reported conditions per the scheme.). Suggest only using the Emergency Energy Alert numerical levels versus the color scheme, to avoid confusion with Homeland Security alerts. An example: A red alert is a breakup like 2003 and 1996, not shedding of load to prevent it, The color scheme does not work for this. Agree with Notifications for Physical Security and Cyber Security. Disagree with Notifications for Transmission Emergency Alerts. This appears to be only IROL related, but could progress to SOL. May have too many of these issued. Suggest the following: Yellow – approaching IROL limit; Orange – procedures implemented to correct IROL; RED – shedding firm to respect an IROL.
Disagree
Disagree
Agree
R3 creates a special need for multi language operators. US and US-involved entities need to use English in all instances, not only for reliability purposes, but for internal communication purposes and to be able to hire replacements without competing for an artificially small set of operators and to be auditable by NERC.
Group
IRC Standards Review Committee
Ben Li
Disagree
The way the definition of Three-part Communication is worded applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct. We suggest the definition be revised as follows: A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it. We believe the term "Interoperability Communication" contradicts the work by the RTO and RC SDT that limits the

requirement to use three-part communications to only those communications that explicitly state that the communication is a Reliability Directive and creates confusion within the industry. Additionally, it appears that this definition would encompass all verbal communications and, as such, we question the need for such definition. While we support using three-part communications during routine operations as a best operating practice, we do not believe that it is so critical to reliability that it becomes an enforceable requirement for routine operating instructions. Rather we believe the enforceable requirement should be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger and auditable and measureable. Both element and facility are used in the Interoperability Communication definition and are NERC defined terms. Did the drafting team intend that the NERC definitions should apply? Then the terms need to be capitalized.

Disagree

This requirement represents a "how" and not a "what". In general, standards should be focused on "what" not how. The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the use of three-part communication protocol until the message has been correctly spoken and comprehended.

Disagree

It is not clear what the purpose of this communication protocol is or what should even be included in the protocol. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions. The NERC BOT has approved pursuing the Performance-based Reliability Standard Task Force's recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to delineate actionable reliability requirements from record/documentation requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. We – and the industry as a whole based on the response to the Task Force – do not support such an approach. We suggest deleting this Requirement from the Standard. Furthermore, the establishment of R2-R7 as elements of the CPOP required in R1 appears to contradict the recent shift in direction that NERC has taken regarding defining criteria as bullets under a requirement. See NERC's August 10th informational filing regarding assignment of violation risk factors and violation severity levels in regards to dockets RM08-11-000, RR08-4-000, RR07-9-000, and RR07-10-000. COM-003 R2 states: "shall use pre-defined system condition terminology as defined in Attachment 1-COM-003-1 for verbal and written Interoperability Communications." Why does R1 establish the requirement for a procedure, when the procedure is essentially defined by R2-R7. If there is such a reliability need to establish these requirements, one could conclude nothing else is so important that it needs to be included because it is not identified in the standard. Furthermore, R2 appears to define Interoperability Communications for attachment 1 communications only. Is this the intent of the drafting team?

Disagree

It is not clear what value there is in identifying alert levels. There does not appear to be any differentiation in actions taken based on the alert levels. Why not just state the number of substations attacked, etc? Further, the "pre-defined" system conditions and alert levels are too detailed and overly prescriptive. System operators need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task does not lend itself to promptly and effectively deal with the emergency situation. Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the parties such as Distribution Provider and Generator Operator cannot have access to these systems due FERC standards of conduct requirements. Attachment 1 and R2 do not appear to be in synch primarily due to the definition of Interoperability Communications. By definition, Interoperability Communication is about how entities change the state of the BES and Attachment 1 is about notifying of what already happened to the BES.

Disagree

There is no need to use a common time zone for communications. There is already a requirement to use hour ending for scheduling purposes, inadvertent accounting, CPS and other standards where needed. There is no demonstrated benefit to reliability to use a common time zone. The time zone should be identified in the communication. Use of CST will cause significant and unnecessary costs



and the resulting reliability benefit is not clear. Some of the costs will arise to change systems such as RCIS, IDC, scheduling and E-Tag systems, etc. Not only does this requirement attempt to determine HOW entities operate within their various footprints, it would significantly change the way many markets are structured. To implement this into existing Markets would cost significant time, money and resources while not enhancing reliability in these areas. We believe that, when operating across time-zones, simply referencing "Central Standard Time" or "Eastern Standard Time" is sufficient for other operating entities to reliably operate; also, let's not lose sight of HOW MANY entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We are strongly opposed to this requirement.

Disagree

Based on the definition of Interoperability Communications, R5 could imply that three-part communications is required to communicate routine operating instructions. We believe this Requirement contradicts the work that has been done and substantially progressed through two other SDTs and creates confusion within the industry. We believe this Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion. We support the work being done by the RC SDT and RTO SDT which would define a directive based on the determination of the person giving such an order. We believe, it should be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger and auditable and measureable. R5 is not consistent with the Functional Model. Only the RC, BA, and TOP issue directives. Thus, the term "....when issuing a directive...." should be "....when communicating directives...." , so both the issuer and receiver are included in the requirement.

Disagree

While this requirement may represent a good utility practice or even a best practice, it is not so necessary to be enforceable through enforceable requirements. Imagine the situation in which an operator says "A as in apple" instead of using the NATO Alpha. Even though the listener should clearly be able to discern the correct meaning, the speaker's company could be sanctioned even if the correct actions were taken as a result of the clear communication. Also, many organizations may have established communications protocols which are functioning properly and making a change may actually hinder reliable operations by introducing unnecessary confusion.

Disagree

Please confirm our understanding of this requirement. We believe that the SDT intends for the requirement to compel all companies to use the same name for all facilities. If this is the intention, we disagree with the requirement. This may represent a good utility practice but it is not necessary to be a requirement. The key question is: "Do the companies' personnel understand one another?" If I know that my company refers to a tie-line as Alpha and my neighboring company calls it Beta, I know what he means when communicating to me. That is all that matters.

Disagree

It is not clear what value is realized by declaring an alert status particularly with regard to cyber and physical attacks. There does not appear to be any differing actions taken based on the alert status. Given that no differing actions are taken for cyber and physical attacks, it seems it would be more beneficial to use specific information such as 12 substations have been physically or cyber attacked. This is more meaningful than issuing a red alert that would only indicate more than one site has been attacked. Furthermore, we question the value of communicating the physical and cyber alerts. How does this notification help the BES reliability? Consider the following example. One BA in Oklahoma is 34,323 sq miles. Communicating that an attack occurred in the BA and RC tells other operators that somewhere in Oklahoma an attack occurred. This notification does not present any information that could require actions on the operators' parts and will only generate phone calls for more information. Furthermore, PSE and CSE is a type of sabotage which is reported in CIP-001 R2 already. TEA Alerts are already covered in IRO-006-East-1, IRO-009, IRO-010, IRO-014.01 R2. Also, several entities have observed confusion during the field-test of these Alert Levels because there are inconsistencies in the implementation of various stages of Alerts. It certainly has not enhanced Reliability. Attachment 1 contains a conflict. The last sentence of the opening paragraph of Attachment 1 reads, "The time frame for declaration of these Alert states shall be consistent with the approach used to declare EEAs and would normally apply to Real Time declarations and not

forecast conditions." In Transmission Emergency Alerts Condition Yellow, Orange and RED: The Reliability Coordinator or Transmission Operator foresees or is experiencing conditions where all available generation resources are committed to respect the IROL and/or is concerned about its ability to respect the IROL. "Foresees" is a forecast condition. In condition Orange and Red for TEA Level Two/Three, the initial notification requirements are redundant with IRO-006-East-1 R3.2. Under the Make Final Notifications, is curtailed intended to mean canceled or terminated? The term Curtailed in operations generally means cuts for schedules/tags. EEA's use terminated. We recommend using terminated. Distribution Service Providers should be Distribution Provider to be consistent with the Functional Model.

Agree

Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the parties such as Distribution Provider and Generation Operator cannot have access to these systems due FERC standards of conduct requirements. Requirement 2 and the listing of functional entities required to be notified within the RC footprint in attachment 1 create a de facto requirement for them to have RCIS access or an unnecessary burden to communicate with all functional entities listed separately. Having to communicate to all functional entities in that list verbally and individually would create an unnecessary burden that distracts the RC from actual system operation and represents a detriment to reliability.

Agree

In some market structures, TSPs and LSE do not own or operate equipment. Thus, including them in the requirements is an unnecessary burden for these areas. The requirement to use CST attempts to determine HOW entities operate within their various footprints and it would significantly change the way many Markets are structured. To implement this into existing Markets would cost significant time, money and resources while not enhancing reliability in these areas. We believe that, when operating across time-zones, simply referencing "Central Standard Time" or "Eastern Standard Time" is sufficient for other operating entities to reliably operate; also, let's not lose sight of HOW MANY entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We are strongly opposed to this requirement.

Agree

We believe that the existing standard COM-002 is actually better than this standard. This standard causes more confusion and ambiguity and creates unnecessary or overly cumbersome requirements that add little or no value to reliability. Additionally, we cannot understand how all requirements but R1 have been determined to have a HIGH VRF when, many of them are dictating HOW communications should take place and not when and why or what. COM-002 retirement does not appear to be consistent with the direction of the RC SDT. The RC SDT appears to be adding requirements. More coordination is requirement between these two teams. Recommendation 26 of the August 14, 2003 blackout report is cited as a driver for extending three-part communications. We believe the title of Recommendation 26 is misleading and when reviewed separately from the supporting text of the recommendation and direct and contributing factors in the report results in an incorrect interpretation. "Failure to identify emergency conditions and communicate that status to neighboring systems" is one of the contributing factors and the supporting text of the recommendation clearly refer to shoring up communications during emergency and anticipated emergency conditions and establishing an emergency broadcast communication system to alert regulatory, state and local officials. The supporting text of Recommendation 26 only mentions addressing alerts, emergencies or other critical situations. Some have incorrectly inferred the initial clause of Recommendation 26, "Tighten communication protocols", means the recommendation applies to all routine communications. The first paragraph in Attachment 1 of COM-003-1 an EEA is stated as being an Emergency Energy Alert rather than an Energy Emergency Alert. This should be corrected for consistency with other standards and to avoid confusion. Also in this paragraph, the term "states" should be replaced with "levels" in order to maintain consistency with the tables in the Attachment as well as EOP-002-2.1 to which this Attachment refers.

Individual

Brett Koelsch

Progress Energy Carolina, Inc

Disagree

The definition for Interoperability Communication needs more clarification/an interpretation since the type of communications is not defined, the term "reliability-related information" undefined, and it may be so diluting as to de-emphasize true reliability directives.
Disagree
The word "Neighboring" is used in TOP-002 R18. Excluding this word in the proposed COM-003-1 means that each entity would have to coordinate the uniform identifiers with an undefined number of entities in the entire Interconnection.
Disagree
A requirement to create a CPOP and mandating absolute adherence to that CPOP is overly prescriptive, may not improve reliability of BES operations, and may serve to delay communications and therefore delay actions necessary to respond to threats to the reliability of the BES.
Disagree
The link between COM-003-1 R2 and Attachment 1 for entities other than the Reliability Coordinator is unclear. R2 links with Attachment 1 and is applicable to a host of entities while Attachment 1 seems to only provide pre-defined system condition terminology for use during notifications by the RC to other entities.
Disagree
Mandating that all "Interoperability Communications" be based on Central Standard Time could generate an error precursor- (i.e. some entity communicating a reliability directive in a location using EST to a different entity in a location using EST having to convert the time stamp to CST introduces possibilities of errors and/or delays.) A better approach for those entities that communicate across time zones is for those entities to agree/coordinate on a time standard reference.
Disagree
PEC supports creating a definition of Reliability Directives. PEC may then agree that each entity shall use 3-part communications when issuing Reliability Directives during "Interoperability Communications." Alternatively, simplify and change to use Three Part Communications when using Interoperability Communications.
Disagree
NATO stands for North Atlantic Treaty Organization. This proposed requirement is a best practice and does not serve to increase the reliability of the BES.
Disagree
Agree
R2 which links with Attachment 1 is applicable to a host of entities while the Attachment seems to only provide pre-defined system condition terminology for use during notifications by the RC to other entities. PEC feels that unscripted specific language used by RCs now on RCIS and in verbal communications currently provides the necessary awareness and information to entities without personnel having to refer to a procedure or remember color codes to decipher the meaning. This attachment does not serve to increase the reliability of the BES.
no
Agree
This proposed revision, if implemented, may introduce unnecessary complications into communications between entities which may lead to delays and misunderstandings, potentially decreasing the reliability of the BES.
Group
PEF
Dania Colon
Disagree
PEF does not agree with the adoption of the proposed term "Interoperability Communication". The term "Reliability Communication" should be used instead. The proposed term "Interoperability Communication" is defined such that it applies to a state or status change of an element or facility of

the BES – but there are many reliability-related communications which do not necessarily apply to a state or status change.

Agree

Agree

Disagree

PEF recommends that the color coding and definitions that are used by Homeland Security also be used for the notification of physical and cyber emergency alerts reported to the RC. This would follow the ES-ISAC standard already adopted by the electric industry. If the attachment is adopted as is, PEF recommends adding the EEA levels to provide “pre-defined system condition terminology.”

Disagree

PEF feels that the use of CST will create too much confusion within the different entities, particularly during emergency communications. We recommend the use of GMT instead.

Agree

Agree

Agree

Agree

PEF recommends that the color coding and definitions that are used by Homeland Security also be used for the notification of physical and cyber emergency alerts reported to the RC. This would follow the ES-ISAC standard already adopted by the electric industry. If the attachment is adopted as is, PEF recommends adding the EEA levels to provide “pre-defined system condition terminology.”

Disagree

Agree

PEF recommends that the color coding and definitions that are used by Homeland Security also be used for the notification of physical and cyber emergency alerts reported to the RC. This would follow the ES-ISAC standard already adopted by the electric industry.

Agree

PEF believes additional NERC defined entities (such as Generators Owners) should be made applicable to this standard. Specifically, PEF believes that the Interchange Authority should be added due to the communications required between the Reliability Coordinator and the Interchange Authority. PEF also believes that the adoption of R4 would have major implications on the tagging process. PEF believes that all tagging would be required to be done using CST due to schedule check-out between BAs, TSPs, LSEs and RCs. Therefore, PSEs should be made applicable as well for R3 and R4.

Group

PPL

Annette Bannon

Disagree

Three-part Communication is too prescriptive. How will “all call/blast” communications be handled? Also, it is unclear what communications are included in Interoperability Communication.

Disagree

It is not clear what real time communications take place with a TSP and/or a LSE that would put the BES in jeopardy and thus necessitate them to be included as an applicable entity.

Disagree

Will the CPOPs be developed regionally, by RCs, by TOPs, by BAs? Will some entities have to adhere to various CPOPs since they may operate in various areas? Too many unanswered questions to support this concept.

Disagree
This requirement should be applicable to a RC only. Some registered entities may not even receive these types of communications. Since the responses are the same for all levels noted in attachment 1, there is questionable value to defining this level of additional administrative detail.
Disagree
This requirement is overly prescriptive and the benefit to reliability by switching everyone to CST is unclear.
Disagree
Only RCs, TOPs, & Bas issue directives. The other entities should be removed from this requirement.
Disagree
The way this could be interpreted is that every type of communication between every applicable entity would have to use the NATO phonetic alphabet. This would be impractical since many of the current communications do not require this level of specificity.
Disagree
Requirement R7 in draft COM-003-1 came from TOP-002-2, Requirement R18. The original requirement intended that neighboring Balancing Authorities use uniform line identifiers when communicating information about their tie lines. This requirement drops that clarification and introduces the additional requirement to use pre-determined "equipment" identifiers. Having to mutually agree in advance on identifiers for every switch & transformer is another example of a prescriptive requirement whose violation will not affect system reliability, yet will expose entities to large fines.
No comments either way since this applies specifically to RCs.
Disagree
Disagree
Agree
If this draft standard would be approved as it is currently proposed, the implementation plan is way too short considering all the process and system changes that are needed to comply with the numerous additional requirements.
Individual
Scott Berry
Indiana Municipal Power Agency
Disagree
It is not clear in the definition of Interoperability Communication if this is communication between two outside entities (two different companies) or could apply to communication between two entities within the same company. For example, communication between a company's generation plant and the same company's dispatcher.
Disagree
The OPCP SDT does not give a real justified reason on making this requirement move from TOP-002-2 to COM-003-1, except saying that the team believes it is appropriate. Unless there is a very sound or technical justification for moving it, the requirement should be left in the current standard (TOP-002-2) to reduce the extra work and confusion this may cause among the industry. In addition, since Inoperability Communication is not clearly defined, if two LSE entities are communicating, do they have to follow the cummunication protocal required in COM-003?
Disagree
What reliability purpose is served by restating requirements two through seven in a Communications Protocol Operating Procedure (CPOP)? Since these requirements are the only required items in the CPOP, entities will just be restating these requirements in their CPOP. In addition, this is an administrative requirement which does not fit into the new performance-based standard principle that should be used by SDT's.
Disagree

No. Does attachment 1 cover all possible communication scenarios and terminology? Using pre-defined condition terminology does not allow flexibility in communications and for near changes in communications that might be needed depending on the situation.

Disagree

There is no need to use a common time zone. The time zone should be identified in the communication, if needed. The reliability benefit is not clear for using one time zone, and the cost associated with using one time zone will be significant and unnecessary. The use of just CST will cause confusion, because one ISO has all its systems in EST and another ISO systems has its systems in EPT. If an entity is required to use CST when verbally communicating to one or both of these two ISOs, then many mistakes and confusion will result because their portals continue to be in their respective times.

Disagree

The definition of Interoperability Communications is not clear and this requirement could require Three-part Communications to communicate routine, internal instructions within an entity. In addition, the definition of a directive is being worked on by a NERC SDT, and this definition might help clear up any confusion in this requirement, along with a better definition of Interoperability Communications.

Disagree

An entity should not be required to use a specific phonetic alphabet. If a letter needs to be clarified, then boy, bob or beta should be allowed to convey the letter "B". In an emergency, an entity wants its coordinators to be concentrating on the situation and not worrying about using the proper phonetic alphabet word for the letter "B".

Agree

This standard is not needed because requirement two in COM-002 takes into account the use of Three-part Communication which is the main reliability requirement from COM-003. The use of a procedure (R1), the English language (R3), a standard time zone (R4), the NATO phonetic alphabet (R6), and a pre-defined system condition terminology (R2) are administrative requirements (not performance based requirements) and if not used, all of them definitely do not have a high VRF. If an entity does not use a procedure, but ensures they follow requirement 2 of COM-002 and both parties have a clear understanding of the directive what other reliability requirement is necessary. One recommendation might be for the COM-002 Standard Drafting Team or another SDT to come up with a definition for a directive.

Individual

Michael R. Lombardi

Northeast Utilities

Disagree

The term "Interoperability Communication" creates confusion within the industry and contradicts the work by RTO and RC SDT in Project 2006-06 that limits the requirement to use three-part communications when issuing Reliability Directives (defined in Project 2006-06) that address anticipated and actual emergency conditions. Additionally, it appears that this definition would encompass all verbal communications and, as such, we question the need for such definition. The definition of "three-part communication" may be viewed as accurate and consistent with the work that has been done and substantially progressed through two other SDTs, we believe the RC SDT requirement, which includes "and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings", is more complete. Again, we believe the term "Interoperability Communication" contradicts this work and creates confusion within the industry. It appears to mandate 3-part communication during operational strategic discussions, as well as other "non-action" oriented communications. We believe this Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion.

Disagree
The SDT expanded Requirement R18 of TOP-002-2 by adding the term "equipment". This Requirement represents a "how" and not a "what". In general, standards should be focused on "what" not how. The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the use of three-part communication protocol until the message has been correctly spoken and understood. LSEs and TSPs do not own or operate equipment, and as such in a market environment should not fall under the mandates of this requirement. Neither the TSP nor the LSE provide or receive information about specific lines or equipment in real-time. Therefore, requirement R7 should not apply to them absent clear evidence that a realistic (not hypothetical) threat to reliability would exist if they are omitted. We do not think that such a threat would exist.
Disagree
This proposed communication protocol is redundant to Requirements R2-R7, and should not be included in this Standard. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions. The NERC BOT has approved pursuing the Results-based Reliability Standard Ad Hoc Working Group recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to eliminate administrative requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. The industry as a whole, based on the response to the Task Force, does not support such an approach. This Requirement should be deleted from the Standard.
Disagree
It is not clear what value there is in identifying alert levels since there does not appear to be any differentiation in actions taken based on the alert levels. Additionally, it has been our experience of during the field-test of these Alert Levels, that there are inconsistencies in when to implement various stages of Alerts and, we believe, this introduces more confusion than exists today.
Disagree
There is no reliability need to use Central Standard Time (CST) a common time zone for communications. Eastern Standard Time (EST) is used in New England and within the NPCC region. Converting to a different time zone will be confusing to the operators and the field personnel. The time zone that will be used should be agreed between each operating entity. This should only impact those entities that cross two time zones. If NERC or a Region were to perform an investigation that involves entities across the eastern interconnection, it would be appropriate for the investigation team to request data using a specific time zone.
Disagree
Based on the definition of Interoperability Communications, R5 implies that three-part communications is required to communicate routine operating instructions, or during operational strategic discussions as well as other "non-action" oriented communications. This Requirement contradicts the work that has been done and substantially progressed through two other SDTs and creates confusion within the industry. This Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion. The work being done by the RC SDT and RTO SDT in Project 2006-06 defines a Reliability Directive based on the determination of the person giving such an order. The entity that needs the action to be taken should establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger, auditable, and measurable.
Disagree
Not only does this requirement attempt to determine HOW entities operate with their various footprints, it may change the way many Markets are structured. What is the difference between using the word "Zebra" instead of "Zulu" to signify the letter "Z"? And, why would this be enforceable. Perhaps this should be a guideline document rather than an enforceable Requirement. There is no reliability need for this Requirement.
Agree





Disagree
If one of the goals is consistent communications, why would the standard require each Entity to develop a separate CPOP? For consistency, shouldn't the Reliability Coordinator develop the CPOP (with input from the other Entities) and all other Entities within the RC's area adopt it?
Agree
Disagree
We believe that any time zone can be used as long as the parties come to a common understanding of time through communication. Also, if an Entity mistakenly starts off a conversation using a time other than Central Standard Time, but corrects themselves during the 3-part communication process, is that a violation? We believe not, that as long as the communicating entities come to a common understanding of time, there is no violation. More clarity on this is desired. We assume such opportunity to correct mistakes is present throughout the standard and the language of the standard ought to reflect that. A high VRF is not appropriate, especially if the parties involved in the communication have a common understanding of the time, who cares what time zone?
Agree
The word "directive" is ambiguous. The standard should either require the Reliability Coordinator to define a "directive" or the standard should make this a defined term so that there is clarity between what is and what is not a directive. In fact, the "disposition" does state that "Reliability Directive" definition is in the scope of the SDT's effort. We do not think that this merits an increase from a "Medium" VRF in COM-002-2 R2 to a "High" VRF in this standard, especially if the actual action taken was in accordance with the direction given.
Disagree
How strict are the NATO pronunciations? E.g., "Uniform" is designated as pronouncing the "i" as a long "ee", most people I know do not do that. Similarly, there are multiple pronunciations of "Quebec", "Sierra", "Victor", "Three", "Four", "Five", and "Nine" to name a few, yet one pronunciation is specified. We presume that if the wrong pronunciation is used in the current draft of the standard, there would be a violation, currently at a high risk factor and high severity level, which seems rather severe. FMPA suggests that the SDT revisit this with an eye towards at least not penalizing someone for saying "five" instead of "fife", and possibly with an eye towards saying "'f" as in 'frank'" is OK, rather than being strict with NATO nomenclature.
Agree
For clarity, a NERC Glossary defined term is more appropriate than "line or equipment" identifiers, such as "Facility" or "Element" identifiers. A VRF of "High" is not appropriate. Note that TOP-002-2, R18, which this requirement retires, was "Medium".
Agree
(FMPA assumes that commenting "agree" means "yes, we have suggestions for improvement") It seems that the first two tables on Physical and Cyber Emergency Alerts are nearly identical. Why not combine them? On the third table on IROLs, are IROLs the only emergencies, e.g., how about a capacity / energy emergency? Shouldn't that be in a table as well?
Disagree
(FMPA assumes "disagree" means that we are not aware of any regional variances)
Disagree
(FMPA assumes that "Disagree" means that we are not aware of any conflicts)
Agree
(FMPA assumes that "Agree" means "Yes, we do have other comments) The Violation Risk Factor for R2 should be "Low", not "High". It is administrative in nature. The Measures make the types of evidence an "or" statement, e.g., "(e)vidence may include ... voice recording, transcripts, operating logs, OR on site observations" (emphasis added). The Data Retention section seems to make evidence an "and" statement, e.g., "Each ... (Responsible Entity) shall retain ... dated operator logs for the most recent 12 months AND voice recordings or transcripts ... for ... 3 months" (emphasis added). These statements are inconsistent with each other and both ought to be "or" statements. Due to the variability of the length of a month, data retention ought to be expressed in days rather than months, e.g., 90 days instead of 3 months. Why is the Transmission Owner included in the applicability of the standard? What "Interoperability Communications" are they involved with? If the

Transmission Owner is included, why isn't the Generation Owner? Explain the inconsistent treatment of Transmission Owners and Generator Owners. R3 – what if an entity starts to communicate in a language other than English, but, as part of the 3 part communication process changes to English and completes all steps of 3-part communication in English, is that entity non-compliant or compliant? How should EOP-001-0, R4.1 coordinate with COM-003-1? Should EOP-001-0, R4.1 focus on internal Entity communications?

Individual

Darcy O'Connell

California Independent System Operator

Disagree

Three-Part Communications: There is no leeway given if the "intent" of the information is repeated back correctly. If the initiating party mispronounces a word and the receiver does not, is it a violation? Also there is a possibility of delaying actions due to multiple repeat backs while attempting to repeat back verbatim. The air traffic control /pilot communications could be held up as the current best practice standard in critical communications, and utilizing three-part techniques... and they do NOT use verbatim word-for-word repeat. Rather the messages are often truncated, but still indicate an understanding of the message. Interoperability Communication: The proposed definition does not distinguish between internal and external entities. A more specific term than entity is needed here for clarity. With no more guidance than provided, a Generation Dispatcher may be considered a separate entity than the Transmission Dispatcher in the same room. As proposed the definition opens the doors for wildly different interpretations. We think this term, in this usage, applies to communication between companies, but we are not sure. Interoperability Communication is a bit of an unconventional use of the word interoperability. The standard strives to ensure communication protocols ensure interoperability. Communication Interoperability normally in usage, refers to the ability of dissimilar systems to exchange data. Its use here is unnecessarily confusing. It's a rather messy way of saying, inter-company communication.

Agree

Disagree

CAISO Comment; The requirement does not distinguish between intra and inter communications. Even though the proposed definition of "Interoperability Communications" is between two "entities", how will an auditor interpret it? Will this be taken to the extreme and be required to address communications between two different functions within one organization? For example, between the generation desk and the scheduling desk? How important is this plan? This requirement has a low Violation Risk Factor while the individual requirements that makeup the plan have High Violation Risk Factors. Furthermore, the Violation Security Levels do not address failure to follow the protocol in the plan. Based on the VFR and VSL, it is easy to conclude this plan does little in supporting an adequate level of reliability.

Disagree

CAISO Comments; Regarding CEA; CIP-002 requires responsible entities to identify their cyber assets and critical cyber assets. This requirement does not address any identification and requires responsible entities to declare emergency conditions for non-critical assets. How does this provide an adequate level of reliability? What technical justification did the SDT use in determining an actual or imminent cyber or physical threat to any BES generating facility, substation, or transmission line constitute an emergency declaration? Regarding PSEA and CEA; This requirement does not provide an adequate level of reliability. As a general statement, receiving notification from the RC stating XXXX BA has identified (actual or imminent) physical or cyber threats affecting 1 or 999 control center(s), generating facility(ies), substation(s), or transmission line(s) close to your jurisdiction would provide an adequate level of reliability compared to XXXX BA has declared a PSEA or CEA condition ORANGE. Why is the SDT promoting requirements that reduce reliability and dumb-down communications? Is this the correct standard to add a requirement such as this? Physical and Cyber threats are addressed in the CIP standards and emergencies are addressed in the EOP standards. Both require notification so why include it in a COM standard? Is there a possibility of double jeopardy between this requirement and CIP requirements? If this requirement must be included, Per attachment 1 – COM-003-1 (PSEA and CEA section) the Reliability Coordinator is the only responsible entity with any defined actions. It is suggested the SDT remove the BA, TO, TOP, GO,

TSP, LSE, and DP due to lack of applicability. The same entities should be removed from the measure (M2) also. Until "soft words" such as "threat" and "sabotage" are defined or clarity is provided the industry should not be proposing standards based upon them. Regarding TEA; What technical justification did the SDT use in determining that notifying all BA, DP, GOP, TOP, and TO in the RC area of a possible IROL violation provides an adequate level of reliability? There are no associated actions for the BA, DP, GOP, TO, and TOP to perform upon notification so what is the purpose of this requirement? The Alert Level Guide is still in the test phase; does not the Alert Level Guide need to be approved prior to any standard which references the guide be approved?  
Comments: Per attachment 1 – COM-003-1 the Reliability Coordinator is the only responsible entity with any actions. Suggest removing BA, TO, TOP, GO, TSP, LSE, and DP. Or assign them actions. The same entities should be removed from the measure (M2) also.

Disagree

CAISO Comments; Any standardization of time zones, in order to enhance reliability or reduce costs would use GMT as the reference zone in our opinion. The use of Central Standard Time is problematic because some months of the year other time zones would be at the same time as CST (Eastern Daylight Savings Time) and others not. Adopting systems that require system operators to sometimes operate in a time zone that is not their own local time and sometimes to operate in a time zone that is equivalent to their own local time is standardization that is not actually standard. How does using Central Standard Time for all verbal and written communication improve or support reliability? The SDT needs to explain how this requirement provides an adequate level of reliability for real-time operations for any entity operating outside the Central Standard Time Zone.

Disagree

CAISO Comments: Until "directive" is a defined term the industry should not accept requirements governing actions regarding directives. Directive is currently being defined in an interpretation. Subsequent interpretations may subvert the standards drafting process. Terms should be formally defined before inclusion in other standards to prevent future interpretation issues, including the changing of a standard outside of the accepted Standard Development process.

Disagree

This requirement is a best practice. Maybe the standardized alpha-numeric communication is something that companies should be required to train their personnel on, maybe it could even be a requirement of their CharliePapaOscarPapa. As this requirement is literally written a system operator who used the word 'cat' instead of the word 'charlie' when giving a directive would violate a sanctionable standard with a VRF of 'High' and a VSL of 'Severe'.

Disagree

CAISO Comments; This Requirement is problematic as it doesn't actually steer towards standardization. It mandates that companies have potentially scores of agreements agreeing on terms with each party it interacts with, all of which may be different. It ensures the system operator will spend more time ensuring terminology is correct for a given inter-company communication and once again, less time actually reliably operating the system. Standardization can only occur in a meaningful manner at very minimum, the interconnection level. Also the language in the VSL section uses "mutually understood", which the CAISO supports as opposed to the requirement and measure use "mutually agreed upon". Mutually agreed upon is overly prescriptive.

CAISO Comments; Information regarding the Alert Level Guide field test has not been widely circulated and unproductive as of late. Does not the Alert Level Guide need to be approved prior to any standard which references the guide be approved? What was the outcome of the field testing? Was reliability enhanced? Attachment 1 describes 'normal, alert, and emergency operating conditions', then goes on to never use those terms again in any meaningful manner. To further confuse it then mixes color coding of steps with levels. Which is it, Condition Red or Level 3? The attachment directs Reliability Coordinators to make vague notifications to the functional entities in its footprint. It directs Reliability Coordinators to make these vague notifications to entities that do not use, in our case the WECCNet. Is it really anticipated that the Reliability Coordinator calling on the telephone every DSP in its footprint with a vague notification will be an enhancement to reliability?

Agree

CAISO Comments; The proposed requirement R7 will cause regions operating in any time zone other than Central to draft regional standards to avoid this non-reliability supporting requirement.

Disagree
Agree
The Drafting team should take a hard look at the VRFs and VSLs established in this standard and contrast them against VRFs and VSLs for other adopted standards. We do not feel, as an example, that the use of Spanish in a normal communication between two companies, while improper, should carry a VRF of 'high' with a VSL of 'severe'. The draft standard focuses too much attention on prescriptive remedy than ensuring understanding.
Individual
Brandy A. Dunn
Western Area Power Administration
Agree
Agree
Agree
Disagree
It's very confusing to refer to each condition using a color and/or a level number. In other areas, we are accustomed to using Alert Levels (ie. EEA states). The color designation seems to throw in an unnecessary element that doesn't add any value.
Disagree
This could be a potential problem since Operators will need to communicate with field personnel and local utilities in their local applicable time zone. It could be confusing to communicate by referring to a different time zone in other instances. It seems like it would make more sense to require that the time zone being used in a communication must be specifically and clearly referred to and identified. It doesn't matter so much WHICH time zone is used, it just matters that everyone understands which one is being used.
Agree
Disagree
Not everyone is familiar with the NATO phonetic alphabet, so it would be another thing for operators to have to memorize, or to always have in front of them to refer to.
Agree
Agree
Disagree
Disagree
Disagree
Individual
Catherine Koch
Puget Sound Energy
Agree
Disagree
PSE agrees in the consolidation of communication type activities into one standards, however the blanket addition of the TSP and LSE across all requirements doesn't seem appropriate. Additional

thought should be given in the potential for these two entities to participate in the communication activities contemplated by each requirement, rather than incorporating them wholesale. For example, a quick search on the term "directive" in the current set of standards indicated that neither Transmission Service Providers or Load Serving Entities (or even some of the other entities covered by the proposed standard) are likely to issue directives under the requirements of those standards, so is it appropriate to subject them to the requirements of Requirement 5?

Disagree

As discussed in Question 2, further consideration should be given to whether it is appropriate to include all the listed entities in this requirement. Additionally, the phrase "is not limited to" should be removed from the last sentence of the proposed requirement. The standard should specifically spell out what should be included in the CPOP. This phrase would lead to confusion about what an entity must include in the CPOP and is likely to result in inconsistent enforcement of the requirement. Also R1 appears to require a CPOP that will be used by personnel responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System. It is unclear if this specificity in who has to follow this extends to R2-R7 as well(while as noted the CPOP has to include elements of R2-R7). Without that clarity, the aspects of R2-R7 could seeming extend to communication between non-critical personnel regarding non-critical information. In addition, it appears that each of these entities must develop their own CPOP with clarity how the protocol gets vetted so that it is effectively employed across the entities. Finally, when reviewing the Functional Model document and it's discussion of tasks and relationships to other entities, it is unclear why the TO is included in the applicability as they perform no real-time functions and provide no real time information.

Disagree

This requirement, along with the associated M2, will be almost impossible to substantiate for audit purposes. For example, would an entity be required to present, and an auditor be required to listen to, voice recorder records for the data retention time? It is difficult to image another way to prove an entity complied with this requirement. Further the statement "as defined in Attachment 1" implies a set of definitions can be found and yet Attachment 1 is not structured in such that way. Is the system condition terminology just the terms "condition yellow", "condition orange", and "condition red". The procedural and time aspects described in this attachment creates confusion as to whether compliance is required under this standard or a different one. Suggest, more simplified presentation of definitions or glossary for clarity. Finally the inclusion of "written" communications creates a question relative to real-time information or whether this is extending beyond that timeframe. Most real time information sharing is verbal due to the urgency of it. Suggest removal of written.

Disagree

The requirement for common time zone should be at the descretion of the Reliability Coordinator in the respective region to determine. The conversion to CST has no apparent value. It would be much more reasonable to require communications related to time to include the time zone used in that communication. If common time zone across the nation is required it should only be imposed on the RCs as they would communicate with each other more readily than entities to other national entities. If an entity does not operate within the CST, the need to convert during periods of stress may increase the potential for error and reduce reliability.

Disagree

The requirement should use the NERC defined term "Reliability Directive," instead of the general term "directive."

Disagree

This requirement is too burdensome when compared to its benefits. The proposed requirement covers many different types of verbal communication and converts a useful communication protocol into mandatory requirement, which carries with it large potential penalties. Under this requirement, an operator's use of the phrase "M as in Mary" instead of "M as in Mike" would be violation of NERC reliability standards. The requirement for Three-Part Communications covers most of this ground in a much more useful fashion and ensures parties understand the information. The use of this protocol is a matter that should be left for entities to consider for inclusion in their CPOPs, but should not be a mandatory requirement to use the protocol. Further it is again assumed that based on R1, this information is related to real time. As well further examples of what a real time issuing of a

"notification" is and what "other realibilty related operation information would be needs to be specified.
Disagree
As discussed in Question 2, Requirement 18 should be removed from TOP-002-2 (or any successor standard) upon adoption of this standard if this requirement is included in this standard. Further the term mutually agreed implies that a discussion has occurred prior to the need to verbalize or write these types of communications. The additional specificity of "pre-determined" is duplicative or leads one to think there is formal guidance as to what the "identifier" should be. Remove "pre-determined". It also begs the question of timeframe which could bring interpretation issues during an audit.
Disagree
See discussion in Question 4. Also the attachment applies to Reliability Coordinators only, yet the requirement referencing the attachment applies to additional entities. Those entities should be removed from Requirement 2 or the attachment and Requirement 2 should be clarified to address what those additional entities' responsibilities are under the attachment.
I might suggest one for R4 by each region that is not in the Central Standard Time zone.
Group
NERC Standards Review Subcommittee
Carol Gerou
Disagree
Concerning Three Part Communications: Please clarify by answering the following. Does the word "correctly" mean repeating back word for word or would paraphrasing the intent of the message received prove that the receiving party understands the intent and specific action of what they are required to accomplish? Please verify that Three Part Communications will be required when issuing directives related to emergency situations, and not every time communications is required between two parties. We believe the proposed definition for the term "Interoperability Communication" is too broad and ambiguous. We recommend the following instead: "Communication between two or more Functional Entities (not within the same organization) to exchange reliability-related information to be used by the entities to change the state or status of Facilities of the Bulk Electric System." The inclusion of the terms "Functional Entities" and "Facilities" removes the ambiguity which we believe is contained in the proposed definition. (Both of these terms are defined in NERC's Glossary) In addition, the inclusion of the phrase "not within the same organization" clarifies that the focus of definition is to address communication between different Functional Entities. The way the definition of Three-part Communication is worded applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct. We suggest the definition be revised as follows: A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it. We believe there should be a definition added for "Directive" as orders given in an emergency situation. Directive, as currently used in the industry, is understood to mean an emergency situation and the party issuing the "Directive" states as such, so everyone knows it is an emergency situation. In the "Disposition of Requirements identified in the SAR for Operations Communications Protocols as Possibly Needing either Modification or Movement" document included with the proposed standard, it is stated that COM-002-2, R2 is being modified in Project 2006-06 to include a new definition for "Reliability Directive" and that it is to be included in the NERC Glossary. It also states that when it is completed, it will be moved into COM-003-1 and COM-002-3 will be deleted. It is our opinion that the definition of Reliability Directive must be included in the review and approval of COM-003-1, as it is central to many of the actions to be

taken. We understand that the SDT is working closely with the Drafting Team working on Project 2006-06 and believe that this team needs to use the term "Reliability Directive" as a replacement for the term "directive" which is in the current version of COM-003-1. The Drafting Team working on Project 2006-06 has defined Reliability Directive as: "A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency." The NSRS recommends use of this definition and the term "Reliability Directive" as opposed to "directive".

Disagree

TOP-002 R18 states that BA, TOP, GOP TSP and LSE shall use uniform line identifiers when referring to transmission facilities of an interconnected network. COM-003 R7 states that each RC, BA, TO, TOP, GOP, TSP, LSE and DP shall use pre-determined, mutually agreed upon line and equipment identifiers for verbal and written Interoperability Communications. TOP-002 allowed the TOP to communicate what the line identifiers were via a list and use during communications. The new requirement implies that the parties must agree upon the line identifiers and that agreement must be documented. We believe the requirement should require the exchange of line identifiers but not impose that they be mutually agreed upon. This requirement represents a "how" and not a "what". In general, standards should be focused on "what" not how.

Disagree

We request that R1 be rewritten for real time operation of elements and facilities connected to the BES. Based upon the concerns that we have with Requirements R2-R7 we would not support this requirement. We would support requirement R1 if it stopped after the first sentence and then merely listed the minimum requirements that should be included in the Procedure such as; (1) time zone, (2) language spoken, (3) when phonetic alphabet will be used, etc.. This will allow the Entities to draft their own CPOP per the intent of the requirement and avoid the concerns that we have documented for the remainder of the requirements. Reliability Standards are supposed to describe "What" is required, not "How" compliance would be achieved. We believe this proposed Reliability Standard describes more the the "How", and is contrary to the Results Based Standards Initiative being implemented by NERC. The NERC BOT has approved pursuing the Performance-based Reliability Standard Task Force's recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to eliminate administrative requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. We – and the industry as a whole based on the response to the Task Force – do not support such an approach. We suggest deleting this Requirement from the Standard. The CPOP should only apply to verbal communications. It could be implied that written communications (switching order affecting the BES) must have a CPOP, which would essentially be a writing guide procedure for how to write a procedure. The CPOP would need to be developed for each entity on how to write a CPOP and all the requirements contained in this draft standard. Every entity has unique switching instruction templates that have been developed over time in negotiations with unions, third-parties, etc, which have detailed procedures for their use. Requiring the use of a CPOP on top of that is adding additional complexity that adds nothing to the reliability of the BES.

Disagree

The attachment only applies to the RC. We recommend R2 state that the RC shall use pre-determined system condition terminology and the BA, DP, GOP, TOP, and TO shall follow orders and directives unless such acts violate safety, etc. Either the attachment should be changed or the requirement should be changed for accurate accountabilities.

Disagree

We believe that requiring the use of Central Standard Time (CST) in the Operating Arena (Real-Time) would reduce the level of reliability on a real-time basis. We understand that one of the primary reasons for going to one time zone is to aid in Event Analysis. It is our belief that during the analysis of an event, there is adequate time to make the necessary adjustments for time zones. The Group performing the analysis could require all data being submitted be in one time zone as the basis. Requiring the use of CST is an added burden to the Operations Staff in real-time that does not help them.

Disagree

Without defining "directive" the SDT is leaving the industry in the same situation we are currently in. As discussed in the response to Question #1 above, it is our opinion that the definition of Reliability Directive must be developed and included in the discussion of this standard (COM-003-1), and should be as defined in Project 2006-06: "A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.". Based on the definition of Interoperability Communications, R5 could imply that three-part communications is required to communicate routine operating instructions. We believe this Requirement contradicts the work that has been done and substantially progressed through two other SDTs and creates confusion within the industry. We believe this Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion. We support the work being done by the RC SDT and RTO SDT which would define a directive based on the determination of the person giving such an order. We believe, it should be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger and auditable and measureable.

Disagree

The required use of the phonetic alphabet should be documented in the Entities CPOP per our comments to question #3. While this requirement may represent a good utility practice or even a best practice, it is not so necessary to be enforceable through enforceable requirements. All information passed by a NERC Certified System operator falls under the scope of Requirement 6: "directives, notifications, directions, instructions, orders or other reliability related operating information". Based on that definition, all communication would fall under this Requirement. The NATO phonetic alphabet does not allow for the use of numbers ten and beyond. An entity WOULD be found non compliant for saying "open switch fourteen bravo". We do not believe this is reasonable as it adds nothing to the reliability of the BES is too prescriptive and all encompassing and could potentially confuse or slow down the communication process. We recommend that use of the NATO phonetic alphabet be included in the NERC operator certification training program and removed from this standard. As we recommended above, the term "directive" should be replaced with "Reliability Directive".

Disagree

Field personnel may not have access to the predetermined agreed to line and equipment identifiers. Requiring universal use of these identifiers could lead to confusion with field personnel within and between companies. This could lead to a decrease in the reliability and safety of the BES. As written R7 is expanding the requirement for agreed upon identifiers. We believe it is not necessary or required to have agreed upon equipment identifiers between companies as long as the line identifiers have been agreed upon. TOP-002 R18 states that BA, TOP, GOP TSP and LSE shall use uniform line identifiers when referring to transmission facilities of an interconnected network. COM-003-1, R7 states that each RC, BA, TO, TOP, GOP, TSP, LSE and DP shall use pre-determined, mutually agreed upon line and equipment identifiers for verbal and written Interoperability Communications. TOP-002 allowed the TOP to communicate what the line identifiers were via a list and use during communications. The new requirement implies that the parties must agree upon the line identifiers and that agreement must be documented. We believe the requirement should require the exchange of line identifiers but not impose that they be mutually agreed upon.

Agree

As Attachment 1 is written it only applies to the RC and is a one-way communications path. The BA, DP, GOP, TOP, and TO are to be notified by the RC but the attachment doesn't state what they are to do with the information. COM-003-1, R1 states that the RC, BA, TO, TOP, GOP, TSP, LSE and DP are to have a CPOP with the elements in R2 through R7, which refer to Attachment 1. If Attachment 1 is applicable only to the RC, as we recommend, there is no reason to have the other Functions listed for Attachment 1. Requirement R2 and Measure M2 need to be revised to be applicable to the RC only. Attachment 1 makes reference to "Distribution Service Providers". There is no definition of a Distribution Service Provider in the NERC Functional Model, and we believe this should either be revised to Distribution Provider, or deleted entirely from the list.

Agree



If the Central Standard time zone is required as noted in R4, we believe there should be a regional variance to allow the WECC to select the time zone to use as a standard.
Agree
Attachment 1, Physical Security is a basis for the SAR for Project 2009-02, Disturbance and Sabotage reporting SDT.
Agree
Without "Directive" being defined, this proposed standard still leaves a huge area that will cause problems and issues within the industry. We believe the SDT should replace "directive" with "Reliability Directive" and use the definition developed in Project 20006-06: "A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency." We believe Reliability Standard COM-003-1 is entirely too prescriptive, and is in actuality a procedure and not a standard. The Standard needs to focus on the "What" and not the "How". If the industry is going to truly embrace the Results Based Standards Initiative, this standard must be significantly revised to reflect that philosophy. We believe that the existing standard COM-002 is actually better than this standard. This standard actually causes more confusion and ambiguity and creates unnecessary or overly cumbersome requirements that add little or no value to reliability.
Individual
Michael Gammon
Kansas City Power & Light
Disagree
The definition of Three-part Communication applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct. We suggest the definition be revised as follows: "A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it." The definition for Interoperability Communication is too broad. Currently, this could mean any communication of information. This should be confined to emergency or unusual operating conditions.
Disagree
Including "equipment" is too broad. This could mean anything and should be limited to transmission devices that could affect the reliable operation of the bulk electric system.
Disagree
This proposed communication protocol is redundant to Requirements R2-R7 and should not be included in this Standard. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions and using agreed upon terminology for switching equipment for bulk electric system.
Disagree
Attachment 1 should be removed from this standard. This is a duplication of the alerts by the NERC Alerts system and the EISAC. In addition, these are reliability standards and should deal with real-time and expected future reliability issues. Alerts are an inappropriate for this standard.
Disagree
There is no reliability need to use a common time zone for communications. There is already a requirement to use hour ending for scheduling purposes, inadvertent accounting, CPS and other standards where needed. There is no additional reliability need to use a common time zone. The time zone should be identified in the communication. Use of CST will actually cause confusion and significant, unnecessary costs with no foreseeable reliability benefit. Some of the costs will arise to change systems such as RCIS, IDC, scheduling and E-Tag systems, etc.
Agree

Agree
Disagree
Including "equipment" is too broad. This could mean anything and should be limited to transmission devices that could affect the reliable operation of the bulk electric system.
Disagree
The attachment is inappropriate for this standard and should be removed. See response to question #4.
Disagree
Disagree
Disagree

## Consideration of Comments on Project 2007-02 Operating Personnel Communications Protocols — Standard COM-003-1

The Operating Personnel Communications Protocols Standard Drafting Team (OPCP SDT) thanks all commenters who submitted comments on the proposed draft COM-003-1 Operating Personnel Communications Protocols Reliability Standard. This standard was posted for a 45-day public comment period from November 30, 2009 through January 15, 2010. Stakeholders were asked to provide feedback on the standard through a special electronic comment form. There were 71 sets of comments submitted, including comments from more than 280 different people from over 100 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

[http://www.nerc.com/filez/standards/Op\\_Comm\\_Protocol\\_Project\\_2007-02.html](http://www.nerc.com/filez/standards/Op_Comm_Protocol_Project_2007-02.html)

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President of Standards and Training, Herb Schrayshuen, at 404 446 2563 or at [Herb.Schrayshuen@nerc.net](mailto:Herb.Schrayshuen@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

### Summary Consideration:

The majority of commenters expressed disagreement with the standard.

### Definitions:

Most commenters found the proposed definitions confusing. The SDT has removed all three definitions (Communications Protocol, Three-part Communication and Interoperability Communication).

- The term “Three-Part Communications” was subsumed into Requirements R2 and R3 in the revised standard.
- The OPCP SDT changed “Interoperability Communications” to become “Operating Communications,” which is now defined as: “Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.”

The OPCP SDT also addressed complaints stating it was unclear if “Interoperability Communication” included internal communication (communication between functional entities of the same organization), external communication (communication between two or more Functional Entities not within the same organization), or both.

“Operating Communication”, the proposed definition to replace “Interoperability Communication,” addresses changes in state, status, output, or input of any Element or Facility, capturing all communication that affects BES reliability. The term “Operating Communication” includes any communication that is requesting a change to the BES, regardless of whether the communicators are internal or external.

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<sup>1</sup> The appeals process is in the Standard Processes Manual:  
[http://www.nerc.com/files/Appendix\\_3A\\_Standard\\_Processes\\_Manual\\_Rev%201\\_20110825.pdf](http://www.nerc.com/files/Appendix_3A_Standard_Processes_Manual_Rev%201_20110825.pdf).

**Requirements:**

*Requirement R1 (required entities to have a Communications Protocol Operating Procedure):*

- The majority of the comments stated a Communications Protocol Operating Procedure (CPOP) would be administrative in nature and would not satisfy the criterion of enhancing the reliable operation of the BES. The SDT has removed it from the revised standard.

*Requirement R2 (required entities to use pre-defined system condition terminology for verbal and written Interoperability Communications as defined in an Attachment)*

- Many commenters indicated Requirement R2 should not have been applicable to TSPs and LSEs. The SDT removed TSPs and LSEs from the standard to be consistent with the approved SAR.
- Many commenters indicated that the scope (involving all Interoperability Communications) of the requirement was too broad.
- Several commenters indicated that the focus of this requirement was confusing and mixed guidance with requirements.
- Several commenters proposed expanding the table of alerts to include the alerts from EOP-002 – Capacity and Energy Emergencies.
- Several commenters indicated that this requirement is calling for entities to make notifications, and take actions under specific conditions, and belongs in other standards.
- The SDT determined that the notifications in the proposed requirement are not “communications protocols” and do not belong in COM-003 and removed the requirement from the revised standard.

*Requirement R3 (required entities to use English language for all Interoperability Communications)*

- Some commenters indicated that there are some places where there are legal requirements to use a language other than English. The SDT modified the standard (now Requirement R1, Part 1.1.1) to clarify that this requirement is not applicable where another language is mandated by law or regulation:
  - 1.1.1 Use the English language when communicating between functional entities, unless another language is mandated by law or regulation.

*Requirement R4 (required entities to use Central Standard Time (24 hour format) for all Interoperability Communications)*

- The majority of commenters stated Requirement R4 would add confusion for the operators and decrease reliability. Some recommend the use of another time in place of Central Standard Time. The SDT modified the standard to require use of the 24 hour format (new 1.1.2) in all Operating Communications and the inclusion of a time zone reference (new 1.1.3) only when Operating Communications occur between different time zones.

1.1.2. Use the 24-hour clock format when referring to clock times.

1.1.3. When the communication is between entities in different time zones, include the time, time zone and indicate whether time is daylight saving time or standard time.

*Requirement R5 (required entities to use Three-part Communications when issuing a directive during verbal Interoperability Communications)*

- Many commenters offered differing recommendations on R5 regarding the application and Definition of “Reliability Directive.” The proposed term “Reliability Directive” is being developed by the RC SDT for Project 2006-06. The SDT avoided use of the terms, “directive” and “Reliability Directive” in the second draft of COM-003.
- Many commenters recommended splitting proposed Requirement R5 to recognize the two distinct parties (sending and receiving) in the three part communication process. The OPCP SDT has done so by separating what had been Requirement R5 into R2 (for the sender) and Requirement R3 (for the receiver). Together these two requirements fully assign the responsibility to accomplish three-part communication.
- Some commenters expressed concerns regarding potential audit citations if a repeat-back was not word-for-word or verbatim. The OPCP SDT added the phrase “not necessarily verbatim” to address the concern. In other words as long as the communication is clear and accurately conveys the Operating Communication and its substantive components, it is acceptable.

**R2.** Each Reliability Coordinator, Transmission Operator and Balancing Authority that issues an oral, two party, person-to-person Operating Communication; excluding Reliability Directives shall: *[Violation Risk Factor: Medium][Time Horizon: Real-Time]*

**2.1.** Issue the Operating Communication and wait for a response from the receiver.

**2.2.** After a response is received , or if no response is received, do one of the following:

- Confirm the receiver’s response, if the repeated information is correct (not necessarily verbatim).
- Reissue the Operating Communication if the repeated information is incorrect, or the issuer does not receive a response.
- Reissue the Operating Communication if requested by the receiver.

**R3.** Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider that receives an oral two party, person-to-person Operating Communication excluding Reliability Directives , shall take one of the following actions:

- Repeat the Operating Communication, (not necessarily verbatim) and wait for confirmation from the issuer that the repetition was correct.
- Request that the issuer reissue the Operating Communication.

*Requirement R6 (required entities to use the NATO alphabet during verbal Interoperability Communications)*

- Many commenters indicated the use of a phonetic alphabet is not necessary and should not be required, as it will not improve reliability of the BES and that there are no instances where the absence of its use has resulting in reliability problems. The SDT disagrees with this comment and believes that enhanced clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities.
- Commenters stated that requiring strict adherence to and precise pronunciation of the NATO phonetic alphabet is overly prescriptive, and the proposed standard should allow for other phonetic clarifiers where clarity on alpha-numeric information is necessary. The SDT agrees, and modified the Requirement to allow for use of the any correct alpha numeric clarifier. The revised language was moved into Requirement R1, as Part 1.2.

1.2 When participating in oral Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.<sup>2</sup>

*Requirement R7 (required entities to use pre-determined, mutually agreed upon line and equipment identifiers for all Interoperability Communications)*

- Many commenters indicated Requirement R7 should not have been applicable to TSPs and LSEs. The SDT agrees, and has removed TSPs and LSEs from the standard to be consistent with the approved SAR.
- Additional commenters indicated the word “equipment” as used in Requirement R7 was too broad. The SDT modified the standard to use the defined terms “Element” and “Facility” instead of “equipment”.
- Other commenters indicated Requirement R7 addressed a planning function already included in TOP-002, and should not be included in COM-003. The drafting team believes communications between entities would be improved when use of pre-determined identifiers is required for interface Elements and Facilities. The SDT retained the concept of R7 and transferred it into Requirement R1, Part 1.1.4.
- There were additional comments that uniform and mutually agreed line and equipment identifiers should not be mandated so long as the identifiers are pre-determined. The SDT agrees documentation of mutual agreement is not necessary, so long as the identifiers are pre-determined, understood and used during Operating Communications. The standard has been modified to reflect this change.

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<sup>2</sup>The North Atlantic Treaty Organization (NATO) Phonetic Alphabet or International Radiotelephony Spelling Alphabet is one example of a widely utilized set of alpha- numeric clarifiers.

- Commenters indicated a general consensus for the mandatory use of line and equipment identifiers applying only to interface Elements, not Elements or Facilities internal to the footprint of the entity. The SDT modified the standard to apply only to interface Elements and Facilities.
  - 1.1.4 When referring to a Transmission interface Element or a Transmission interface Facility, use the name specified by the owner(s) for that Transmission Element or Transmission Facility.

### Outstanding Minority Issues

Several stakeholders identified potential conflicts between COM-003 and work underway in Project 2006-06 – Reliability Coordination where another drafting team is also addressing the use of three-part communications. In Project 2006-06 the proposed requirements focus on the use of three part communication when issuing and receiving “Reliability Directives.” As proposed, a Reliability Directive is a directive issued to address an Emergency or an Adverse Reliability Impact. The OPCP SDT proposes use of three-part communication for all Operating Communications, which would include Reliability Directives. To prevent double jeopardy, the second draft of the Implementation Plan for COM-003 proposes retiring COM-002 when COM-003 becomes effective.

Some additional comments were received indicating the previously posted standard was too prescriptive in specifying “how” to communicate, instead of “what.” The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations.

Commenters also indicated the proposed standard was unnecessary and would distract operators from reliably controlling the system. The SDT disagreed based on Blackout Task Force Report recommendation 26, which calls for tightening communication to improve reliability.

**Addendum:** As a result of the April 2012 Quality Review, the SDT adopted many changes that would impact many of the responses in this document. The SDT believes the QR recommendations provide clarity for the requirements and add discernible reliability value.

- A significant QR change is the addition of language excluding “Reliability Directives” from the scope of Operating Communications addressed in R2 and R3. The purpose of the exclusion is to prevent a potential overlap by requiring the use of three part communications in two different standards (COM 003-1 and COM 002-3). Thus, several of the responses in this report indicate that the term, “Reliability Directive” is not used in COM-003-2 and that is no longer true. Based on the need to distinguish between Reliability Directives (Operating Communications issued relative to an Emergency) and Operating Communications (Operating Communications issued anytime there is a need to communicate about maintenance or a change to an Element or Facility on the BES), Requirements R2 and R3 now include phrases to indicate they **do not apply** to “Reliability Directives”. Retention of the requirements for three-part communication in COM-002-3, recognizes that failure to effectively communicate during an Emergency has greater potential risk to reliability than a similar failure during other operating conditions. Thus noncompliance with three-part communication in COM-002-3 has a High VRF while as proposed, noncompliance with three part communications for

Operating Communications during other than Emergencies as proposed in COM-003-1 has a Medium VRF.

- The SDT believes the proposed definition: *Reliability Directive* is a subset of Operating Communication when the Reliability Directive is an instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. While Reliability Directives are excluded from COM 003-01, Requirements R2 and R3, Reliability Directives are subject to the protocols in Requirement R1.
- The SDT modified the implementation plan to omit the reference to retirement of COM-002-3.



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1. Do you agree with the adoption of the following new terms for inclusion in the NERC Glossary and their proposed definitions: Communications Protocol, Three-part Communication, and Interoperability Communication? If not, please explain in the comment area..... 22
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**Consideration of Comments on OPCP SDT — Project 2007-02**

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

		Commenter	Organization	Industry Segment										
				1	2	3	4	5	6	7	8	9	10	
1.	Group	Mike Garton	Electric Market Policy	X		X		X	X					
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	Bill Thompson	Dominion Resources, Inc.	SERC	1										
2.	Jalal Babik	Dominion Resources, Inc.	SERC	1										
3.	Louis Slade	Dominion Resources, Inc.	RFC	6										
4.	Jack Kerr	Dominion Resources, Inc.	SERC	1										
2.	Group	Jason L. Marshall	Midwest ISO Standards Collaborators		X									
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	Jim Cyrulewski	JDRJC Associates, LLC	RFC	8										
2.	Kirit Shah	Ameren	SERC	1										
3.	Bill Hutchison	Southern Illinois Power Cooperative	SERC	1										
4.	Greg Mason	Dynegy	NPCC	5										
5.	Joe Knight	Great River Energy	MRO	1, 3, 5, 6										
6.	Kenneth A. Goldsmith P.E.	Alliant Energy	MRO	4										
7.	Barb Kedrowski	We Energies	RFC	3, 4, 5										
8.	Rick Koch	NPPD	MRO	1, 3, 5										
9.	Alisha Anker	Prairie Power, Inc.	SERC	3										

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10.	Larry Larson	Otter Tail Power	MRO	1																																																																																																																																			
11.	Randi Woodward	Minnesota Power	MRO	1, 3, 5, 6																																																																																																																																			
12.	Ben Porath	Dairyland Power Cooperative	MRO	1, 3, 5																																																																																																																																			
3.	Group	Guy Zito	Northeast Power Coordinating Council																			X																																																																																																																	
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			1	2	3	4	5	6	7	8	9	10								
1.	Ray Phillips	AMEA	SERC	3, 4																
2.	Alan Jones	Alcoa	SERC	1, 5																
3.	Fred Krebs	Calpine	SERC	5																
4.	Jack Kerr	Dominion VP	SERC	1, 3																
5.	Louis Slade	Dominion VP	SERC	1, 3																
6.	Greg Rowland	Duke Energy	SERC	1, 3, 5																
7.	Laura Lee	Duke Energy	SERC	1, 3, 5																
8.	Sam Holeman	Duke Energy	SERC	1, 3, 5																
9.	Scott Watts	Duke Energy	SERC	1, 3, 5																
10.	Greg Mason	Dynegy	SERC	5, 6																
11.	Chad Randall	E.ON.US	SERC	1, 3, 5																
12.	Keith Steinmetz	E.ON.US	SERC	1, 3, 5																
13.	Jim Case	Entergy Transmission	SERC	1, 3																
14.	Melinda Montgomery	Entergy Transmission	SERC	1, 3																
15.	Wayne Mitchell	Entergy Transmission	SERC	1, 3																
16.	Bob Thomas	IMEA	SERC	3, 4, 9																
17.	Nick Lamotte	LA Generating	SERC	1, 3, 5																
18.	Timmy LeJeune	LA Generating	SERC	1, 3, 5																
19.	Jason Marshall	Midwest ISO	SERC	2																
20.	Randy Castello	Mississippi Power	SERC	1, 3, 5																
21.	Scott McGough	OPC (Oglethorpe Power)	SERC	5																
22.	Mike Bryson	PJM	SERC	2																
23.	Bill Thigpen	PowerSouth	SERC	1, 3, 5, 9																
24.	Tim Hattaway	PowerSouth	SERC	1, 3, 5, 9																
25.	Glenn Stephens	Santee Cooper	SERC	1, 3, 5, 9																
26.	Kristi Boland	Santee Cooper	SERC	1,3,5,9																
27.	Rene' Free	Santee Cooper	SERC	1,3,5,9																
28.	Tom Abrams	Santee Cooper	SERC	1,3,5,9																
29.	Gene Delk	SCE&G	SERC	1,3,5																
30.	John Troha	SERC Reliability Corp.	SERC	10																
31.	Alvis Lanton	SIPC	SERC	1,3,5																

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42.	John Kell	TVA	SERC	1,3,5,9																																																																																																																																																																																																																																																																																																																																																																
43.	Larry Akens	TVA	SERC	1,3,5,9																																																																																																																																																																																																																																																																																																																																																																
44.	Sam Austin	TVA	SERC	1,3,5,9																																																																																																																																																																																																																																																																																																																																																																
5.	Group	Margaret Ryan	Pacific Northwest Small Utilities Comment Group				X	X																																																																																																																																																																																																																																																																																																																																																												
<table border="1"> <thead> <tr> <th colspan="2">Additional Member</th> <th colspan="2">Additional Organization</th> <th>Region</th> <th>Segment</th> <th colspan="15">Selection</th> </tr> </thead> <tbody> <tr><td>1.</td><td>Central Lincoln PUD</td><td></td><td></td><td>WECC</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2.</td><td>Cowlitz PUD</td><td></td><td></td><td>WECC</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3.</td><td>Blachly-Lane Electric Cooperative</td><td></td><td></td><td>WECC</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4.</td><td>Central Electric Cooperative, Inc.</td><td></td><td></td><td>WECC</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5.</td><td>Coos-Curry Electric Cooperative</td><td></td><td></td><td>WECC</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6.</td><td>Douglas Electric Cooperative</td><td></td><td></td><td>WECC</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7.</td><td>Fall River Electric Cooperative, Inc.</td><td></td><td></td><td>WECC</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8.</td><td>Lane Electric Cooperative, Inc.</td><td></td><td></td><td>WECC</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9.</td><td>Lincoln Electric Cooperative, Inc.</td><td></td><td></td><td>WECC</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10.</td><td>Lost River Electric Cooperative</td><td></td><td></td><td>WECC</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>11.</td><td>Northern Lights, Inc.</td><td></td><td></td><td>WECC</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>12.</td><td>Okanogan Country Electric Cooperative, Inc.</td><td></td><td></td><td>WECC</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>13.</td><td>Raft River Electric Cooperative, Inc.</td><td></td><td></td><td>WECC</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>14.</td><td>Salmon River Electric Cooperative, Inc.</td><td></td><td></td><td>WECC</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>15.</td><td>Umatilla Electric Cooperative</td><td></td><td></td><td>WECC</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>																					Additional Member		Additional Organization		Region	Segment	Selection															1.	Central Lincoln PUD			WECC	3																2.	Cowlitz PUD			WECC	3																3.	Blachly-Lane Electric Cooperative			WECC	3																4.	Central Electric Cooperative, Inc.			WECC	3																5.	Coos-Curry Electric Cooperative			WECC	3																6.	Douglas Electric Cooperative			WECC	3																7.	Fall River Electric Cooperative, Inc.			WECC	3																8.	Lane Electric Cooperative, Inc.			WECC	3																9.	Lincoln Electric Cooperative, Inc.			WECC	3																10.	Lost River Electric Cooperative			WECC	3																11.	Northern Lights, Inc.			WECC	3																12.	Okanogan Country Electric Cooperative, Inc.			WECC	3																13.	Raft River Electric Cooperative, Inc.			WECC	3																14.	Salmon River Electric Cooperative, Inc.			WECC	3																15.	Umatilla Electric Cooperative			WECC	3															
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	Commenter	Organization	Industry Segment											
			1	2	3	4	5	6	7	8	9	10		
16.	West Oregon Electric Cooperative, Inc.	WECC 3												
17.	Consumers Power Inc.	WECC 3												
18.	Clearwater Power Company	WECC 3												
19.	Pacific Northwest Generating Cooperative	WECC 4												
6.	Group	Martin Kaufman	ExxonMobil Research and Engineering	X					X					
<b>Additional Member</b>			<b>Additional Organization</b>	<b>Region</b>		<b>Segment Selection</b>								
1.	David Cheshire	ExxonMobil Corp - Baton Rouge	SERC	NA										
2.	Joe Gourley	ExxonMobil Oil Corporation Beaumont Refinery	SERC	NA										
3.	Brock Pearson	ExxonMobil Refining and Supply Company	ERCOT	NA										
7.	Group	Patti Metro	NRECA RTF Members	X		X	X	X						
<b>Additional Member</b>			<b>Additional Organization</b>	<b>Region</b>		<b>Segment Selection</b>								
1.	Mark Ringhausen	Old Dominion Electric Cooperative	SERC	4										
2.	Steve McElhane	South Mississippi Electric Power Association	SERC	5										
3.	John Alberts	Wolverine Power Cooperative	RFC	1										
4.	Noman Williams	Sunflower Electric Power Corporation	SPP	1										
5.	Bob Solomon	Hoosier Energy	RFC	1										
6.	Chris Bolick	Associated Electric Cooperative	SERC	1, 3										
7.	John Bussman	Associated Electric Cooperative	SERC	1, 3										
8.	Mike Avant	Garkane Energy	WECC	NA										
8.	Group	Mike Bryson	PJM		X									
<b>Additional Member</b>			<b>Additional Organization</b>	<b>Region</b>		<b>Segment Selection</b>								
1.	Patrick Brown	PJM	RFC	2										
2.	Albert DiCaprio	PJM	RFC	2										
3.	William Harm	PJM	RFC	2										
4.	Tom Bowe	PJM	RFC	2										
9.	Group	Mike Bryson	PJM SOS Comments		X									
<b>Additional Member</b>			<b>Additional Organization</b>	<b>Region</b>		<b>Segment Selection</b>								
1.	Jeff Boltz	First Energy	RFC	1										

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	Commenter	Organization			Industry Segment										
					1	2	3	4	5	6	7	8	9	10	
2.	Stephen Alexander	PEPCO	RFC	1, 3											
3.	Bill Keagle	Baltimore Gas & Electric	RFC	1, 3											
4.	Carl J. Eng	Dominion Virginia Power	SERC	1, 3											
5.	Ron Warton	PSE&G	RFC	1, 3											
6.	Doug Myers	PPLEU	RFC	1, 3											
7.	Tom Bowe	PJM Interconnection	RFC	2											
8.	Raj Rana	AEP	RFC	1, 3											
9.	Bob Fannin	Dayton Power and Light	RFC	1, 3											
10.	David Mahler	Duquesne Light	RFC	1, 3											
11.	Kenneth Keilholtz	RRI Energy	RFC	5											
12.	Stephen Kimish	PSEG Energy Resources and Trade	RFC	1, 3											
13.	Stephen C. Knapp	Constellation Energy	RFC	1, 3											
10.	Group	Howard Rulf	We Energies				X	X	X						
<b>Additional Member Additional Organization Region Segment Selection</b>															
1.	Tom Hawley														
2.	Rob Martin														
11.	Group	Jason Shaver	ATC and ITC		X										
<b>Additional Member Additional Organization Region Segment Selection</b>															
1.	Michael Ayotte	ITC	MRO	1											
12.	Group	Sam Ciccone	FirstEnergy		X		X	X	X	X					
<b>Additional Member Additional Organization Region Segment Selection</b>															
1.	Dave Folk	FirstEnergy	RFC	1, 3, 4, 5, 6											
2.	Doug Hohlbaugh	FirstEnergy	RFC	1, 3, 4, 5, 6											
3.	Steve Megay	FirstEnergy	RFC	1											
4.	John Martinez	FirstEnergy	RFC	1											
5.	Andy Hunter	FirstEnergy	RFC	1											
6.	John Reed	FirstEnergy	RFC	1											
7.	Jim Eckels	FirstEnergy	RFC	1											
8.	John Wilson	FirstEnergy	RFC	1											



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	Commenter	Organization				Industry Segment															
						1	2	3	4	5	6	7	8	9	10						
9.	John TeSelle	FirstEnergy	RFC	3																	
10.	Larry Herman	FirstEnergy	RFC	3																	
11.	Kevin Querry	FirstEnergy	RFC	6																	
12.	Brian Orians	FirstEnergy	RFC	5																	
13.	Bill Duge	FirstEnergy	RFC	5																	
13.	Group	Richard Kafka	Pepco Holdings, Inc. - Affiliates				X		X		X	X									
<b>Additional Member Additional Organization Region Segment Selection</b>																					
1.	Dave Thorne	Potomac Electric Power Company	RFC	1																	
2.	Steve Alexander	Potomac Electric Power Company	RFC	1																	
3.	JB Rogers	Delmarva Power & Light	RFC	1																	
4.	Vic Davis	Delmarva Power & Light	RFC	1																	
5.	John Keller	Atlantic City Electric	RFC	1																	
6.	Paul Wassil	Conectiv Energy Supply, Inc	RFC	5																	
7.	Kara Dundas	Conectiv Energy Supply, Inc	RFC	5																	
14.	Group	JT Wood	Southern Company Transmission				X		X												
<b>Additional Member Additional Organization Region Segment Selection</b>																					
1.	SERC SOS	SERC	SERC																		
15.	Group	Kenneth D. Brown	PSEG Companies				X		X		X	X									
<b>Additional Member Additional Organization Region Segment Selection</b>																					
1.	Ron Wharton	PSE&G ESOC	RFC	1, 3																	
2.	Steve Kimmish	PSEG Energy Resources & Trade	RFC	6																	
3.	Dave Murray	PSEG Power LLC	RFC	5																	
4.	Dom DiBari	Odessa Power Partners	ERCOT	5																	
5.	Clint Bogan	PSEG Power Connecticut	NPCC	5																	
6.	Jim Hebson	PSEG ER&T	NPCC	6																	
16.	Group	Howard Gugel	NERC Staff																		
<b>Additional Member Additional Organization Region Segment Selection</b>																					

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	Commenter	Organization	Industry Segment																	
			1	2	3	4	5	6	7	8	9	10								
1.	Laurel Heacock																			
2.	Bob Cummings																			
3.	Larry Kezele																			
4.	Ed Ruck																			
5.	Todd Thompson																			
6.	Mark Vastano																			
7.	Roman Carter																			
8.	Jule Tate																			
9.	David Taylor																			
10.	Maureen Long																			
11.	Andy Rodriguez																			
12.	Stephanie Monzon																			
13.	Steve Crutchfield																			
14.	Harry Tom																			
15.	Edd Dobrowolski																			
16.	Al McMeekin																			
17.	Group	Terry L. Blackwell	Santee Cooper																	
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	S. T. Abrams	Santee Cooper	SERC	1																
2.	Glenn Stephens	Santee Cooper	SERC	1																
3.	Jim Peterson	Santee Cooper	SERC	1																
4.	Rene' Free	Santee Cooper	SERC	1																
5.	Vicky Budreau	Santee Cooper	SERC	1																
6.	Wayne Ahl	Santee Cooper	SERC	1																
18.	Group	Denise Koehn	Bonneville Power Administration																	
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Tedd Snodgrass	Transmission Dispatch	WECC	1																
2.	Tim Loepker	Transmission Dispatch	WECC	1																
3.	Jim Burns	Transmission Technical Operations	WECC	1																

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		Commenter	Organization	Industry Segment											
				1	2	3	4	5	6	7	8	9	10		
19.	Group	Ben Li	IRC Standards Review Committee		X										
		<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment</b>	<b>Selection</b>									
		1. Bill Phillips	Midwest ISO	MRO	2										
		2. Al Dicaprio	PJM	RFC	2										
		3. Mark Thompson	AESO	WECC	2										
		4. Charles Yeung	SPP	SPP	2										
		5. Steve Myers	ERCOT	ERCOT	2										
		6. Matt Goldberg	ISO-NE	NPCC	2										
		7. Lourdes Estrada-Saliner	CAISO	WECC	2										
		8. Jim Castle	NYISO	NPCC	2										
20.	Group	Annette Bannon	PPL			X				X	X				
		<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment</b>	<b>Selection</b>									
		1. Gary Bast	PPL Electric Utilities	RFC	1										
		2. Jon Williamson	PPL EnergyPlus	WECC	6										
		3. Mark Heimbach	PPL EnergyPlus	MRO	6										
		4. Mark Heimbach	PPL EnergyPlus	NPCC	6										
		5. Mark Heimbach	PPL EnergyPlus	RFC	6										
		6. Mark Heimbach	PPL EnergyPlus	SERC	6										
		7. Mark Heimbach	PPL EnergyPlus	SPP	6										
		8. Annette Bannon	PPL Generation	RFC	5										
		9. Annette Bannon	PPL Generation	NPCC	5										
		10. Annette Bannon	PPL Generation	WECC	5										
21.	Group	Frank Gaffney	Florida Municipal Power Agency (FMPA) and some members			X		X	X	X	X				
		<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment</b>	<b>Selection</b>									
		1. Jim Howard	Lakeland Electric	FRCC	1, 3, 5										
		2. Cairo Venegas	Fort Pierce Utilitiiese Authority		1, 3, 4, 5										
22.	Group	Carol Gerou	MRO NERC Standards Review Subcommittee												X

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	Commenter	Organization	Industry Segment											
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	<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>										
1.	Chuck Lawrence	American Transmission Company	MRO	1										
2.	Tom Webb	WPS Corporation	MRO	3, 4, 5, 6										
3.	Terry Bilke	Midwest ISO Inc.	MRO	2										
4.	Jodi Jenson	Western Area Power Administration	MRO	1, 6										
5.	Ken Goldsmith	Alliant Energy	MRO	4										
6.	Alice Murdock	Xcel Energy	MRO	1, 3, 5, 6										
7.	Dave Rudolph	Basin Electric Power Cooperative	MRO	1, 3, 5, 6										
8.	Eric Ruskamp	Lincoln Electric System	MRO	1, 3, 5, 6										
9.	Joseph Knight	Great River Energy	MRO	1, 3, 5, 6										
10.	Joe DePoorter	Madison Gas & Electric	MRO	3, 4, 5, 6										
11.	Scott Nickels	Rochester Public Utilities	MRO	4										
12.	Terry Harbour	MidAmerican Energy Company	MRO	6, 1, 3, 5										
23.	Individual	Brent Ingebrigtsen	E.ON U.S. LLC		X		X	X	X	X				
24.	Individual	Silvia Parada-Mitchell	Transmission Owner		X				X	X				
25.	Individual	Sandra Shaffer	PacifiCorp		X		X		X	X				
26.	Individual	Robert Ganley	New York State Reliability Council											X
27.	Individual	Dania Colon	PEF		X									
28.	Individual	James Sharpe	South Carolina Electric and Gas		X		X		X	X				
29.	Individual	Martin Bauer	Bureau of Reclamation						X					
30.	Individual	Kasia Mihalchuk	Manitoba Hydro		X		X		X	X				
31.	Individual	Tim Hattaway	PowerSouth Energy						X					
32.	Individual	Joylyn Stover	Consumers Energy				X	X	X					

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		Commenter	Organization	Industry Segment										
				1	2	3	4	5	6	7	8	9	10	
33.	Individual	Jonathan Appelbaum	Long Island Power Authority	X										
34.	Individual	Richard Appel	Sunflower Electric Power Corp.	X		X		X						
35.	Individual	Kevin Koloini	American Municipal Power				X							
36.	Individual	Edward Bedder	Orange and Rockland Utilities, Inc.	X										
37.	Individual	Noman Williams	Sunflower Electric Power Corporation	X										
38.	Individual	Mark Ringhausen	Old Dominion Electric Cooperative			X	X	X						
39.	Individual	Misty Revenew	Westar Energy	X		X		X	X					
40.	Individual	Bob Casey	Georgia Transmission Corp	X										
41.	Individual	Tracy Sliman - System Operations Compliance	Tri-State Generation & Transmission Assoc.	X										
42.	Individual	Joe O'Brien	NIPSCO	X		X		X	X					
43.	Individual	Joe Knight	Great River Energy	X		X		X	X					
44.	Individual	Fred Meyer	The Empire District Electric Company	X		X		X						
45.	Individual	Ed Davis	Entergy Services	X		X		X	X					
46.	Individual	Gordon Rawlings	British Columbia Transmission Corporation	X										
47.	Individual	Greg Rowland	Duke Energy	X		X		X	X					
48.	Individual	Frank Cumpton	Transmission System Operations	X										
49.	Individual	Greg Mason	Dynegy					X						

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		Commenter	Organization	Industry Segment										
				1	2	3	4	5	6	7	8	9	10	
50.	Individual	Dustin Smith	Washington City Light & Power			X								
51.	Individual	Kirit Shah	Ameren	X		X		X	X					
52.	Individual	Kathleen Goodman	ISO New England Inc.		X									
53.	Individual	Henry Masti	NYSEG	X										
54.	Individual	Jose Medina	NextEra Energy Resources, LLC					X						
55.	Individual	Dan Rochester	Independent Electricity System Operator		X									
56.	Individual	Daryl Curtis	Oncor Electric Delivery	X										
57.	Individual	Brady Baker	City Of Greenfield			X								
58.	Individual	James H. Sorrels, Jr.	American Electric Power	X		X		X	X					
59.	Individual	Alice Murdock	Xcel Energy	X		X		X	X					
60.	Individual	Laura Zotter	ERCOT ISO		X									X
61.	Individual	Leland McMillan	NorthWestern Energy	X		X								
62.	Individual	Saurabh Saksena	National Grid	X		X								
63.	Individual	Roger Champagne	Hydro-Québec TransEnergie	X										
64.	Individual	Brett Koelsch	Progress Energy Carolina, Inc	X		X		X						
65.	Individual	Scott Berry	Indiana Municipal Power Agency				X							
66.	Individual	Michael R. Lombardi	Northeast Utilities	X		X		X						
67.	Individual	Eric Olson	Transmission Agency of Northern California	X										

**Consideration of Comments on OPCP SDT — Project 2007-02**

		Commenter	Organization	Industry Segment										
				1	2	3	4	5	6	7	8	9	10	
68.	Individual	Darcy O'Connell	California Independent System Operator		X									
69.	Individual	Brandy A. Dunn	Western Area Power Administration	X						X				
70.	Individual	Catherine Koch	Puget Sound Energy	X										
71.	Individual	Michael Gammon	Kansas City Power & Light	X		X		X	X					

1. Do you agree with the adoption of the following new terms for inclusion in the NERC Glossary and their proposed definitions: Communications Protocol, Three-part Communication, and Interoperability Communication? If not, please explain in the comment area.

**Summary Consideration:**

Most commenters who responded to this question indicated all three of the proposed definitions were confusing and had little bearing on improving communication clarity. The SDT has removed all 3 definitions.

Based on these comments, the SDT deleted the term “Three-Part Communications” but will be covered in the requirements (R2 and R3) of second draft of the standard.

The OPCP SDT deleted “Interoperability Communications” and replaced it with “Operating Communications,” which is defined as:

“Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.”

The OPCP SDT also responded to comments that the definition of “Interoperability Communication” did not clearly indicate if it included internal communication (communication between functional entities of the same organization), external communication (communication between two or more functional entities not within the same organization), or both. The proposed definition of the new term “Operating Communication” includes communications that change or maintain the state, status, output, or input of any Element or Facility. As such, the term “Operating Communication” includes any communication that is requesting a change to the BES, regardless of whether the communicators are internal or external and regardless of whether the communications are oral or written.

Some commenters indicated concerned that the terms “facilities” and “elements,” were not capitalized in the proposed definition of Interoperability Communications. The defined terms “Facility” and “Element” are capitalized in the new proposed definition of Operating Communication.

The term “Communication Protocol” was never specifically mentioned in the standard so the SDT has eliminated it from the second draft of the standard.

Organization	Yes or No	Question 1 Comment
British Columbia Transmission	Agree	



Consideration of Comments on OPCP SDT — Project 2007-02

Organization	Yes or No	Question 1 Comment
Corporation		
Bureau of Reclamation	Agree	
ExxonMobil Research and Engineering	Agree	
NextEra Energy Resources, LLC	Agree	
NorthWestern Energy	Agree	
Oncor Electric Delivery	Agree	
PacifiCorp	Agree	
Puget Sound Energy	Agree	
South Carolina Electric and Gas	Agree	
Sunflower Electric Power Corporation	Agree	
Transmission Owner	Agree	
Western Area Power Administration	Agree	
Xcel Energy	Agree	
Washington City Light & Power	Disagree	
ATC and ITC	Disagree	ATC believes that the proposed definition for the term “Interoperability Communication” is too broad and

Organization	Yes or No	Question 1 Comment
		<p>ambiguous. We recommend the following: “Communication between two or more Functional Entities (not within the same organization) to exchange reliability-related information to be used by the entities to change the state or status of Facilities of the Bulk Electric System.” The inclusion of the terms “Functional Entities” and “Facilities” removes the ambiguity which we believe is contained in the proposed definition. (Both of these terms are defined in NERC’s Glossary) In addition, the inclusion of the phrase “not within the same organization” clarifies that the focus of definition is to address communication between different Functional Entities.</p> <p><b>Response: We agree with most of your comments. The SDT is eliminating the term “Interoperability Communications” because of comments citing ambiguity. We have revised the draft standard by defining the new term “Operating Communications.” With this new definition including all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System, the SDT believes it has removed any ambiguity over the utilization of communication protocols between or among Functional Entities in the same or in other organizations.</b></p> <p>ATC understands that this Drafting Team is working closely with the Drafting Team working on Project 2006-06 and believes that this team needs to use the term “Reliability Directive” as a replacement for the term “directive” which is currently being used. The Drafting Team working on Project 2006-06 has defined Reliability Directive as: “A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.”</p> <p><b>Response: The current draft version of COM-003-1 does not use the terms “directive” or “Reliability Directive,” instead using the new term “Operating Communications.” The SDT is working to coordinate with Project 2006-06 to eliminate any potential conflicts between the standards.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
Bonneville Power Administration	Disagree	<p>BPA does not agree with the aspects of Interoperability Communications.</p> <p>We do not need a common time standard.</p> <p>Why use the NATO Standard. This could add a lot of time to a directive that needs to be given immediately.</p> <p>The 3 part communication is already used by BPA.</p>

Organization	Yes or No	Question 1 Comment
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>1. The SDT has eliminated the term Interoperability Communications.</b></p> <p><b>2 The SDT is proposing an alternative to a single time zone that should address your concern. In the second draft of the standard references to time zones are only required when those involved in the communication are in different time zones.</b></p> <p><b>3. The SDT is proposing the use of a correct alpha-numeric clarifier instead of explicitly requiring the use of the NATO phonetic alphabet, and does not agree that it would add an inordinate amount of time to communications.</b></p> <p><b>4 The SDT acknowledges BPA’s use of three-part communications.</b></p>		
Orange and Rockland Utilities, Inc.	Disagree	Clarification must be made to the definition "Interoperability Communication" and to the specific applicability of the term as it translates into the actions and functions both internal and external to the local TO.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT is eliminating the term Interoperability Communications because of comments citing ambiguity. We have revised the draft standard by defining the new term “Operating Communications.” With this new definition including all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System, the SDT believes it has removed any ambiguity over the utilization of communication protocols between or among Functional Entities in the same or in other organizations.</b></p>		
Manitoba Hydro	Disagree	<p>Comments:</p> <p>Agree to the adoption, but not the definitions as defined.</p> <p>1. Communication Protocol - Remove “written” from this definition. Create a new standard that defines “written” protocol, i.e.: express “24 hour format”, common date format, etc.</p> <p><b>Response: “Communication Protocol” has been removed as a defined term. The SDT believes references to written protocols in some elements of the requirements are justified and these have been retained in the revised standard.</b></p> <p>a) Using “written” in this definition and which is also used in COM-003-1 R2, R3, R4 and R7 clouds both the Definition and the Standard. The majority of COM-003-1 requirements also focus on the spoken word, such as the use of English, Phonetics and Three-way Communication.</p> <p><b>Response: The SDT believes “written” is appropriate in some cases, and has chosen to retain it. Operating Communications can be “written” in some cases, and use of these protocols in those cases will add clarity.</b></p>

Organization	Yes or No	Question 1 Comment
		<p>b) “Communications” in the Definition infers verbal communication especially when examining the COM-003-1 Standard where its purpose is “timely information in alerts and emergencies”.</p> <p><b>Response: The SDT respectfully disagrees that “Communications” in the definition applies <u>solely</u> to verbal communication. The SDT has removed the proposed definition “Interoperability Communications” and proposes a new definition, “Operating Communication.” The requirements in the draft standard specify when protocols are required for written, oral or both types of communication.</b></p> <p>c) When COM-001-1 R4 “English” and COM-002-2 R2 “Three-way” requirements are amalgamated into COM-003-1, the COM-003-1 standard will now strengthen the focus on the process of verbal communications.</p> <p><b>Response: The SDT agrees with your comments.</b></p> <p>d) COM-003-1 R2 “Uniform Line Identifiers” This requirement would be used in real time reliability situations, alerts and emergencies. The “written” communications would be used after the fact and therefore “written” does not belong in the definition.</p> <p><b>Response: The SDT questions if you meant R7 instead of R2 as written. Nonetheless, the SDT believes utilizing uniform line identifiers for interface Elements/Facilities for both oral and written communications adds clarity and contributes to the accuracy of operating instructions.</b></p> <p>e) In COM-003-1 R3 “use English” The purpose of this standard is convey information effectively during alerts and emergencies. “Written” would be used after the fact and therefore does not belong here.</p> <p><b>Response: The SDT does not agree the purpose of this standard is to <u>only</u> convey information effectively during alerts and emergencies, and also does not agree that written communication is necessarily “after the fact” communication“. The revised standard requires English in both written and oral “Operating Communications” when communicating between functional entities, unless another language is mandated by law or regulation.</b></p> <p>f) In COM-003-1 R4 “24 hour format” “Written” could be reserved for a new standard, which could which define “24 hour format” along with a common date format which is also needed.</p> <p><b>Response: The SDT believes the requirement for use of 24 hour format should apply to both oral and written communication, and sees no need to create a separate standard. The term 24 hour format is commonly understood and does not require definition. With real-time communications, the SDT does not believe it is necessary to include a common date format.</b></p> <p>g) In COM-003-1 R5 “Three-part Communication” Focuses entirely on the spoken word and appears</p>

Organization	Yes or No	Question 1 Comment
		<p>appropriate that “written” is not used here.  <b>Response: The SDT agrees with the comment, and the revised draft standard clarifies that three part communication is only required for oral communication.</b></p> <p>h) In COM-003-1 R6 “Phonetics” Focus on the spoken word and would never be used to empathize a written word and is appropriate that is not used here.  <b>Response: The SDT agrees with your comment and has modified the standard to clearly indicate phonetic clarifiers are only required for oral communications.</b></p> <p>i) COM-003-1 R7 states “Operating State Levels” All communications for broadcasting these alerts would typically be verbal. “Written” communications would be after the fact.  <b>Response: The SDT believes that Operating State levels could be written or oral. Note, however, that based on stakeholder comments, the SDT has removed Requirement R2 from the second draft of the standard. In addition, written communication is not always after the fact.</b></p> <p>2. Three-part Communication - Use COM-002-2 R2 requirement as an improved basis for the “Three-part Communication” glossary term and define each part of the three parts separately.</p> <p>a) This new NERC Glossary term is better defined in the COM-002-2 R2 “Three-part communication” requirement.” Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall issue directives in a clear, concise, and definitive manner; shall ensure the recipient of the directive repeats the information back correctly; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings.”</p> <p>b) The current glossary term is overwhelming and confusing with the “back and forth” exchange of responsibilities. More thought process is consumed trying to break down the definition into usable portions, then comprehending the definition itself.</p> <p>c) The glossary term should be more clearly defined by specifying each of the three part communication protocol;</p> <p>i. An initiating party verbally issues directives in a clear, concise and definitive manner.</p>

Organization	Yes or No	Question 1 Comment
		<p>ii. The receiving party shall replicate the intent of the directive and</p> <p>iii. The initiating party shall acknowledge to their satisfaction that the receiving party fully understands and is</p> <p><b>c.</b></p> <p>capable of carrying out the directive.</p> <p><b>Response: The SDT has removed the definition for “Three-part Communication” from the second draft of the standard and has instead included the details of implementing three-part communication in Requirements R2 and R3 in the second draft of COM-003-1.</b></p> <p>3. Interoperability Communication - Define further and/or define entities. Expand “interoperability” and add and define “entity”</p> <p>a) Using “interoperability” and “entities” in same glossary term, clouds the definition especially when this glossary term is used to help clarify requirements in COM-003-1. There are at least three possible levels of “Interoperability” from a Control Center point of view;</p> <p>i. Internally, within a utility.-Communication between the Balancing Authority and Transmission for reliability purposes (within control center).-Between BA, TO, TOP, GO, TSP, LSE and DP, such as between the sending and receiving end of an HVDC terminal.</p> <p>ii. Externally, between neighbouring utilities.</p> <p>iii. Externally, between the Balancing Authority and their Reliability Coordinator. For a Reliability Coordinator two more levels of “Interoperability” could be added:</p> <p>iv. Communication between Reliability Organizations.</p> <p>v. Communication between the three major interconnections.</p> <p>b) Though the glossary definition surely includes all of the above, it does not clarify that and becomes immediately clouded when interpreting COM-003-1 R1 where “personnel” is used for real time control for effective Interoperability Communication.1. Personnel - individual responsible for the operation of the interconnected bulk electrical system (real time, planning, etc)c Adding and defining Entity in the glossary as per suggestions;</p> <p>i. “Entities” are used commonly in the Reliability Standards and encompasses a lot of different contexts.</p> <p>ii. “Entity” defined by a dictionary includes a comprehensive range such as:-body-Unit-Group-Thing-Article</p>

Organization	Yes or No	Question 1 Comment
		<p>iii. Entity in a interoperable power system:- BA, TO, GO, TSP, LSE, etc- Neighbouring BA, Control Area, Neighbour (Utility)- Reliability Coordinator, MISO, Reserve sharing Group, etc- NERC, MRO, WECC, NPCC, ERCOT, etc- Western Interconnection, Eastern Interconnection, ERCOT.</p> <p><b>Response: The SDT has eliminated the term “Interoperability Communications” because of comments citing ambiguity. We have revised the draft standard by defining the new term “Operating Communications.” With this new definition including all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System, the SDT believes it has removed any ambiguity over the utilization of communication protocols between or among Functional Entities in the same or in other organizations.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>New York State Reliability Council</p>	<p>Disagree</p>	<p>Comments:</p> <p>NYSRC agrees with the definitions for Communication Protocol.</p> <p><b>Response: “Communication Protocol” has been removed as a definition as it was not used except in the title of the standard.</b></p> <p>NYSRC disagrees with the definition for Three-Part Communication. NYSRC prefers the process offered in COM-002-03 (draft). In COM-003 the listener must understand the communication the first time. Failure to understand and repeat back correctly could be a violation of the requirement. The intent three part communication is to have an iterative process whereby the person issuing the message is ultimately satisfied that the recipient understands the information and will perform the required action. It should not be defined as three steps and only three steps.</p> <p>NYSRC offers the following definition: A Real-Time Operating Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back to the party that initiated the communication by the second party that received the communication, and the information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.</p> <p><b>Response: The SDT has removed the definition for “Three-part communication” and has included revised language for the protocol in the second draft of COM-003-1 Requirements R2 and R3. Requirements R2</b></p>

Organization	Yes or No	Question 1 Comment
		<p><b>and R3 in the second draft of the standard addresses your concerns.</b></p> <p>NYSRC disagrees with the definition of Interoperability Communication. NYSRC believes the Standard is addressing the communication of the Operating State of BES equipment and facilities. The proposed definition utilizes the phrase “change the state ... of a BES facility” which can be interpreted as the position, e.g. open, close, tap position, etc., thereby extending this Standard into routine switching and operation of the BES. The SAR stated this Standard was “to use specific communications protocols under normal, abnormal and emergency conditions to relay critical reliability-related information in a timely and effective manner”. The proposed definition can be interpreted in a manner that extends this to all reliability related information for every BES operation</p> <p><b>Response: The SDT has addressed your concerns by eliminating the term “Interoperability Communications” and revised the draft standard to include the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. However, please note the SDT believes that even routine switching could affect reliability if proper communications protocols are not used.</b></p> <p>The drafting team should also consider adding a definition for Directive or acknowledge the definition in draft Com-002-03.</p> <p><b>Response: The second draft version of COM-003-1 does not use the terms “directive” or “Reliability Directive,” instead using the new term “Operating Communications.” The SDT is working to coordinate with Project 2006-06 to eliminate any potential conflicts between the standards.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our comments above.</b></p>		
NRECA RTF Members	Disagree	<p>Comments:</p> <p>We agree with the new terms for inclusion in the NERC Glossary.</p> <p>We are somewhat concerned that in this version of the draft standard there was no definition for “directive” included. We do understand that the term “directive” is no longer capitalized in this version of the standard, therefore, not required to be included in the NERC Glossary. Since several requirements of this draft standard require certain actions when a “directive” is issued, the term should be defined. It is necessary to</p>



Organization	Yes or No	Question 1 Comment
		define the term “directive” to ensure that just normal conversations between entities are not later “interpreted” to be a “directive”.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>Response: The second draft version of COM-003-1 does not use the terms “directive” or “Reliability Directive,” instead using the new term “Operating Communications.” The SDT is working to coordinate with Project 2006-06 to eliminate any potential conflicts between the standards.</b></p>		
Pacific Northwest Small Utilities Comment Group	Disagree	Communication protocols extend beyond the verbal and written versions. How does the “non-routable (communication) protocol” of CIP-006 fit into or not fit into these definitions?
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT feels “non-routable (communication) protocol” of CIP-006 falls outside of the scope of the COM-003-1 standard, which deals with oral and written Operating Communications. If you feel it is within the scope, please elaborate.</b></p>		
Consumers Energy	Disagree	Communications Protocol and Three Part Communications have been used in the industry and are acceptable. There seems to be a better way of stating “informational” communications since Directives are already discussed.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT agrees with your statements, and has revised the draft of COM-003-1 to eliminate the previous definitions. The SDT is proposing a new term, “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.</b></p>		
We Energies	Disagree	<p>Communications Protocol: This defined term appears only in the Three-part Communication definition and in titles. Titles are expected to be capitalized and are not necessarily the defined term. The COM-003-1 Standard title is “Operating Personnel Communications Protocols”, but the purpose is not restricted to verbal and written information, so “Communications Protocol” does not seem to refer to the defined term in this title. Similarly, it is not necessarily the defined term in CPOP. It is not clear where this definition is being utilized in the standard.</p> <p><b>Response: The SDT agrees and has removed the definition of “Communications Protocol.”</b></p>

Organization	Yes or No	Question 1 Comment
		<p>Three-Part Communication: Should be required for “Reliability Directives” only. It seems that this is currently being addressed, and could remain, in an updated version of COM-002-003. This should be coordinated between standards and duplication should be avoided.</p> <p><b>Response: The SDT disagrees that three-part communication should be used only for Reliability Directives. Miscommunications occur during routine operations and the impact on reliability can be the same. The SDT is working to coordinate with Project 2006-06 to eliminate any potential conflicts between the standards.</b></p> <p>Interoperability Communication: This definition is excessively broad, and the terminology “reliability related information” is ambiguous and vague. Communication is used elsewhere within the NERC Standards to include voice, data, email, memos, NERCnet, etc. Since communication of any type may be used to change the “state or status” of the Bulk Electric System, this definition seems to pertain to every communication in every form, which could be interpreted to include market information which is continuously used to drive changes to the “state or status”.</p> <p><b>Response: The SDT has eliminated the term “Interoperability Communication,” and replaced it with the term “Operating Communications.” With this new definition including all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System, the SDT believes it has removed any ambiguity over the utilization of communication protocols between or among Functional Entities in the same or in other organizations.</b></p> <p>By extension, a CPOP would need to include every communication of any type (voice, data, email, memos, etc.), which is over-reaching and open to conflict with the CPOP’s developed independently by other entities. Interoperability Communications should apply only to situations covered in Attachment 1, and definitions should better reflect applicability to communications between separate, distinct entities (not communications within the same organization).</p> <p><b>Response: The SDT has removed the CPOP requirement and Interoperability Communication from the second version of the draft COM-003-1 standard.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		

Organization	Yes or No	Question 1 Comment
<p>MRO NERC Standards Review Subcommittee</p>	<p>Disagree</p>	<p>Concerning Three Part Communications: Please clarify by answering the following. Does the word “correctly” mean repeating back word for word or would paraphrasing the intent of the message received prove that the receiving party understands the intent and specific action of what they are required to accomplish?</p> <p><b>Response: The second draft of the Standard has been modified to address this by adding the phrase “not necessarily verbatim”.</b></p> <p>Please verify that Three Part Communications will be required when issuing directives related to emergency situations, and not every time communications is required between two parties.</p> <p><b>Response: In the second draft, three-part communication is required any time that verbal communication is intended to change or maintain the state or status of the BES.</b></p> <p>We believe the proposed definition for the term “Interoperability Communication” is too broad and ambiguous. We recommend the following instead:</p> <p>“Communication between two or more Functional Entities (not within the same organization) to exchange reliability-related information to be used by the entities to change the state or status of Facilities of the Bulk Electric System.”</p> <p>The inclusion of the terms “Functional Entities” and “Facilities” removes the ambiguity which we believe is contained in the proposed definition. (Both of these terms are defined in NERC’s Glossary) In addition, the inclusion of the phrase “not within the same organization” clarifies that the focus of definition is to address communication between different Functional Entities.</p> <p><b>Response: Your definition approximates the proposed definition of “Operating Communication” — Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. The SDT believes flawed operating communication within the same organization can impact the reliability of the BES during normal operations. With this new definition of “Operating Communications” including all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System, the SDT believes it has removed any ambiguity over the utilization of communication protocols between or among Functional Entities in the same or in other organizations.</b></p>

Organization	Yes or No	Question 1 Comment
		<p>The way the definition of Three-part Communication is worded applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct. We suggest the definition be revised as follows:</p> <p>A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. Those modifications incorporate many of your recommendations.</b></p> <p>We believe there should be a definition added for “Directive” as orders given in an emergency situation. Directive, as currently used in the industry, is understood to mean an emergency situation and the party issuing the “Directive” states as such, so everyone knows it is an emergency situation. In the “Disposition of Requirements identified in the SAR for Operations Communications Protocols as Possibly Needing either Modification or Movement” document included with the proposed standard, it is stated that COM-002-2, R2 is being modified in Project 2006-06 to include a new definition for “Reliability Directive” and that it is to be included in the NERC Glossary. It also states that when it is completed, it will be moved into COM-003-1 and COM-002-3 will be deleted. It is our opinion that the definition of Reliability Directive must be included in the review and approval of COM-003-1, as it is central to many of the actions to be taken. We understand that the SDT is working closely with the Drafting Team working on Project 2006-06 and believe that this team needs to use the term “Reliability Directive” as a replacement for the term “directive” which is in the current version of COM-003-1. The Drafting Team working on Project 2006-06 has defined Reliability Directive as: “A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.” The NSRS recommends use</p>

Organization	Yes or No	Question 1 Comment
		<p>of this definition and the term “Reliability Directive” as opposed to “directive”.</p> <p><b>The second draft version of COM-003-1 does not use the terms “directive” or “Reliability Directive,” instead using the new term “Operating Communications.” The SDT is working to coordinate with Project 2006-06 to eliminate any potential conflicts between the standards.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
E.ON U.S. LLC	Disagree	<p>For the Communication Protocol definition, please clarify if “written” includes electronic (email.) Change the definition of “Interoperability” to “Emergency” Entities should not be required to use 3 part communications on a routine basis, only on emergency issues.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The second draft of the standard removes the proposed definition “Communications Protocol” and proposes a new definition for the term “Operating Communications” which will apply to all communications to alter or maintain the state of the BES. An email message is one example of written Operating Communications.</b></p> <p><b>The OPCP SDT disagrees with the concept of only requiring three part communication solely in emergency conditions. Mistakes due to poor communication can also occur during routine operations. Blackout Report Recommendation #26 states communication protocols should be tightened especially those for alerts and emergency communications, but does not recommend they be tightened <i>only</i> for alert and emergency conditions. FERC Order 693 P531 directed communication protocols be tightened, and suggested a new COM Reliability Standard as an acceptable approach. The SAR for this SDT charged the team to “tighten communication protocols, especially for communications during alerts and emergencies,” but did not rule out improving all communications as a way of meeting the objective of the SAR. Additionally the SAR required “the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions.”</b></p>		
American Electric Power	Disagree	<p>Given that Three-part Communications is required when using a directive, a “directive” must be clearly defined. Without this determination, the definitions are incomplete.</p> <p><b>Response: The second draft version of COM-003-1 does not use the terms “directive” or “Reliability Directive,” instead using the new term “Operating Communications.” The SDT is working to coordinate with Project 2006-06 to eliminate any potential conflicts between the standards.</b></p> <p>There are undefined conditions, such as conference calls with multiple parties. Does each participant repeat back in three-part?</p>

Organization	Yes or No	Question 1 Comment
		<p><b>Response: The SDT clarified that the use of three-part communication is limited to instances involving oral, person-to-person communication.</b></p> <p>Also, the definitions do not address communication of directives that are made in a non-oral format. This is an important area to address in this standard.</p> <p><b>Response: The second draft of the standard provides clarity on which protocols apply to both written and oral Operating Communications and which protocols apply only to oral Operating Communications.</b></p> <p>Lastly, please expand “entities” in the Interoperability Communication definition to be “NERC registered functional entities.” We are concerned that the definition is much too broad and may expand the scope of required communication beyond alerts and emergencies.</p> <p><b>Response: The SDT is eliminating the term “Interoperability Communications” because of comments citing ambiguity. We have revised the draft standard by defining the new term “Operating Communications.” With this new definition including all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System, the SDT believes it has removed any ambiguity over the utilization of communication protocols between or among Functional Entities in the same or in other organizations.</b></p> <p>The SDT is addressing more than just alerts and emergencies. Blackout Report Recommendation #26 states communication protocols should be tightened, “especially” those for alerts and emergency communications, but does not recommend they be tightened <i>only</i> for alert and emergency conditions. The SAR for this SDT charged the team to “tighten communication protocols, especially for communications during alerts and emergencies,” but did not rule out improving all communications as a way of meeting the objective of the SAR. Mishaps due to miscommunication can and do occur during routine operations, and have the potential to negatively impact reliability.</p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
Great River Energy	Disagree	<p>GRE believes the proposed definition for the term Interoperability Communication is too broad and ambiguous. We recommend the following instead:</p> <p>Communication between two or more Functional Entities to exchange reliability-related information to be</p>

Organization	Yes or No	Question 1 Comment
		<p>used by the entities to change the state or status of Facilities of the Bulk Electric System.</p> <p>The inclusion of the terms Functional Entities and Facilities removes the ambiguity which we believe is contained in the proposed definition. (Both of these terms are defined in NERC’s Glossary)</p> <p><b>Response: Your definition approximates the new proposed definition of “Operating Communication” — Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. The SDT believes flawed operating communication within the same organization can impact the reliability of the BES.</b></p> <p>The way the definition of Three-part Communication is worded applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct. We suggest the definition be revised as follows:</p> <p>A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003.</b></p> <p>GRE believes there should be a definition added for Reliability Directive to ensure consistency across the defined projects for standards development. The Drafting Team working on Project 2006-06 has defined Reliability Directive as: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.</p>

Organization	Yes or No	Question 1 Comment
		<p>GRE recommends use of this definition and the term Reliability Directive as opposed to Directive.</p> <p><b>Response: The term Reliability Directive is being developed under NERC Project 2006-06 Reliability Coordination. The current draft version of COM-003-1 does not use the terms “directive” or “Reliability Directive,” instead using the new term “Operating Communications.” The SDT is working to coordinate with Project 2006-06 to eliminate any potential conflicts between the standards.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
Sunflower Electric Power Corp.	Disagree	<p>I feel the use of the NATO phonetic alphabet is over kill. You should use a phonetic alphabet that is in common use in the USA</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT has considered your comments and has changed the standard to permit the use of any correct alpha-numeric clarifiers. The North Atlantic Treaty Organization phonetic alphabet is in common use in the US Military, many police and fire organizations, and the US airline industry.</b></p>		
Power South Energy	Disagree	<p>Inoperability definition is too broad and not clear.</p>
<p><b>Response: The SDT thanks you for your comments. The definition for “Interoperability Communication” has been removed and a new definition has been proposed for the term “Operating Communications” in the second draft of the standard.</b></p>		
National Grid	Disagree	<p>Interoperability Communication: Virtually all communications in a control room environment deal with changing the state or status of an element of facility, as such there is not a need to define this communication protocol. However, addition of “real time communication” in the definition will to an extent address the issue. The definition should be revised as follows:</p> <p>Real Time Communication between two or more entities to exchange reliability-related information to be used by the entities to change the state or status of an element or facility of the Bulk Electric System.</p> <p><b>Response: Your definition approximates the proposed definition of “Operating Communication” — Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. The SDT believes flawed operating communication within the same organization can impact the reliability of the BES.</b></p> <p>Three-part Communication: The way the definition of Three-part Communication is worded applies only</p>



Organization	Yes or No	Question 1 Comment
		<p>when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct.</p> <p>We suggest the definition be revised as follows:</p> <p>A Real-Time Operating Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
Indiana Municipal Power Agency	Disagree	<p>It is not clear in the definition of Interoperability Communication if this is communication between two outside entities (two different companies) or could apply to communication between two entities within the same company. For example, communication between a company's generation plant and the same company's dispatcher.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT is eliminating the term Interoperability Communications because of comments citing ambiguity. We have revised the draft standard by defining the new term “Operating Communications.” With this new definition requiring the protocols for all operations that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System, the SDT believes it has removed any ambiguity over the utilization of communication protocols between or among Functional Entities in the same or in other organizations.</b></p>		
Long Island Power Authority	Disagree	<p>LIPA disagrees with the definition for Three-Part Communication. LIPA prefers the process offered in COM-002-03 (draft). In COM-003 the listener must understand the communication the first time. Failure to understand and repeat back correctly could be a violation of the requirement. The intent three part</p>

Organization	Yes or No	Question 1 Comment
		<p>communication is to have an iterative process whereby the person issuing the message is ultimately satisfied that the recipient understands the information and will perform the required action. It should not be defined as three steps and only three steps.</p> <p>LIPA offers the following definition:</p> <p>A Real-Time Operating Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back to the party that initiated the communication by the second party that received the communication, and the information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. The new language incorporates much of your suggestion.</b></p> <p>LIPA disagrees with the definition of Interoperability Communication. LIPA believes the Standard is addressing the communication of the Operating State of BES equipment and facilities. The proposed definition utilizes the phrase “change the state ... of a BES facility” which can be interpreted as the position, e.g. open, close, tap position, etc... thereby extending this Standard into routine switching and operation of the BES. The SAR stated this Standard was “to use specific communications protocols under normal, abnormal and emergency conditions to relay critical reliability-related information in a timely and effective manner”. The proposed definition can be interpreted in a manner that extends this to all reliability related information for every BES operation.</p> <p><b>Response: The definition for “Interoperability Communication” has been removed. The SDT believes flawed operating communication within the same organization and during normal or routine operations can detrimentally impact the reliability of the BES.</b></p> <p>The drafting team should also consider adding a definition for Directive or acknowledge the definition in draft Com-002-03.</p> <p><b>Response: The term Reliability Directive is being developed under NERC Project 2006-06 Reliability</b></p>

Organization	Yes or No	Question 1 Comment
		<p>Coordination. The current draft version of COM-003-1 does not use the terms “directive” or “Reliability Directive,” instead using the new term “Operating Communications.” The SDT is working to coordinate with Project 2006-06 to eliminate any potential conflicts between the standards.</p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
NERC Staff	Disagree	<p>NERC staff recommends that the term “Communications Protocol” be removed from the definition section because the term is only used in the title and in another definition. In addition, the definition adds no additional clarity than can be provided by a commonly used definition of the terms.</p> <p><b>Response: The term “Communication Protocol” has been eliminated from the standard.</b></p> <p>Similarly, the term “Three-part Communication” can be removed since it is used in only one requirement, and the definition can be incorporated in the requirement.</p> <p>Furthermore, Three-part Communication refers to a process or procedure, not a term. NERC staff recommends that the term “Interoperability Communication” be modified to “Operating Communication” with the definition of “communication with the intent to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.” This captures all communication that affects BES reliability, not just communication between function entities.</p> <p><b>Response: The proposed definitions in the previous draft have been removed and the new term “Operating Communications” has been proposed.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
PEF	Disagree	<p>PEF does not agree with the adoption of the proposed term “Interoperability Communication”. The term “Reliability Communication” should be used instead. The proposed term “Interoperability Communication” is defined such that it applies to a state or status change of an element or facility of the BES - but there are many reliability-related communications which do not necessarily apply to a state or status change.</p>
<p><b>Response: The SDT thanks you for your comments and your recommendation.</b></p> <p><b>The proposed term “Interoperability Communication” has been removed from the previous draft of the standard. Instead the SDT is proposing the new term “Operating Communications” to focus on the communications that change or maintain the state of the BES.</b></p>		
Pepco Holdings, Inc. -	Disagree	<p>PHI believes the proposed definition for the term Interoperability Communication is too broad and</p>

Organization	Yes or No	Question 1 Comment
Affiliates		<p>ambiguous. It is inconsistent with the effort to develop results based standards which would have an effect in the reliability of bulk electric system.</p> <p>Additionally, PHI does not see the need of a definition of Interoperability Communication now that the term Reliability Directive has been defined in draft standard COM-002-3 which is currently posted for review.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications” to focus on the communications that change or maintain the state of the BES.</b></p> <p><b>The SDT does not believe its work to be inconsistent with results-based principles. The Need or Problem Statement for this standard is that miscommunication can lead to action or inaction harmful to the reliability of BES. This was identified by the NERC President in his January 2011 report to the industry as one of the eight top priority issues for BPS reliability, and there are a number of events that have occurred in the past where miscommunication was a contributing factor to the event or exacerbated the severity of the event. The Goal, therefore, is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication. The key Objective to accomplish this Goal is to use communication protocols to reduce or correct misunderstandings. The requirements have been written to accomplish this Objective, and are risk-mitigating requirements (while operator performance is measured, the actions themselves are primarily designed to mitigate the risk of miscommunication that could lead to poor BES performance). We believe this standard is consistent with results-based principles, and it will improve the reliability of the BES.</b></p> <p><b>The SDT believes the term Reliability Directives as defined in COM 002-03 does not fully address the range of miscommunication risks that could seriously impact the reliability of the BES.</b></p>		
American Municipal Power	Agree	Please define "directive" as a term.
<p><b>Response: The SDT thanks you for your comments. The second draft version of COM-003-1 does not use the terms “directive” or “Reliability Directive,” instead using the new term “Operating Communications.” The SDT is working to coordinate with Project 2006-06 to eliminate any potential conflicts between the standards.</b></p>		
The Empire District Electric Company	Disagree	<p>Replace the proposed COM-003-1 definition of "Thee-part Communication with what is used here:</p> <p>Three Part Communication: A communications protocol to be used when a Reliability Directive is initiated verbally, whereby the action to be taken is identified as a Reliability Directive; the recipient repeat the details of the Reliability Directive back to the issuer of the Reliability Directive; and the issuer acknowledges the</p>

Organization	Yes or No	Question 1 Comment
		<p>response from the recipient of the Reliability Directive as correct, or re-issues the Reliability Directive to resolve any misunderstanding.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. The new language incorporates much of your suggestion.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
Southern Company Transmission	Disagree	<p>Southern Company supports the SERC SOS comments.</p> <p>SERC SOS comments: We feel that the definition of Interoperability Communication is much too broad and is inconsistent with the effort to develop results-based standards. Adherence to such results-based standards would have a measurable and observable effect on the reliability of the bulk electric system. The definition of Interoperability Communication, as written, can include virtually any information exchange/instruction between entities, both routine and emergency. Such communication may or may not have a measurable and observable effect on bulk system reliability.</p> <p>The concern is that, since the broad term Interoperability Communication is used in every requirement in COM-003-1, entities will be required to use the English language, the central time zone, and 3-part communication in even the most routine exchanges of information. This could create a burden on operating personnel and a distraction from their reliability duties.</p> <p><b>Response: The SDT is eliminating the term Interoperability Communications because of comments citing ambiguity. We have revised the draft standard by defining the new term “Operating Communications.” With this new definition including all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System, the SDT believes it has removed any ambiguity over the utilization of communication protocols between or among Functional Entities in the same or in other organizations.</b></p> <p><b>The SDT does not believe its work to be inconsistent with results-based principles. The Need or Problem Statement for this standard is that miscommunication can lead to action or inaction harmful to the reliability of BES. This was identified by the NERC President in his January 2011 report to the industry as one of the eight top priority issues for BPS reliability, and there are a number of events that have occurred in the past where miscommunication was a contributing factor to the event or exacerbated the severity of the event. The Goal, therefore, is to specify clear, formal and universally applied communication protocols</b></p>

Organization	Yes or No	Question 1 Comment
		<p>that reduce the possibility of miscommunication. The key Objective to accomplish this Goal is to use communication protocols to reduce or correct misunderstandings. The requirements have been written to accomplish this Objective, and are risk-mitigating requirements (while operator performance is measured, the actions themselves are primarily designed to mitigate the risk of miscommunication that could lead to poor BES performance). We believe this standard is consistent with results-based principles, and it will improve the reliability of the BES.</p> <p>This group does not feel the need for a definition of Interoperability Communication, since the term Reliability Directive has been defined in draft standard COM-002-3, which is currently posted for review. The Reliability Directive term is emergency-focused and consistent with the results-based standards process.</p> <p><b>Response: The SDT believes the term Reliability Directive as defined in COM 002-03 does not fully address the range of miscommunication risks that could seriously impact the reliability of the BES.</b></p> <p><b>The Need for this standard is that miscommunication can lead to action or inaction harmful to the reliability of BES, not just that miscommunications associated with emergencies can lead to action or inaction harmful to the reliability of BES. As such this standard is consistent with results-based principles. To the extent that entities feel actions or inactions caused by miscommunication have no ability to impact the reliability of the BES, then those entities simply disagree with the Need, but that does not indicate the standard is inconsistent with the results-based principles.</b></p> <p>In addition, the definition of Three-part Communication in this standard does not match the three-part communication requirements stated in COM-002-3. In COM-002-3, the requirements for three-part communication (state - repeat - acknowledge) apply to Reliability Directives, while in COM-003-1 the definition of Three-part Communication refers to “information” in general.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. The requirement now also applies only to “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System</b></p>

Organization	Yes or No	Question 1 Comment
		<p>If, as stated in the Disposition of Requirements, the revisions to COM-002-3 will be moved to COM-003-1, the definition of Three-part Communication in this draft standard should be consistent with the requirements of COM-002-3.</p> <p><b>Response: The SDT agrees with this recommendation for consistency, however as envisioned, the requirements of COM-002-3 will be retired when the requirements of COM-003-1 become effective.</b></p> <p>Southern Company comments:</p> <p>Interoperability Communication - Communication between two or more entities to exchange reliability-related information regarding the Bulk Electric System. Why is a change in state or status required to make a communication between two entities an Interoperability Communication? What term should be used when a conference call is made to all of the RCs in an Interconnection to discuss low frequency?</p> <p><b>Response: The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications” to focus on the communications that change or maintain the state of the BES.</b></p> <p><b>Conference calls and discussions to determine actions and options would not constitute Operating Communications if they do not directly request a change to, or maintain, the state, status, output, or input of an Element or Facility of the Bulk Electric System.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
Progress Energy Carolina, Inc	Disagree	<p>The definition for Interoperability Communication needs more clarification/an interpretation since the type of communications is not defined, the term "reliability-related information" undefined, and it may be so diluting as to de-emphasize true reliability directives.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications” to focus on the communications that change or maintain the state of the BES.</b></p>		
NYSEG	Disagree	<p>The definition for Interoperability Communication needs to be further explained. The current definition would appear to include not only communication between two control centers, but also between a control center and field personnel for all normal and routine switching, which we do not believe is the intent of the</p>

Organization	Yes or No	Question 1 Comment
		<p>Standard.</p> <p><b>Response: The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications” to focus on the communications that change or maintain the state of the BES. That definition would also extend to communication between two control centers, and between a control center and field personnel for all normal and routine switching to the extent it meets the criteria of the Operating Communications definition. Miscommunication during routine operations can result in mistakes that could seriously impact reliability on the BES.</b></p> <p>Communication Protocol as a separate definition does not appear to be necessary. The provided definition describes the term in a simple and generic way and is not specific enough to provide anymore guidance than is already provided in a general understanding of the word “communication” or “protocol”.</p> <p><b>Response: The SDT agrees and has removed the term.</b></p> <p>Three-part communication should be revised as follows:</p> <p>An iterative process where verbal communication from a sender to receiver is repeated back to the sender by the receiver to eventually ensure correct and accurate transmission of the entire message.</p> <p>We believe this definition is more consistent with COM-002 R2, which is proposed to be retired once COM-003-1 is approved and Three-part Communication is adopted.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. The new language incorporates the intent of your recommendation.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
Ameren	Disagree	<p>The definition for three part implies the exact message must be repeated back. What should be said is the content must be repeated back in original or modified forms such that the originator is sure the recipient understands and can execute the action.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second</b></p>



Organization	Yes or No	Question 1 Comment
		<p><b>draft of COM-003. We have incorporated the language to not require a verbatim repeat-back.</b></p> <p>As far as Interoperability, what is state or status? Is the dispatch instruction to change from 500 MW to 505 MW such a communication? (which changed, state or status?)</p> <p><b>Response: The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.</b></p> <p><b>A dispatch instruction to change from 500 MW to 505 MW would be such a communication. The input or output on the system was changed in your example.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Entergy Services</p>	<p>Disagree</p>	<p>The definition for Three-part communication is deficient when compared with the requirements of the recently posted COM-002-3 which describes an iterative process in which the communicating party corrects the recipient in the situation where the repeated message contains inconsistencies. The party receiving the message will not always get the message right the first time.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. The new language incorporates the concept of iteration, and also includes the phrase, “not necessarily verbatim.”</b></p> <p>Also, Entergy does not believe that the introduction of the term Interoperability Communications is necessary. In the questions below, we identify specific ways that the requirements could be improved by including the term Reliability Directive as included in the recently posted COM-002-3. The term Interoperability Communications is very broad, covering both normal and emergency communications, creates a new category of communications without providing any real benefit to the industry.</p> <p><b>Response: The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the</b></p>

Organization	Yes or No	Question 1 Comment
		<p><b>Bulk Electric System.</b></p> <p>The SDT believes the term Reliability Directives as defined in COM 002-03 does not fully address the range of miscommunication risks that could seriously impact the reliability of the BES.</p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
Transmission System Operations	Disagree	<p>The definition of “Interoperability Communication” is not clear. What does the term “reliability-related” information entail? Does “Interoperability Communication” include instructions from a control room to a generator to adjust vars, from the control room to field personnel to direct the changing of transformer taps, from the control room to field personnel to implement switching instructions, etc? What is the definition of “entity”? Does this mean if switching instructions are given from a control room of one company to personnel in its own company (i.e., the same entity), that the interaction would not be classified as “Interoperability Communication”?</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. Each of your examples, if they direct a change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System, will be subject to the protocols in COM 003 including three part communication.</p>		
Florida Municipal Power Agency (FMPA) and some members	Disagree	<p>The definition of Communications Protocol can be improved as: Policies and procedures that govern how verbal and written communication is exchanged.</p> <p><b>Response: The SDT agreed with the numerous comments that the term was not useful and eliminated it from the Standard.</b></p> <p>The definition of Three-part Communication could be improved by simplifying the language as: A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly by the party receiving the communication to the initiating party, and the same information is verbally confirmed to be correct by the initiating party.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second</b></p>

Organization	Yes or No	Question 1 Comment
		<p><b>draft of COM-003. The new language incorporates much of your suggestion.</b></p> <p>The definition of Interoperability Communication can be improved by using NERC Glossary of Terms definitions, e.g., Element and Facility ought to be capitalized in the definition, and the use of both Element and Facility is redundant and only the term Facility needs to be used since a Facility is essentially defined as a BES Element.</p> <p><b>Response: The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. The SDT has capitalized the terms “Element” and “Facility” as suggested, but elected to keep both terms in the definition. The NERC Glossary term Facility is not defined as a BES Element, but as “A set of electrical equipment that operates as a single Bulk Electric System Element.”</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
Georgia Transmission Corp	Disagree	<p>The definition of Interoperability Communication is very broad and has no real benefit.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT eliminated the term “Interoperability Communications.” Instead, the SDT has revised the draft standard by defining the new term “Operating Communications.” With this new definition including all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System, the SDT believes it has improved the standard to be clearer and less ambiguous.</b></p>		
Santee Cooper	Disagree	<p>The definition of Interoperability Communication needs to be clarified. What is the intent of the word “entities” in this definition? This definition may no longer be needed with the recent definition of a Reliability Directive.</p> <p>Three-part Communication should be required when issuing and receiving a Reliability Directive. This term has recently been defined by a SDT.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or</b></p>		

Organization	Yes or No	Question 1 Comment
<p><b>Facility of the Bulk Electric System.</b></p> <p>The SDT disagrees that Three-part Communication should be required only when issuing and receiving a Reliability Directive. The SDT believes the term Reliability Directives as defined in COM 002-03 does not fully address the range of miscommunication risks that could seriously impact the reliability of the BES.</p>		
<p>Kansas City Power &amp; Light</p>	<p>Disagree</p>	<p>The definition of Three-part Communication applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct.</p> <p>We suggest the definition be revised as follows: "A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it."</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003.</b></p> <p>The definition for Interoperability Communication is too broad. Currently, this could mean any communication of information. This should be confined to emergency or unusual operating conditions.</p> <p><b>Response: The SDT disagrees that three-part communication should be confined to emergency or unusual operating conditions; miscommunication occurs during routine operations that could seriously impact the reliability of the BES. The proposed term "Interoperability Communication" has been removed from the standard and replaced with the new term "Operating Communications." This term includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. As such, this limits the scope of the requirements so that not all communications of information are included under the standard.</b></p>

Organization	Yes or No	Question 1 Comment
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Midwest ISO Standards Collaborators</p>	<p>Disagree</p>	<p>The definition of Three-part Communication applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct.</p> <p>We suggest the definition be revised as follows:”</p> <p>A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.”</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. The SDT has also added language to specify responses are not necessarily required to be verbatim.</b></p> <p>These principles are included in Requirements R2 and R3 in the recently issued draft Standard COM-002-3 in Project 2006-06. We believe the term “Interoperability Communication” creates confusion within the industry and contradicts the work by RTO and RC SDT in Project 2006-06 that limits the requirement to use three-part communications when issuing Reliability Directives (defined in Project 2006-06) that address anticipated and actual emergency conditions.</p> <p><b>Response: The current draft version of COM-003-1 does not use the terms “directive” or “Reliability Directive,” instead using the new term “Operating Communications.” The SDT is working to coordinate with Project 2006-06 to eliminate any potential conflicts between the standards.</b></p> <p><b>The OPCP SDT disagrees with the concept of only requiring three part communication solely in emergency conditions. Mistakes due to poor communication can also occur during routine operations. Blackout</b></p>

Organization	Yes or No	Question 1 Comment
		<p>Report Recommendation #26 states communication protocols should be tightened, “especially” those for alerts and emergency communications, but does not recommend they be tightened only for alert and emergency conditions. FERC Order 693 P531 directed communication protocols be tightened, and suggested a new COM Reliability Standard as an acceptable approach. The SAR for this SDT charged the team to “tighten communication protocols, especially for communications during alerts and emergencies,” but did not rule out improving all communications as a way of meeting the objective of the SAR. Additionally the SAR required “the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions.”</p> <p>Additionally, it appears that this definition would encompass all verbal communications and, as such, we question the need for such definition. While using three-part communications during routine operations may be a best operating practice, we do not believe that it is so critical to reliability that it becomes an enforceable requirement for routine operating instructions. Rather we believe the enforceable requirement should be limited to require three-part communications during actual emergency and anticipated emergency conditions only.</p> <p><b>Response: The SDT disagrees that three-part communication should be confined to emergency or unusual operating conditions; miscommunication can occur during routine operations that could seriously impact the reliability of the BES.</b></p> <p>Both element and facility are used in the Interoperability Communication definition and are NERC defined terms. Did the drafting team intend that the NERC definitions should apply? Then the terms need to be capitalized.</p> <p><b>Response: The SDT did not retain the term, “Interoperability Communication” in the second draft of the standard. However, where the SDT proposed a new term, “Operating Communication” that uses the terms, “Element” and “Facility” and the SDT has capitalized these words where used so in the new term.</b></p> <p>In addition, the term “entities” is confusing and needs to be defined.</p> <p><b>The SDT believes the word entity is well understood in the industry – however the term, “Interoperability Communication” is not used in the second draft of the standard</b></p>

Organization	Yes or No	Question 1 Comment
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
PSEG Companies	Disagree	<p>The PSEG Companies agree with the concerns expressed in the comments filed by the PJM System Operations Subcommittee (SOS) Group.</p>
<p><b>Response: The SDT thanks you for your comments. Please see our response to the comments filed by the PJM System Operations Subcommittee (SOS) Group.</b></p>		
ERCOT ISO	Disagree	<p>The purpose of the standard is for timely communication of reliability-related information “especially during alerts and emergencies”. The definition and use of Interoperability Communication in this standard expands the intended scope of the standard beyond alerts and emergencies.</p> <p><b>The OPCP SDT disagrees with the concept of requiring three part communication solely in emergency conditions. Mistakes due to poor communication can also occur during routine operations. Blackout Report Recommendation #26 states communication protocols should be tightened, “especially” those for alerts and emergency communications, but does not recommend they be tightened only for alert and emergency conditions. FERC Order 693 P531 directed communication protocols be tightened, and suggested a new COM Reliability Standard as an acceptable approach. The SAR for this SDT charged the team to “tighten communication protocols, especially for communications during alerts and emergencies,” but did not rule out improving all communications as a way of meeting the objective of the SAR. Additionally the SAR required “the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions.”</b></p> <p>Guidance should be provided for verbal communications with respect to hot-line calls (one party too many) and how three-part communication should be handled. This definition assumes a one on one communication.</p> <p><b>Response: The SDT clarified, in the second draft of the standard, that the use of three-part communication is limited to instances involving oral, person-to-person communication.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
Northeast Utilities	Disagree	<p>The term “Interoperability Communication” creates confusion within the industry and contradicts the work by RTO and RC SDT in Project 2006-06 that limits the requirement to use three-part communications when</p>

Organization	Yes or No	Question 1 Comment
		<p>issuing Reliability Directives (defined in Project 2006-06) that address anticipated and actual emergency conditions. Additionally, it appears that this definition would encompass all verbal communications and, as such, we question the need for such definition.</p> <p>The definition of “three-part communication” may be viewed as accurate and consistent with the work that has been done and substantially progressed through two other SDTs, we believe the RC SDT requirement, which includes “and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings”, is more complete.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. We are following the progress of Project 2006-06 (RCSDT) to work toward consistency.</b></p> <p>Again, we believe the term “Interoperability Communication” contradicts this work and creates confusion within the industry. It appears to mandate 3-part communication during operational strategic discussions, as well as other “non-action” oriented communications. We believe this Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion.</p> <p><b>Response: The proposed term “Interoperability Communication” has been removed from the revised standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. With this change, the SDT does not believe the standard can be construed as requiring repeating back during such conversations on pre-action, strategic calls and/or discussions.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above</b></p>		
<p>Tri-State Generation &amp; Transmission Assoc.</p>	<p>Disagree</p>	<p>The term directive is not defined therefore it is unclear what constitutes a directive.</p>
<p><b>Response: The SDT thanks you for your comments. The second draft version of COM-003-1 does not use the terms “directive” or “Reliability Directive,” instead using the new term “Operating Communications.”</b></p>		



Organization	Yes or No	Question 1 Comment
Dynergy	Disagree	<p>The way the definition of “Three-part Communication” is worded applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct.</p> <p>We suggest the definition be revised as follows:</p> <p>”A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.”</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. The new language incorporates much of your suggestion. The SDT has also added language to applicable requirements to specify repeat-backs are not required to be verbatim.</b></p> <p>It should also be noted that these principles are included in Requirements R2 and R3 in the recently issued draft Standard COM-002-3 in Project 2006-06. This definition in this Standard is not needed.</p> <p>We believe the term “Interoperability Communication” creates confusion within the industry and contradicts the work by RTO and RC SDT in Project 2006-06 that limits the requirement to use three-part communications when issuing Reliability Directives (defined in Project 2006-06) that address anticipated and actual emergency conditions. Additionally, it appears that this definition would encompass all verbal communications and, as such, would be a distraction to Operators. Therefore, there is no reliability need for this definition.</p> <p><b>Response: The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the</b></p>

Organization	Yes or No	Question 1 Comment
		<p><b>Bulk Electric System. We are following the progress of Project 2006-06 (RCSDT) to work toward consistency.</b></p> <p>While using three-part communications during routine operations may be a best operating practice, we do not believe that it is so critical to reliability that it needs to become an enforceable requirement for routine operating instructions. Rather we believe the enforceable requirement should be limited to require three-part communications during actual emergency and anticipated emergency conditions only.</p> <p><b>The OPCP SDT disagrees with the concept of only requiring three part communication solely in emergency conditions. Mistakes due to poor communication can also occur during routine operations. Blackout Report Recommendation #26 states communication protocols should be tightened, “especially” those for alerts and emergency communications, but does not recommend they be tightened only for alert and emergency conditions. FERC Order 693 P531 directed communication protocols be tightened, and suggested a new COM Reliability Standard as an acceptable approach. The SAR for this SDT charged the team to “tighten communication protocols, especially for communications during alerts and emergencies,” but did not rule out improving all communications as a way of meeting the objective of the SAR. Additionally the SAR required “the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions.”</b></p> <p>Both element and facility are used in the Interoperability Communication definition and are NERC defined terms. Did the drafting team intend that the NERC definitions should apply? Then the terms need to be capitalized.</p> <p><b>Response: The SDT did not retain the term, “Interoperability Communication” in the second draft of the standard. However, where the SDT proposed a new term, “Operating Communication” that uses the terms, “Element” and “Facility” and the SDT has capitalized these words where used so in the new term.</b></p> <p>In addition, the term “entities” is confusing and needs to be defined.</p> <p><b>Response: The SDT believes the word entity is well understood in the industry – however the term, “Interoperability Communication” is not used in the second draft of the standard.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Hydro-Quebec TransEnergie</p>	<p>Disagree</p>	<p>The way the definition of “Three-part Communication” is worded applies only when the communication is understood by the listener the first time. The RC SDT requirement which includes “and shall acknowledge the</p>

Organization	Yes or No	Question 1 Comment
		<p>response as correct or repeat the original statement to resolve any misunderstandings” is more complete. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct.</p> <p>A suggested revision to the definition:</p> <p>A Real-Time Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back to the party that initiated the communication by the second party that received the communication, and the information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.</p> <p>These principles are included in Requirements R2 and R3 in the recently issued draft Standard COM-002-3 in Project 2006-06.</p> <p>An alternative suggestion to the definition of Three-part Communication: A Real-Time Operating Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the information is verbally confirmed to be correct by the party who initiated the communication.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. The new language incorporates much of your suggestion. The SDT has also added language to applicable requirements to specify repeat-backs are not required to be verbatim.</b></p> <p>In the definition of Communications Protocol, the term “Interoperability Communication” creates confusion within the industry, and contradicts the work by RTO and RC SDT in Project 2006-06 that limits the requirement to use three-part communications when issuing Reliability Directives (defined in Project 2006-06) that address anticipated and actual emergency conditions, and do not agree with its definition. What also must be considered is that the RC SDT has stated that when someone “says”, it is a directive--operating conditions are not distinguished. This definition unnecessarily and counterproductively encompasses all</p>

Organization	Yes or No	Question 1 Comment
		<p>verbal communications and, as such, is not needed. It is not so critical to reliability that it should become an enforceable requirement for routine operating instructions.</p> <p><b>Response: The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.</b></p> <p><b>The OPCP SDT disagrees with the concept of only requiring three part communication solely in emergency conditions. Mistakes due to poor communication can also occur during routine operations. Blackout Report Recommendation #26 states communication protocols should be tightened, “especially” those for alerts and emergency communications, but does not recommend they be tightened only for alert and emergency conditions. FERC Order 693 P531 directed communication protocols be tightened, and suggested a new COM Reliability Standard as an acceptable approach. The SAR for this SDT charged the team to “tighten communication protocols, especially for communications during alerts and emergencies,” but did not rule out improving all communications as a way of meeting the objective of the SAR. Additionally the SAR required “the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions.”</b></p> <p>The enforceable requirement should be limited to require three-part communications, and be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger, and be auditable and measurable. Virtually all communications in a control room environment deal with changing the state or status of an element of facility, as such there is not a need to define this communication protocol.</p> <p><b>Response: The SDT believes it is just as clear a trigger to use three part communication based on the criteria that three-part communication must be used for any communication that intends to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.</b></p> <p>Both element and facility are used in the Interoperability Communication definition and are NERC defined terms. Did the drafting team intend that the NERC definitions should apply? Then the terms need to be capitalized.</p>

Organization	Yes or No	Question 1 Comment
		<p>Response: The SDT did not retain the term, “Interoperability Communication” in the second draft of the standard. However, where the SDT proposed a new term, “Operating Communication” that uses the terms, “Element” and “Facility” and the SDT has capitalized these words where used so in the new term.</p> <p>In addition, the term “entities” is confusing and needs to be defined.</p> <p>Response: The SDT believes the word entity is well understood in the industry – however the term, “Interoperability Communication” is not used in the second draft of the standard.</p>
<p>Response: The SDT thanks you for your comments. Please see our responses above</p>		
<p>Northeast Power Coordinating Council</p>	<p>Disagree</p>	<p>The way the definition of “Three-part Communication” is worded applies only when the communication is understood by the listener the first time. The RC SDT requirement which includes “and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings” is more complete. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct.</p> <p>A suggested revision to the definition:</p> <p>A Real-Time Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.</p> <p>These principles are included in Requirements R2 and R3 in the recently issued draft Standard COM-002-3 in Project 2006-06.</p> <p>An alternative suggestion to the definition of Three-part Communication:</p> <p>A Real-Time Operating Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by</p>

Organization	Yes or No	Question 1 Comment
		<p>the second party that received the communication, and the same information is verbally confirmed to be correct by the party who initiated the communication.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. The new language incorporates much of your suggestion. The SDT has also added language to applicable requirements to specify repeat-backs are not required to be verbatim.</b></p> <p>A suggestion to the definition of Communications Protocol: <b>The SDT could not locate the content here.</b></p> <p>The term “Interoperability Communication” creates confusion within the industry, and contradicts the work by RTO and RC SDT in Project 2006-06 that limits the requirement to use three-part communications when issuing Reliability Directives (defined in Project 2006-06) that address anticipated and actual emergency conditions, and do not agree with its definition. What also must be considered is that the RC SDT has stated that when someone “says”, it is a directive--operating conditions are not distinguished. This definition unnecessarily and counterproductively encompasses all verbal communications and, as such, is not needed. It is not so critical to reliability that it should become an enforceable requirement for routine operating instructions.</p> <p><b>Response: The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.</b></p> <p><b>The OPCP SDT disagrees with the concept of only requiring three part communication solely in emergency conditions. Mistakes due to poor communication can also occur during routine operations. Recommendation #26 states communication protocols should be tightened, “especially” those for alerts and emergency communications, but does not recommend they be tightened only for alert and emergency conditions. FERC Order 693 P531 directed communication protocols be tightened, and suggested a new COM Reliability Standard as an acceptable approach. The SAR for this SDT charged the team to “tighten communication protocols, especially for communications during alerts and emergencies,” but did not rule out improving all communications as a way of meeting the objective of the SAR. Additionally the SAR</b></p>

Organization	Yes or No	Question 1 Comment
		<p><b>required “the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions.”</b></p> <p>The enforceable requirement should be limited to require three-part communications, and be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger, and be auditable and measurable. Virtually all communications in a control room environment deal with changing the state or status of an element of facility, as such there is not a need to define this communication protocol.</p> <p><b>Response: The SDT believes it is just as clear a trigger to use three part communication based on the criteria that three-part communication must be used for any communication that intends to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.</b></p> <p>Both element and facility are used in the Interoperability Communication definition and are NERC defined terms. Did the drafting team intend that the NERC definitions should apply? If so, the terms need to be capitalized.</p> <p><b>Response: The SDT did not retain the term, “Interoperability Communication” in the second draft of the standard. However, where the SDT proposed a new term, “Operating Communication” that uses the terms, “Element” and “Facility” and the SDT has capitalized these words where used so in the new term.</b></p> <p>The term “entities” is confusing and needs to be defined.</p> <p><b>Response: The SDT believes the word entity is well understood in the industry – however the term, “Interoperability Communication” is not used in the second draft of the standard.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above</b></p>		
<p>IRC Standards Review Committee</p>	<p>Disagree</p>	<p>The way the definition of Three-part Communication is worded applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the</p>

Organization	Yes or No	Question 1 Comment
		<p>speaker to get the information correct.</p> <p>We suggest the definition be revised as follows:</p> <p>A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. The new language incorporates much of your suggestion. The SDT has also added language to specify repeat-backs are not required to be verbatim.</b></p> <p>We believe the term “Interoperability Communication” contradicts the work by the RTO and RC SDT that limits the requirement to use three-part communications to only those communications that explicitly state that the communication is a Reliability Directive and creates confusion within the industry. Additionally, it appears that this definition would encompass all verbal communications and, as such, we question the need for such definition. While we support using three-part communications during routine operations as a best operating practice, we do not believe that it is so critical to reliability that it becomes an enforceable requirement for routine operating instructions. Rather we believe the enforceable requirement should be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger and auditable and measureable.</p> <p><b>Response: The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. The SDT believes this provides just as clear a trigger.</b></p> <p>Both element and facility are used in the Interoperability Communication definition and are NERC defined terms. Did the drafting team intend that the NERC definitions should apply? Then the terms need to be</p>



Organization	Yes or No	Question 1 Comment
		<p>capitalized.</p> <p><b>Response: The SDT agrees and has done so within the new term, “Operating Communications”.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>ISO New England Inc.</p>	<p>Disagree</p>	<p>The way the definition of Three-part Communication is worded applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct. We suggest the definition be revised as follows:</p> <p>A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back to the party that initiated the communication by a second party that received the communication, and the information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. The new language incorporates much of your suggestion. The SDT has also added language to applicable requirements to specify repeat-backs are not required to be verbatim.</b></p> <p>We believe the term “Interoperability Communication” contradicts the work by the RTO and RC SDT that limits the requirement to use three-part communications to only those communications that explicitly state that the communication is a Reliability Directive and creates confusion within the industry. Additionally, it appears that this definition would encompass all verbal communications and, as such, we question the need for such definition. While we support using three-part communications during routine operations as a best operating practice, we do not believe that it is so critical to reliability that it becomes an enforceable requirement for routine operating instructions. Rather we believe the enforceable requirement should be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger and auditable</p>

Organization	Yes or No	Question 1 Comment
		<p>and measurable.</p> <p><b>Response: The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. The SDT believes this provides just as clear a trigger.</b></p>
<p>The way the definition of Three-part Communication is worded seems to only apply when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation. The definition should, rather, reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct. We suggest the definition be revised as follows:</p> <p>A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back to the party that initiated the communication by a second party that received the communication, and the information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. The new language incorporates much of your suggestion. The SDT has also added language to applicable requirements to specify repeat-backs are not required to be verbatim.</b></p>		
FirstEnergy	Disagree	<p>Three-part Communication The phrase "the information is repeated back correctly" may pose compliance problems if the second party does not repeat the information back correctly the first time.</p> <p>We suggest the definition be revised as follows:</p> <p>"A Communications Protocol where information is verbally stated by one person to a second person whereby communication is initiated, the second person repeats the information back to the first person as means to verify the communication. The initiating party either confirms the response as correct or repeats the original statement and resolves any misunderstandings.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. The new language incorporates much of your suggestion. The SDT has also added language to specify repeat-backs are not required to be verbatim.</b></p>

Organization	Yes or No	Question 1 Comment
		<p>"Interoperability Communication</p> <p>We recommend this definition be removed and be incorporated into the RCSDT's proposed definition of Reliability Directive. Please see our comments in Question 6 for a complete explanation.</p> <p><b>Response: The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.</b></p> <p><b>Please see response to comments in Question 6 as well.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above</b></p>		
PPL	Disagree	<p>Three-part Communication is too prescriptive. How will “all call/blast” communications be handled? Also, it is unclear what communications are included in Interoperability Communication.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT has eliminated the definition of three-part communication and has incorporated it into the language of Requirements R2 and R3 in the new draft. The language has been modified to be more flexible and support different scenarios. The SDT considered adding a requirement to address “all call” or “blast” communications but determined that a requirement is not necessary. As revised, the need to perform a “repeat back” of an Operating Communication is limited to oral person-to-person communications.</b></p>		
California Independent System Operator	Disagree	<p>Three-Part Communications:</p> <p>There is no leeway given if the “intent” of the information is repeated back correctly. If the initiating party mispronounces a word and the receiver does not, is it a violation?</p> <p>Also there is a possibility of delaying actions due to multiple repeat backs while attempting to repeat back verbatim. The air traffic control /pilot communications could be held up as the current best practice standard in critical communications, and utilizing three-part techniques... and they do NOT use verbatim word-for-word repeat. Rather the messages are often truncated, but still indicate an understanding of the message.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft</b></p>

Organization	Yes or No	Question 1 Comment
		<p>of COM-003. The SDT has also added language to applicable requirements to specify repeat-backs are not required to be verbatim.</p> <p>Interoperability Communication:                      The proposed definition does not distinguish between internal and external entities. A more specific term than entity is needed here for clarity. With no more guidance than provided, a Generation Dispatcher may be considered a separate entity than the Transmission Dispatcher in the same room. As proposed the definition opens the doors for wildly different interpretations. We think this term, in this usage, applies to communication between companies, but we are not sure.</p> <p><b>Response: We agree with your comments. The SDT is eliminating the term “Interoperability Communications” because of comments citing ambiguity. We have revised the draft standard by defining the new term “Operating Communications.” With this new definition including all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System, the SDT believes it has removed any ambiguity over the utilization of communication protocols between or among Functional Entities in the same or in other organizations.</b></p> <p>Interoperability Communication is a bit of an unconventional use of the word interoperability. The standard strives to ensure communication protocols ensure interoperability. Communication Interoperability normally in usage, refers to the ability of dissimilar systems to exchange data. Its use here is unnecessarily confusing. It’s a rather messy way of saying, inter-company communication.</p> <p><b>Response: The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
Electric Market Policy	Disagree	<p>We do not agree with the adaptation of the proposed term “Interoperability Communication”. As defined, it is limited to the communication of information to be used to change the state or status of a BES element or facility. That definition is too limiting in that there are many types of reliability-related information that need</p>

Organization	Yes or No	Question 1 Comment
		<p>to be clearly communicated that do not lead to changing the state of a BES facility. For example; information related to ratings, information related to the results of studies, information related to data errors or loss of data, etc.</p> <p>If the term “Interoperability Communication” is to be retained, we strongly suggest a name change. The word “interoperability” is widely used to refer to the ability of a system to work with or use the parts or equipment of another system. For example please see the current standards development efforts identified in the NIST Framework and Roadmap for Smart Grid Interoperability Standards available at: <a href="http://www.nist.gov/public_affairs/releases/smartgrid_interoperability.pdf">http://www.nist.gov/public_affairs/releases/smartgrid_interoperability.pdf</a>. Using the term “interoperability” to refer to reliability-related human communications could be confusing to regulators, compliance personnel, auditors, and many others who have to deal with a variety of standards.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>Response: The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.</b></p>		
PJM	Disagree	<p>We feel that the definition of Interoperability Communication is much too broad and is inconsistent with the effort to develop results-based standards which would have a measurable and observable effect on the reliability of the bulk electric system. The definition of Interoperability Communication, as written, can include virtually any information exchange/instruction between entities, both routine and emergency. Such communication may or may not have a measurable and observable effect on bulk system reliability. Since the broad term Interoperability Communication is used in every requirement in COM-003-1, entities will be required to use the English language, the central time zone, and 3-part communication in even the most routine exchanges of information. This could create a burden on operating personnel and a distraction from their reliability duties. This group does not feel the need for a definition of Interoperability Communication, since the term Reliability Directive has been defined in draft standard COM-002-3, which is currently posted for review. The Reliability Directive term is emergency-focused and consistent with the results-based standards process</p> <p><b>Response: Response: The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the</b></p>

Organization	Yes or No	Question 1 Comment
		<p>Bulk Electric System. Routine operations that would affect the BES as described would be subject to the use of the communication protocols in COM 003. The SDT believes the term Reliability Directives as defined in COM 002-03 does not fully address the range of miscommunication risks that could seriously impact the reliability of the BES.</p> <p>The SDT does not believe its work to be inconsistent with results-based principles. The Need or Problem Statement for this standard is that miscommunication can lead to action or inaction harmful to the reliability of BES. This was identified by the NERC President in his January 2011 report to the industry as one of the eight top priority issues for BPS reliability, and there are a number of events that have occurred in the past where miscommunication was a contributing factor to the event or exacerbated the severity of the event. The Goal, therefore, is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication. The key Objective to accomplish this Goal is to use communication protocols to reduce or correct misunderstandings. The requirements have been written to accomplish this Objective, and are risk-mitigating requirements (while operator performance is measured, the actions themselves are primarily designed to mitigate the risk of miscommunication that could lead to poor BES performance). We believe this standard is consistent with results-based principles, and it will improve the reliability of the BES.</p> <p>In addition, the definition of Three-part Communication in this standard does not match the three-part communication requirements stated in COM-002-3. In COM-002-3, the requirements for three-part communication (state - repeat - acknowledge) apply to Reliability Directives, while in COM-003-1 the definition of Three-part Communication refers to “information” in general. If, as stated in the Disposition of Requirements, the revisions to COM-002-3 will be moved to COM-003-1, the definition of Three-part Communication in this draft standard should be consistent with the requirements of COM-002-3. The way the definition of Three-part Communication is worded applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an iterative process that should be followed until the listener is confirmed by the speaker to get the information correct.</p> <p>We suggest the definition be revised as follows:</p>

Organization	Yes or No	Question 1 Comment
		<p>"A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. The SDT has also added language to applicable requirements to specify repeat-backs are not required to be verbatim.</b></p> <p>Both element and facility are used in the Interoperability Communication definition and are NERC defined terms. Did the drafting team intend that the NERC definitions should apply? Then the terms need to be capitalized.</p> <p><b>Response: The SDT agrees and has done so within the new term, "Operating Communications".</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above</b></p>		
PJM SOS Comments	Disagree	<p>We feel that the definition of Interoperability Communication is much too broad and is inconsistent with the effort to develop results-based standards which would have a measurable and observable effect on the reliability of the bulk electric system. The definition of Interoperability Communication, as written, can include virtually any information exchange/instruction between entities, both routine and emergency. Such communication may or may not have a measurable and observable effect on bulk system reliability. Since the broad term Interoperability Communication is used in every requirement in COM-003-1, entities will be required to use the English language, the central time zone, and 3-part communication in even the most routine exchanges of information. This could create a burden on operating personnel and a distraction from their reliability duties. This group does not feel the need for a definition of Interoperability Communication, since the term Reliability Directive has been defined in draft standard COM-002-3, which is currently posted for review. The Reliability Directive term is emergency-focused and consistent with the results-based standards process.</p>

Organization	Yes or No	Question 1 Comment
		<p>Response: The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. Routine operations that would affect the BES as described would be subject to the use of the communication protocols in COM 003. The SDT believes the term Reliability Directives as defined in COM 002-03 does not fully address the range of miscommunication risks that could seriously impact the reliability of the BES.</p> <p>The SDT does not believe its work to be inconsistent with results-based principles. The Need or Problem Statement for this standard is that miscommunication can lead to action or inaction harmful to the reliability of BES. This was identified by the NERC President in his January 2011 report to the industry as one of the eight top priority issues for BPS reliability, and there are a number of events that have occurred in the past where miscommunication was a contributing factor to the event or exacerbated the severity of the event. The goal, therefore, is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication. The key objective to accomplish this goal is to use communication protocols to reduce or correct misunderstandings. The requirements have been written to accomplish this objective, and are and risk-mitigating requirements (while operator performance is measured, the actions themselves are primarily designed to mitigate the risk of miscommunication that could lead to poor BES performance). We believe this standard is consistent with results-based principles, and it will improve the reliability of the BES.</p> <p>In addition, the definition of Three-part Communication in this standard does not match the three-part communication requirements stated in COM-002-3. In COM-002-3, the requirements for three-part communication (state - repeat - acknowledge) apply to Reliability Directives, while in COM-003-1 the definition of Three-part Communication refers to “information” in general. If, as stated in the Disposition of Requirements, the revisions to COM-002-3 will be moved to COM-003-1, the definition of Three-part Communication in this draft standard should be consistent with the requirements of COM-002-3. The way the definition of Three-part Communication is worded applies only when the communication is understood by the listener the first time. Because the definition requires the listener to repeat the information back correctly, failure of the listener to understand the information the first time could be construed as a violation or at least not fitting the definition. The definition should rather reflect that three-part communication is an</p>



Organization	Yes or No	Question 1 Comment
		<p>iterative process that should be followed until the listener is confirmed by the speaker to get the information correct.</p> <p>We suggest the definition be revised as follows:”</p> <p>A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back to the party that initiated the communication by the second party that received the communication, and the information is verbally confirmed to be correct or corrected by the party who initiated the communication. The protocol should be followed until the party issuing the information is satisfied that a party receiving the information has understood the communication and confirmed it.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft of COM-003. The SDT has also added language to applicable requirements to specify repeat-backs are not required to be verbatim.</b></p> <p>”Both element and facility are used in the Interoperability Communication definition and are NERC defined terms. Did the drafting team intend that the NERC definitions should apply? Then the terms need to be capitalized.</p> <p><b>Response: The SDT agrees and has done so within the new term, “Operating Communications”.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above</b></p>		
<p>SERC OC&amp;SOS Standards Review Group</p>	<p>Disagree</p>	<p>We feel that the definition of Interoperability Communication is much too broad and is inconsistent with the effort to develop results-based standards. Adherence to such results-based standards would have a measurable and observable effect on the reliability of the bulk electric system. The definition of Interoperability Communication, as written, can include virtually any information exchange/instruction between entities, both routine and emergency. Such communication may or may not have a measurable and observable effect on bulk system reliability. The concern is that, since the broad term Interoperability Communication is used in every requirement in COM-003-1, entities will be required to use the English language, the central time zone, and 3-part communication in even the most routine exchanges of information. This could create a burden on operating personnel and a distraction from their reliability duties. This group does not feel the need for a definition of Interoperability Communication, since the term</p>

Organization	Yes or No	Question 1 Comment
		<p>Reliability Directive has been defined in draft standard COM-002-3, which is currently posted for review. The Reliability Directive term is emergency-focused and consistent with the results-based standards process.</p> <p><b>Response: The SDT is eliminating the term Interoperability Communications because of comments citing ambiguity. We have revised the draft standard by defining the new term “Operating Communications.” With this new definition requiring the protocols for all operations that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System, the SDT believes it has removed any ambiguity over the utilization of communication protocols between or among Functional Entities in the same or in other organizations.</b></p> <p><b>The SDT does not believe its work to be inconsistent with results-based principles. The Need or Problem Statement for this standard is that miscommunication can lead to action or inaction harmful to the reliability of BES. This was identified by the NERC President in his January 2011 report to the industry as one of the eight top priority issues for BPS reliability, and there are a number of events that have occurred in the past where miscommunication was a contributing factor to the event or exacerbated the severity of the event. The goal, therefore, is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication. The key objective to accomplish this goal is to use communication protocols to reduce or correct misunderstandings. The requirements have been written to accomplish this objective, and are and risk-mitigating requirements (while operator performance is measured, the actions themselves are primarily designed to mitigate the risk of miscommunication that could lead to poor BES performance). We believe this standard is consistent with results-based principles, and it will improve the reliability of the BES.</b></p> <p>In addition, the definition of Three-part Communication in this standard does not match the three-part communication requirements stated in COM-002-3. In COM-002-3, the requirements for three-part communication (state - repeat - acknowledge) apply to Reliability Directives, while in COM-003-1 the definition of Three-part Communication refers to “information” in general. If, as stated in the Disposition of Requirements, the revisions to COM-002-3 will be moved to COM-003-1, the definition of Three-part Communication in this draft standard should be consistent with the requirements of COM-002-3.</p> <p><b>Response: The SDT has eliminated the definition of three-part communication and has incorporated the performance of three-part communication into the language of Requirements R2 and R3 in the second draft</b></p>

Organization	Yes or No	Question 1 Comment
		of COM-003. The SDT agrees with your comments on consistency between the 2 standards.
<b>Response: The SDT thanks you for your comments. Please see our responses above</b>		
NIPSCO	Agree	When COM-002-3 is fully incorporated, more definitions such as Reliability Directive will need to be added.
<b>Response: The SDT thanks you for your comments.</b>		
Duke Energy	Disagree	<p>When viewed in the context of its use in R5 and R6, the definition of Interoperability Communication is excessively broad and unclear. R5 refers to the issuing of a “directive” during verbal Interoperability Communications. The term “directive” is undefined.</p> <p>R6 requires the use of the NATO phonetic alphabet during verbal Interoperability communications such as directives, notifications, directions, instructions, orders or other reliability related operating information. This could conceivably encompass all communications.</p> <p><b>Response: The proposed term “Interoperability Communication” has been removed from the revised standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.</b></p> <p>Also, the definition refers to communications between two or more “entities”. Does “entities” refer to functional entities or registered entities?</p> <p><b>Response: The new term “Operating Communications” does not contain the word “entities.”</b></p>
<b>Response: The SDT thanks you for your comments. Please see our responses above</b>		
Westar Energy	Disagree	Would like to see the Interoperability Communication definition be more specific.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The proposed term “Interoperability Communication” has been removed from the standard. Instead the SDT is proposing the new term “Operating Communications,” which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. The SDT believes this is more specific.</b></p>		

2. The SDT incorporated TOP-002-2 Requirement R18 into this new standard COM-003-1 as Requirement R7. In TOP-002-2, Requirement R18 applies to the Transmission Service Provider and Load Serving Entity. These entities are now added to COM-003-1. Do you agree with this proposal? If not, please explain in the comment area.

**Summary Consideration:** While many commenters did agree with the proposal, most commenters who responded to this question disagreed with the proposal.

The dissenting commenters addressed several key issues. Many indicated that Requirement R7 should not be applicable to TSPs and LSEs because these entities were not included in the SAR for this project. The SDT agrees and has removed TSPs and LSEs from the standard to be consistent with the approved SAR.

Additional commenters indicated the word “equipment” as used in Requirement R7 was too broad. The standard has been modified to use the defined terms “Element” and “Facility” instead in the revised standard Part 1.1.4.

Other commenters indicated Requirement R7 addressed a planning function already included in TOP-002, and should not be included in COM-003. While the SDT agrees that TOP-002-2a R18 is a planning function the drafting team working on TOP-002 revisions under Project 2007-03 has proposed retiring this requirement, and the OPCP SDT believes communications between entities would be improved when use of pre-determined identifiers is required for interface Elements and Facilities. The SDT proposes the concept of R7 be retained and transferred to Requirement R1, Part 1.1.4.

Commenters indicated a general consensus for the mandatory use of line and equipment identifiers applying only to interface Elements, not Elements or Facilities internal to the footprint of the entity. The SDT agreed, and modified the standard to apply only to interface Elements and Facilities.

Some additional comments were received indicating the previously posted standard was too prescriptive in specifying “how” to communicate, instead of “what.” They also indicated the proposed standard was unnecessary and would distract operators from reliably controlling the system. The SDT disagreed based on Blackout Task Force Report recommendation 26, which calls for tightening communication to improve reliability. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations.

There were additional comments that uniform and mutually agreed line and equipment identifiers should not be mandated so long as the identifiers are pre-determined. The SDT agrees documentation of mutual agreement is not necessary, so long as the identifiers are pre-determined, understood and used during Operating Communications. The standard has been modified to reflect this change – Requirement R7 was absorbed into R1 as Part 1.1.4 as shown below:

**R1.** Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall use the following communications protocols:

1.1 When participating in oral or written Operating Communications:

1.1.4. When referring to a Transmission interface Element or Transmission interface Facility, use the name specified by the owner(s) for that Transmission interface Element or Transmission Facility.

Organization	Yes or No	Question 2 Comment
Ameren	Agree	
American Municipal Power	Agree	
British Columbia Transmission Corporation	Agree	
Bureau of Reclamation	Agree	
California Independent System Operator	Agree	
ERCOT ISO	Agree	
ExxonMobil Research and Engineering	Agree	
FirstEnergy	Agree	
Georgia Transmission	Agree	

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Organization	Yes or No	Question 2 Comment
Corp		
Long Island Power Authority	Agree	
New York State Reliability Council	Agree	
NIPSCO	Agree	
NYSEG	Agree	
Oncor Electric Delivery	Agree	
Orange and Rockland Utilities, Inc.	Agree	
PacifiCorp	Agree	
PEF	Agree	
Pepco Holdings, Inc. - Affiliates	Agree	
PowerSouth Energy	Agree	
South Carolina Electric and Gas	Agree	
Sunflower Electric Power Corp.	Agree	

Organization	Yes or No	Question 2 Comment
Sunflower Electric Power Corporation	Agree	
Transmission System Operations	Agree	
Westar Energy	Agree	
Western Area Power Administration	Agree	
Xcel Energy	Agree	
Washington City Light & Power	Disagree	
The Empire District Electric Company	Disagree	<p>A more efficient method of designation common pre-determined line and equipment identifiers would be through the Reliability Coordinator. Having the Reliability Coordinator establish this would create a single methodology as opposed to several different methodologies that would have to be agreed upon between entities and a significant amount of work for all entities.</p>
<p><b>The SDT thanks you for your comments. The second draft of the standard requires that, when referring to a Transmission interface Element/Facility, entities must use the name specified by the owner(s) of that Element /Facility. We believe that assignment to be the most appropriate since it will not require any entity to change its existing practice.</b></p>		
Santee Cooper	Disagree	<p>A TSP and LSE should not be subjected to other requirements within the COM 003 Standard such as Three-part Communications.</p> <p>In addition, R18 of TOP002-2 required the use of uniform line identifiers among neighboring BAs. As this requirement (R7) is now written in COM003 it is not clear that this is when the use of uniform line identifiers is required. As currently written, it could be interpreted that the use of uniform line identifiers is required for all communication which is more restricting.</p>

Organization	Yes or No	Question 2 Comment
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities.</b></p> <p><b>The second draft of the standard requires that, when referring to a Transmission interface Element/Facility, entities must use the name specified by the owner(s) of that Element /Facility.</b></p>		
<p>E.ON U.S. LLC</p>	<p>Disagree</p>	<p>As the requirement already exists it is redundant to incorporate it into COM-003. The incorporation not only exposes a responsible entity to double jeopardy, it now exposes Transmission Service Providers and LSEs to COM-003 requirements that should not apply to these entities.</p> <p><b>Response: The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities consistent with your comments.</b></p> <p>TOP-002 addresses planning ahead of the operating hour whereas COM-003 addresses communication during real-time operations. In the absence of evidence that the lack of common identifiers is an imminent and continuing risk to BES reliability, it does not make sense to have operators addressing urgent, real-time situations bear significant penalty risk should they refer a BES element by something other than a newly established common identifier.</p> <p><b>Response: The drafting team working on revisions to TOP-002-2a has recommended retiring R18. The OPCP SDT believes this requirement is necessary in COM-003-1 for reliable real-time operations. Not ensuring that operators are communicating about the same piece of equipment can lead to actions or inactions that could compromise reliability.</b></p> <p>Is it the intent of the requirement that the common identifiers be the same for all neighboring parties, all of whom must “agree” to the identification? If not, then an element might be referred to by one identifier with Party A, another with Party B etc. which might well defeat the purpose of the requirement. If it is required that there be a single identifier, then all neighbors would have to agree upon the identifier constrained as each may be by, for example, the formatting limitation of their respective SCADA/EMS systems.</p> <p><b>Response: The second draft of the standard no longer requires explicit agreement. The new Requirement R1 Part 1.1.4 calls for the owner of the transmission asset to specify the name for its interface Elements and Facilities.</b></p>



Organization	Yes or No	Question 2 Comment
		<p>Cost to modify software to accommodate common identifiers could be significant and NERC should weigh these costs and the aforementioned operational risks against the perceived incremental improvements to the BES reliability.</p> <p><b>Response: The standard does not require modifications to software. To the extent entities wish to modify their internal systems to facilitate this requirement, the SDT disagrees the cost to modify software would be significant, as it would be limited to <u>only</u> interface Elements/Facilities as stated in R1.1.4 of the second draft of the standard.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>American Electric Power</p>	<p>Disagree</p>	<p>Based on definitions provided in the functional model, the inclusion of the TSP and LSE in this standard is inappropriate. These entities manage the relationship with the end-use customer and are not responsible for the operation or maintenance of BES facilities.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities.</b></p>		
<p>We Energies</p>	<p>Disagree</p>	<p>Because applicability to a TSP and LSE of this standard stems solely from TOP-002-2 R18, R7 should be the only requirement that applies to a TSP or LSE.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities.</b></p>		
<p>Bonneville Power Administration</p>	<p>Disagree</p>	<p>BPA Would like further clarification about what is meant by “pre-determined, mutually agreed upon line and equipment identifiers”.</p> <p><b>Response: The second draft of the standard requires that, when referring to a Transmission interface Element/Facility, entities must use the name specified by the owner(s) of that Element /Facility.</b></p> <p>Is it a specified format no matter which part of the system is being used, or is it only for 115 kV and above as it applies to LSE’s and TSP’s. If it only refers to Transmission equipment above 115 kV, then BPA would likely agree.</p> <p><b>Response: The SDT has limited the standard to communication with the intent to change or maintain the state,</b></p>

Organization	Yes or No	Question 2 Comment
		<p>status, output, or input of an Element or Facility of the Bulk Electric System (see definition of “Operating Communications.” As such, the format would only apply in those situations. In addition, the SDT removed LSEs and TSPs as responsible entities in the second draft of the standard.</p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Old Dominion Electric Cooperative</p>	<p>Disagree</p>	<p>Comments: We believe that it may be important for entities registered as a Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider , Load Serving Entity and Distribution Provider to have a formalized Communications Protocol Operating Procedure (CPOP) for Interoperability Communications, but this requirement will place an unnecessary burden on the personnel at many of the smaller Load Serving Entities and Distribution Providers on the NERC Compliance Registry. In most real-time scenarios, the BES facilities are not operated nor maintained by the Load Serving Entity or Distribution Provider. As with many standards, entities will be required to demonstrate why the standard/requirement is applicable. We suggest the drafting team consider modifying the applicability of this standard as follows similar to the format used in PRC-OO5:4.</p> <p>Applicability:</p> <ul style="list-style-type: none"> <li>4.1. Transmission Operator</li> <li>4.2. Transmission Owner</li> <li>4.3. Balancing Authority</li> <li>4.4. Reliability Coordinator</li> <li>4.5. Generator Operator</li> <li>4.6. Distribution Provider that is responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System</li> <li>4.7. Transmission Service Provider</li> <li>4.8. Load Serving Entity that is responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System</li> </ul>
<p><b>Response: The SDT thanks you for your comments and suggestion.</b>  <b>The SDT has deleted the requirement for a Communications Protocol Operating Procedure.</b>  <b>The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities; however DPs were included as applicable entities and have been</b></p>		

Organization	Yes or No	Question 2 Comment
<p><b>retained in COM-003-1. The specified role of the DP to shed load justifies the retention of the DP as an applicable Entity.</b></p>		
<p>Electric Market Policy</p>	<p>Disagree</p>	<p>In our experience, neither the TSP nor the LSE provide or receive information about specific lines or equipment in real-time. Therefore, requirement R7 should not apply to them absent clear evidence that a realistic (not hypothetical) threat to reliability would exist if they are omitted. We do not think that such a threat would exist. Applying R7 to TSPs and LSEs would only cause them grief and further burden the compliance staffs of the regional entities for no appreciable benefit.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities.</b></p>		
<p>Kansas City Power &amp; Light</p>	<p>Disagree</p>	<p>Including “equipment” is too broad. This could mean anything and should be limited to transmission devices that could affect the reliable operation of the bulk electric system.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>R7 (now R1.1.4) has been revised in the second draft of the standard, and refers to interface Elements and interface Facilities rather than “equipment”.</b></p>		
<p>PPL</p>	<p>Disagree</p>	<p>It is not clear what real time communications take place with a TSP and/or a LSE that would put the BES in jeopardy and thus necessitate them to be included as an applicable entity.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities.</b></p>		
<p>Manitoba Hydro</p>	<p>Disagree</p>	<p>Leave TOP-002-2 R18 in its original location.                      1) “Mutual line and equipment identifiers” should not be moved from TOP-002-2 and placed in COM-003-1 R7. TOP-002-2 Standard’s focus is “Planning, coordination and procedures” whereas:                      o R1 is “Maintain current Plans”                      o R2 is “Participate in planning and design”                      o R3 is “LSE coordinate with Host”                      o R4 is “BA coordinate with neighbours”                      o R5 is “plan to meet schedules”</p>

Organization	Yes or No	Question 2 Comment
		<p>o R6 is “plan to meet N-1”</p> <p>o R7 is “plan to meet capacity and reserves”</p> <p>o R8 is “plan to meet VAR limits”</p> <p>o R9 is “plan to meet interchange”</p> <p>o R10 is “plan to meet IROL, SOL’s”</p> <p>o R11 is “perform studies for SOL’s” and “utilize identical SOL’s for common facilities”</p> <p>o R12 is “include known SOLs or IROLs”</p> <p>o R13 is “GO shall verify generation capability”</p> <p>o R14 is “GO shall notify of changes”</p> <p>o R15 is “GO shall provide generation forecast”</p> <p>o R16 is “shall notify RC of changes”</p> <p>o R17 is “notify RC of R1 to R16”</p> <p>o R18 is “shall use uniform identifiers”</p> <p>o R19 is “maintain computer models for planning”</p> <p>2)TOP-002-2 R18 “shall use uniform identifies” appears to be more strongly related to where it already exists and would have more impact to have it moved between R2 and R3.</p> <p>3) Uniform identifiers are determined in the planning stages and are common knowledge to entities by the time they are in service and not a real time communication issue.</p> <p>a. Having TOP-002-2 R18 moved to COM-003-1 R7, takes the purpose of the COM-003 standard outside its context of “timely convey reliability information . . . especially during alerts and emergencies”.</p> <p>b.COM-003-1’s purpose and all its requirements directly relate to real time communication.</p> <p>4) TOP-002-2 R11 “identical SOL’s for common facilities” complements R18 “shall use uniform identifiers” and again are both planning requirements. 5)The unofficial comment for “Pre-determined Line and Equipment Identifiers” indicates that mutual agreement of these identifiers are to be reached in advance, thus agreeing with above.</p> <p>Leave R18 in TOP-002-2, but possibly move it between R2 and R3, thus R2 in COM-003-1 would be removed.</p> <p><b>Response: The drafting team working on revisions to TOP-002-2a has recommended retiring R18. The OPCP SDT believes communications between entities would be improved when use of pre-determined identifiers is</b></p>

Organization	Yes or No	Question 2 Comment
		<p>required for interface Elements and Facilities. The SDT proposes the concept of R7 being retained and transferred to R1 Part 1.1.4. The SDT feels that this requirement is appropriate under COM-003, as the use of pre-determined names for interface Elements/Facilities during oral and written Operating Communications supports the purpose of COM-003.</p> <p>Regarding adding TSP and LSE, no comment added.</p> <p><b>Response: The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
Tri-State Generation & Transmission Assoc.	Disagree	LSE and TSP are not responsible for the reliability of the Bulk Electric System. That responsibility resides with the TOP.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities.</b></p>		
National Grid		National Grid has no specific stand either ways. However, please refer to response to Question 8 for issues pertaining to the language of the requirement.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>Please refer to the SDT response to Question 8.</b></p>		
NERC Staff	Disagree	<p>NERC staff agrees with the proposal, but would offer the following modification in order to add clarity. We recommend that the phrase “when issuing directives, notifications, directions, instructions, orders or other reliability related operating information that involves alpha-numeric information during verbal Interoperability Communications” be replaced with “when verbal Operating Communications with alpha-numeric information is involved.” This would utilize the definition of Operating Communications offered in the response to Question 1. This will hopefully eliminate the need to further define what communication is or is not included in the phrase “directives, notifications, directions, instructions, orders or other reliability related operating information.”</p>
<p><b>Response: The SDT thanks you for your comments.</b></p>		

Organization	Yes or No	Question 2 Comment
<p>The SDT agrees with your comments and has incorporated the Operating Communications revisions to R7 (now R1 Part 1.1.4) in the second draft of the standard.</p>		
<p>Pacific Northwest Small Utilities Comment Group</p>		<p>Our utilities agree with the move in principle, but are concerned about the transition. How will NERC ensure that registered entities are not doubly jeopardized during the time when the same requirement exists in two active standards? The addition of LSE to COM-003 goes way beyond the obligations in TOP-002-2 R18; LSE’s are now in every requirement of COM-003.</p>
<p><b>Response: The SDT thanks you for your comments.</b>                      The drafting team working on revisions to TOP-002-2a has recommended retiring R18. The OPCP SDT believes communications between entities would be improved when use of pre-determined identifiers is required for interface Elements and Facilities. The SDT proposes the concept of R7 being retained and transferred to R1 Part 1.1.4.                      The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities.</p>		
<p>Puget Sound Energy</p>	<p>Disagree</p>	<p>PSE agrees in the consolidation of communication type activities into one standard; however the blanket addition of the TSP and LSE across all requirements doesn't seem appropriate. Additional thought should be given in the potential for these two entities to participate in the communication activities contemplated by each requirement, rather than incorporating them wholesale. For example, a quick search on the term “directive” in the current set of standards indicated that neither Transmission Service Providers or Load Serving Entities (or even some of the other entities covered by the proposed standard) are likely to issue directives under the requirements of those standards, so is it appropriate to subject them to the requirements of Requirement 5?</p>
<p><b>Response: The SDT thanks you for your comments.</b>                      The SDT reviewed the SAR, agrees with your comments and has removed TSPs and LSEs as applicable entities.</p>		
<p>PJM</p>	<p>Disagree</p>	<p>Requirement R7, regarding the use of pre-determined line &amp; equipment identifiers, applies to TSPs &amp; LSEs. However, the other requirements of this standard do not seem to apply to these entities. For instance, most of the reliability-related alerts are communicated through the Reliability Coordinator Information System (RCIS). TSPs do not have access to this real-time communication tool, so the TSP should not be included in the applicability for the entire standard.  <b>Response: The SDT reviewed the SAR, agrees with your comments and has removed TSPs and LSEs as applicable entities.</b></p>

Organization	Yes or No	Question 2 Comment
		<p>Furthermore, Requirement R18 in TOP-002-2 mandated that neighboring Balancing Authorities use the uniform line identifiers. In COM-003-1, this requirement is lost, since Requirement R7 makes no mention of neighboring BAs.</p> <p><b>Response: The SDT understands the comment in regard to the use of the word “neighboring”. The SDT agrees and has modified Requirement R7 to only apply to interface Elements/Facilities.</b></p> <p>This requirement represents a “how” and not a “what”. In general, standards should be focused on “what” not how. The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the of use three-part communication protocol until the message has been correctly spoken and comprehended.</p> <p><b>Response: The OPCP SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations. In addition to three-part communication, the SDT believes the standard should consider other necessary protocols that prevent miscommunication.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>PJM SOS Comments</p>	<p>Disagree</p>	<p>Requirement R7, regarding the use of pre-determined line &amp; equipment identifiers, applies to TSPs &amp; LSEs. However, the other requirements of this standard do not seem to apply to these entities. For instance, most of the reliability-related alerts are communicated through the Reliability Coordinator Information System (RCIS). TSPs do not have access to this real-time communication tool, so the TSP should not be included in the applicability for the entire standard.</p> <p><b>Response: The SDT reviewed the SAR, agrees with your comments and has removed TSPs and LSEs as applicable entities.</b></p> <p>Furthermore, Requirement R18 in TOP-002-2 mandated that neighboring Balancing Authorities use the uniform line identifiers. In COM-003-1, this requirement is lost, since Requirement R7 makes no mention of neighboring BAs.</p> <p><b>Response: The SDT understands the comment in regard to the use of the word “neighboring”. The SDT agrees</b></p>

Organization	Yes or No	Question 2 Comment
		<p><b>and has modified Requirement R7 (now R1 Part 1.1.4) to only apply to interface Elements/Facilities.</b></p> <p>This requirement represents a “how” and not a “what”. In general, standards should be focused on “what” not how. The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the of use three-part communication protocol until the message has been correctly spoken and comprehended.</p> <p><b>Response: The OPCP SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations. In addition to three-part communication, the SDT believes the Standard should address other necessary protocols that prevent miscommunication.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Southern Company Transmission</p>	<p>Disagree</p>	<p>Southern Company supports SERC SOS comments.</p> <p>SERC SOS comments:</p> <p>Requirement R7, regarding the use of pre-determined line &amp; equipment identifiers, applies to TSPs &amp; LSEs. However, the other requirements of this standard do not seem to apply to these entities. For instance, most of the reliability-related alerts are communicated through the Reliability Coordinator Information System (RCIS). TSPs do not have access to this real-time communication tool, so the TSP should not be included in the applicability for the entire standard.</p> <p><b>Response: The SDT reviewed the SAR, agrees with your comments and has removed TSPs and LSEs as applicable entities.</b></p> <p>Furthermore, Requirement R18 in TOP-002-2 mandated that neighboring Balancing Authorities use the uniform line identifiers. In COM-003-1, this requirement is lost, since Requirement R7 makes no mention of neighboring BAs.</p> <p><b>Response: The SDT understands the comment in regard to the use of the word “neighboring”. The SDT agrees and has modified Requirement R7 to only apply to interface Elements/Facilities.</b></p> <p>Southern Company comments:</p>



Organization	Yes or No	Question 2 Comment
		<p>No proposed revision to remove R18 from TOP-002-2 has been provided in this SDT proposal. If this standard is adopted and TOP-002-2 is not revised at the same time the same requirement will be in two reliability standards.</p> <p><b>Response: The drafting team working on revisions to TOP-002-2a has recommended retiring R18. The OPCP SDT team believes communications between entities would be improved when use of pre-determined identifiers is required for interface Elements and Facilities. The SDT proposes the concept of R7 being retained and transferred to R1 Part 1.1.4.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Florida Municipal Power Agency (FMPA) and some members</p>	<p>Agree</p>	<p>The implementation plan does not specify that TOP 002 2, R18 will be retired. The disposition of the SAR explains this, but, it should be clear in the implementation plan.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The drafting team working on revisions to TOP-002-2a has recommended retiring R18. The OPCP SDT believes communications between entities would be improved when use of pre-determined identifiers is required for interface Elements and Facilities. The SDT proposes the concept of R7 be retained and transferred to R1 Part 1.1.4.</b></p>		
<p>Indiana Municipal Power Agency</p>	<p>Disagree</p>	<p>The OPCP SDT does not give a real justified reason on making this requirement move from TOP-002-2 to COM-003-1, except saying that the team believes it is appropriate. Unless there is a very sound or technical justification for moving it, the requirement should be left in the current standard (TOP-002-2) to reduce the extra work and confusion this may cause among</p> <p><b>Response: The drafting team working on revisions to TOP-002-2a has recommended retiring R18. The OPCP SDT believes communications between entities would be improved when use of pre-determined identifiers is required for interface Elements and Facilities. The SDT proposes the concept of R7 being retained and transferred to R1 Part 1.1.4.</b></p> <p>In addition, since Inoperability Communication is not clearly defined, if two LSE entities are communicating, do they have to follow the communication protocol required in COM-003?</p> <p><b>Response: The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities.</b></p>

Organization	Yes or No	Question 2 Comment
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
PSEG Companies	Disagree	<p>The PSEG Companies agree with the concerns expressed in the comments filed by the PJM System Operations Subcommittee (SOS) Group.</p>
<p><b>Response: The SDT thanks you for your comments. Please refer to our response to the comments filed by the PJM System Operations Subcommittee (SOS) Group.</b></p>		
Dynergy	Disagree	<p>The SDT actually expanded Requirement R18 of TOP-002-2 by adding the term “equipment”. In any event, this Requirement represents a “how” and not a “what”. In general, standards should be focused on “what” not how.</p> <p><b>Response: The SDT appreciates the comment in regard to the use of the word “equipment”. The SDT agrees and has modified Requirement R7 to only apply to interface Elements/Facilities.</b></p> <p><b>The OPCP SDT was chartered to develop Communication Protocols for Operating Personnel.</b></p> <p><b>The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations.</b></p> <p>The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the use of the three-part communication protocol until the message has been correctly spoken and comprehended.</p> <p><b>Response: In addition to three-part communication, the SDT believes the standard should address other protocols that prevent miscommunication.</b></p>
Midwest ISO Standards Collaborators	Disagree	<p>The SDT actually expanded Requirement R18 of TOP-002-2 by adding the term “equipment”.</p> <p><b>Response: The SDT appreciates the comment in regard to the use of the word “equipment”. The SDT agrees and has modified Requirement R7 (now R1 Part 1.1.4) to only apply to interface Elements/Facilities.</b></p> <p>In any event, this Requirement represents a “how” and not a “what”. In general, standards should be focused on “what” not how. The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the of use three-part communication protocol until the message has been correctly spoken and comprehended.</p> <p><b>Response: The OPCP SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT</b></p>

Organization	Yes or No	Question 2 Comment
		<p>proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations. In addition to three-part communication, the SDT believes the standard should consider protocols that prevent miscommunication.</p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Hydro-Québec TransEnergie</p>	<p>Disagree</p>	<p>The SDT expanded Requirement R18 of TOP-002-2 by adding the term “equipment”.</p> <p><b>Response: The SDT appreciates the comment in regard to the use of the word “equipment”. The SDT agrees and has modified Requirement R7 (now R1 Part 1.1.4) to only apply to interface Elements/Facilities</b></p> <p>This Requirement represents a “how” and not a “what”. In general, standards should be focused on “what” not how.</p> <p>The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the of use three-part communication protocol until the message has been correctly spoken and understood.</p> <p><b>Response: The OPCP SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations. In addition to three-part communication, the SDT believes the standard should consider other protocols that prevent miscommunication.</b></p> <p>LSEs and TSPs do not own or operate equipment, and as such should not fall under the mandates of this requirement. Neither the TSP nor the LSE provide or receive information about specific lines or equipment in real-time. Therefore, requirement R7 should not apply to them absent clear evidence that a realistic (not hypothetical) threat to reliability would exist if they are omitted. We do not think that such a threat would exist.</p> <p><b>Response: The SDT reviewed the SAR, agrees with your comment and has removed TSPs and LSEs as applicable entities.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Northeast Power</p>	<p>Disagree</p>	<p>The SDT expanded Requirement R18 of TOP-002-2 by adding the term “equipment”.</p> <p><b>Response: The SDT appreciates the comment in regard to the use of the word “equipment”. The SDT agrees and</b></p>

Organization	Yes or No	Question 2 Comment
Coordinating Council		<p><b>has modified Requirement R7 (now R1 Part 1.1.4) to only apply to interface Elements/Facilities.</b></p> <p>This Requirement represents a “how” and not a “what”. In general, standards should be focused on “what” not how.</p> <p>The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the of use three-part communication protocol until the message has been correctly spoken and understood.</p> <p><b>Response: The OPCP SDT was chartered to develop Communication Protocols for Operating Personnel. In addition to three-part communication, the SDT believes the Standard should address other protocols that prevent miscommunication.</b></p> <p>LSEs and TSPs do not own or operate equipment, and as such should not fall under the mandates of this requirement. Neither the TSP nor the LSE provide or receive information about specific lines or equipment in real-time. Therefore, requirement R7 should not apply to them absent clear evidence that a realistic (not hypothetical) threat to reliability would exist if they are omitted. We do not think that such a threat would exist.</p> <p><b>Response: The SDT reviewed the SAR, agrees with your comment and has removed TSPs and LSEs as applicable entities.</b></p>
Northeast Utilities	Disagree	<p>The SDT expanded Requirement R18 of TOP-002-2 by adding the term “equipment”.</p> <p><b>Response: The SDT appreciates the comment in regard to the use of the word “equipment”. The SDT agrees and has modified Requirement R7 (now R1 Part 1.1.4) to only apply to interface Elements/Facilities.</b></p> <p>This Requirement represents a “how” and not a “what”. In general, standards should be focused on “what” not how.</p> <p>The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the of use three-part communication protocol until the message has been correctly spoken and understood.</p> <p><b>Response: The OPCP SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations.</b></p>

Organization	Yes or No	Question 2 Comment
		<p><b>In addition to three-part communication, the SDT believes the Standard should address other protocols that prevent miscommunication.</b></p> <p>LSEs and TSPs do not own or operate equipment, and as such should not fall under the mandates of this requirement. Neither the TSP nor the LSE provide or receive information about specific lines or equipment in real-time. Therefore, requirement R7 should not apply to them absent clear evidence that a realistic (not hypothetical) threat to reliability would exist if they are omitted. We do not think that such a threat would exist.</p> <p><b>Response: The SDT reviewed the SAR, agrees with your comment and has removed TSPs and LSEs as applicable entities</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
Progress Energy Carolina, Inc	Disagree	<p>The word "Neighboring" is used in TOP-002 R18. Excluding this word in the proposed COM-003-1 means that each entity would have to coordinate the uniform identifiers with an undefined number of entities in the entire Interconnection.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT agrees and has modified R7 to only apply only to interface Elements and interface Facilities.</b></p>		
Transmission Agency of Northern California	Disagree	<p>There is no additional reliability benefit to the proposed applicability of COM-003-1 Requirement R7 to Transmission Service Providers (TSP) and Load Serving Entities (LSE), since TSP and LSE must already comply with effectively the same terms in TOP-002-2 Requirement R18. Furthermore, TSP and LSE exposure to penalties and sanctions associated with non-compliance of TOP-002-2 Requirement R18 would effectively be doubled if they were required to also comply with COM-003-1 Requirement R7.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT reviewed the SAR, agrees and has removed TSPs and LSEs as applicable entities. Note that the drafting team working on proposed revisions to TOP-002 has recommended retiring Requirement R18.</b></p>		
Consumers Energy	Disagree	<p>There is no reason to move R18 from TOP-002 to COM-003. There is also no reason to utilize a shotgun blast method of coverage for this standard. Also, regardless of technical accuracy, TOP-002-2 R18 should not be moved to COM-003-1 without a simultaneous and corresponding change to TOP-002-2, lest an entity be found non-compliant with both standards for a compliance violation.</p>

Organization	Yes or No	Question 2 Comment
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The drafting team working on revisions to TOP-002-2a has recommended retiring R18. The OPCP team believes communications between entities would be improved when use of pre-determined identifiers is required for interface Elements and Facilities. The SDT proposes the concept of R7 be retained and transferred to R1 Part 1.1.4.</b></p>		
<p>Next Era Energy Resources, LLC</p>	<p>Disagree</p>	<p>This requirement is already covered by TOP-002. If the TOP-002 standard is deemed deficient because certain entities have been excluded or language appears to be missing, the changes need to occur to TOP-002 as opposed to copying and revising the existing requirement elsewhere. This would ensure that compliance oversight, understanding, and adherence goals are unencumbered by unnecessary redundancies. Moreover, this would ensure that the industry continues to re-enforce standards with changes that are within the scope of their original reliability purpose. The latter is in line with one of the core objectives of the Performance-based Reliability Standards Task Force’s recommendations to focus on identifying and minimizing duplicated requirements.</p>
<p><b>Response: The drafting team working on revisions to TOP-002-2a has recommended retiring R18. The OPCP team believes communications between entities would be improved when pre-determined names are used for referencing interface Elements and Facilities. The SDT proposes the concept of R7 being retained and transferred to R1 Part 1.1.4.</b></p>		
<p>Transmission Owner</p>	<p>Disagree</p>	<p>This requirement is already covered by TOP-002. If the TOP-002 standard is deemed deficient because certain entities have been excluded or language appears to be missing, the changes need to occur to TOP-002 as opposed to copying and revising the existing requirement elsewhere. This would ensure that compliance oversight, understanding, and adherence goals are unencumbered by unnecessary redundancies. Moreover, this would ensure that the industry continues to re-enforce standards with changes that are within the scope of their original reliability purpose. The latter is in line with one of the core objectives of the Performance-based Reliability Standards Task Force’s recommendations to focus on identifying and aggregating duplicated requirements.</p>
<p><b>Response: The drafting team working on revisions to TOP-002-2a has recommended retiring R18. The OPCP team believes communications between entities would be improved when use of pre-determined names is required for interface Elements and Facilities. The SDT proposes the concept of R7 be retained and transferred to R1 Part 1.1.4.</b></p>		
<p>Independent Electricity</p>	<p>Disagree</p>	<p>This requirement represents a “how” and not a “what”. In general, standards should be focused on “what” not how.</p>

Organization	Yes or No	Question 2 Comment
System Operator		<p>The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also use three-part communication protocol until the message's correct understanding is confirmed.</p> <p><b>Response: The OPCP SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on "what" protocols to use in specific situations. In addition to three-part communication, the SDT believes the Standard should address other protocols that prevent miscommunication.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
IRC Standards Review Committee	Disagree	<p>This requirement represents a "how" and not a "what". In general, standards should be focused on "what" not how.</p> <p>The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the of use three-part communication protocol until the message has been correctly spoken and comprehended.</p> <p><b>Response: The OPCP SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on "what" protocols to use in specific situations. In addition to three-part communication, the SDT believes the Standard should address other protocols that prevent miscommunication.</b></p>
ISO New England Inc.	Disagree	<p>This requirement represents a "how" and not a "what". In general, standards should be focused on "what" not how.</p> <p>The only real need for a requirement is to establish that each entity issuing a directive shall use three-part communications and the recipient of a directive shall also properly participate in the of use three-part communication protocol until the message has been correctly spoken and comprehended.</p> <p><b>Response: The OPCP SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on "what" protocols to use in specific situations. In addition to three-part communication, the SDT believes the Standard should address other protocols that prevent miscommunication.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		

Organization	Yes or No	Question 2 Comment
ATC and ITC	Disagree	<p>TOP-002 R18 states that BA, TOP, GOP TSP and LSE shall use uniform line identifiers when referring to transmission facilities of an interconnected network. COM-003 R7 states that each RC, BA, TO, TOP, GOP, TSP, LSE and DP shall use pre-determined, mutually agreed upon line and equipment identifiers for verbal and written Interoperability Communications. TOP-002 allowed the TOP to communicate what the line identifiers were via a list and use during communications. The new requirement implies that the parties must agree upon the line identifiers and that agreement must be documented. ATC believes that the requirement should state that “mutual agreement” allows for multiple identifiers. We believe that this is needed in order to avoid the following issues.</p> <ol style="list-style-type: none"> <li>1) This clarification will avoid any need for arbitration or formal dispute resolution steps.</li> <li>2) If the standard does not allow for this provision entities will be forced to deviate from their own line naming convention and will result in entities to modify their drawings, field signs, and SCADA systems.</li> </ol>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT agrees that mutual agreement is not necessary so long as the identifiers are pre-determined, unique and used during Operating Communications. The second draft of the standard requires that, when referring to a Transmission interface Element/Facility, entities must use the name specified by the owner(s) of that Element /Facility.</b></p>		
MRO NERC Standards Review Subcommittee	Disagree	<p>TOP-002 R18 states that BA, TOP, GOP TSP and LSE shall use uniform line identifiers when referring to transmission facilities of an interconnected network. COM-003 R7 states that each RC, BA, TO, TOP, GOP, TSP, LSE and DP shall use pre-determined, mutually agreed upon line and equipment identifiers for verbal and written Interoperability Communications. TOP-002 allowed the TOP to communicate what the line identifiers were via a list and use during communications. The new requirement implies that the parties must agree upon the line identifiers and that agreement must be documented.</p> <p>We believe the requirement should require the exchange of line identifies but not impose that they be mutually agreed upon. This requirement represents a “how” and not a “what”. In general, standards should be focused on “what” not how.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT agrees that mutual agreement is not necessary so long as the identifiers are pre-determined, unique and used during Operating Communications. The second draft of the standard requires that, when referring to a Transmission interface Element/Facility, entities must use the name specified by the owner(s) of that Element /Facility.</b></p> <p><b>The OPCP SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the</b></p>		



Organization	Yes or No	Question 2 Comment
<p>standard is more focused on “what” protocols to use in specific situations.  <b>In addition to three-part communication, the SDT believes the Standard should address other protocols that prevent miscommunication.</b></p>		
Great River Energy	Disagree	<p>TOP-002_R18 is fundamentally different from the new proposed requirement in COM-003-1_R7. TOP-002 R18 states that the BA, TOP, GOP TSP and LSE shall use uniform line identifiers when referring to transmission facilities of an interconnected network. COM-003-1_R7 states that each RC, BA, TO, TOP, GOP, TSP, LSE and DP shall use PRE-DETERMINED, MUTUALLY AGREED UPON line and equipment identifiers for verbal and written Interoperability Communications. GRE believes the TOP-002_R18 could be included in COM-003-1 but included as stated verbatim in TOP-002.</p>
<p><b>Response: The SDT thanks you for your comments and recommendation.</b>  <b>The drafting team working on revisions to TOP-002-2a has recommended retiring R18. The OPCP team believes communications between entities would be improved when use of pre-determined identifiers is required for interface Elements and Facilities. The SDT proposes the concept of R7 being retained and transferred to R1 Part 1.1.4.</b>  <b>The SDT agrees that mutual agreement is not necessary so long as the identifiers are pre-determined, unique and used during Operating Communications. The second draft of the standard requires that, when referring to a Transmission interface Element/Facility, entities must use the name specified by the owner(s) of that Element /Facility.</b></p>		
Entergy Services	Disagree	<p>TSP and LSE are not typically included in real-time communications and should not be included in this requirement. The intent this requirement in TOP-002-2 pertained to communications between neighboring BAs and TOPs. Adding LSE and TSP to this requirement doesn’t make sense, and this change should not be made.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT reviewed the SAR, agrees with your comment and has removed TSPs and LSEs as applicable entities.</b></p>		
SERC OC&SOS Standards Review Group	Disagree	<p>TSPs and LSEs are not typically included in real-time communications and should not be included in COM-003-1. The intent of requirement R18 in TOP-002-2 pertained to communications between neighboring BAs and TOPs. Adding LSEs and TSPs to the applicability of this standard doesn’t make sense, and this change should not be made.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT reviewed the SAR, agrees with your comment and has removed TSPs and LSEs as applicable entities.</b></p>		
Duke Energy	Disagree	<p>We disagree with moving R18 into COM-003-1 and broadening it to include every line and piece of equipment. This would create an enormous amount of effort to implement, and would substantially increase compliance risk,</p>

Organization	Yes or No	Question 2 Comment
		without any increase in reliability. Furthermore, if R18 is moved into COM-003-1, when would it be removed from TOP-002-2? Until R18 is actually removed from TOP-002-2, entities would be subject to compliance double jeopardy.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT appreciates the comment in regard to the use of the word “equipment”. The SDT agrees and has modified Requirement R7 to only apply to interface Elements/Facilities.</p> <p>The drafting team working on revisions to TOP-002-2a has recommended retiring R18. The OPCP team believes communications between entities would be improved when use of pre-determined identifiers is required for interface Elements and Facilities. The SDT proposes the concept of R7 being retained and transferred to R1 Part 1.1.4.</p>		
NRECA RTF Members	Agree	Yes, we believe that the use of pre-determined, mutually agreed upon line and equipment identifiers for verbal and written Interoperability Communications enhances the reliable operation of the BES.
<p><b>Response: The SDT thanks you for your comments.</b></p>		

3. Requirement R1 of the draft COM-003-1 states, “Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall develop a written Communications Protocol Operating Procedure (CPOP) for Interoperability Communications among personnel responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System. The CPOP shall include but is not limited to all elements described in Requirements R2 through R7 to ensure effective Interoperability Communications.” Do you agree with this proposal? If not, please explain in the comment area.

**Summary Consideration:**

The majority of the commenters indicated a Communications Protocol Operating Procedure (CPOP) would be administrative in nature and would not satisfy the criterion of enhancing the reliable operation of the BES.

The SDT agrees that a CPOP is administrative in nature, and does not satisfy the criteria of enhancing the reliable operation of the BES. The SDT has removed it from the proposed standard.

The SDT also removed TSPs and LSEs from the list of applicable entities because they were not named in the SAR. DPs have been maintained as applicable entities in the standard, as they were named in the SAR and perform activities impacting the BES.

Organization	Yes or No	Question 3 Comment
Bureau of Reclamation	Agree	
NIPSCO	Agree	
Oncor Electric Delivery	Agree	
PacifiCorp	Agree	
PEF	Agree	
South Carolina Electric and Gas	Agree	
Sunflower Electric Power Corp.	Agree	

Organization	Yes or No	Question 3 Comment
Western Area Power Administration	Agree	
ATC and ITC	Disagree	: Based upon the concerns that we have with R2-R7 we would not support this requirement. We would support the requirement if it stopped after the first sentence and then merely listed the minimum requirements that should be included in the Procedure such as; (1) time zone, (2) language spoken, (3) when phonetic alphabet will be used, etc.. This will allow the Entities to draft their own CPOP per the intent of the requirement and avoid the concerns that we have documented for the remainder of the requirements.
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Progress Energy Carolina, Inc	Disagree	A requirement to create a CPOP and mandating absolute adherence to that CPOP is overly prescriptive, may not improve reliability of BES operations, and may serve to delay communications and therefore delay actions necessary to respond to threats to the reliability of the BES.
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
American Municipal Power	Disagree	A written CPOP will place an unnecessary burden on smaller entities without an increase in reliable communications. I feel that the other requirements are somewhat self-explanatory and that an annual review of the phonetics and three-part communications would improve reliability more than having a written CPOP requirement.
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Puget Sound Energy	Disagree	<p>As discussed in Question 2, further consideration should be given to whether it is appropriate to include all the listed entities in this requirement.</p> <p>Additionally, the phrase “is not limited to” should be removed from the last sentence of the proposed requirement. The standard should specifically spell out what should be included in the CPOP. This phrase would lead to confusion about what an entity must include in the CPOP and is likely to result in inconsistent enforcement of the requirement.</p> <p>Also R1 appears to require a CPOP that will be used by personnel responsible for Real-time generation control</p>

Organization	Yes or No	Question 3 Comment
		<p>and Real-time operation of the interconnected Bulk Electric System. It is unclear if this specificity in who has to follow this extends to R2-R7 as well (while as noted the CPOP has to include elements of R2-R7). Without that clarity, the aspects of R2-R7 could seem to extend to communication between non-critical personnel regarding non-critical information.</p> <p>In addition, it appears that each of these entities must develop their own CPOP with clarity how the protocol gets vetted so that it is effectively employed across the entities. Finally, when reviewing the Functional Model document and its discussion of tasks and relationships to other entities, it is unclear why the TO is included in the applicability as they perform no real-time functions and provide no real time information.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT did remove the TSP and LSE from the second draft of the standard. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
<p>British Columbia Transmission Corporation</p>	<p>Disagree</p>	<p>BCTC agrees with R1, R2, R3, R5 and R7 but strongly objects to R4 and R6.</p> <p>As a majority of the Interoperability Communications is within our time zone there is no advantage in using Central Standard Time as this will only make the communications more difficult as both parties are required to change time, R4 is unreasonable.</p> <p>R6 requiring the use of North American Treaty Organization (NATO) phonetic alphabet adds no value and will only cause confusion presently an instruction would be issued as: "At Kelly Lake open 5CB4" R6 it will now become "At Kelly Lake open Fife Charlie Bravo Fow-er"</p>
<p><b>Response: The SDT thanks you for your comments. Since the comments made by BCTC are directed specifically to requirements R4 and R6, the SDT responses to BCTC are covered in the responses to the relevant section for those requirements. You are correct, based on the requirement to use a phonetic alphabet, an operator that might normally say "At Kelly Lake open 5CB4" will now be required to say something similar to "At Kelly Lake open Fife Charlie Bravo Fow-er." This is intended to ensure that the recipient of the communication does not mistake the instruction for "At Kelly Lake open 5CP4." While "B" and "P" may sound similar, "Bravo" and "Papa" clearly do not.</b></p>		
<p>Bonneville Power Administration</p>	<p>Disagree</p>	<p>BPA does not agree with the one time zone or the NATO Standard. We believe the protocols are unnecessary and in fact will add more confusion to the process. We also do not agree, if this requires creating a brand new documented procedure just to address this standard, when elements are already covered in a different standard (common language in TOP).</p>
<p><b>Response: The SDT thanks you for your comments. Since the comments made by BPA are directed specifically to requirement R6, the SDT</b></p>		

Organization	Yes or No	Question 3 Comment
<p><b>responses to BPA are covered in the responses to the relevant requirements. Note that the SDT is proposing an alternative to R6.</b></p>		
<p>California Independent System Operator</p>	<p>Disagree</p>	<p>CAISO Comment; The requirement does not distinguish between intra and inter communications. Even though the proposed definition of “Interoperability Communications” is between two “entities”, how will an auditor interpret it? Will this be taken to the extreme and be required to address communications between two different functions within one organization? For example, between the generation desk and the scheduling desk? How important is this plan? This requirement has a low Violation Risk Factor while the individual requirements that makeup the plan have High Violation Risk Factors. Furthermore, the Violation Security Levels do not address failure to follow the protocol in the plan. Based on the VFR and VSL, it is easy to conclude this plan does little in supporting an adequate level of reliability.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP. Additionally, it should be noted that the SDT has removed the definition and any reference to “Interoperability Communications”.</b></p>		
<p>NorthWestern Energy</p>	<p>Disagree</p>	<p>COM-001 and COM-002 standards, along with Operator Training, adequately address this issue. Therefore there is no need for this additional requirement.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
<p>New York State Reliability Council</p>	<p>Disagree</p>	<p>Comments: NYSRC agrees with the need for CPOP but does not agree that R4 can or should apply to all interoperability communications between entities. Since the examples in Attachment 1 specifically state RC and TOP, this standard should not apply to any other entity except for the RC and TOP. COM-002-03(draft) could require the other entities to utilize three part communication for reliability-related Interoperability communication.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP. The concern stated by NYSRC regarding R4 is addressed in the SDT responses to question #5.</b></p>		
<p>Old Dominion Electric Cooperative</p>	<p>Disagree</p>	<p>Comments: We believe that it may be important for entities registered as a Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider , Load Serving Entity and Distribution Provider to have a formalized Communications Protocol Operating Procedure (CPOP) for Interoperability Communications, but this requirement will place an unnecessary burden on the</p>

Organization	Yes or No	Question 3 Comment
		<p>personnel at many of the smaller Load Serving Entities and Distribution Providers on the NERC Compliance Registry. In most real-time scenarios, the BES facilities are not operated nor maintained by the Load Serving Entity or Distribution Provider. As with many standards, entities will be required to demonstrate why the standard/requirement is applicable. We suggest the drafting team consider modifying the applicability of this standard as follows similar to the format used in PRC-005:4. Applicability:</p> <ul style="list-style-type: none"> <li>4.1. Transmission Operator</li> <li>4.2. Transmission Owner</li> <li>4.3. Balancing Authority</li> <li>4.4. Reliability Coordinator</li> <li>4.5. Generator Operator</li> <li>4.6. Distribution Provider that is responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System</li> <li>4.7. Transmission Service Provider</li> <li>4.8. Load Serving Entity that is responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System</li> </ul>
<p><b>Response:</b> The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP. We did not include the LSE or TSP because they were not listed in the SAR but did include DPs in the standard as DPs carry out actions related to the reliability of the Bulk Electric System such as voltage reduction and load shedding.</p>		
<p>Tri-State Generation &amp; Transmission Assoc.</p>	<p>Disagree</p>	<p>DP, LSE and TSP are not responsible for the reliability of the Bulk Electric System. Also, attachment 1 explains Operating State Alert Levels that defines colors that are already in use by the Department of Homeland Security. Re-using these colors presents confusion to the operators of the BES. This places an unnecessary additional burden on Real Time day-to-day operations with a high risk of confusion in an emergency.</p>
<p><b>Response:</b> The SDT thanks you for your comments. The SDT appreciates the comments with regards to concerns related to including TSPs, DPs and LSEs. The SDT has removed the LSE and TSP functions from the applicability of the current draft of the standard, which is consistent with the SAR. However, the SDT believes that DPs carry out actions related to the reliability of the Bulk Electric System such as voltage reduction and load shedding. Several existing standards contain requirements concerning operating communications that DPs must presently comply with that would be governed by the protocols of COM -003-1. It should be noted that the requirements of the second draft of COM-003-1 are only applicable to</p>		

Organization	Yes or No	Question 3 Comment
<p><b>Operating Communications.</b> To the extent that these entities do not take actions that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System, COM-003-1 would not apply.</p> <p>The SDT refers Tri-State Generation &amp; Transmission Assoc. to response to Question 9 to see responses showing changes proposed on Attachment 1 of COM-003.</p>		
<p>Pacific Northwest Small Utilities Comment Group</p>	<p>Disagree</p>	<p>DPs and LSEs are in general users, not owners or operators of interconnected BES equipment per the registry criteria. DPs and LSEs should be removed from this requirement since LSEs typically do not own or operate the interconnected BES equipment</p>
<p><b>Response:</b> The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</p> <p>The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities; however DPs were included as applicable entities and have been retained in COM-003-1. The specified role of the DP to shed load justifies the retention of the DP as an applicable entity.</p>		
<p>Transmission Owner</p>	<p>Disagree</p>	<p>FPL agrees with the reliability goal of establishing a set of agreed upon communication standards to ensure consistent communications particularly for actual and anticipated emergency coordination needs. FPL also believes that existing coordination/communication standards already fulfill this objective and that it might be of “training” or “reference” value to aggregate those requirements to a single document or view. However, FPL is not convinced that this requirement, largely administrative in nature, will result in marked improvement in reliability. Organizations tend to take the path of least resistance and unless forced out of that path with extensive and granular guidance on what CPOPs should contain above and beyond existing standards or contract language, CPOPs would likely become a simple patchwork of requirements constructed out of existing NERC standard language and contract language. Standards need to be clearly implementable before they are approved yet important implementation questions do not appear to have been answered.</p> <p>(1) What if parties cannot reach agreement?</p> <p>(2) Is it enough to have attempted to coordinate?</p> <p>(3) What if parties already have agreed upon procedures such as NPIRs, or those stated in Interconnection Agreements - do they take precedent or must they be redesigned/relegated?</p> <p>(4) What if CPOPs differ greatly across interconnections because of differing parties? (One might conclude that by formalizing these different practices, as opposed to mandating standard practices, the goal of more reliable coordination may not have been achieved)</p>



Organization	Yes or No	Question 3 Comment
		<p>(5) What level of evidence constitutes “agreement” especially in circumstances where entities may be remiss to agree?</p> <p>(6) What if CPOPs are simply a patchwork of requirements constructed out of existing NERC standard language and contract language - does that achieve the CPOP goal?</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Consumers Energy	Disagree	<p>I agree written Communication Protocols should be in place. Since we do not agree with all of the requirements mentioned we cannot agree with this statement. Furthermore, since these protocols will have to be between Functional Entities and most likely multiple companies, a methodology needs to be in place to prevent duplication of efforts and double jeopardy in the audit process.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Florida Municipal Power Agency (FMPA) and some members	Disagree	<p>If one of the goals is consistent communications, why would the standard require each Entity to develop a separate CPOP? For consistency, shouldn't the Reliability Coordinator develop the CPOP (with input from the other Entities) and all other Entities within the RC's area adopt it?</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Entergy Services	Disagree	<p>Interoperability communications should be removed as recommended in our response to question 1. Creating requirements for the communications protocol will by necessity require entities to document how they meet the requirements. A requirement for an operating procedure is redundant. The requirement to have an operating procedure in effect makes this a “how” requirement. An entity could choose to have more than one procedure that described their communications protocol. This requirement as written could force an entity to put all of their communications procedures into one CPOP, which doesn't improve reliability. Therefore the requirement is not needed and should not be included in the standard.</p>
<p><b>Response: The SDT thanks you for your comments. “Interoperability Communications” has been removed because it appeared to be ambiguous and unclear.</b></p>		

Organization	Yes or No	Question 3 Comment
<p>Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</p>		
We Energies	Disagree	<p>It is not clear what the purpose of the CPOP is, or how having it would improve reliability of the Bulk Electric System. This standard, (or alternatively COM-002-003) should focus on requiring Three-Part Communication during Reliability Directives. In addition, the vague and broad nature of the existing definition of Interoperability Communication makes creating CPOP’s problematic and open to conflict with the CPOP’s developed independently by other entities. As noted in question 2, R1 should not apply to a TSP or LSE.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP. The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities.</b></p>		
Independent Electricity System Operator	Disagree	<p>It is not clear what the purpose of this communication protocol is or what should even be included in the protocol. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions without inclusion of the elements to be communicated as they cover a wide range of conditions which can vary among the communicating parties.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
IRC Standards Review Committee	Disagree	<p>It is not clear what the purpose of this communication protocol is or what should even be included in the protocol. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions. The NERC BOT has approved pursuing the Performance-based Reliability Standard Task Force’s recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to delineate actionable reliability requirements from record/documentation requirements.</p> <p>This proposal takes the opposite approach and incorporates a new administrative requirement. We - and the industry as a whole based on the response to the Task Force - do not support such an approach. We suggest deleting this Requirement from the Standard.</p> <p>Furthermore, the establishment of R2-R7 as elements of the CPOP required in R1 appears to contradict the recent</p>

Organization	Yes or No	Question 3 Comment
		<p>shift in direction that NERC has taken regarding defining criteria as bullets under a requirement. See NERC’s August 10th informational filing regarding assignment of violation risk factors and violation severity levels in regards to dockets RM08-11-000, RR08-4-000, RR07-9-000, and RR07-10-000.COM-003 R2 states: “shall use pre-defined system condition terminology as defined in Attachment 1-COM-003-1 for verbal and written Interoperability Communications.” Why does R1 establish the requirement for a procedure, when the procedure is essentially defined by R2-R7. If there is such reliability need to establish these requirements, one could conclude nothing else is so important that it needs to be included because it is not identified in the standard. Furthermore, R2 appears to define Interoperability Communications for attachment 1 communications only. Is this the intent of the drafting team?</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
<p>ISO New England Inc.</p>	<p>Disagree</p>	<p>It is not clear what the purpose of this communication protocol is or what should even be included in the protocol. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions. The NERC BOT has approved pursuing the Performance-based Reliability Standard Task Force’s recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to delineate actionable reliability requirements from record/documentation requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. We - and the industry as a whole based on the response to the Task Force - do not support such an approach. We suggest deleting this Requirement from the Standard. Furthermore, the establishment of R2-R7 as elements of the CPOP required in R1 appears to contradict the recent shift in direction that NERC has taken regarding defining criteria as bullets under a requirement. See NERC’s August 10th informational filing regarding assignment of violation risk factors and violation severity levels in regards to dockets RM08-11-000, RR08-4-000, RR07-9-000, and RR07-10-000.COM-003 R2 states: “shall use pre-defined system condition terminology as defined in Attachment 1-COM-003-1 for verbal and written Interoperability Communications.” Why does R1 establish the requirement for a procedure, when the procedure is essentially defined by R2-R7. If there is such a reliability need to establish these requirements, one could conclude nothing else is so important that it needs to be included because it is not identified in the standard. Furthermore, R2 appears to define Interoperability Communications for attachment 1 communications only. Is this the intent of the drafting team?</p>

Organization	Yes or No	Question 3 Comment
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
National Grid	Disagree	<p>It is not clear what the purpose of this communication protocol is or what should even be included in the protocol. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
PJM	Disagree	<p>It is not clear what the purpose of this communication protocol is or what should even be included in the protocol. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions. We feel that there should not be a requirement in the standard to have a “procedure”. It is our understanding that, to be auditably compliant with a standard, the responsible entity must develop a procedure, train on that procedure, and be able to demonstrate compliance via documents, data, logs, records, etc. If Requirements R2 - R7 are included in this standard, the entity will need to develop a procedure to be compliant. In other words, the procedure itself will become the focus rather than the actual communications protocol. Therefore, we feel that requirement R1 is redundant and should not be included. The NERC BOT has approved pursuing the Performance-based Reliability Standard Task Force’s recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to delineate actionable reliability requirements from record/documentation requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. We - and the industry as a whole based on the response to the Task Force - do not support such an approach. We suggest deleting this Requirement from the Standard. Furthermore, the establishment of R2-R7 as elements of the CPOP required in R1 appears to contradict the recent shift in direction that NERC has taken regarding defining criteria as bullets under a requirement. See NERC’s August 10th informational filing regarding assignment of violation risk factors and violation severity levels in regards to dockets RM08-11-000, RR08-4-000, RR07-9-000, and RR07-10-000. Furthermore, R2 appears to define Interoperability Communications for attachment 1 communications only. Is this the intent of the drafting team?</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		

Organization	Yes or No	Question 3 Comment
PJM SOS Comments	Disagree	<p>It is not clear what the purpose of this communication protocol is or what should even be included in the protocol. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions. We feel that there should not be a requirement in the standard to have a “procedure”. It is our understanding that, to be auditably compliant with a standard, the responsible entity must develop a procedure, train on that procedure, and be able to demonstrate compliance via documents, data, logs, records, etc. If Requirements R2 - R7 are included in this standard, the entity will need to develop a procedure to be compliant. In other words, the procedure itself will become the focus rather than the actual communications protocol. Therefore, we feel that requirement R1 is redundant and should not be included. The NERC BOT has approved pursuing the Performance-based Reliability Standard Task Force’s recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to delineate actionable reliability requirements from record/documentation requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. We - and the industry as a whole based on the response to the Task Force - do not support such an approach. We suggest deleting this Requirement from the Standard. Furthermore, the establishment of R2-R7 as elements of the CPOP required in R1 appears to contradict the recent shift in direction that NERC has taken regarding defining criteria as bullets under a requirement. See NERC’s August 10th informational filing regarding assignment of violation risk factors and violation severity levels in regards to dockets RM08-11-000, RR08-4-000, RR07-9-000, and RR07-10-000. Furthermore, R2 appears to define Interoperability Communications for attachment 1 communications only. Is this the intent of the drafting team?</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
NYSEG	Disagree	<p>It is not clear when the Interoperability Communication is required to be used. Is it only for communications between registered entities (inter) or internal to a registered entity (intra)? And is it required for all communications or used only in certain circumstances (i.e. emergency (if emergency, it needs to be defined what constitutes an emergency))?</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
PowerSouth Energy	Disagree	<p>It's not clear as to who is being targeted as the "personnel responsible for real-time generation control and real-</p>

Organization	Yes or No	Question 3 Comment
		time operation of the BES". Is this just the system operator or is this the generator unit operator or the field switchman?
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p> <p><b>The person responsible may be any individual from an Applicable Entity who sends or receives an operating communication changing the state or status of the BES. Note that in the second draft of this standard, the phrase, "personnel responsible for real-time generation control and real-time operation of the BES" is not used.</b></p>		
Long Island Power Authority	Disagree	LIPA agrees with the need for CPOP but does not agree that R4 can or should apply to all interoperability communications between entities. Since the examples in Attachment 1 specifically state RC and TOP, this standard should not apply to any other entity except for the RC and TOP. COM-002-03(draft) could require the other entities to utilize three part communication for reliability-related Interoperability communication.
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
City Of Greenfield	Disagree	Listed as an LSE & DP, we are a small municipal utility that does not own nor operate any generation or transmission equipment. Therefore this standard is not applicable to our facility. Keep in mind, not all LSE's & DP's operate generation or transmission equipment. There are several small utilities that this standard would not be applicable to. LSE's & DP's should be put into class sizes depending on the size of the company or utility. Example: Class #1 LSE & DP : Companies that own & operate generation & transmission      Class #2 LSE & DP : Companies that do not own or operate generation & transmission.(municipals,co-ops,etc)
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p> <p><b>The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities; however DPs were included as applicable entities and have been retained in COM-003-1. The specified role of the DP to shed load justifies the retention of the DP as an applicable Entity.</b></p>		
NERC Staff	Disagree	NERC staff recommends that Requirement R1 be deleted because it is strictly an administrative requirement that is not necessary. It is not results-based, and is redundant given the imbedded reference to Requirements R2 to R7. If an entity can demonstrate compliance with the other requirements, Requirement R1 performs no additional reliability enhancement. A Requirement should state a performance outcome or a risk to be mitigated. If there is a need to document something, the appropriate location for that is in the Measures section of the

Organization	Yes or No	Question 3 Comment
		<p>standard. A distinction should be made here that producing a document containing specific content necessary for reliability, such as a system restoration procedure, can be an effective requirement used to minimize risk. However, documentation that does not stand on its own as a result necessary for reliability should not be made into a requirement. Such documentation requirements should either be eliminated or moved to an administrative, informational section of the standards. An example of a weak requirement is “the Responsible Entity shall document the implementation of security patches”. The requirement that directly contributes to a risk reduction outcome is to implement applicable cyber security patches. Documentation of the implementation is simply a vehicle for demonstrating compliance. The NERC staff does not find that the CPOP satisfies the criterion of reducing risk.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
<p>NextEra Energy Resources, LLC</p>	<p>Disagree</p>	<p>NextEra agrees with the reliability goal of establishing a set of agreed upon communication standards to ensure consistent communications particularly for actual and anticipated emergency coordination needs. NextEra believes that existing coordination/communication standards already fulfill this objective and that it might be of “training” or “reference” value to aggregate those requirements to a single document or view. However, NextEra is not convinced that this requirement, largely administrative in nature, will result in marked improvement in reliability. Organizations tend to take the path of least resistance and unless forced out of that path with extensive and granular guidance on what CPOPs should contain above and beyond existing standards or contract language, CPOPs would likely become a simple patchwork of requirements constructed out of existing NERC standard language and contract language. Standards need to be clearly implementable before they are approved yet important implementation questions do not appear to have been answered. (1) What if parties cannot reach agreement? (2) Is it enough to have attempted to coordinate? (3) What if parties already have agreed upon procedures such as NPIRs, or those stated in Interconnection Agreements - do they take precedent or must they be redesigned/relegated? (4) What if CPOPs differ greatly across interconnections because of differing parties? (One might conclude that by formalizing these different practices, as opposed to mandating standard practices, the goal of more reliable coordination may not have been achieved) (5) What level of evidence constitutes “agreement” especially in circumstances where entities may be remiss to agree? (6) What if CPOPs are simply a patchwork of requirements constructed out of existing NERC standard language and contract language - does that achieve the CPOP goal?</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute</b></p>		

Organization	Yes or No	Question 3 Comment
<p><b>to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
<p>Pepco Holdings, Inc. - Affiliates</p>	<p>Disagree</p>	<p>PHI agrees that communications procedures are necessary. We do not see the need to create a CPOP that includes requirements R2 through R7 given that each requirement defines how and what is to be communicated. This requirement as written could force entities to incorporate all of their communication procedures into a CPOP which will not improve reliability.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
<p>Orange and Rockland Utilities, Inc.</p>	<p>Disagree</p>	<p>R4 - Use of the CST time format would present challenges affecting hardware, software, and training in the ECC and is counter to practices of scheduling, switching execution, and time-stamping of activities currently executed by the ECC. A more defined definition of “Interoperability Communications” needs to be instituted in conjunction with R4 applicability.</p>
<p><b>Response: See the responses under question #5 which addresses R4. The SDT has eliminated the term “Interoperability Communications”</b></p>		
<p>E.ON U.S. LLC</p>	<p>Disagree</p>	<p>Requiring production of a document that merely repeats Requirement 2-7 of COM-003 does not further BES reliability. Requirements R2-R7 set forth all that such a document would contain. Stating that the CPOP should include but not be limited to R2-R7 is nonsensical. What additional issues should the CPOP be required to address and why aren’t those issues the subject of a COM-003 requirement?</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
<p>Southern Company Transmission</p>	<p>Disagree</p>	<p>Southern Company supports the SERC SOS comments.                      SERC SOS comments: This group feels that there should not be a requirement in the standard to have a “procedure”. It is our understanding that, to be auditably compliant with a standard, the responsible entity must develop a procedure, train on that procedure, and be able to demonstrate compliance via documents, data, logs, records, etc. If Requirements R2 - R7 are included in this standard, the entity will need to develop a procedure to be compliant. Therefore, we feel that requirement R1 is redundant and should not be included.                      Southern company comments: The VSF for not having a written procedure is Severe. If an entity does not have a written procedure but complies with the other requirements in this standard has the reliability of the Bulk Electric System been affected? If the reliability of the Bulk Electric System is not affected by not having a written</p>



Organization	Yes or No	Question 3 Comment
		procedure why is this requirement in a Reliability Standard?
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Great River Energy	Disagree	<p>The NERC BOT has approved pursuing the Performance-based Reliability Standard Task Force’s recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to eliminate administrative requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. GRE does not support such an approach. GRE suggests deleting this Requirement from the Standard.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
PSEG Companies	Disagree	<p>The PSEG Companies agree with the concerns expressed in the comments filed by the PJM System Operations Subcommittee (SOS) Group.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Duke Energy	Disagree	<p>There is no need to have a CPOP to describe how an entity will comply with R2 through R7. A CPOP would just be a restatement of the requirements. If an entity complies with R2 through R7, there’s no reliability related benefit to having a CPOP.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
ERCOT ISO	Disagree	<p>This approach of an administrative type requirement is in conflict with the NERC BOT approval of pursuing the development of standards to support reliability performance and eliminate administrative requirements. It is not necessary to have a separate CPOP document to insure operating personnel communicate effectively.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
SERC OC&SOS	Disagree	<p>This group feels that there should not be a requirement in the standard to have a “procedure”. It is our</p>

Organization	Yes or No	Question 3 Comment
Standards Review Group		understanding that, to be auditably compliant with a standard, the responsible entity must develop a procedure, train on that procedure, and be able to demonstrate compliance via documents, data, logs, records, etc. If Requirements R2 - R7 are included in this standard, the entity will need to develop a procedure to be compliant. Therefore, we feel that requirement R1 is redundant and should not be included.
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Ameren	Disagree	This is a near fill-in-the-blank requirement. The mere inclusion, or recitation, of the R2-7 elements does not assure a meaningful plan. It is easy to say “Our plans includes R3”. That does not assure reliable communications. This requirement should describe a functional CPOP.
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Georgia Transmission Corp	Disagree	This is a requirement for an operating procedure which is redundant and would require the entities to document how they met the requirement.
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Dynergy	Disagree	<p>This proposed communication protocol is redundant to Requirements R2-R7 and should not be included in this Standard. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions.</p> <p>The NERC BOT has approved pursuing the Performance-based Reliability Standard Task Force’s recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to eliminate administrative requirements. This proposed Requirement takes the opposite approach and incorporates a new administrative requirement. We - and the industry as a whole based on the response to the Task Force - do not support such an approach. We suggest deleting this Requirement from the Standard.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Hydro-Québec	Disagree	This proposed communication protocol is redundant to Requirements R2-R7, and should not be included in this

Organization	Yes or No	Question 3 Comment
TransEnergie		<p>Standard. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions for all entities involved in real time operations. The NERC BOT has approved pursuing the Results-based Reliability Standard Task Force’s recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to eliminate administrative requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. The industry as a whole, based on the response to the Task Force, does not support such an approach. This Requirement should be deleted from the Standard. There is no need to create a CPOP that includes requirements R2 through R7 given that each requirement spells out how and what is to be communicated. A CPOP may be needed for Interoperability Communications that are not addressed in R2-7.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Kansas City Power & Light	Disagree	<p>This proposed communication protocol is redundant to Requirements R2-R7 and should not be included in this Standard. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions and using agreed upon terminology for switching equipment for bulk electric system.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Midwest ISO Standards Collaborators	Disagree	<p>This proposed communication protocol is redundant to Requirements R2-R7 and should not be included in this Standard. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions. The NERC BOT has approved pursuing the Performance-based Reliability Standard Task Force’s recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to eliminate administrative requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. We - and the industry as a whole based on the response to the Task Force - do not support such an approach. We suggest deleting this Requirement from the Standard.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute</b></p>		

Organization	Yes or No	Question 3 Comment
<p><b>to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
<p>Northeast Power Coordinating Council</p>	<p>Disagree</p>	<p>This proposed communication protocol is redundant to Requirements R2-R7, and should not be included in this Standard. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions. The NERC BOT has approved pursuing the Results-based Reliability Standard Task Force’s recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to eliminate administrative requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. The industry as a whole, based on the response to the Task Force, does not support such an approach. This Requirement should be deleted from the Standard. There is no need to create a CPOP that includes requirements R2 through R7 given that each requirement spells out how and what is to be communicated. A CPOP may be needed for Interoperability Communications that are not addressed in R2-7.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
<p>Northeast Utilities</p>	<p>Disagree</p>	<p>This proposed communication protocol is redundant to Requirements R2-R7, and should not be included in this Standard. This standard only needs to focus on requiring three-part communications during actual and anticipated emergency conditions. The NERC BOT has approved pursuing the Results-based Reliability Standard Ad Hoc Working Group recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to eliminate administrative requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. The industry as a whole, based on the response to the Task Force, does not support such an approach. This Requirement should be deleted from the Standard.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
<p>Electric Market Policy</p>	<p>Disagree</p>	<p>We agree that communications procedures are necessary, but we do not agree with several of the requirements proposed to be addressed in the elements of the CPOP. See our comments on specific requirements elsewhere in our responses.</p>

Organization	Yes or No	Question 3 Comment
		We do not see the need to create a CPOP that includes requirements R2 through R7 given that each requirement spells out how and what is to be communicated. We could agree that a CPOP may be needed for Interoperability Communications that are not addressed in R2-7.
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Xcel Energy	Disagree	We agree with the structure of the standard, however we have issues with several of the CPOP elements being proposed. (See detail comments in following questions.)
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Santee Cooper	Disagree	We believe that a company’s documentation demonstrating compliance for R2 through R7 would eliminate the need for a CPOP document.
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Sunflower Electric Power Corporation	Disagree	We believe that distribution providers (electric cooperatives) should be removed from this standard unless they control a BES segment
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p> <p><b>The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities; however DPs were included as applicable entities and have been retained in COM-003-1. The specified role of the DP to shed load justifies the retention of the DP as an applicable Entity subject to the DPs’ impact on Elements on the BES.</b></p>		
NRECA RTF Members	Disagree	We believe that it may be important for entities registered as a Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider , Load Serving Entity and Distribution Provider to have a formalized Communications Protocol Operating Procedure (CPOP) for Interoperability Communications, but this requirement will place an unnecessary burden on the personnel at many of the smaller Load Serving Entities and Distribution Providers on the NERC Compliance Registry. In most real-time scenarios, the BES facilities are not operated nor maintained by the Load Serving Entity or Distribution Provider. As with many standards, entities will be required to demonstrate why the standard/requirement is

Organization	Yes or No	Question 3 Comment
		<p>applicable. We suggest the drafting team consider modifying the applicability of this standard as follows similar to the format used in PRC-005:</p> <p>4. Applicability:</p> <p>4.1. Transmission Operator</p> <p>4.2. Transmission Owner</p> <p>4.3. Balancing Authority</p> <p>4.4. Reliability Coordinator</p> <p>4.5. Generator Operator</p> <p>4.6. Distribution Provider that is responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System</p> <p>4.7. Transmission Service Provider</p> <p>4.8. Load Serving Entity that is responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p> <p><b>The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities; however DPs were included as applicable entities and have been retained in COM-003-1. The specified role of the DP to shed load justifies the retention of the DP as an applicable Entity subject to the DPs’ impact on Elements on the BES.</b></p>		
Washington City Light & Power	Disagree	<p>We believe that it may be important for entities registered as a Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider , Load Serving Entity and Distribution Provider to have a formalized Communications Protocol Operating Procedure (CPOP) for Interoperability Communications, but this requirement will place an unnecessary burden on the personnel at many of the smaller Load Serving Entities and Distribution Providers on the NERC Compliance Registry. In most real-time scenarios, the BES facilities are not operated nor maintained by the Load Serving Entity or Distribution Provider. As with many standards, entities will be required to demonstrate why the standard/requirement is applicable.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute</b></p>		

Organization	Yes or No	Question 3 Comment
<p>to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</p> <p>The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities; however DPs were included as applicable entities and have been retained in COM-003-1. The specified role of the DP to shed load justifies the retention of the DP as an applicable Entity subject to the DPs’ impact on Elements on the BES.</p>		
Transmission System Operations	Disagree	We believe the phrase, “but is not limited to” should be deleted. The elements required to be in the CPOP should be well-defined.
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
FirstEnergy	Disagree	We feel that procedures are beneficial for entities to have as far as internal training of new personnel and as a reference guide for all personnel, but we do not agree that it should be a requirement of a reliability standard. It is not appropriate to subject an entity to monetary fines for not having a procedure even if that entity has fully complied with all the other requirements (R2 through R7) of this standard that the procedure is referencing. Although this requirement may fall into the category of best practices and administrative requirements, it certainly does not rise to the level of performance-based, risk-based, or competency-based requirements. The real evidence of an entity implementing R2 through R7 is by evaluating the measures of those requirements and a variety of information could be used by an entity such as training records, procedures, voice recordings etc. Having a procedure does not need to be a standalone requirement.
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
MRO NERC Standards Review Subcommittee	Disagree	We request that R1 be rewritten for real time operation of elements and facilities connected to the BES. Based upon the concerns that we have with Requirements R2-R7 we would not support this requirement. We would support requirement R1 if it stopped after the first sentence and then merely listed the minimum requirements that should be included in the Procedure such as; (1) time zone, (2) language spoken, (3) when phonetic alphabet will be used, etc.. This will allow the Entities to draft their own CPOP per the intent of the requirement and avoid the concerns that we have documented for the remainder of the requirements. Reliability Standards are supposed to describe “What” is required, not “How” compliance would be achieved. We believe this proposed Reliability Standard describes more the “How”, and is contrary to the Results Based Standards Initiative being implemented by NERC. The NERC BOT has approved pursuing the Performance-based Reliability

Organization	Yes or No	Question 3 Comment
		<p>Standard Task Force’s recommendations to assess the existing standards, modify and develop standards that support reliability performance and risk management, and work on an overall plan to transition existing standards to a new set of standards. One goal of this effort is to eliminate administrative requirements. This proposal takes the opposite approach and incorporates a new administrative requirement. We - and the industry as a whole based on the response to the Task Force - do not support such an approach. We suggest deleting this Requirement from the Standard. The CPOP should only apply to verbal communications. It could be implied that written communications (switching order affecting the BES) must have a CPOP, which would essentially be a writing guide procedure for how to write a procedure. The CPOP would need to be developed for each entity on how to write a CPOP and all the requirements contained in this draft standard. Every entity has unique switching instruction templates that have been developed over time in negotiations with unions, third-parties, etc, which have detailed procedures for their use. Requiring the use of a CPOP on top of that is adding additional complexity that adds nothing to the reliability of the BES.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
<p>The Empire District Electric Company</p>	<p>Disagree</p>	<p>What benefit to the BES would this provide? Rather I see more confusion by having entities develop different CPOPs. How will this benefit real time operation? This seems to be a requirement by NERC to assist NERC in analysis "after the fact" of an event, but in reality it can hinder daily operations.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
<p>Indiana Municipal Power Agency</p>	<p>Disagree</p>	<p>What reliability purpose is served by restating requirements two through seven in a Communications Protocol Operating Procedure (CPOP)? Since these requirements are the only required items in the CPOP, entities will just be restating these requirements in their CPOP. In addition, this is an administrative requirement which does not fit into the new performance-based standard principle that should be used by SDT's.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
<p>American Electric Power</p>	<p>Disagree</p>	<p>While having a procedure is important and the responsible entities should have a procedure to be compliant, there is not necessary to establish this requirement to have a procedure. We need to stay focused on what the purpose of the standard is to be and not dilute its effectiveness by focusing on documented procedures.</p>



Organization	Yes or No	Question 3 Comment
		Furthermore, if the extent of communication concerns warrants the extensive effort to establish pre-defined line and equipment identifiers, then this should be established in a uniform manner and not left to result in multitudes of approaches. There will likely need to be system modifications to address character limitations with respect to line and equipment identifiers.
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
Westar Energy	Disagree	While I agree that a CPOP is necessary and should include the elements of the requirements, I am not sold on all of the requirements yet as written.
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP. Please comment on the revisions we made to the remaining requirements.</b></p>		
ExxonMobil Research and Engineering	Disagree	While recording telephone conversations may be routine for utility companies, many industrial facilities that fall under the jurisdiction of this standard do not currently have the facilities necessary to record the conversations and store them for an extended length of time. If a company does not currently possess the capability to record telephone conversations, is it the intent of this standard to require them to install such facilities? If so, what is the time frame surrounding the installation of the facilities necessary to record and store telephone conversations? Currently, we maintain a log of our communications which includes the question or instruction and our (or in the case of a question the third party's) response. Does this satisfy the requirements for evidence as defined in measures M2 through M7?
<p><b>Response: The SDT thanks you for your comments. The SDT respectfully refers to the measures, which identify types of evidence that may be used. The SDT recognizes that similar requirements already exist within the COM standards and that the same types of evidence have been included in the associated measures. Having voice recordings is an example of what could be used as evidence; not what is required or the only type of evidence. Time frames for implementation of the Requirements of COM-003-1 are identified under the Proposed Effective Date in the second draft of the standard.</b></p>		
PPL	Disagree	Will the CPOPs be developed regionally, by RCs, by TOPs, by BAs? Will some entities have to adhere to various CPOPs since they may operate in various areas? Too many unanswered questions to support this concept.
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute</b></p>		

Organization	Yes or No	Question 3 Comment
<p><b>to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p>		
<p>Manitoba Hydro</p>	<p>Agree</p>	<p>Yes, with comments</p> <p>1) In this requirement “Interoperability Communications between personnel responsible for real time” becomes clouded when compared to the “Interoperability Communications” definition that states “exchange information between entities”.</p> <p>a. Improving the “Interoperability Communication” definition as per early suggestion should clarify this.</p> <p>2) Changing the order of requirements would make the flow of the standard smoother.</p> <p>a. Since this standard is mostly designed for real time communication, the requirements should pyramid down.</p> <ul style="list-style-type: none"> <li>o R1 is fine.</li> <li>o R2 should be “English”</li> <li>o R3 should be “NATO”</li> <li>o R4 should be “Time”</li> <li>o R5 should be “Three-part communications”</li> <li>o R6 reserved for “Full name identification” (See below for clarification)</li> </ul> <p>Conclusion: This requirement is acceptable as long as the enclosed comments are considered.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that having a CPOP does not directly contribute to reliability. The SDT agrees, and has deleted the requirement for a CPOP.</b></p> <p><b>The SDT supports the ordering of the comments you suggested. After aggregating all of the industry comments and changes, the SDT reformatted the posted Standard. While it is not Identical, some groupings and concepts are similar. We would be interested in your comments on this next draft version.</b></p>		

4. Requirement R2 of the draft COM-003-1 states, “Each Responsible Entity shall use pre-defined system condition terminology as defined in Attachment 1-COM-003-1 for all verbal and written Interoperability Communications.” Do you agree with this proposal? If not, please explain in the comment area.

**Summary Consideration:**

Most stakeholders who responded to this question disagreed with the proposal.

The major recommendation from the comments for question 4 was that the term “Interoperability Communications” should be removed from the standard. The OPCP SDT agreed and changed “Interoperability Communications” to “Operating Communications” which is now defined as – “Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.”

Several commenters pointed out that “Alert Levels” with defined colors are already in use by the Department of Homeland Security and may be misinterpreted.

Other commenters stated that attempting to mold all possible situations into the pre-defined terms is overly restrictive and may result in reduced accuracy, unnecessary confusion and misinterpretation.

The SDT proposes that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement (R2) to use Attachment 1 from the revised standard.

Organization	Yes or No	Question 4 Comment
British Columbia Transmission Corporation	Agree	
ExxonMobil Research and Engineering	Agree	
Florida Municipal Power Agency (FMPA) and some members	Agree	

Organization	Yes or No	Question 4 Comment
Old Dominion Electric Cooperative	Agree	
Oncor Electric Delivery	Agree	
Orange and Rockland Utilities, Inc.	Agree	
PacifiCorp	Agree	
Sunflower Electric Power Corp.	Agree	
Transmission System Operations	Agree	
Westar Energy	Agree	
American Electric Power	Disagree	<p>AEP suggests that RCIS be expanded to include the additional parties necessary to support Interoperability Communications. Without such an expansion, the communication requirements for the RC are burdensome and the effectiveness may be compromised by the volume of parties that will need to be included. Is it practical for RFC to communicate across some 60 parties or should this be limited to only those that need to know?</p> <p>Attachment 1 does not seem consistent with the stated purpose of this standard as Attachment seems to focus on defining the operating condition, not communication during alerts and emergencies. The SDT should consider if the scope of the standard is appropriate to resolve this discrepancy. To the extent that it gets mandated, Attachment 1 could be administered through the addition of “check boxes” on the expanded RCIS.</p>
<p><b>Response:</b> The SDT thanks you for your comments and recommendations regarding RCIS expansion. While the SDT believes that it has merit, such an initiative is beyond the scope of this standard’s development. The team will recommend your proposal to the proper authority for their consideration.</p> <p>The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to</p>		

Organization	Yes or No	Question 4 Comment
<p><b>use Attachment 1 from the revised standard.</b></p>		
Sunflower Electric Power Corporation	Agree	As defined in Attachment 1 - COM-003-1
<p><b>Response: The SDT thanks you for your comments. Note that the SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Tri-State Generation & Transmission Assoc.	Disagree	Attachment 1 explains Operating State Alert Levels that defines colors that are already in use by the Department of Homeland Security. Re-using these colors presents confusion to the operators of the BES. This places an unnecessary additional burden on Real Time day-to-day operations with a high risk of confusion in an emergency. Additionally, this is too complicated and requires a complete retraining of operators in the English language.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Duke Energy	Disagree	Attachment 1 is limited to notifications from the RC to other entities regarding Alerts for Physical Security Emergency, Cyber Security Emergency or Transmission Emergency. Also, these types of notifications wouldn’t meet the definition of “Interoperability Communications”, because they wouldn’t necessarily be used to effect a change in the state or status of an element or facility of the Bulk Electric System.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p> <p><b>The term Interoperability Communications has been removed from the second draft of the standard.</b></p>		
NorthWestern Energy	Disagree	Attachment 1 seems too overly complicated for emergency Operating circumstances and provides an additional burden for Real Time personnel who are stressed with difficult decisions already.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Kansas City Power & Light	Disagree	Attachment 1 should be removed from this standard. This is a duplication of the alerts by the NERC Alerts system and the EISAC. In addition, these are reliability standards and should deal with real-time and expected future reliability issues. Alerts are an inappropriate for this standard.

Organization	Yes or No	Question 4 Comment
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
We Energies	Disagree	<p>Attempting to mold all possible circumstantial situations into the pre-defined terminologies is overly restrictive and may result in reduced accuracy, unnecessary confusion and misinterpretation. R2 should have the word “all” included (as is stated in this question) in order to restrict the applicability of Interoperability Communications to only those situations defined in Attachment 1. As noted in question 2, R2 should not apply to a TSP or LSE.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p> <p><b>Note that the definition of “Interoperability Communications” has been deleted from the revised standard and replaced with the term, “Operating Communication” with a more narrow focus on communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.</b></p> <p><b>The SDT has removed the TSPs and LSEs because they were not bound by this requirement in the originating SAR.</b></p>		
California Independent System Operator	Disagree	<p>CAISO Comments;</p> <p>Regarding CEA;</p> <p>CIP-002 requires responsible entities to identify their cyber assets and critical cyber assets. This requirement does not address any identification and requires responsible entities to declare emergency conditions for non-critical assets. How does this provide an adequate level of reliability? What technical justification did the SDT use in determining an actual or imminent cyber or physical threat to any BES generating facility, substation, or transmission line constitute an emergency declaration?</p> <p>Regarding PSEA and CEA;</p> <p>This requirement does not provide an adequate level of reliability. As a general statement, receiving notification from the RC stating XXXX BA has identified (actual or imminent) physical or cyber threats affecting 1 or 999 control center(s), generating facility(ies), substation(s), or transmission line(s) close to your jurisdiction would provide an adequate level of reliability compared to XXXX BA has declared a PSEA or CEA condition ORANGE. Why is the SDT promoting requirements that reduce reliability and dumb-down communications?</p> <p>Is this the correct standard to add a requirement such as this? Physical and Cyber threats are addressed in the</p>

Organization	Yes or No	Question 4 Comment
		<p>CIP standards and emergencies are addressed in the EOP standards. Both require notification so why include it in a COM standard?</p> <p>Is there a possibility of double jeopardy between this requirement and CIP requirements?</p> <p>If this requirement must be included, Per attachment 1 - COM-003-1 (PSEA and CEA section) the Reliability Coordinator is the only responsible entity with any defined actions. It is suggested the SDT remove the BA, TO, TOP, GO, TSP, LSE, and DP due to lack of applicability. The same entities should be removed from the measure (M2) also. Until “soft words” such as “threat” and “sabotage” are defined or clarity is provided the industry should not be proposing standards based upon them.</p> <p>Regarding TEA;</p> <p>What technical justification did the SDT use in determining that notifying all BA, DP, GOP, TOP, and TO in the RC area of a possible IROL violation provides an adequate level of reliability? There are no associated actions for the BA, DP, GOP, TO, and TOP to perform upon notification so what is the purpose of this requirement?</p> <p>The Alert Level Guide is still in the test phase; does not the Alert Level Guide need to be approved prior to any standard which references the guide be approved?</p> <p>Comments: Per attachment 1 - COM-003-1 the Reliability Coordinator is the only responsible entity with any actions. Suggest removing BA, TO, TOP, GO, TSP, LSE, and DP. Or assign them actions. The same entities should be removed from the measure (M2) also.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined, based on your comments and the comments of other stakeholders, that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
<p>New York State Reliability Council</p>	<p>Disagree</p>	<p>Comments: NYSRC believes the use of “shall” and “all” coupled with the broad applicability of this Standard and the broad definition of Interoperability Communication will result in entities either not complying with R2 or making statements regarding the Operating Alert State when unnecessary. Attachment 1-Com-003 is very prescriptive in the use pre-defined terminology, colors and levels, and what to report on. There is no benefit to specifying the specific terminology. This requirement should require the RC to define the terms/levels/alert states to include within the CPOP that sufficiently communicate the increased levels of Alert or Response encountered/required. Many entities have invested time and training in the existing processes that meet the intent of this requirement.</p> <p>Read strictly, the only predefined alert conditions are Physical security, Cyber security and Transmission</p>

Organization	Yes or No	Question 4 Comment
		<p>Security as it applies to the RC and TOP only.</p> <p>NYSRC notes that R2 in the draft Standard does not match R2 in this question. Specifically the word ALL is not in the Standard.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “Communication Protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p> <p><b>The SDT notes you referenced the term “Interoperability Communication” and the requirement to have a CPOP. Both have been eliminated in the second draft of the Standard. The SDT appreciates the observation and the word “all” was not in the requirement. It should not have been in the question.</b></p>		
National Grid	Disagree	<p>Defining specific wording per Attachment 1 is overly prescriptive. The requirements should focus on what is required not how. The RC and encompassing entities should be required to define terms that will be used in communications. This would allow for the use of terms that are well understood in an area rather than adding new terms.</p> <p>Also, System operators need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task does not lend itself to promptly and effectively deal with the emergency situation.</p> <p>There is still plenty of grey area in Attachment 1 and there does not appear to be any differentiation in actions taken based on the alert levels.</p> <p>Finally, the section Background Information in the Comment's form mentions “The SDT proposes four system condition alerts instead of initial three in the RCWG version.” However, Attachment 1 only mentions 3 alerts - Physical Security, Cyber Security, and Transmission Emergency Alerts leading to confusion.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
American Municipal Power	Agree	<p>Eliminating lax communications and improving identifiers is one of the cheapest and easiest ways to improve reliability.</p>
<p><b>Response: The SDT thanks you for your comments. Your insight is refreshing as well as accurate.</b></p>		
Transmission	Disagree	<p>FPL agrees that standard system condition terminology could be beneficial in communications but this</p>



Organization	Yes or No	Question 4 Comment
Owner		requirement introduces alert level conventions with no clarity on what the corresponding associated actions for such levels are and as a result, aside from the value derived from have improvement in terminology during communications, it is unclear what reliability improvements this will achieve in carrying out instructions since details on what sort of tasks need to be carried out for each level have not been defined. Also, this requirement should clearly indicate that this alerting system and any communication conventions be required for emergency conditions.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Bonneville Power Administration	Agree	In Attachment #1 - Operating State Alert Levels, for the Transmission Emergency Alert (TEA) Level 2 definition, a “why” needs to be incorporated into the definition. It appears that the reason we're going to TEA 2 is to avoid violation of an SOL but it needs to be called out.
<p><b>Response: The SDT thanks you for your comments. The SDT is interested in your comment but would require additional information and discussion to address it properly.</b></p>		
Northeast Utilities	Disagree	It is not clear what value there is in identifying alert levels since there does not appear to be any differentiation in actions taken based on the alert levels. Additionally, it has been our experience of during the field-test of these Alert Levels, that there are inconsistencies in when to implement various stages of Alerts and, we believe, this introduces more confusion than exists today.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Independent Electricity System Operator	Disagree	It is not clear what value there is in identifying alert levels. There does not appear to be any differentiation in actions taken based on the alert levels. Why not just state the number of substations attacked, etc? Further, the “pre-defined” system conditions and alert levels are too detailed and overly prescriptive. System operators need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task, in and of itself, does not ensure nor improve reliability and does not lend itself to promptly and effectively deal with the emergency situation.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		

Organization	Yes or No	Question 4 Comment
IRC Standards Review Committee	Disagree	<p>It is not clear what value there is in identifying alert levels.</p> <p>There does not appear to be any differentiation in actions taken based on the alert levels. Why not just state the number of substations attacked, etc?</p> <p>Further, the “pre-defined” system conditions and alert levels are too detailed and overly prescriptive. System operators need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task does not lend itself to promptly and effectively deal with the emergency situation.</p> <p>Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the parties such as Distribution Provider and Generator Operator cannot have access to these systems due FERC standards of conduct requirements.</p> <p>Attachment 1 and R2 do not appear to be in synch primarily due to the definition of Interoperability Communications. By definition, Interoperability Communication is about how entities change the state of the BES and Attachment 1 is about notifying of what already happened to the BES.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
ISO New England Inc.	Disagree	<p>It is not clear what value there is in identifying alert levels.</p> <p>There does not appear to be any differentiation in actions taken based on the alert levels. Why not just state the number of substations attacked, etc?</p> <p>Further, the “pre-defined” system conditions and alert levels are too detailed and overly prescriptive. System operators need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task does not lend itself to promptly and effectively deal with the emergency situation.</p> <p>Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the parties such as Distribution Provider and Generator Operator cannot have access to these systems due FERC standards of conduct requirements.</p> <p>Attachment 1 and R2 do not appear to be in synch primarily due to the definition of Interoperability Communications. By definition, Interoperability Communication is about how entities change the state of the BES and Attachment 1 is about notifying of what already happened to the BES.</p>

Organization	Yes or No	Question 4 Comment
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
<p>Dynegy</p>	<p>Disagree</p>	<p>It is not clear what value there is in identifying alert levels.</p> <p>There does not appear to be any differentiation in actions taken based on the alert levels. Why not just state the number of substations attacked, etc?</p> <p>Further, the “pre-defined” system conditions and alert levels are too detailed and overly prescriptive. System operators need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task does not lend itself to promptly and effectively deal with the emergency situation.</p> <p>Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the parties such as Distribution Provider and Generator Operator cannot have access to these systems due FERC standards of conduct requirements.</p> <p>Attachment 1 and R2 do not appear to be in synch primarily due to the definition of Interoperability Communications. By definition, Interoperability Communication is about how entities change the state of the BES and Attachment 1 is about notifying of what already happened to the BES.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
<p>Great River Energy</p>	<p>Disagree</p>	<p>It is not clear what value there is in identifying alert levels.</p> <p>There does not appear to be any differentiation in actions taken based on the alert levels. Why not just state the number of substations attacked, etc?</p> <p>Further, the “pre-defined” system conditions and alert levels are too detailed and overly prescriptive. System operators need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task does not lend itself to promptly and effectively deal with the emergency situation.</p> <p>Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the parties such as Distribution Provider and Generator Operator cannot have access to these systems due FERC standards of conduct requirements.</p> <p>Attachment 1 and R2 do not appear to be in synch primarily due to the definition of Interoperability</p>

Organization	Yes or No	Question 4 Comment
		<p>Communications. By definition, Interoperability Communication is about how entities change the state of the BES and Attachment 1 is about notifying of what already happened to the BES.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
<p>Hydro-Québec TransEnergie</p>	<p>Disagree</p>	<p>It is not clear what value there is in identifying these alert levels. There does not appear to be any differentiation in actions taken based on the alert levels. Just stating the severity and details of the incident should suffice.</p> <p>There does not appear to be any differentiation in actions taken based on the alert levels. Why not just state the number of substations attacked, etc?</p> <p>Further, the “pre-defined” system conditions and alert levels are too detailed and overly prescriptive. System operators will need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task does not lend itself to promptly and effectively deal with the emergency situation. The level(s) identified in the notification text are at odds with the condition (color versus numerical). Suggest that the standard either use Condition (color) or the level (numerical).</p> <p>Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the listed entities such as Distribution Provider and Generator Operator cannot have access to these systems due FERC standards of conduct requirements.</p> <p>Attachment 1 and R2 are not consistent with the definition of Interoperability Communications. By definition, Interoperability Communication pertains to all communications about how entities change the state of the BES (not just physical or cyber attacks). Attachment 1 is about notifying of what physical and cyber attacks have already happened to the BES. It is not clear in the context of Interoperability Communications what the recipient of a specific notification is expected to do when there is a change of state or status of an element or facility of the Bulk Electric System.</p> <p>Attachment 1 pertains specifically to Operating State Alert Levels and says nothing about the communication of information to be used to change the state or status of a BES element or facility (which is the SDT’s proposed definition of Interoperability Communications). Therefore, it is not appropriate to require that all verbal and written Interoperability Communications use the pre-defined terminology in Attachment 1. Only those communications concerning Operating State Alert Levels should be required to use that terminology.</p> <p>By the proposed definition, such communications are not Interoperability Communications since the</p>

Organization	Yes or No	Question 4 Comment
		<p>information is not used to change the state or status of a BES element or facility. The SDT needs to revise this requirement to clarify that it pertains only to communicating the Operating State Alert Levels and nothing more.</p> <p>None of the examples in either of the attachments appear to address EEAs (EEA is mentioned in the top paragraph of page 9 that is included in EOP-002-2.1) or SOLs. This limits the use of Interoperability Communications to only events where there exists either a physical or cyber threat, or where an IROL can't be mitigated.</p> <p>The requirements should focus on what is required, not how. The RC and encompassed entities should be required to define terms that will be used in communications. This would allow for the use of terms that are well understood in an area, rather than having to add new terms.</p> <p>The Background Information in this Comment Form introductory section mentions "The SDT proposes four system condition alerts instead of initial three in the RCWG version." However, Attachment 1 only mentions 3 alerts - Physical Security, Cyber Security, and Transmission Emergency Alerts leading to confusion.</p> <p>Finally, Attachment should only be used as a guide.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a "communication protocol" and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
<p>Midwest ISO Standards Collaborators</p>	<p>Disagree</p>	<p>It is not clear what value there is in identifying alert levels.</p> <p>There does not appear to be any differentiation in actions taken based on the alert levels. Why not just state the number of substations attacked, etc?</p> <p>Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the parties such as Distribution Provider and Generator Operator cannot have access to these systems due FERC standards of conduct requirements.</p> <p>Attachment 1 and R2 are not consistent with the definition of Interoperability Communications. By definition, Interoperability Communication pertains to all communications about how entities change the state of the BES (not just about physical or cyber attacks). Attachment 1 is only about notifying of what physical and cyber attacks and transmission emergencies have already happened to the BES.</p>
<p><b>Response: The SDT thanks you for your comments. Response: The SDT determined that determining alert levels falls outside the scope of a "communication protocol" and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		

Organization	Yes or No	Question 4 Comment
Northeast Power Coordinating Council	Disagree	<p>It is not clear what value there is in identifying these alert levels.</p> <p>There does not appear to be any differentiation in actions taken based on the alert levels. Just stating the severity and details of the incident should suffice.</p> <p>Further, the “pre-defined” system conditions and alert levels are too detailed and overly prescriptive. System operators will need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task does not lend itself to promptly and effectively deal with the emergency situation. The level(s) identified in the notification text are at odds with the condition (color versus numerical). Suggest that the standard either use Condition (color) or the level (numerical).</p> <p>Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the listed entities such as Distribution Provider and Generator Operator cannot have access to these systems due FERC standards of conduct requirements.</p> <p>Attachment 1 and R2 are not consistent with the definition of Interoperability Communications. By definition, Interoperability Communication pertains to all communications about how entities change the state of the BES (not just physical or cyber attacks). Attachment 1 is about notifying of what physical and cyber attacks have already happened to the BES.</p> <p>It is not clear in the context of Interoperability Communications what the recipient of a specific notification is expected to do when there is a change of state or status of an element or facility of the Bulk Electric System.</p> <p>Attachment 1 pertains specifically to Operating State Alert Levels and says nothing about the communication of information to be used to change the state or status of a BES element or facility (which is the SDT’s proposed definition of Interoperability Communications). Therefore, it is not appropriate to require that all verbal and written Interoperability Communications use the pre-defined terminology in Attachment 1. Only those communications concerning Operating State Alert Levels should be required to use that terminology. By the proposed definition, such communications are not Interoperability Communications since the information is not used to change the state or status of a BES element or facility. The SDT needs to revise this requirement to clarify that it pertains only to communicating the Operating State Alert Levels and nothing more.</p> <p>None of the examples in either of the attachments appear to address EEAs (EEA is mentioned in the top paragraph of page 9 that is included in EOP-002-2.1) or SOLs. This limits the use of Interoperability Communications to only events where there exists either a physical or cyber threat, or where an IROL can’t be mitigated. The requirements should focus on what is required, not how.</p>

Organization	Yes or No	Question 4 Comment
		<p>The RC and encompassed entities should be required to define terms that will be used in communications. This would allow for the use of terms that are well understood in an area, rather than having to add new terms.</p> <p>The Background Information in this Comment Form introductory section mentions “The SDT proposes four system condition alerts instead of initial three in the RCWG version.” However, Attachment 1 only mentions 3 alerts - Physical Security, Cyber Security, and Transmission Emergency Alerts leading to confusion.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Western Area Power Administration	Disagree	<p>It’s very confusing to refer to each condition using a color and/or a level number. In other areas, we are accustomed to using Alert Levels (i.e. EEA states). The color designation seems to throw in an unnecessary element that doesn’t add any value.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Long Island Power Authority	Disagree	<p>LIPA believes the use of “shall” and “all” coupled with the broad applicability of this Standard and the broad definition of Interoperability Communication will result in entities either not complying with R2 or making statements regarding the Operating Alert State when unnecessary.</p> <p>Attachment 1-Com-003 is very prescriptive in the use pre-defined terminology, colors and levels, and what to report on. There is no benefit to specifying the specific terminology. This requirement should require the RC to define the terms/levels/alert states to include within the CPOP that sufficiently communicate the increased levels of Alert or Response encountered/required.</p> <p>Many entities have invested time and training in the existing processes that meet the intent of this requirement.</p> <p>Read strictly, the only predefined alert conditions are Physical security, Cyber security and Transmission Security as it applies to the RC and TOP only.</p> <p>LIPA notes that R2 in the draft Standard does not match R2 in this question. Specifically the word ALL is not in the Standard.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		

Organization	Yes or No	Question 4 Comment
Manitoba Hydro	Disagree	<p>Move this new requirement R1.2 in COM-002-2.</p> <p>1) COM-003-1 R2 “Pre-defined system condition terminology” are all planned definitions.</p> <p>a.COM-003-1 purpose is to “convey information effectively” meaning the use of English, NATO, three-part communication, 24 time format are all verbal aspects to accomplish this purpose and not suited to pre-defined or planned items.</p> <p>2) COM-003-1 R2 appears more appropriate and relevant placed in COM-002-2. COM-002-2’s Purpose is “capabilities for addressing real time emergencies and to ensure communications by personnel are effective.”</p> <p>a. Placing “Pre-defined system condition terminology” in COM-002-2 after R1.1 as R1.2 appears to have more of a chronological approach.</p> <p>i.R1.1 states “conditions that could threaten”</p> <p>ii.R1.2 use “pre defined system conditions”</p> <p>Conclusion: Remove COM-003-1 R2 and replace in COM-002-2 as R1.2</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
NERC Staff	Disagree	<p>NERC staff agrees with the principle behind Requirement R2. However, it appears that two separate communication actions are being performed, the action to notify the Reliability Coordinator, and the action by the Reliability Coordinator to communicate the alert level to affected functional entities. Therefore, we recommend that that Requirement R2 be split into two requirements and offer the following wording:</p> <p>A Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall notify its Reliability Coordinator when it becomes aware that there is a situation involving the facilities under its control that meets the criteria for an alert, as specified in Attachment 1 - Operating State Alert Levels, to keep the Reliability Coordinator informed on the initial and subsequent status of the situation.</p> <p>When a Reliability Coordinator is notified (or becomes aware) that there is a situation within its Reliability Coordinator Area that meets conditions specified in Attachment 1 - Operating State Alert Levels, the Reliability Coordinator shall use the phraseology when making the notifications specified in Attachment 1 to keep others informed on the initial and subsequent status of the situation.</p> <p>The NERC staff recommends that the SDT review the content of the Attachment for consistency, clarity and</p>



Organization	Yes or No	Question 4 Comment
		omissions (such as found in the table on page 14 of the draft - the cell, "Notify the following entities:" is blank).
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a "communication protocol" and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
NextEra Energy Resources, LLC	Disagree	NextEra agrees that standard system condition terminology could be beneficial in communications but this requirement introduces alert level conventions with no clarity on what the corresponding associated actions for such levels are and as a result, aside from the value derived from having improvement in terminology during communications, it is unclear what reliability improvements this will achieve in carrying out instructions.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a "communication protocol" and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Indiana Municipal Power Agency	Disagree	No. Does attachment 1 cover all possible communication scenarios and terminology? Using pre-defined condition terminology does not allow flexibility in communications and for near changes in communications that might be needed depending on the situation.
<p><b>Response: The SDT thanks you for your comments. Response: The SDT determined that determining alert levels falls outside the scope of a "communication protocol" and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
PEF	Disagree	PEF recommends that the color coding and definitions that are used by Homeland Security also be used for the notification of physical and cyber emergency alerts reported to the RC. This would follow the ES-ISAC standard already adopted by the electric industry.  If the attachment is adopted as is, PEF recommends adding the EEA levels to provide "pre-defined system condition terminology."
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a "communication protocol" and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
NYSEG	Disagree	R2 indicates the need to use pre-defined system condition terminology for all verbal and written Interoperability Communications yet Attachment 1 only defines transmission loading and physical and cyber security threats. Either need to rewrite the Requirement to include only these circumstances, or define every possible system condition used in Interoperability Communications.  Additionally, there does not appear to be any benefit in attempting to pre-define transmission loading, and physical and cyber alert system conditions since the actions associated with each are similar, if not the same,

Organization	Yes or No	Question 4 Comment
		for almost all conditions.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Bureau of Reclamation	Disagree	Reclamation does not agree with the Attachment 1 condition color coding as it will conflict with the DHS system of notification of change in threat condition. The three color system is unique to the notifications issued by DHS. Use of that color system is reserved by the DHS. Federal agencies are required to perform specific tasks when DHS issues alerts or changes the threat condition. Only DHS can change the threat condition. The concept needs to be revised considerably to avoid the conflict or create a potential security issue.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Pepco Holdings, Inc. - Affiliates	Disagree	Requiring system operators to use the color-coded system condition terminology during communication adds a layer of responsibility that will distract from the operator’s real-time reliability-related tasks.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Georgia Transmission Corp	Disagree	Should only include physical security emergency, cyber security emergency, or transmission emergency as stated in Attachment 1 instead of Interoperability Communications.
<p><b>Response: The SDT thanks you for your comments. The proposed term “Interoperability Communication” has been removed from the Standard. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Southern Company Transmission	Disagree	<p>Southern Company supports the SERC SOS comments.</p> <p>SERC SOS comments:</p> <p>The Alert Level Guides in Attachment 1 are not consistent with the proposed definitions of reliability-related communications. Both the Reliability Directive and Interoperability Communication, as currently defined, require some emergency action or change of equipment status. Yet the Alert Level Guides were intended for announcement, not actions</p> <p>Requiring system operators to use the color-coded system condition terminology during communication adds a</p>

Organization	Yes or No	Question 4 Comment
		<p>layer of responsibility that will distract from the operator’s real-time reliability-related tasks.</p> <p>We also do not feel that these Alert Level Guides apply to all the responsible entities identified under Applicability in the draft standard - for example, TSPs and LSEs are not included in the list of notifications.</p> <p>The requirement to use the central time zone for logging the time of an alert is problematic in that all communication tools, such as the RCIS, will need to be re-vamped</p> <p>We question whether there will be a measurable reliability benefit by so doing. There is also some redundancy in the Alert Level Guides - for example, the CIP-001 standard requires notification of sabotage events - it should not be repeated in this standard.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Entergy Services	Disagree	<p>Term Interoperability Communications should be removed from the standard. As written, the actions that fall into interoperability communications are much broader than the set of conditions described in the table in attachment 1. To the extent that the communications are outside of the ones in the table, entities will be non-compliant because their communications are not pre-defined.</p> <p>Recommend that this requirement be changed to indicate that “Any Reliability Coordinator or Transmission Operator experiencing a physical security emergency, cyber security emergency, or transmission emergency will communicate their status using the conditions and processes in Attachment 1.”</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
PJM	Disagree	<p>The Alert Level Guides in Attachment 1 are not consistent with the proposed definitions of reliability-related communications. Both the Reliability Directive and Interoperability Communication, as currently defined, require some emergency action or change of equipment status. Yet the Alert Level Guides were intended for announcement, not actions.</p> <p>Further, the “pre-defined” system conditions and alert levels are too detailed and overly prescriptive. System operators need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task does not lend itself to promptly and effectively deal with the emergency situation.</p> <p>We also do not feel that these Alert Level Guides apply to all the responsible entities identified under</p>

Organization	Yes or No	Question 4 Comment
		<p>Applicability in the draft standard - for example, TSPs and LSEs are not included in the list of notifications. The requirement to use the central time zone for logging the time of an alert is problematic in that all communication tools, such as the RCIS, will need to be re-vamped.</p> <p>We question whether there will be a measurable reliability benefit by doing so. There is also some redundancy in the Alert Level Guides - for example, the CIP-001 standard requires notification of sabotage events - it should not be repeated in this standard. This also needs to be reconciled with EOP-004 and CIP-001 and the SAR formed to address those redundancies.</p> <p>It is not clear what value there is in identifying alert levels. There does not appear to be any differentiation in actions taken based on the alert levels. Why not just state the number of substations attacked, etc?</p> <p>Attachment 1 and R2 do not appear to be in synch primarily due to the definition of Interoperability Communications. By definition, Interoperability Communication is about how entities change the state of the BES and Attachment 1 is about notifying of what already happened to the BES.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
<p>PJM SOS Comments</p>	<p>Disagree</p>	<p>The Alert Level Guides in Attachment 1 are not consistent with the proposed definitions of reliability-related communications. Both the Reliability Directive and Interoperability Communication, as currently defined, require some emergency action or change of equipment status. Yet the Alert Level Guides were intended for announcement, not actions.</p> <p>Further, the “pre-defined” system conditions and alert levels are too detailed and overly prescriptive. System operators need to spend time looking for the right color and level to communicate the prevailing system condition terminology to avoid violating the standard. This task does not lend itself to promptly and effectively deal with the emergency situation.</p> <p>We also do not feel that these Alert Level Guides apply to all the responsible entities identified under Applicability in the draft standard - for example, TSPs and LSEs are not included in the list of notifications. The requirement to use the central time zone for logging the time of an alert is problematic in that all communication tools, such as the RCIS, will need to be re-vamped.</p> <p>We question whether there will be a measurable reliability benefit by doing so. There is also some redundancy in the Alert Level Guides - for example, the CIP-001 standard requires notification of sabotage events - it should</p>

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		<p>not be repeated in this standard. This also needs to be reconciled with EOP-004 and CIP-001 and the SAR formed to address those redundancies.</p> <p>It is not clear what value there is in identifying alert levels. There does not appear to be any differentiation in actions taken based on the alert levels. Why not just state the number of substations attacked, etc?</p> <p>Attachment 1 and R2 do not appear to be in synch primarily due to the definition of Interoperability Communications. By definition, Interoperability Communication is about how entities change the state of the BES and Attachment 1 is about notifying of what already happened to the BES.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
<p>SERC OC&amp;SOS Standards Review Group</p>	<p>Disagree</p>	<p>The Alert Level Guides in Attachment 1 are not consistent with the proposed definitions of reliability-related communications. Both the Reliability Directive and Interoperability Communication, as currently defined, require some emergency action or change of equipment status. Yet the Alert Level Guides were intended for announcement, not actions</p> <p>Requiring system operators to use the color-coded system condition terminology during communication adds a layer of responsibility that will distract from the operator’s real-time reliability-related tasks.</p> <p>We do not feel that these Alert Level Guides apply to all the responsible entities identified under Applicability in the draft standard - for example, TSPs and LSEs are not included in the list of notifications.</p> <p>There is also some redundancy in the Alert Level Guides - for example, the CIP-001 standard requires notification of sabotage events - it should not be repeated in this standard.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
<p>E.ON U.S. LLC</p>	<p>Disagree</p>	<p>The attachment adds a whole new lexicon for BES operators. E.ON U.S. suggests integrating attachment 1 and the relative alert levels into the EOP standards. The purpose of COM-003 indicates this standard is to ensure understanding of information during emergency alerts and emergency situations and not to establish the conditions, required notification, or levels of emergency alerts.</p> <p>While the attachment has been identified as a product of the RCWG it is unclear whether it has been reviewed and approved through the normal NERC and industry vetting.</p>

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<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
MRO NERC Standards Review Subcommittee	Disagree	The attachment only applies to the RC. We recommend R2 state that the RC shall use pre-determined system condition terminology and the BA, DP, GOP, TOP, and TO shall follow orders and directives unless such acts violate safety, etc. Either the attachment should be changed or the requirement should be changed for accurate accountabilities.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
ATC and ITC	Disagree	The Attachment pertains to requirements of the RC, not all entities. Either the attachment should be changed or the requirement should be changed for accurate accountabilities.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Consumers Energy	Disagree	The COM Standards should put forth the methodology of communication, not provide communication for each event. For example, CIP-001 describes the communication to take place for CIP attacks, be they physical or cyber, EOP-002 describes the process for Generation and Capacity Emergencies. Utilizing the similar sounding vernacular (EEA,CEA,PSEA,TEA) is not prudent.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Progress Energy Carolina, Inc	Disagree	The link between COM-003-1 R2 and Attachment 1 for entities other than the Reliability Coordinator is unclear. R2 links with Attachment 1 and is applicable to a host of entities while Attachment 1 seems to only provide pre-defined system condition terminology for use during notifications by the RC to other entities.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
PSEG Companies	Disagree	The PSEG Companies agree with the concerns expressed in the comments filed by the PJM System Operations Subcommittee (SOS) Group.
<p><b>Response: The SDT thanks you for your comments.</b></p>		

Organization	Yes or No	Question 4 Comment
<p>Please see our responses to by the PJM System Operations Subcommittee (SOS) Group.</p>		
<p>Pacific Northwest Small Utilities Comment Group</p>	<p>Disagree</p>	<p>The referenced attachment appears to list alert levels for RCs to use in communicating threats to BAs, DPs, GOs, TOPs and TOs. This requirement should apply only to RCs.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
<p>Xcel Energy</p>	<p>Disagree</p>	<p>The use of Yellow, Orange and Red, as related to the various alert levels, may conflict with existing color requirements that entities already have in use. We recommend instead only refer to the PSEA, CEA and TEA levels. Additionally, it is unclear how R2 applies to anyone other than the RC. Attachment 1 seems to only apply to the RC. If this is correct, then why would the other entities listed in R2 have to incorporate that terminology into their CPOP? If this is not correct, please clarify the requirement so that the other entities can clearly understand what is expected.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
<p>The Empire District Electric Company</p>	<p>Disagree</p>	<p>This attachment is not needed. It is a duplicate of the NERC Alert process that is already established as well as CIP-001 Sabotage reporting requirement R2 along with requirements of EOP-001 R5 and EOP-004 R2 dealing with disturbance reporting. The last thing the industry needs is more paperwork requirements that are redundant when an emergency event happens on the system.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
<p>Ameren</p>	<p>Disagree</p>	<p>This is an ambiguous reference in all of NERC standards for all but the RC. How would an LSE interpret this in communication between them and a DP. Would there ever be a red condition for issues that affect them? And as it relates to operating, it looks like this is exclusive of EEA type events, i.e. BA type emergencies seem to not be represented. It would seem that the pre-defined conditions should be established for each interaction that each entity might have, e.g. a predefined set for a BA to a TOP, a BA to an LSE, et al. While each entity can certainly address the 3 scenarios in Attachment 1 (RC to entity) those are not the only conditions where communication affects BES reliability.</p>

Organization	Yes or No	Question 4 Comment
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
NIPSCO	Disagree	This may not be necessary.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Power South Energy	Disagree	This requirement is unnecessary.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
PPL	Disagree	This requirement should be applicable to a RC only. Some registered entities may not even receive these types of communications. Since the responses are the same for all levels noted in attachment 1, there is questionable value to defining this level of additional administrative detail.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Puget Sound Energy	Disagree	<p>This requirement, along with the associated M2, will be almost impossible to substantiate for audit purposes. For example, would an entity be required to present, and an auditor be required to listen to, voice recorder records for the data retention time? It is difficult to image another way to prove an entity complied with this requirement</p> <p>Further the statement "as defined in Attachment 1" implies a set of definitions can be found and yet Attachment 1 is not structured in such that way.</p> <p>Is the system condition terminology just the terms "condition yellow", "condition orange", and "condition red".</p> <p>The procedural and time aspects described in this attachment create confusion as to whether compliance is required under this standard or a different one.</p> <p>Suggest more simplified presentation of definitions or glossary for clarity.</p> <p>Finally the inclusion of "written" communications creates a question relative to real-time information or whether this is extending beyond that timeframe. Most real time information sharing is verbal due to the</p>



Organization	Yes or No	Question 4 Comment
		urgency of it. Suggest removal of written.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
Santee Cooper	Disagree	Utilization of a color-coded system for all verbal and written Interoperability Communications adds a layer of complexity to the System Operator that is not necessary.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
South Carolina Electric and Gas	Agree	We agree with the proposal, however we feel that the color system should be evaluated to better distinguish the type of attack for example using P-YELLOW for physical vs. C-YELLOW for cyber instead of just "YELLOW" for both.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
NRECA RTF Members	Agree	We believe there is a need to use pre-defined system condition terminology and the ones provided in the attachment are easy to understand.
<p><b>Response: The SDT thanks you for your comments. Note that based on stakeholder comments, the team deleted the requirement. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		
FirstEnergy	Disagree	We do not support R2 and its referenced attachment and feel that they should be removed. The requirement and attachment are too convoluted, create confusion among system operators, and not necessary with regard to the goal of this standard. This standard mandates proper three-part communication in all reliability-related communication (including alert level situations). Other standards should define and mandate rules associated with the specifics surrounding urgent action situations (i.e. CIP, TOP, EOP standards). Together these standards will arrive at proper communication between entities during alerts.
<p><b>Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.</b></p>		

Organization	Yes or No	Question 4 Comment
Electric Market Policy	Disagree	<p>We object due to the following reasons;</p> <p>1 - There are 3 versions of Attachment 1-COM-003-1 which is potentially confusing. We suggest separating into 3 attachments, one for each type of notification.</p> <p>2 - The level(s) identified in the notification text are at odds with the condition (color vs. numerical). It is suggested that the standard either use to Condition (color) or the level (numerical).</p> <p>3 - None of the Operating State Alert Levels in Attachment 1 appears to address Energy Emergency Alerts (EEAs). The note in the “Attachment 1-COM-003-1 defines normal, alert, and emergency operating conditions as they relate to Transmission Loading, Physical and Cyber Security. These definitions for Transmission Loading, Physical and Cyber Security Alert states align with the Emergency Energy Alert (EEA) states (as already described in NERC Reliability Standard EOP-002-2.1). The time frame for declaration of these Alert states shall be consistent with the approach used to declare EEAs and would normally apply to Real Time declarations and not forecast conditions.” This seems to limit use of Interoperability Communications to only events where there exists either a physical or cyber threat, or where an IROL can’t be mitigated. This emphasizes the confusion as described in item 2 above where the EEA levels in EOP-002-2.1 uses numerical values (i.e. EEA Level 1) without the colored conditions. We recommend adding a new section to Attachment 1 ‘Operating State Alert Levels’ as: ‘Reliability Coordinator Notifications for Energy Emergency Alerts.</p> <p>’4-Attachment 1 pertains specifically to Operating State Alert Levels and says nothing about the communication of information to be used to change the state or status of a BES element or facility (which is the SDT’s proposed definition of Interoperability Communications). Therefore, it is not appropriate to require that all verbal and written Interoperability Communications use the pre-defined terminology in Attachment 1.</p> <p>Only those communications concerning Operating State Alert Levels should be required to use that terminology. By the proposed definition, such communications are not Interoperability Communications since the information is not used to change the state or status of a BES element or facility. The SDT needs to revise this requirement to clarify that it pertains only to communicating the Operating State Alert Levels and nothing more.</p>

**Response: The SDT thanks you for your comments. The SDT determined that determining alert levels falls outside the scope of a “communication protocol” and has removed the requirement to use Attachment 1 from the revised standard.**

5. Requirement R4 of the draft COM-003-1 states, “Each Responsible Entity shall use Central Standard Time (24 hour format) as the common time zone for all verbal and written Interoperability Communications.” Do you agree with this proposal? If not, please explain in the comment area.

**Summary Consideration:**

The majority of commenters stated Requirement R4 would add confusion for the operators and decrease reliability. Some recommend the use of another time in place of Central Standard Time. In response, the OPCP SDT has modified the standard to use the 24 hour format (new 1.1.2) in all Operating Communications and the inclusion of a time zone reference (new 1.1.3) when Operating Communications occur between entities in different time zones.

There were also several comments of a general nature that indicated time zone issues as a non-factor for reliability. The OPCP SDT has modified the requirement to focus on Operating Communications in a format that it believes would increase reliability as it would reduce the potential for a miscommunication related to the desired time of a system operation.

Organization	Yes or No	Question 5 Comment
Bureau of Reclamation	Agree	
ExxonMobil Research and Engineering	Agree	
Georgia Transmission Corp	Agree	
Independent Electricity System Operator	Agree	
Old Dominion Electric Cooperative	Agree	
Oncor Electric	Agree	

Organization	Yes or No	Question 5 Comment
Delivery		
Sunflower Electric Power Corp.	Agree	
Westar Energy	Agree	
Santee Cooper	Disagree	A common time zone is not necessary and is overly prescriptive. Companies should not have to worry about self-reporting or receiving a compliance violation if someone states the wrong time during a conversation.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity must explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
American Electric Power	Disagree	AEP believes that the significant efforts and significant system changes necessary to support a common time zone does not provide a significant enough reliability benefit. In fact, the focus on a common time may divert attention away from more pressing operational reliability needs.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone , and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
Electric Market Policy	Disagree	Any confusion about what time is being verbally communicated should be cleared up by three-part communications. There should be no confusion about what time is being communicated in writing as long as the time zone and AM\PM designation are included. Besides, many entities exchange written information via web-enabled applications that allow the users to configure their interface to show time in whatever format and time zone they prefer. This eliminates confusion. Operators will continue to use local time in their communications with field personnel, support staff, and management, and we see no demonstrable reliability-related need to require every operator in North America to have to convert their local time to CST in their communications with other operators. However, if the SDT feels a standard time must be adopted, it should be

Organization	Yes or No	Question 5 Comment
		GMT as this is the time that used by all 'true time' devices.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone , and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
Manitoba Hydro	Disagree	<p>As per below.</p> <p>1)The 24 hour format will certainly reduce the confusion of AM and PM and at present seems to be the current best practice for all entities so should not be a major change.</p> <p>2)Examining the definition of “Interoperability Communications” means that there is and will be real time communications with entities in other times zones, thus it is assumed that this being an NERC standard is enforcing that all other time zones (PST, MST, EST) will be using CST when communicating with interoperability.</p> <p>a. If this is the case, it appears that the other time zones (PST, MST and EST) must make effort to modify their local time to synchronize with CST.</p> <p>b. This brings to point that when interoperability communication is used, this fact must be mentioned, instead of 13:53, it should be 13:53 CST.</p> <p>3) Adding CST to verbal time formats will be difficult to implement, so maybe a statement confirming the time zone should be appropriate each time interoperability communications is used when required. Conclusion: 24 hour format is fine, further clarify that all other time zones must use CST.</p>
<p><b>Response: The SDT thanks you for your comments. The second draft version of COM-003-1 eliminates the term “Interoperability Communication” and now proposes the term “Operating Communications” which is defined as communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.</b></p> <p><b>The SDT is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		

Organization	Yes or No	Question 5 Comment
ATC and ITC	Disagree	ATC is in the Central Standard Time zone, and would not be directly impacted by this requirement. With that being said we are concerned that forcing an organization to refer to a time zone that is not local may result in an increase of errors and a decrease in reliability. See comments for question #3.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p> <p>Please see response to question #3.</p>		
British Columbia Transmission Corporation	Disagree	BCTC's position: as a majority of the Interoperability Communications is within our time zone there is no advantage in using Central Standard Time as this will only make the communications more difficult as both parties are required to change time, R4 is unreasonable.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
California Independent System Operator	Disagree	CAISO Comments; Any standardization of time zones, in order to enhance reliability or reduce costs would use GMT as the reference zone in our opinion. The use of Central Standard Time is problematic because some months of the year other time zones would be at the same time as CST (Eastern Daylight Savings Time) and others not. Adopting systems that require system operators to sometimes operate in a time zone that is not their own local time and sometimes to operate in a time zone that is equivalent to their own local time is standardization that is not actually standard. How does using Central Standard Time for all verbal and written communication improve or support reliability? The SDT needs to explain how this requirement provides an adequate level of reliability for real-time operations for any entity operating outside the Central Standard Time Zone.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address</p>		

Organization	Yes or No	Question 5 Comment
<p><b>your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
<p>New York State Reliability Council</p>	<p>Disagree</p>	<p>Comments: This requirement will burden those entities whose operations and communication needs are with other entities in the same time zone, which represents the overwhelming majority of all communications performed. It will increase the likelihood of errors for such entities. Further, some entities are operating both NERC BES elements and non-BES elements from the same control room. This requirement will significantly impact the efficiency and the safety of workers within those entities. NYSRC notes that R4 in the draft Standard does not match R2 in this question. Specifically the word ALL is not in the Standard.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
<p>Consumers Energy</p>	<p>Disagree</p>	<p>Common Time Zone has been discussed for decades. There was little or no evidence a common time zone standard would have prevented any of the system disturbances experienced since 1996 let alone the blackout of 2003.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
<p>Xcel Energy</p>	<p>Disagree</p>	<p>Do not agree with the requirement to use CST. By requiring the use of CST it may actually introduce an element of error for those who do not routinely operate in that time zone and must make mental corrections for the time zone they are in. Additionally, some agreements already exist that stipulate what time zone is to be used.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address</b></p>		

Organization	Yes or No	Question 5 Comment
<p><b>your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
<p>NextEra Energy Resources, LLC</p>	<p>Disagree</p>	<p>Existing market and reliability communication methods already ensure that time-zone adjustments occur. It is critical that the feasibility, impact, and logistical aspects of implementing this change be rigorously reviewed and understood to inform this standard’s development. Conceivably, the result of that analysis could expose significant risks outweighing the purported benefits of implementing a single time-zone policy. Any implementation or transition gaps between the time format and references used by reliability coordinators, their corresponding systems, and the interfaced systems of market participants would be extremely detrimental to system stability and ongoing market operations.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
<p>Transmission Owner</p>	<p>Disagree</p>	<p>Existing market and reliability communication methods already ensure that time-zone adjustments occur. It is critical that the feasibility, impact, and logistical aspects of implementing this change be rigorously reviewing and understood to inform this standard’s development. Any implementation or transition gaps between the time format and references used by reliability coordinators, their corresponding systems, and the interfaced systems of market participants would be extremely detrimental to system stability and ongoing market operations.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
<p>Sunflower Electric Power Corporation</p>	<p>Agree</p>	<p>General question will time follow central prevailing time (standard/daylight savings)?</p>



Organization	Yes or No	Question 5 Comment
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, and include whether the time is standard or daylight saving when communicating with one or more entities in a different time zone.</b></p>		
<p>Hydro-Québec TransEnergie</p>	<p>Disagree</p>	<p>HQT agrees with using 24 hour format.</p> <p>However, there is no reliability need to use a common time zone for communications. There is already a requirement to use hour ending for scheduling purposes, inadvertent accounting, CPS and other standards where needed. There is no additional reliability need to use a common time zone.</p> <p>The time zone should be identified in the communication. Not only does this requirement attempt to determine HOW entities operate within their various footprints, it would significantly change the way many markets are structured. To implement this into existing Markets would cost significant time, money and resources while not enhancing reliability in these areas. When operating across time-zones, simply referencing “Central Standard Time” or “Eastern Standard Time” is sufficient for operating entities to reliably operate. The time zone adopted by the respective Reliability Coordinator (RC) and their area control center, e.g., NYISO Eastern Standard Time (EST), should be used. If each entity in the area and the RC are all using EST (or daylight savings), then why would a time zone be used that is foreign to all parties in the area? This can lead to considerable confusion. What cannot be ignored is how many entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc.</p> <p>We are strongly opposed to this requirement. The requirement should be that those entities which need to communicate and are in different time zones define which time they will use for communications</p> <p>.Any confusion about what time is being verbally communicated should be cleared up through three-part communications. There should be no confusion about what time is being communicated as long as the time zone (where applicable), and the 24 hour format designations are included. Besides, many entities exchange written information via web-enabled applications that allow the users to configure their interface to show time in whatever format and time zone they prefer. This eliminates confusion.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating</b></p>		

Organization	Yes or No	Question 5 Comment
<p><b>Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
NIPSCO	Agree	I believe we call this "system time" in our area
<p><b>Response: The SDT thanks you for your comments. Many stakeholders proposed modifications to the standard – and the SDT revised the standard to only require inclusion of time and time zone when communicating with one or more entities in a different time zone.</b></p>		
E.ON U.S. LLC	Disagree	<p>If it is the intent that the requirements of this standard apply not only to control room operators but field personnel (line crews, substation crews, etc.) then E ON US is not in favor of using a common time zone nationwide. The confusion that this change could create in real-time operations outweighs the BES reliability benefit E.ON US would also like clarification that this requirement does not apply to control systems or elements thereof that may log equipment operations. The background information above suggests this possible interpretation.</p>
<p><b>Response: The SDT thanks you for your comments. This does include communications that involve field personnel.</b></p>		
We Energies	Disagree	<p>If requiring one standard time zone, it would seem prudent to specify Greenwich Mean Time (GMT) as a universal standard. That being said, solely utilizing Central Standard Time (CST), or even GMT, as the common time zone may cause undue confusion given that MISO and PJM already operate with established processes and systems that are inconsistent with this, and are based on their own market timing. In addition, many plant personnel and procedures already have a long and engrained history of successful operation under existing timing directions, which are not aligned with market timing. Forcing every plant across multiple time zones to establish a new standard ignores the need for cases of special consideration and historical circumstances. The potential confusion due to the forced timing standard across many entities within a given area is too high a price to pay for the possible clarity by a limited few due to the switch to CST. A preferred alternative would include focusing the standard on requiring very clear communication of the time zone being specified for a given Reliability Directive. Thus, compliance enforcement would only pertain to Reliability Directives.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone. This requirement would apply to verbal and written “Operating</b></p>		

Organization	Yes or No	Question 5 Comment
<p><b>Communications” as defined in the current draft of the standard. If you are a responsible entity as defined in the requirement then it is applicable.</b></p>		
<p>The Empire District Electric Company</p>	<p>Disagree</p>	<p>In dealing in real time, what possible benefit can be had by this requirement? I see this requirement benefitting NERC analysis after the fact and can lead to more operating mistakes in real time than it benefits. If a situation is occurring in real time and two entities are in communication with each other, the requirement of a common time zone holds no benefit.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
<p>American Municipal Power</p>	<p>Disagree</p>	<p>In other large industries one time zone is usually picked, and the time zone that is usually picked is the EST zone (JP Morgan Chase is an example). I feel that picking a standard time zone is very important, but I have not seen significantly good arguments to use CST. EST, on the other hand, is where the majority of the load for the electric industry resides. I suggest changing the standard to EST but with the 24 hour format.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
<p>NERC Staff</p>	<p>Disagree</p>	<p>In the “Background Information” section of this Comment Form, you state, “The SDT believes that Interoperability Communications would be enhanced with the use of a common time zone. Central Standard Time was chosen as it is already in use for NERC Time Error Corrections. The Blackout Report cited the need to tighten communication protocols and the SAR includes consideration of a common time zone to minimize mismatched time signature issues between control systems especially during an emergency.”NERC staff would like to see more detailed justification on how reliability would be enhanced with this requirement. This appears to solve issues for communications between time zones, but may add additional confusion for all additional communications that exist within a common time zone.</p>

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<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p> <p>The OPCP SDT believes that any critical element to an Operating Communication (time, ordered action, clear understanding by all parties) must be governed by protocols that reduce the risk of communicating a misunderstood message. A misunderstood message increases the risk of a mishap which could destabilize the BES by creating an improper circuit arrangement. The time an event is supposed to occur in a sequence is critical. If a sender gives a time in EST and the receiver interprets it as CST the risk of a mishap that will affect reliability (not to mention people and equipment) increases dramatically.</p>		
<p>Progress Energy Carolina, Inc</p>	<p>Disagree</p>	<p>Mandating that all “Interoperability Communications” be based on Central Standard Time could generate an error precursor- (i.e. some entity communicating a reliability directive in a location using EST to a different entity in a location using EST having to convert the time stamp to CST introduces possibilities of errors and/or delays.) A better approach for those entities that communicate across time zones is for those entities to agree/coordinate on a time standard reference.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
<p>NorthWestern Energy</p>	<p>Disagree</p>	<p>NorthWestern appreciates the opportunity to comment. We believe the requirement to use Central Standard Time will cause unnecessary confusion (translating to a different time zone and possibly to a different time reckoning - standard or daylight) at a time when the need for clarity is critical. NorthWestern suggests that each entity use their local time zone when issuing switching orders. Each entity should state the time zone they are using when giving any time reference (e.g., 15:20 Mountain Daylight Time) if necessary.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT understands your concerns and adopted your suggestion. In the second draft of COM 003, instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time</p>		

Organization	Yes or No	Question 5 Comment
<p>and time zone when communicating with one or more entities in a different time zone.</p>		
PEF	Disagree	PEF feels that the use of CST will create too much confusion within the different entities, particularly during emergency communications. We recommend the use of GMT instead.
<p><b>Response: The SDT thanks you for your comments.</b>                      The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
Pepco Holdings, Inc. - Affiliates	Disagree	PHI believes that mandating one time zone for all Interoperability Communications will create more confusion during an emergency that it will prevent and may contribute to increased reliability issues.
<p><b>Response: The SDT thanks you for your comments.</b>                      The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
Southern Company Transmission	Disagree	Southern Company supports the SERC SOS comments. SERC SOS comments: We feel that this requirement of a common time zone is overly prescriptive. The requirement should be that entities operating in different time zones agree on how to best eliminate any confusion regarding the time difference. Entities that routinely operate in different time zones already have an effective system for dealing with time differences. There seems to be no incentive to change a system that already works quite well, and the cost of updating computer systems could prove prohibitive. This group feels that mandating a common time zone across all of North America can only lead to confusion and increased reliability issues.
<p><b>Response: The SDT thanks you for your comments.</b>                      The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		

Organization	Yes or No	Question 5 Comment
PSEG Companies	Disagree	The PSEG Companies agree with the concerns expressed in the comments filed by the PJM System Operations Subcommittee (SOS) Group.
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
Puget Sound Energy	Disagree	The requirement for common time zone should be at the discretion of the Reliability Coordinator in the respective region to determine. The conversion to CST has no apparent value. It would be much more reasonable to require communications related to time to include the time zone used in that communication. If common time zone across the nation is required it should only be imposed on the RCs as they would communicate with each other more readily than entities to other national entities. If an entity does not operate within the CST, the need to convert during periods of stress may increase the potential for error and reduce reliability.
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
PacifiCorp	Disagree	The sole use of Central Standard time would add confusion to the for Interoperability communication Communications process that would detract would have the unintended consequence of creating more confusion, particularly during emergency communications. While PacifiCorp appreciates the need for minimizing mis-matched time signatures between control systems, it believes that mandating one time zone for all Interoperability Communications will create more confusion during an emergency that it will prevent.
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		

Organization	Yes or No	Question 5 Comment
National Grid	Disagree	The use of central time is unnecessary and may cause more confusion when converting times. The requirement should be that those entities which need to communicate and are in different time zones, define which time they will use for communications.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
IRC Standards Review Committee	Disagree	There is no need to use a common time zone for communications. There is already a requirement to use hour ending for scheduling purposes, inadvertent accounting, CPS and other standards where needed. There is no demonstrated benefit to reliability to use a common time zone. The time zone should be identified in the communication. Use of CST will cause significant and unnecessary costs and the resulting reliability benefit is not clear. Some of the costs will arise to change systems such as RCIS, IDC, scheduling and E-Tag systems, etc. Not only does this requirement attempt to determine HOW entities operate within their various footprints, it would significantly change the way many markets are structured. To implement this into existing Markets would cost significant time, money and resources while not enhancing reliability in these areas. We believe that, when operating across time-zones, simply referencing “Central Standard Time” or “Eastern Standard Time” is sufficient for other operating entities to reliably operate; also, let’s not lose sight of HOW MANY entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We are strongly opposed to this requirement.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT understands your concerns and adopted your suggestion for including the time zone in communications that involve communicating with one or more entities in a different time zone.</b></p>		
ISO New England Inc.	Disagree	There is no need to use a common time zone for communications. There is already a requirement to use hour ending for scheduling purposes, inadvertent accounting, CPS and other standards where needed. There is no demonstrated benefit to reliability to use a common time zone. The time zone should be identified in the communication. Use of CST will cause significant and unnecessary costs and the resulting reliability benefit is not clear. Some of the costs will arise to change systems such as RCIS, IDC, scheduling and E-Tag systems, etc.

Organization	Yes or No	Question 5 Comment
		<p>Not only does this requirement attempt to determine HOW entities operate within their various footprints, it would significantly change the way many markets are structured. To implement this into existing Markets would cost significant time, money and resources while not enhancing reliability in these areas. We believe that, when operating across time-zones, simply referencing “Central Standard Time” or “Eastern Standard Time” is sufficient for other operating entities to reliably operate; also, let’s not lose sight of HOW MANY entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We, and our members, are strongly opposed to this requirement.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and adopted your suggestion for including the time zone in communications that involve communicating with one or more entities in a different time zone.</b></p>		
<p>Indiana Municipal Power Agency</p>	<p>Disagree</p>	<p>There is no need to use a common time zone. The time zone should be identified in the communication, if needed. The reliability benefit is not clear for using one time zone, and the cost associated with using one time zone will be significant and unnecessary.</p> <p>The use of just CST will cause confusion, because one ISO has all its systems in EST and another ISO systems has its systems in EPT. If an entity is required to use CST when verbally communicating to one or both of these two ISOs, then many mistakes and confusion will result because their portals continue to be in their respective times.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and adopted your suggestion for including the time zone in communications that involve communicating with one or more entities in a different time zone.</b></p>		
<p>Dynegy</p>	<p>Disagree</p>	<p>There is no reliability need to use a common time zone for communications. There is already a requirement to use hour ending for scheduling purposes, inadvertent accounting, CPS and other standards where needed. The time zone should be identified in the communication. Use of CST in all time zones will actually cause confusion and significant and unnecessary costs with no foreseeable reliability benefit. Some of the costs will arise to change systems such as RCIS, IDC, scheduling and E-Tag systems, etc.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and adopted your suggestion for including the time zone in communications that involve communicating with one or more entities in a different time zone.</b></p>		
<p>Great River Energy</p>	<p>Disagree</p>	<p>There is no reliability need to use a common time zone for communications. The prevailing time zone should be used to avoid confusion between operating staff and field personnel. Use of CST will actually cause</p>



Organization	Yes or No	Question 5 Comment
		confusion with no foreseeable reliability benefit.
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
Kansas City Power & Light	Disagree	<p>There is no reliability need to use a common time zone for communications. There is already a requirement to use hour ending for scheduling purposes, inadvertent accounting, CPS and other standards where needed. There is no additional reliability need to use a common time zone. The time zone should be identified in the communication. Use of CST will actually cause confusion and significant, unnecessary costs with no foreseeable reliability benefit. Some of the costs will arise to change systems such as RCIS, IDC, scheduling and E-Tag systems, etc.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and adopted your suggestion for including the time zone in communications that involve communicating with one or more entities in a different time zone.</b></p>		
Midwest ISO Standards Collaborators	Disagree	<p>There is no reliability need to use a common time zone for communications. There is already a requirement to use hour ending for scheduling purposes, inadvertent accounting, CPS and other standards where needed. There is no additional reliability need to use a common time zone. The time zone should be identified in the communication. Use of CST will actually cause confusion and significant, unnecessary costs with no foreseeable reliability benefit. Some of the costs will arise to change systems such as RCIS, IDC, scheduling and E-Tag systems, etc.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and adopted your suggestion for including the time zone in communications that involve communicating with one or more entities in a different time zone.</b></p>		
Northeast Power Coordinating Council	Disagree	<p>There is no reliability need to use a common time zone for communications. There is already a requirement to use hour ending for scheduling purposes, inadvertent accounting, CPS and other standards where needed. There is no additional reliability need to use a common time zone. The time zone should be identified in the communication. Not only does this requirement attempt to determine HOW entities operate within their various footprints, it would significantly change the way many markets are structured. To implement this into existing Markets would cost significant time, money and resources while not enhancing reliability in these areas. When operating across time-zones, simply referencing “Central Standard Time” or “Eastern Standard</p>

Organization	Yes or No	Question 5 Comment
		<p>Time” is sufficient for operating entities to reliably operate. The time zone adopted by the respective Reliability Coordinator (RC) and their area control center, e.g., NYISO Eastern Standard Time (EST), should be used. If each entity in the area and the RC are all using EST (or daylight savings), then why would a time zone be used that is foreign to all parties in the area? This can lead to considerable confusion. What cannot be ignored is how many entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We are strongly opposed to this requirement. The requirement should be that those entities which need to communicate and are in different time zones define which time they will use for communications. Any confusion about what time is being verbally communicated should be cleared up through three-part communications. There should be no confusion about what time is being communicated as long as the time zone (where applicable), and the 24 hour format designations are included. Besides, many entities exchange written information via web-enabled applications that allow the users to configure their interface to show time in whatever format and time zone they prefer. This eliminates confusion.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and adopted your suggestion for including the time zone in communications that involve communicating with one or more entities in a different time zone.</b></p>		
Northeast Utilities	Disagree	<p>There is no reliability need to use Central Standard Time (CST) a common time zone for communications. Eastern Standard Time (EST) is used in New England and within the NPCC region. Converting to a different time zone will be confusing to the operators and the field personnel. The time zone that will be used should be agreed between each operating entity. This should only impact those entities that cross two time zones. If NERC or a Region were to perform an investigation that involves entities across the eastern interconnection, it would be appropriate for the investigation team to request data using a specific time zone.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
Western Area Power Administration	Disagree	<p>This could be a potential problem since Operators will need to communicate with field personnel and local utilities in their local applicable time zone. It could be confusing to communicate by referring to a different time zone in other instances. It seems like it would make more sense to require that the time zone being used in a communication must be specifically and clearly referred to and identified. It doesn't matter so much</p>

Organization	Yes or No	Question 5 Comment
		WHICH time zone is used, it just matters that everyone understands which one is being used.
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
Bonneville Power Administration	Disagree	This creates a communication barrier between the utility and its customers and the local population. Do not go ahead with this provision. The very last thing that we want to do is to create confusion and this approach, given that the country itself is using different time zones, will do just that. With 3-part communications with specified time zones in Interoperability Communications as required and a common English language, the matter is covered.
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
Entergy Services	Disagree	This is also a “how” requirement and not a “what” requirement. If the industry believes that confusion exists pertaining to what time zone different entities are referring to in written and verbal communications, the requirement should be focused on ensuring clear communication of time zone information is included in verbal and written communication. Forcing entities to change to any one time zone will impose significant effort and expense without a measurable improvement in reliability. However, Entergy is not aware that reliability issues have occurred as a result of entities communicating in written or verbal format in different time zones. Entergy proposes that this requirement be removed from the standard.
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and adopted the suggestion for including the time zone in communications that involve communicating with one or more entities in a different time zone.</b></p>		
ERCOT ISO	Disagree	This is an administrative task and prescribes how something should be done. Written Interoperability Communications are typically done through automated systems, in which time zone conversion should not be an issue. Verbal communication should be thorough enough to confirm the conversion. If the industry is in favor of this requirement, then perhaps consideration should be to use Central Prevailing Time to alleviate potential confusion with changes with Daylight Savings Time.

Organization	Yes or No	Question 5 Comment
<p><b>Response:</b> The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
PPL	Disagree	This requirement is overly prescriptive and the benefit to reliability by switching everyone to CST is unclear.
<p><b>Response:</b> The SDT thanks you for your comments. The SDT revised COM-003 so that instead of requiring the use of a single continent-wide time zone, the revised standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
Power South Energy	Disagree	This requirement will be too confusing and could lead to compliance violations because someone stated the wrong time during the conversation.
<p><b>Response:</b> The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
Long Island Power Authority	Disagree	This requirement will burden those entities whose operations and communication needs are with other entities in the same time zone, which represents the overwhelming majority of all communications performed. It will increase the likelihood of errors for such entities. Further, some entities are operating both NERC BES elements and non-BES elements from the same control room. This requirement will significantly impact the efficiency and the safety of workers within those entities. LIPA notes that R4 in the draft Standard does not match R2 in this question. Specifically the word ALL is not in the Standard.
<p><b>Response:</b> The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
NYSEG	Disagree	Unless the communication is across time zones, there is no benefit to using Central Standard Time, nor is it sensible. Entire system infrastructures and business processes are driven by current, local standard time and it is far more safe, reliable, and practical to use the established current time for system operations. If there is a

Organization	Yes or No	Question 5 Comment
		<p>compelling need for definitive time notation across time zones then the requirement should dictate the addition of the time zone when referring to a specific clock time (i.e., 1400 CST, 1400 EST, 1400 ED[aylight]T, etc.).</p>
<p><b>Response:</b> The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone. Your recommendation is the genesis of the proposal we have developed in the standard.</p>		
<p>Orange and Rockland Utilities, Inc.</p>	<p>Disagree</p>	<p>Use of the CST time format would present significant challenges as expressed in the comments of question #3 listed above.</p>
<p><b>Response:</b> The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone. Please see responses to Question#3 comments above as well.</p>		
<p>FirstEnergy</p>	<p>Disagree</p>	<p>Using a specific time zone that is subject to adjustments for daylight savings introduces additional complexity for an operator and has potential to introduce additional reliability issues. A significant portion of the Eastern Interconnection transmission operators have dealings with entities that do not span multiple time zones and are solely within the Eastern Time Zone. We do not feel that it is appropriate for this standard to mandate how time is communicated during three-part communication. Operating communication can deal with several different subjects and data during a conversation, and it would be inappropriate to mandate all the possible subjects and data through standard requirements. As a best practice, and not as a mandated requirement, it would be appropriate for operators to state the time zone they are in if necessary for the situation or if requested by an entity.</p>
<p><b>Response:</b> The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate</p>		

Organization	Yes or No	Question 5 Comment
<p>whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
Ameren	Disagree	<p>We agree that all inter-entity operability communication should be on common time zone but if said communication includes routine dispatch instructions several RTOs use EST time for market operations, would they then need to change to CST? And while CST seems to have some value because it is used for time error, wouldn't it make more sense to use UTC? It is a world standard and has the benefit of not being associated with daylight savings times as Central time does (may be confusion at some times between CST and CDT)</p>
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
NRECA RTF Members	Disagree	<p>We believe that adding the Central Time zone requirement for all verbal and written Interoperability Communications is unnecessary. For these type of activities there should already be accurate time stamps from equipment such as RTUs, EMS systems etc... for record keeping and documentation activities. In the future, with the implementation of Smart Grid technologies, time stamping will be included in the developed platforms for such technology, therefore, reducing the much of the time stamping errors. Because many of the actions required for Interoperability Communications, are completed by field personnel this requirement is onerous. It could potentially impact reliability since the field personnel might be more focused on documenting the correct time zone, for compliance to the requirement and the potential impact for non-compliance, than completing the required task safely and accurately. If time-stamping is an issue in event analysis, it might be more appropriate that Central Standard Time be utilized by recording devices such as RTUs, EMS systems etc... not for the actual verbal and written communications. In addition, how will daylight savings time be addressed in the proposed requirement of this standard?</p>
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone and indicate whether the time is daylight saving or standard.</b></p>		
Florida Municipal Power Agency	Disagree	<p>We believe that any time zone can be used as long as the parties come to a common understanding of time through communication. Also, if an Entity mistakenly starts off a conversation using a time other than Central</p>

Organization	Yes or No	Question 5 Comment
(FMPPA) and some members		Standard Time, but corrects themselves during the 3-part communication process, is that a violation? We believe not, that as long as the communicating entities come to a common understanding of time, there is no violation. More clarity on this is desired. We assume such opportunity to correct mistakes is present throughout the standard and the language of the standard ought to reflect that. A high VRF is not appropriate, especially if the parties involved in the communication have a common understanding of the time, who cares what time zone?
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
MRO NERC Standards Review Subcommittee	Disagree	We believe that requiring the use of Central Standard Time (CST) in the Operating Arena (Real-Time) would reduce the level of reliability on a real-time basis. We understand that one of the primary reasons for going to one time zone is to aid in Event Analysis. It is our belief that during the analysis of an event, there is adequate time to make the necessary adjustments for time zones. The Group performing the analysis could require all data being submitted be in one time zone as the basis. Requiring the use of CST is an added burden to the Operations Staff in real-time that does not help them.
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
Transmission System Operations	Disagree	We believe that the use of Central Standard Time in non-CST areas would create confusion between the Reliability Coordinator, Transmission Operator, Transmission Owner, Generator Operators, and field personnel.
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM -003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
Duke Energy	Disagree	We don't agree with this requirement because it would introduce confusion into communications, especially in all communications other than RC to RC. RC's already have protocols in place to deal with time zone

Organization	Yes or No	Question 5 Comment
		differences, and changing that and applying it to all entities would create reliability errors. We think that this is “a solution in search of a problem”.
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
PJM	Disagree	We feel that this requirement of a common time zone is overly prescriptive. The requirement should be that entities operating in different time zones agree on how to best eliminate any confusion regarding the time difference. Entities that routinely operate in different time zones already have an effective system for dealing with time differences. There seems to be no incentive to change a system that already works quite well, and the cost of updating computer systems could prove prohibitive. This group feels that mandating a common time zone across all of North America can only lead to confusion and increased reliability issues.
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
PJM SOS Comments	Disagree	We feel that this requirement of a common time zone is overly prescriptive. The requirement should be that entities operating in different time zones agree on how to best eliminate any confusion regarding the time difference. Entities that routinely operate in different time zones already have an effective system for dealing with time differences. There seems to be no incentive to change a system that already works quite well, and the cost of updating computer systems could prove prohibitive. This group feels that mandating a common time zone across all of North America can only lead to confusion and increased reliability issues.
<p><b>Response: The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
SERC OC&SOS Standards Review	Disagree	We feel that this requirement of a common time zone is overly prescriptive. The requirement should be that entities operating in different time zones agree on how to best eliminate any confusion regarding the time



Organization	Yes or No	Question 5 Comment
Group		<p>difference. Entities that routinely operate in different time zones already have an effective system for dealing with time differences. There seems to be no incentive to change a system that already works quite well, and the cost of updating computer systems could prove prohibitive. For instance, the requirement to use the central time zone for logging the time of an alert is problematic in that all communication tools, such as the RCIS, will need to be re-vamped. We question whether there will be a measurable reliability benefit by so doing. This group feels that mandating a common time zone across all of North America can only lead to confusion and increased reliability issues.</p>
<p><b>Response:</b> The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
South Carolina Electric and Gas	Disagree	<p>We feel that time zones should be consistent throughout all standards and regulatory reporting requirements(e.g. TADS)</p>
<p><b>Response:</b> The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
Tri-State Generation & Transmission Assoc.	Disagree	<p>We have been operating within our individual time zones for many years without incident. Modifying the time zone to which we operate will pose additional confusion and add unnecessary risk in operating the BES.</p>
<p><b>Response:</b> The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
Pacific Northwest Small Utilities Comment Group	Disagree	<p>While our utilities agree that understanding the actual time is important, stating the time zone and summer offset (13:34 PDT) should suffice. As an alternative, UTC might be used since it is clearly distinguishable from local time in all of NERC.</p> <p>As in R1, LSEs and DPs should be removed from this Requirement.</p>

Organization	Yes or No	Question 5 Comment
		<p>Response: The SDT thanks you for your comments. The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM- 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communications an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p> <p>The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities; however DPs were included as applicable entities and have been retained in COM-003-1. The specified role of the DP to shed load justifies the retention of the DP as an applicable entity.</p>

**6. Requirement R5 of the draft COM-003-1 states, “Each Responsible Entity shall use Three-part Communications when issuing a directive during verbal Interoperability Communications.” Do you agree with this proposal? If not, please explain in the comment area.**

**Summary Consideration:**

Most stakeholders who responded to this question disagreed with the proposed Requirement R5.

Many commenters offered differing recommendations on R5 regarding the application and definition of “Reliability Directive.” The proposed term “Reliability Directive” is being developed by the RC SDT for Project 2006-06, and the OPCP SDT has not utilized this term in the first or second drafts of COM- 003-1.

Many commenters recommended splitting proposed Requirement R5 to recognize the two distinct parties (sending and receiving) in a three part communication process. The OPCP SDT has done so by separating what had been R5 into two requirements – R2 for the sender and R3 for the receiver of an oral, person-to-person “Operating Communication.”

Some commenters expressed concerns regarding potential audit citations if a repeat-back was not word-for-word or verbatim. The OPCP SDT modified the standard, adding “not necessarily verbatim” to address the concern. In other words, communication is acceptable as long as the communication is clear and accurately conveys the Operating Communication and its substantive components.

The Quality Review team recommended that the OPCP SDT modify Requirements R2 and R3 to clarify that these requirements for performance of three-part communication exclude Reliability Directives. This eliminates the double jeopardy issue that may have existed if both COM-002 and COM-003 were approved.

Thus – the revised COM-003 does include the term, Reliability Directive. In addition, the implementation plan was revised to no longer recommend retirement of COM-002. As modified, the two standards can exist without conflict. COM-002 requires the issuer of an Operating Communication to identify that communication as a “Reliability Directive” which gives recipients notice that the directive is associated with an “Emergency”. COM-003 now specifically identifies that the requirements for thee part communication do not include “Reliability Directives.”

Per Standards Committee guidance, the SDT did not revise all the responses in this report that indicate COM-003 does not include the term, “Reliability Directive” nor did the team revise all the responses that indicated the team recommended retirement of COM-002.

Organization	Yes or No	Question 6 Comment
Ameren	Agree	
British Columbia Transmission Corporation	Agree	

Consideration of Comments on OPCP SDT — Project 2007-02

Organization	Yes or No	Question 6 Comment
Bureau of Reclamation	Agree	
Consumers Energy	Agree	
ExxonMobil Research and Engineering	Agree	
Kansas City Power & Light	Agree	
NorthWestern Energy	Agree	
Old Dominion Electric Cooperative	Agree	
Oncor Electric Delivery	Agree	
Orange and Rockland Utilities, Inc.	Agree	
PacifiCorp	Agree	
PEF	Agree	
Sunflower Electric	Agree	

Organization	Yes or No	Question 6 Comment
Power Corp.		
Sunflower Electric Power Corporation	Agree	
Westar Energy	Agree	
Western Area Power Administration	Agree	
Pepco Holdings, Inc. - Affiliates	Disagree	As mentioned in Question 1 above, the term Reliability Directive has been defined in the draft standard COM-002-3 and should be considered in place of Interoperability Communication since the directive is specific to emergency operations. PHI recommends that the requirement changed to read “Each responsible entity shall use Three Part Communication when issuing or receiving a Reliability Directive”.
<p><b>Response: The SDT thanks you for your comments. The current draft version of COM-003-1 eliminates the term “Interoperability Communication” and now proposes the term “Operating Communications” which is defined as communications required when the state or status of an Element or Facility of the BES is changed or altered. Three part communications will be required when oral, person-to-person Operating Communications are used.</b></p>		
Independent Electricity System Operator	Disagree	3-part communication should be used for communicating a directive that must be complied with. The “must be complied with” is needed to distinguish between an “instruction type” of directive and a “need to perform type” of directive. We believe it is the latter that should require 3-part communication.
<p><b>Response: The SDT thanks you for your comments. The current draft version of COM-003-1 eliminates the term “Interoperability Communication” and now proposes the term “Operating Communications” which is defined as communications required when the state or status of an Element or Facility of the BES is changed or altered. Three part communications will be required when oral, person-to-person Operating Communications are used.</b></p>		
FirstEnergy	Disagree	Although we agree that proper communication should be used during actions that affect the reliability of the

Organization	Yes or No	Question 6 Comment
		<p>BES, we do not agree with this requirement as written. The following contains our rationale and suggestions:</p> <p>1. The lower case term "directive" is ambiguous, not defined, and confusing. This is especially true in light of the proposal of the RCSDT to modify COM-002-3 to include a definition of "Reliability Directive" and their plan to use this defined term to invoke 3-part communication. Since the plan of this OPCPSDT is to eventually incorporate the COM-002-3 requirements into this new COM-003-1 standard, we feel the definition of Reliability Directive should be moved to this standard now (instead of later) and the term should be broadened to include any actions that affect the BES reliability. Essentially then, the current proposed R1 of COM-002-3 can be moved to this COM-003-1 standard.</p> <p><b>Response: The implementation plan proposes retiring COM-002 when COM-003 becomes effective. We also agree the term should be broadened to include any actions that affect the BES reliability. As envisioned, the new term, "Operating Communications" includes "Reliability Directives."</b></p> <p>2. Our proposal for the term Reliability Directive in item 1 above incorporates the verbiage of the proposed Interoperability Communication definition. Therefore, the proposed term Interoperability Communication is no longer required and can be eliminated.</p> <p><b>The second draft version of COM-003-1 eliminates the term "Interoperability Communication" and proposes the term "Operating Communications" which is defined as communications required when the state or status of an Element or Facility of the BES is changed or altered.</b></p> <p>3. Once the term Reliability Directive and proposed R1 from COM-002-3 are moved to this COM-003-1 standard, the current R5 of COM-003-1 requiring the use of Three-Part Communication could then be revised to require three-part when a Reliability Directive is issued and continue until the operating condition that invoked the Reliability Directive is resolved, mitigated, or ended.</p> <p><b>The SDT believes that three part communication should be used for all oral, person-to-person Operating Communications.</b></p> <p>4. With respect to the proposed R2 and R3 of COM-002-3 which essentially discuss three-part communication,</p>

Organization	Yes or No	Question 6 Comment
		<p>these requirements could be eliminated and would be covered by COM-003-1. As a result, the COM-002-3 requirements being proposed by the RCSDT can be eliminated in their entirety since we have now incorporated all of them into this new COM-003-1.</p> <p><b>The SDT believes this is the intention as the projects progress through the Standard Development process.</b></p> <p>5. Since COM-002-3 included the Purchasing-Selling Entity as an applicable entity, since they could be the recipient of a Reliability Related Directive and since, with our proposed changes, COM-002-3 can be retired; the Purchasing-Selling Entity can be added to the applicability section of and incorporated into this new COM-003-1 standard as recommended below.</p> <p><b>The SDT again believes this is the intention as the projects as they progress through the Standard Development process. There are many contingencies that could surface that could impact the final outcome.</b></p> <p>In conclusion, we suggest the following changes/additions to COM-003-1:</p> <p>A. Move a revised version of the term "Reliability Directive" from COM-002-3 to this new COM-003-1 standard and define it as follows: "A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where the recipient is directed to change the state or report the status of an Element or Facility of the Bulk Electric System."</p> <p>B. Delete proposed definition "Interoperability Communication".</p> <p>C. Delete R2 and R3 of COM-002-3 as suggested in item 4 above.</p> <p>D. Insert a New Requirement R4, renumbered as R2, into new standard COM-003-1 taken from COM-002-3 R1: "When a Reliability Coordinator, Transmission Operator or Balancing Authority issues a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]"</p> <p>E. Revise Requirement R5 and renumber as R3: "Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall use Three-part Communication for all communications</p>

Organization	Yes or No	Question 6 Comment
		<p>concerning a Reliability Directive that was issued per Requirement R1 and continuing until the actions or status reporting identified in the Reliability Directive has been completed. [Violation Risk Factor: High][Time Horizon: Real time]"</p> <p>F. Add the Purchasing-Selling Entity as an applicable entity to COM-003-1.</p> <p><b>The SDT does not believe the requirements of COM-003 are applicable to the PSE. The PSE is not involved in real-time operating communication. In addition, the SAR for this project did not include the PSE as a responsible entity.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
Electric Market Policy	Agree	<p>As currently defined, Three-part Communications presumes the second party will repeat the information back “correctly.” Failure to do so is assigned a High VRF and a Severe VSL. The practical application of Three-part Communication involves a sender communicating information, a receiver repeating back the information, and the sender verifying the repeat back is either correct or incorrect. If the repeat back is incorrect, the process repeats until both parties have the same understanding of what is being communicated. This iterative process needs to be addressed within the definition of Three-part Communications.</p>
<p><b>Response: The SDT thanks you for your comments. The second draft of the standard captures many of your observations in Requirements R2 and R3. Note that the SDT modified the VRF for both R2 and R3 in the second draft of COM-003 to “Moderate” rather than “High”.</b></p>		
Transmission System Operations	Disagree	<p>As stated in Question #1, the definition of “Interoperability Communication” needs further clarification. Also, further clarification is needed as to when “Interoperability Communications” is required to be used.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The current draft version of COM-003-1 eliminates the term “Interoperability Communication” and now proposes the term “Operating Communications” which is defined as communications required when the state or status of an Element or Facility of the BES is changed or altered. The second draft of the standard does identify when Operating Communications are required for oral and written communications.</b></p>		
PJM	Disagree	<p>As suggested in Question 1 above, the term Reliability Directive (as defined in COM-002-3) should be used in place of Interoperability Communication, since the directive is specific to emergency operations. The</p>



Organization	Yes or No	Question 6 Comment
		<p>requirement should read: “Each responsible entity shall use Three-part Communication when issuing a Reliability Directive”.</p> <p>In addition, this requirement should apply only to entities which issue reliability directives - BAs, TOPs &amp; RCs. The other entities listed in the draft standard under Applicability do not issue Reliability Directives.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The OPCP SDT met with the RCS DT and RTOS DT members to coordinate efforts on the use of the terms, “Three-part Communications” and “Reliability Directives.” The teams agreed that the RC SDT will advance the new Glossary term “Reliability Directive” in its Project 2006-06. The second draft version of COM-003-1 has not used the term “directive” or “Reliability Directive” and instead uses the proposed defined term “Operating Communications.” The second draft version of COM-003-1 eliminates the term “Interoperability Communication” and now proposes the term “Operating Communications” which is defined as communications required when the state or status of an Element or Facility of the BES is changed or altered.</p> <p>The second draft includes a new R2 and R3 that fully assign the responsibility for accomplishing three-part communication. The entities listed as applicable in the second draft are limited to Reliability Coordinators, Balancing Authorities, and Transmission Operators, as senders and Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider as receivers of oral person-to-person Operating Communications.</p>		
PJM SOS Comments	Disagree	<p>As suggested in Question 1 above, the term Reliability Directive (as defined in COM-002-3) should be used in place of Interoperability Communication, since the directive is specific to emergency operations. The requirement should read: “Each responsible entity shall use Three-part Communication when issuing a Reliability Directive”.</p> <p>In addition, this requirement should apply only to entities which issue reliability directives - BAs, TOPs &amp; RCs. The other entities listed in the draft standard under Applicability do not issue Reliability Directives.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The OPCP SDT met with the RC SDT and RTO SDT members to coordinate efforts on the use of the terms, “Three-part Communications” and “Reliability Directives”. The teams agreed that the RC SDT will advance the new Glossary term “Reliability Directive” in its Project 2006-06. The second draft version of COM-003-1 has not used the term “directive” or “Reliability Directive” and instead uses the proposed defined term “Operating Communications.” The second draft version of COM-003-1 eliminates the term “Interoperability Communication” and now proposes</p>		

Organization	Yes or No	Question 6 Comment
		<p>the term “Operating Communications” which is defined as communications required when the state or status of an Element or Facility of the BES is changed or altered.</p> <p>The second draft includes a new R2 and R3 that fully assign the responsibility for accomplishing three-part communication. The entities listed as applicable in the second draft are limited to Reliability Coordinators, Balancing Authorities, and Transmission Operators, as senders and Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider as receivers of oral person-to-person Operating Communications.</p>
<p>SERC OC&amp;SOS Standards Review Group</p>	<p>Disagree</p>	<p>As suggested in Question 1 above, the term Reliability Directive (as defined in COM-002-3) should be used in place of Interoperability Communication, since the directive is specific to emergency operations. The requirement should read: “Each responsible entity shall use Three-part Communication when issuing a Reliability Directive”. In addition, this requirement should apply only to BAs, TOPs &amp; RCs. The other entities listed in the draft standard under Applicability do not issue Reliability Directives.</p>
		<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The OPCP SDT met with the RC SDT and RTO SDT members to coordinate efforts on the use of the terms, “Three-part Communications” and “Reliability Directives”. The teams agreed that the RC SDT will advance the new Glossary term “Reliability Directive” in its Project 2006-06. The second draft version of COM-003-1 has not used the term “directive” or “Reliability Directive” and instead uses the proposed defined term “Operating Communications.”</p> <p>The second draft version of COM-003-1 has not used the term “Interoperability Communication” and has now used the proposed defined term “Operating Communications” for which the term “Reliability Directive” is included as a subset of “Operating Communications”.</p> <p>The second draft includes a new R2 and R3 that fully assign the responsibility for accomplishing three-part communication. The entities listed as applicable in the second draft are limited to Reliability Coordinators, Balancing Authorities, and Transmission Operators, as senders and Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider as receivers of oral person-to-person Operating Communications.</p>
<p>ATC and ITC</p>	<p>Disagree</p>	<p>ATC believes that the term “directive” should be replaced with the term “Reliability Directive” which is being developed under Project 2006-06. It is important for BES reliability that NERC use clearly defined term which will identify the circumstances under which this requirement is enforceable. We provide the definition for “Reliability Directive”, as it appears in the latest posting for Project 2006-06, in our response to question 1.</p>

Organization	Yes or No	Question 6 Comment
		<p>It is our understanding and interpretation that the intent of this requirement is to require entities to use Three-Part Communication during emergency situations in which “Reliability Directives” are being issued. In other words this requirement as proposed does not apply to normal (non-emergency) day-to-day switching. The replacement of the term “directive” with “Reliability Directive” provides the additional clarity around an entity’s compliance obligation.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The OPCP SDT met with the RC SDT and RTO SDT members to coordinate efforts on the use of the terms, “Three-part Communications” and “Reliability Directives”. The teams agreed that the RC SDT will advance the new Glossary term “Reliability Directive” in its Project 2006-06. The second draft version of COM-003-1 has not used the term directive and has now used the proposed defined term “Operating Communications,”</p> <p>The OPCP SDT changed Interoperability Communications to become Operating Communications which includes all communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System which could be applicable to routine operations that impact the BES.</p> <p>Your comments on the term Reliability Directive reflect the potential outcome of a Standard under development by another drafting team.</p>		
<p>IRC Standards Review Committee</p>	<p>Disagree</p>	<p>Based on the definition of Interoperability Communications, R5 could imply that three-part communications is required to communicate routine operating instructions. We believe this Requirement contradicts the work that has been done and substantially progressed through two other SDTs and creates confusion within the industry. We believe this Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion. We support the work being done by the RC SDT and RTO SDT which would define a directive based on the determination of the person giving such an order. We believe, it should be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger and auditable and measureable. R5 is not consistent with the Functional Model. Only the RC, BA, and TOP issue directives. Thus, the term “...when issuing a directive...” should be “...when communicating directives...” , so both the issuer and receiver are included in the requirement.</p>
<p>The second draft version of COM-003-1 does not use or define the term directive and now proposes defined term “Operating Communications”. The SDT is aware of the term Reliability Directive proposed under NERC Project 2006-06 Reliability Coordination.</p>		

Organization	Yes or No	Question 6 Comment
<p>The term “Interoperability Communication” has been removed from the second draft of COM-003. The second draft includes a new R2 and R3 that fully assign the responsibility for accomplishing three-part communication. The use of three-part communication with Operating Communications does not apply to “non action” items, but to those that instruct a change or maintenance of the state, status, output, or input of an Element or Facility of the Bulk Electric System which could be applicable to routine operations that impact the BES. The entities listed as applicable for issuing an oral Operating Communication in the second draft of COM-003 are limited to Reliability Coordinators, Balancing Authorities, and Transmission Operators. The SDT believes miscommunications during routine operations as described in “Operating Communications” can and do lead to mishaps that impact reliability.</p>		
<p>ISO New England Inc.</p>	<p>Disagree</p>	<p>Based on the definition of Interoperability Communications, R5 could imply that three-part communications is required to communicate routine operating instructions. We believe this Requirement contradicts the work that has been done and substantially progressed through two other SDTs and creates confusion within the industry. We believe this Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion. We support the work being done by the RC SDT and RTO SDT which would define a directive based on the determination of the person giving such an order. We believe, it should be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger and auditable and measureable.</p>
<p>The second draft version of COM-003-1 does not use or define the term directive and now proposes defined term “Operating Communications”. The SDT is aware of the term Reliability Directive proposed under NERC Project 2006-06 Reliability Coordination.</p> <p>The term “Interoperability Communication” has been removed from the second draft of COM-003. The second draft includes a new R2 and R3 that fully assign the responsibility for accomplishing three-part communication. The use of three-part communication with Operating Communications does not apply to “non action” items, but to those that that instruct a change to, or maintenance of, the state, status, output, or input of an Element or Facility of the Bulk Electric System which could be applicable to routine operations that impact the BES. The SDT believes miscommunications during routine operations as described in “Operating Communications” can and do lead to mishaps that impact reliability.</p>		
<p>Dynegy</p>	<p>Disagree</p>	<p>Based on the definition of Interoperability Communications, R5 implies that three-part communications is required to communicate routine operating instructions. We believe this Requirement contradicts the work that has been done and substantially progressed through two other SDTs and creates confusion within the industry. We believe this Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing</p>

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		<p>the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion. We support the work being done by the RC SDT and RTO SDT in Project 2006-06 which would define a Reliability Directive based on the determination of the person giving such an order. We believe, it should be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger and auditable and measureable. R5 is not consistent with the Functional Model. Only the RC, BA, and TOP can issue directives.</p>
<p><b>The second draft version of COM-003-1 does not use or define the term directive and now proposes defined term “Operating Communications”. The SDT is aware of the term Reliability Directive proposed under NERC Project 2006-06 Reliability Coordination.</b></p> <p><b>The term “Interoperability Communication” has been removed from the second draft of COM-003. The second draft includes a new R2 and R3 that fully assign the responsibility for accomplishing three-part communication. The use of three-part communication with Operating Communications does not apply to “non action” items, but to those that that instruct a change to, or maintenance of, the state, status, output, or input of an Element or Facility of the Bulk Electric System which could be applicable to routine operations that impact the BES. The entities listed as applicable for issuing an oral Operating Communication in the second draft of COM-003 are limited to Reliability Coordinators, Balancing Authorities, and Transmission Operators. The SDT believes miscommunications during routine operations as described in “Operating Communications” can and do lead to mishaps that impact reliability.</b></p>		
<p>Hydro-Québec TransEnergie</p>	<p>Disagree</p>	<p>Based on the definition of Interoperability Communications, R5 implies that three-part communications is required to communicate routine operating instructions, or during operational strategic discussions as well as other “non-action” oriented communications. This Requirement contradicts the work that has been done and substantially progressed through two other SDTs and creates confusion within the industry. This Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion. The work being done by the RC SDT and RTO SDT in Project 2006-06 defines a Reliability Directive based on the determination of the person giving such an order. The entity that needs the action to be taken should establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger, auditable, and measureable. R5 is not consistent with the Functional Model. Only the RC, BA, and TOP can issue directives. Outside of allowing the individual who NEEDS the action to be taken, this is an auditable or measureable requirement whether it be for 3-part communications or for the receiving entity to actually take said action. By</p>

Organization	Yes or No	Question 6 Comment
		<p>definition, Three-part Communications presumes the second party will repeat the information back “correctly.” Failure to do so is assigned a High VRF and a Severe VSL. The practical application of Three-part Communication involves a sender communicating information, a receiver repeating back the information, and the sender verifying the repeat back is either correct or incorrect. If the repeat back is incorrect, the process repeats until both parties have the same understanding of what is being communicated.</p>
<p>The second draft version of COM-003-1 does not use or define the term directive and now proposes defined term “Operating Communications”. The SDT is aware of the term Reliability Directive proposed under NERC Project 2006-06 Reliability Coordination.</p> <p>The term “Interoperability Communication” has been removed from the second draft of COM-003. The second draft includes a new R2 and R3 that fully assign the responsibility for accomplishing three-part communication. The use of three-part communication with Operating Communications does not apply to “non action” items, but to those that that instruct a change to, or maintenance of, the state, status, output, or input of an Element or Facility of the Bulk Electric System which could be applicable to routine operations that impact the BES. The entities listed as applicable for issuing an oral Operating Communication in the second draft of COM-003 are limited to Reliability Coordinators, Balancing Authorities, and Transmission Operators. The SDT believes miscommunications during routine operations as described in “Operating Communications” can and do lead to mishaps that impact reliability.</p>		
<p>Midwest ISO Standards Collaborators</p>	<p>Disagree</p>	<p>Based on the definition of Interoperability Communications, R5 implies that three-part communications is required to communicate routine operating instructions. We believe this Requirement contradicts the work that has been done and substantially progressed through two other SDTs and creates confusion within the industry. We believe this Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion. We support the work being done by the RC SDT and RTO SDT in Project 2006-06 which would define a Reliability Directive based on the determination of the person giving such an order. We believe it should be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger and easily auditable and measureable. R5 is not consistent with the Functional Model. Only the RC, BA, and TOP can issue directives.</p>
<p>Response: The SDT thanks you for your comments.</p> <p>The second draft version of COM-003-1 does not use or define the term directive and now proposes defined term “Operating Communications”.</p>		

Organization	Yes or No	Question 6 Comment
<p>The SDT is aware of the term Reliability Directive proposed under NERC Project 2006-06 Reliability Coordination.</p> <p>The term “Interoperability Communication” has been removed from the second draft of COM-003. The second draft includes a new R2 and R3 that fully assign the responsibility for accomplishing three-part communication. The use of three-part communication with Operating Communications does not apply to “non action” items, but to those that instruct a change to, or maintenance of, the state, status, output, or input of an Element or Facility of the Bulk Electric System” which could be applicable to routine operations that impact the BES. The entities listed as applicable for issuing an oral Operating Communication in the second draft of COM-003 are limited to Reliability Coordinators, Balancing Authorities, and Transmission Operators.</p>		
<p>Northeast Power Coordinating Council</p>	<p>Disagree</p>	<p>Based on the definition of Interoperability Communications, R5 implies that three-part communications is required to communicate routine operating instructions, or during operational strategic discussions as well as other “non-action” oriented communications. This Requirement contradicts the work that has been done and substantially progressed through two other SDTs and creates confusion within the industry. This Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion. The work being done by the RC SDT and RTO SDT in Project 2006-06 defines a Reliability Directive based on the determination of the person giving such an order. The entity that needs the action to be taken should establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger, auditable, and measureable. R5 is not consistent with the Functional Model. Only the RC, BA, and TOP can issue directives.</p> <p><b>Response:</b> The second draft version of COM-003-1 does not use or define the term directive and now proposes defined term “Operating Communications”. The SDT is aware of the term Reliability Directive proposed under NERC Project 2006-06 Reliability Coordination.</p> <p>The term “Interoperability Communication” has been removed from the second draft of COM-003. The second draft includes a new R2 and R3 that fully assign the responsibility for accomplishing three-part communication. The use of three-part communication with Operating Communications does not apply to “non action” items, but to those that instruct a change to, or maintenance of, the state, status, output, or input of an Element or Facility of the Bulk Electric System which could be applicable to routine operations that impact the BES. The entities listed as applicable for issuing an oral person-to-person Operating Communication in the second draft of COM-003 are limited to Reliability Coordinators, Balancing Authorities, and Transmission Operators. The SDT believes miscommunications during routine operations as described in “Operating</p>

Organization	Yes or No	Question 6 Comment
		<p><b>Communications” can and do lead to mishaps that impact reliability.</b></p> <p>Outside of allowing the individual who NEEDS the action to be taken, this is an auditable or measureable requirement whether it be for 3-part communications or for the receiving entity to actually take said action. By definition, Three-part Communications presumes the second party will repeat the information back “correctly.” Failure to do so is assigned a High VRF and a Severe VSL. The practical application of Three-part Communication involves a sender communicating information, a receiver repeating back the information, and the sender verifying the repeat back is either correct or incorrect. If the repeat back is incorrect, the process repeats until both parties have the same understanding of what is being communicated.</p> <p><b>Response: The SDT has added “not necessarily verbatim” to Requirement R3.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
Northeast Utilities	Disagree	<p>Based on the definition of Interoperability Communications, R5 implies that three-part communications is required to communicate routine operating instructions, or during operational strategic discussions as well as other “non-action” oriented communications. This Requirement contradicts the work that has been done and substantially progressed through two other SDTs and creates confusion within the industry. This Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion. The work being done by the RC SDT and RTO SDT in Project 2006-06 defines a Reliability Directive based on the determination of the person giving such an order. The entity that needs the action to be taken should establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger, auditable, and measurable.</p>
<p><b>The second draft version of COM-003-1 does not use or define the term directive and now proposes defined term “Operating Communications”. The SDT is aware of the term Reliability Directive proposed under NERC Project 2006-06 Reliability Coordination.</b></p> <p><b>The term “Interoperability Communication” has been removed from the second draft of COM-003. The second draft includes a new R2 and R3 that fully assign the responsibility for accomplishing three-part communication. The use of three-part communication with Operating Communications does not apply to “non action” items, but to those that instruct a change to, or maintenance of, the state, status, output, or input of an Element or Facility of the Bulk Electric System which could be applicable to routine operations that impact the BES. The SDT believes miscommunications</b></p>		



Organization	Yes or No	Question 6 Comment
<p>during routine operations as described in “Operating Communications” can and do lead to mishaps that impact reliability.</p>		
National Grid	Disagree	<p>Based on the definition of Interoperability Communications, this would require 3- part communication to be used during virtually all control room communications. The definition of Interoperability Communications should be revised as proposed in response to Question 1.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The OPCP SDT replaced “Interoperability Communications” with “Operating Communications” which includes all communications that instruct a change to, or maintenance of, the state, status, output, or input of an Element or Facility of the Bulk Electric System. By use of the term, “Operating Communications” the second draft of COM-003 requires three-part communication only for operations that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.</p>		
California Independent System Operator	Disagree	<p>CAISO Comments:</p> <p>Until “directive” is a defined term the industry should not accept requirements governing actions regarding directives. Directive is currently being defined in an interpretation. Subsequent interpretations may subvert the standards drafting process. Terms should be formally defined before inclusion in other standards to prevent future interpretation issues, including the changing of a standard outside of the accepted Standard Development process.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes the defined term “Operating Communications”. The SDT is aware of the term Reliability Directive proposed under NERC Project 2006-06 Reliability Coordination.</p>		
New York State Reliability Council	Disagree	<p>Comments:</p> <p>The SDT should define Directive. Draft Com-002 -3 has a similar requirement to identify a directive and then utilize three-part communication. Also Com-002-3 Three part communication differs from the description of Three-part communication in this Standard. NYSRC prefers Com-002-3 usage of the word “intent” in the repeat back. Also see comments to Question 1.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p>		

Organization	Yes or No	Question 6 Comment
<p>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes the defined term “Operating Communications”. The SDT is aware of the term Reliability Directive proposed under NERC Project 2006-06 Reliability Coordination.</p> <p>The second draft of the standard includes the phrase, “not necessarily verbatim” in describing the repeat back.</p>		
<p>Tri-State Generation &amp; Transmission Assoc.</p>	<p>Disagree</p>	<p>Directive is not defined. This would require issuing a directive for each and every verbal communication between entities, even those that pose no risk to the BES, which is not necessary.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes the defined term “Operating Communications”. The SDT is aware of the term Reliability Directive proposed under NERC Project 2006-06 Reliability Coordination. Unless a communication would impact the BES as described in the proposed definition of “Operating Communications” the SDT does not believe every conversation would require three-part communications.</p>		
<p>E.ON U.S. LLC</p>	<p>Disagree</p>	<p>E ON US believes more specificity is required as to what constitutes a “directive”. Moreover, this requirement is redundant in light of COM-002 R2 for normal operations. If COM-003 is only applicable to emergencies, then this R5 would appear reasonable. E.ON U.S. suggests editing R5 and M5 as follows: Each Responsible Entity shall use Three-part Communications when issuing and/or receiving a directive during verbal Interoperability Communications</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes the defined term “Operating Communications”.</p> <p>COM -003 is not limited to emergencies only.</p> <p>The second draft includes a new R2 and R3 that fully assign the responsibility for accomplishing three-part communication and uses the new term Operating Communication.</p>		
<p>American Municipal Power</p>	<p>Agree</p>	<p>I feel that there needs to be a way to verify what has been said. Three-part Communications accomplish the verification that may be required as a result of the communication medium. If a better method is developed I</p>

Organization	Yes or No	Question 6 Comment
		propose that it be used.
<p><b>Response: The SDT thanks you for your comments.</b></p>		
American Electric Power	Disagree	Is a “directive” from the RC a “directive” all the way through the communication process, including down to the plant orders? Again, based on definitions provided in the functional model, the inclusion of the TSP and LSE in this standard is inappropriate. These entities manage the relationship with the end-use customer and are not responsible for the operation or maintenance of BES facilities. Consequently, when would such entities be responsible for issuing “directives?”
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes the defined term “Operating Communications”. The term Reliability Directive is proposed under NERC Project 2006-06 Reliability Coordination.</p> <p>The SDT agrees with your comments on TSPs and LSEs and has removed them because they were not bound by this requirement in the originating SAR.</p>		
NIPSCO	Disagree	It's not clear whether this is limited to emergency situations. In the Purpose section of this standard the line "especially during alerts and emergencies" seems rather vague. When does this standard exactly apply?
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes the defined term “Operating Communications”. The SDT is aware of the term “Reliability Directive” proposed under NERC Project 2006-06 Reliability Coordination. The second draft of COM-003 proposes requiring use of three part communications for, verbal “Operating Communications” to any communication that instructs a change to, or maintenance of, the state, status, output, or input of an Element or Facility of the Bulk Electric System and is not limited to emergencies.</p>		
Manitoba Hydro		<p>Move requirement as planned but keep Three-part Communication definition as stated originally in COM-002-2 R2.</p> <p>1) Reading the “Disposition/Explanation” it appears that COM-002-2 R2 will eventually be moved into COM-003 R5. This appears logical as COM-002-2 ensures staffing and communication capabilities.</p>

Organization	Yes or No	Question 6 Comment
		<p>a .The statement in COM-002 R2 is reasonably descriptive, but loses its depiction when replaced with statement found in COM-003-0 R5.</p> <p>2) Regarding COM-002-2 R2, Manitoba Hydro interprets part 2 (repeat back correctly) of Three-part Communication to mean; that the party receiving the directive has clearly received it in its full form and understands completely what is expected of him and to convey this to the sender</p> <p>i. We delineated “repeating back correctly” to mean any of the three protocols as acceptable:</p> <ol style="list-style-type: none"> <li>1. Actually repeating back the directives correctly.</li> <li>2. The recipient verifies the issued directive(s) are identical to a copy they have at hand.  Example for clarification: “The steps you have read are identical to what I have here on Order Number 1234, Revision 5 and I understand I can proceed with steps 3, 4 and 5.”</li> <li>3.The recipient summarizes the issued directive(s) to a copy they have at hand.  Example for clarification: “I will do step 8, open all 115 kV disconnects as read to me and are identical to the order 1234 Revision 5 that I have at hand”.</li> <li>4. This all could be resolved by using the term “repeat back the intent of the directive”. This statement could allow the operator to determine if the recipient fully understands and is capable of carrying out the directive, by the method of the recipient reply (any literate person can read back a written statement, but do they understand what they are doing and the consequences).</li> </ol> <p>ii.The purpose of protocols 2 and 3 are to alleviate potential of “lose of attention” due to the tedious receptiveness of long written directives. Summarizing or verifying these types of written orders will maintain the interest and attention to the detail.</p> <p>iii.Verbally detailing a directive at least once in any single conversation by either party should be sufficient to fulfill the first two parts of Three-part Communications (Clear and concise, repeat back).</p> <p>iv. Part 3 (acknowledge to satisfaction of the originator) could ensure that the person receiving the directive is capable and competent of carrying out the directive.</p> <p>v. None written (changes, revisions, real time emergency switching) and radio communication directives are a must for repeating back and are covered by other local policies. Part Two “Three Part Identification”</p>

Organization	Yes or No	Question 6 Comment
		<p><b>The SDT believes many of the details you have listed above are incorporated into the new R2 and R3 in the second draft of COM 003-01. We would appreciate your comments in the initial ballot.</b></p> <p>3) This new Standard COM-003-1 should contain a requirement for “Three Part Identification” or more commonly known as “Full Name Identification”. This is not addressed fully anywhere in the NERC standards.</p> <p>4) We have defined “Three Part Identification” based loosely on common industry best practice into three parts:</p> <ol style="list-style-type: none"> <li>1. Location - Company Name, Control Room Name, etc.</li> <li>2. Area of responsibility or authority (function) - The operator at the desk must identify his position such as Balancing Authority or Distribution Operate, etc.</li> <li>3. Identification - Unique identifier such as first and last Name.</li> </ol> <p><b>The SDT acknowledges and believes your comments on Full Name Identification do constitute a strong best practice which would add additional clarity to operating communications. For many organizations that becomes overly prescriptive and conflicts with their existing nomenclature scheme.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
NERC Staff	Disagree	<p>NERC staff agrees with the principle behind Requirement R5. We recommended in Question 1 that the term “Three-part Communication” be removed since it is only used in this requirement. We feel that this requirement should be split into two requirements so that the sender and receiver each have responsibility in the communication. Therefore, we offer the following as suggested replacement language for Requirement R5: Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider that receives a verbal Operating Communication shall repeat the communication to the initiator. Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider that initiates a verbal Operating Communication shall ensure that the receiving party has repeated the communication, and shall verbally confirm the communication to be correct or reinitiate the communication.</p>

Organization	Yes or No	Question 6 Comment
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT has removed the definition for “Three-part communication” in the second draft of COM-003-1 standard.</b></p> <p><b>The second draft includes a new R2 and R3 that fully assign the responsibility for accomplishing three-part communication.</b></p>		
<p>NextEra Energy Resources, LLC</p>	<p>Disagree</p>	<p>NextEra believes that by associating the “3-part communication” method with “directives” this standard drafting team could be at risk of unintentionally defining a directive as anything that takes the 3-part communication form. We would encourage the standard drafting team to continue to use the terms already employed in the draft standard: “... three-part communication be used when issuing instructions related to actual or expected emergency conditions.”</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>In the second draft of COM-003, the SDT proposes that three-part communication would be required when verbal person-to-person “Operating Communications” take place for any communication to instruct a change to, or maintenance of, the state, status, output, or input of an Element or Facility of the Bulk Electric System. This could include non emergency conditions.</b></p>		
<p>PPL</p>	<p>Disagree</p>	<p>Only RCs, TOPs, &amp; Bas issue directives. The other entities should be removed from this requirement.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes the defined term “Operating Communications” for any communication to instruct a change to, or maintenance of, the state, status, output, or input of an Element or Facility of the Bulk Electric System. Other entities have to participate so they remain responsible as designated.</b></p>		
<p>Progress Energy Carolina, Inc</p>	<p>Disagree</p>	<p>PEC supports creating a definition of Reliability Directives. PEC may then agree that each entity shall use 3-part communications when issuing Reliability Directives during “Interoperability Communications.” Alternatively, simplify and change to use Three Part Communications when using Interoperability Communications.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes defined term “Operating Communications”. The SDT is aware of the term Reliability Directive proposed under NERC Project 2006-06 Reliability Coordination.</b></p>		

Organization	Yes or No	Question 6 Comment
<p>The second draft includes a new R2 and R3 that fully assign the responsibility for accomplishing three-part communication for verbal “Operating Communications”.</p>		
<p>Pacific Northwest Small Utilities Comment Group</p>	<p>Disagree</p>	<p>Per TOP-001 and IRO-001, only TOs and RCs have the authority to issue reliability directives (per the proposed definition of interoperability communications, such directives would qualify as reliability directives). All other entity types should be removed from this requirement.</p> <p><b>The applicable entities in the standard include senders and receivers of three part communications.</b></p> <p>As in Q2, the transition is a concern. Unless the effective date of COM-003-1 is the same as the date of retirement of COM-002; there will either be a reliability gap where neither active standard requires three-part communication, or there will be a situation where an entity could be doubly jeopardized for a single event.</p> <p><b>The implementation plan for COM-003 proposes retiring COM-002 when COM-003 becomes effective – as envisioned, only one standard will be in place at a time.</b></p> <p>Three-part communication is worthless unless the recipient understands what he/she is parroting and is authorized to take action. For example, many DPs/LSEs do not maintain 24/7 dispatch desks and an afterhours call may go to an answering service. Three-part communication with the answering service operator will only delay the requested action. The entity issuing the directive should be required to ensure their employee reaches someone authorized to take action before delivering the directive via Three-part communication.</p> <p><b>The SDT reviewed the SAR and has removed TSPs and LSEs as applicable entities; however DPs were included as applicable entities and have been retained in COM-003-1. The specified role of the DP to shed load justifies the retention of the DP as an applicable Entity.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Georgia Transmission Corp</p>	<p>Disagree</p>	<p>Replace “directive during verbal Interoperability Communications” with “Reliability Directive”.</p> <p>Replace "Each Responsible Entity" with "TOPs &amp; RCs". The other entities listed in the draft standard under Applicability do not issue Reliability Directives.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p>		

Organization	Yes or No	Question 6 Comment
<p>The second draft version of COM-003-1 eliminates the term “Interoperability Communication” and now proposes the term “Operating Communications” which is defined as communications required when the state or status of an Element or Facility of the BES is changed or altered. The term “Reliability Directive is being proposed under NERC Project 2006-06 Reliability Coordination and is not used in COM-003.</p> <p>The phrase “Each Responsible Entity” was replaced with the name of each of the responsible functional entities.</p>		
<p>Entergy Services</p>	<p>Disagree</p>	<p>Should be rewritten to say that “Each Responsible Entity shall use Three-part Communications when issuing a Reliability Directive.” This should use the definition of Reliability Directive as proposed in project 2006-06. Entergy recommends not including the definition of Interoperability Communications in this standard or in the R5 Requirement. Also, the list of responsible entities listed in the requirement R5 is not all able to issue Reliability Directives. So this requirement should be limited to Reliability Coordinators, Balancing Authorities and Transmission Operators, who can issue Reliability Directives.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes defined term “Operating Communications” which is defined as communications required when the state or status of an Element or Facility of the BES is changed or altered. The SDT is aware of the term “Reliability Directive” proposed under NERC Project 2006-06 Reliability Coordination. It is a draft proposal and has not been filed or approved.</p> <p>There are other entities listed as applicable who have to receive and repeat back “Operating Communications.”</p>		
<p>Southern Company Transmission</p>	<p>Disagree</p>	<p>Southern Company supports the SERC SOS comments.</p> <p>SERC SOS comments:</p> <p>As suggested in Question 1 above, the term Reliability Directive (as defined in COM-002-3) should be used in place of Interoperability Communication, since the directive is specific to emergency operations.</p> <p>The requirement should read: “Each responsible entity shall use Three-part Communication when issuing a Reliability Directive”. In addition, this requirement should apply only to BAs, TOPs &amp; RCs. The other entities listed in the draft standard under Applicability do not issue Reliability Directives.</p> <p>Southern Company comments: conditional on if the definition of directive is not routine operational instruction.</p>



Organization	Yes or No	Question 6 Comment
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 eliminates the term “Interoperability Communication” and now proposes the term “Operating Communications” which is defined as communications required when the state or status of an Element or Facility of the BES is changed or altered.</p> <p>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes defined term “Operating Communications”. The SDT is aware of the term “Reliability Directive” proposed under NERC Project 2006-06 Reliability Coordination. The term “Operating Communications” is not restricted to emergencies.</p> <p>The other entities who are listed have to receive and repeat back “Operating Communications.”</p>		
Bonneville Power Administration	Agree	Suggest that each entity is also required to use the full station name in verbal communications.
<p><b>Response: The SDT thanks you for your comments.</b></p>		
Indiana Municipal Power Agency	Disagree	The definition of Interoperability Communications is not clear and this requirement could require Three-part Communications to communicate routine, internal instructions within an entity. In addition, the definition of a directive is being worked on by a NERC SDT, and this definition might help clear up any confusion in this requirement, along with a better definition of Interoperability Communications.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 eliminates the term “Interoperability Communication” and now proposes the term “Operating Communications” which is defined as communications required when the state or status of an Element or Facility of the BES is changed or altered.</p> <p>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes the defined term “Operating Communications”. The SDT is aware of the term “Reliability Directive” proposed under NERC Project 2006-06 Reliability Coordination.</p>		
NYSEG	Disagree	The definition of Three-part Communications and Interoperability Communications needs to be revised as explained above.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 eliminates the term “Interoperability Communication” and now proposes the term “Operating</p>		

Organization	Yes or No	Question 6 Comment
<p><b>Communications” which is defined as communications required when the state or status of an Element or Facility of the BES is changed or altered.</b></p>		
PSEG Companies	Disagree	The PSEG Companies agree with the concerns expressed in the comments filed by the PJM System Operations Subcommittee (SOS) Group.
<p><b>Response: The SDT thanks you for your comments.</b>  <b>Please see our response to the PJM System Operations Subcommittee (SOS) Group.</b></p>		
Puget Sound Energy	Disagree	The requirement should use the NERC defined term “Reliability Directive,” instead of the general term “directive.”
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The current draft version of COM-003-1 does not use or define the term “directive” and now proposes defined term “Operating Communications”.</b>  <b>The SDT is aware of the term “Reliability Directive” proposed under NERC Project 2006-06 Reliability Coordination.</b></p>		
ERCOT ISO	Disagree	The requirement, based on the definitions of the terms, introduces ambiguity or even conflict. Three part communication should be required for emergency situations and with the issuance of Reliability Directives (term not yet formally defined - in the works by the Reliability Coordination SDT). Interoperability communications refer to any communications in which a status of a facility or element is to be changed, which means not specifically related to emergencies.
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The second draft version of COM-003-1 eliminates the term “Interoperability Communication” and now proposes the term “Operating Communications” which is defined as communications required when the state or status of an Element or Facility of the BES is changed or altered.</b>  <b>This will apply to routine operations that impact the BES.</b>  <b>The second draft version of COM-003-1 does not define or use the term “directive” and now proposes defined term “Operating Communications”.</b>  <b>The SDT is aware of the term Reliability Directive proposed under NERC Project 2006-06 Reliability Coordination.</b>  <b>The term “Operating Communications” is not restricted to emergencies.</b></p>		

Organization	Yes or No	Question 6 Comment
Santee Cooper	Disagree	The SDT should consider using the now defined term Reliability Directive in place of Interoperability Communications. Typically, only BAs, TOPs, or RCs issue Reliability Directives so this requirement should only be applicable to those entities.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 eliminates the term “Interoperability Communication” and now proposes the term “Operating Communications” which is defined as communications required when the state or status of an Element or Facility of the BES is changed or altered. More applicable entities will be impacted by “Operating Communications” since three part communication involves both senders and receivers of communications.</p>		
Long Island Power Authority	Disagree	The SDT should define Directive. Draft Com-002 -3 has a similar requirement to identify a directive and then utilize three-part communication. Also Com-002-3 Three part communication differs from the description of Three-part communication in this Standard. LIPA prefers Com-002-3 usage of the word “intent” in the repeat back. Also see comments to Question 1.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 eliminates the term “Interoperability Communication” and now proposes the term “Operating Communications” which is defined as communications required when the state or status of an Element or Facility of the BES is changed or altered. The second draft version of COM-003-1 does not use or define the term “directive” and now proposes defined term “Operating Communications”. The SDT is aware of the term Reliability Directive proposed under NERC Project 2006-06 Reliability Coordination and is not filed or approved. The SDT current draft “correct but not necessarily verbatim” in describing the repeat back.</p>		
South Carolina Electric and Gas	Disagree	The term "directive" should be changed to "Reliability Directive" as defined in COM-002-3.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The term “Reliability Directive’ is not approved. It also has a very narrow focus and in its present form is restricted to emergencies. The OPCP SDT is proposing the term “Operating Communications” which is more inclusive and would have a bigger scope to improve reliability.</p>		

Organization	Yes or No	Question 6 Comment
Transmission Owner	Disagree	<p>The term “directive” as of yet has not been explicitly defined. Furthermore, FPL believes that by associating the “3-part communication” method with “directives” this standard drafting team could be at risk of unintentionally defining a directive as anything that takes the 3-part communication form. We would encourage the standard drafting team to continue to use the terms already employed in the draft standard: “... three-part communication be used when issue instructions related to “actual or expected emergency conditions.”</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The second draft version of COM-003-1 does not define or use the term “directive” and now proposes the defined term “Operating Communications” which will require three-part communication for communications required when the state or status of an Element or Facility of the BES is changed or altered. This will apply to routine operations that impact the BES.</b></p> <p><b>The SDT is aware of the term “Reliability Directive” proposed under NERC Project 2006-06 Reliability Coordination.</b></p>		
We Energies	Disagree	<p>The term “directive” should be replaced with the term “Reliability Directive” as defined by the Drafting Team working on Project 2006-06 which states it as: “A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency”. Three-part Communication should be required (with regard to compliance) during emergency situations in which Reliability Directives are being issued. This requirement should not apply to normal or non-emergency situations, and should be enforceable between Functional Entities (distinct entities, not within a given organization). As noted in question 2, R5 should not apply to a TSP or LSE.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The term “Reliability Directive’ is not approved. It also has a very narrow focus and in its present form is restricted to emergencies. The OPCP SDT is proposing the term “Operating Communications” which is more inclusive and will require three-part communications when the state or status of an Element or Facility of the BES is changed or altered. This will apply to routine operations that impact the BES.</b></p> <p><b>The SDT is aware of the term “Reliability Directive” proposed under NERC Project 2006-06 Reliability Coordination. This standard would have a bigger scope to improve reliability.</b></p> <p><b>The SDT has removed the TSPs and LSEs because they were not bound by this requirement in the originating SAR.</b></p>		
Energy	Disagree	<p>The term interoperability communications is not clear.</p>

Organization	Yes or No	Question 6 Comment
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 eliminates the term “Interoperability Communication” and now proposes the term “Operating Communications” which is defined as communications required when the state or status of an Element or Facility of the BES is changed or altered.</p>		
Xcel Energy	Disagree	The way the standard is written, the term "directive" is still open to interpretation and could be inconsistently applied. The term "directive" should be defined.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 does not define or use the term “directive” and now proposes the defined term “Operating Communications”. The SDT is aware of the term “Reliability Directive” proposed under NERC Project 2006-06 Reliability Coordination.</p>		
Florida Municipal Power Agency (FMPA) and some members	Agree	<p>The word “directive” is ambiguous. The standard should either require the Reliability Coordinator to define a “directive” or the standard should make this a defined term so that there is clarity between what is and what is not a directive. In fact, the “disposition” does state that “Reliability Directive” definition is in the scope of the SDT’s effort.</p> <p>We do not think that this merits an increase from a “Medium” VRF in COM-002-2 R2 to a “High” VRF in this standard, especially if the actual action taken was in accordance with the direction given.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes defined term “Operating Communications”. The SDT is aware of the term “Reliability Directive” proposed under NERC Project 2006-06 Reliability Coordination.</p> <p>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in COM-003-01. The VRF associated with the requirement to use three-part communication in the second draft of COM-003 is “Medium.”</p>		
NRECA RTF Members	Disagree	We agree that Three-part communication is a more accurate form of communication for issuing and responding to a Directive during verbal Interoperability Communications and should remain as a requirement of this standard. However since the term “directive” has not been defined it is unclear when Three-part communication is required.

Organization	Yes or No	Question 6 Comment
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes the defined term “Operating Communications” and proposes using three-part communication for any communication when the state or status of an Element or Facility of the BES is changed or altered.</b></p>		
Duke Energy	Disagree	<p>We believe that the term “directive” should be defined. This SDT should work with the COM-002 SDT to come up with common phraseology and definition for the term “Directive”. Work on COM-003-1 should have begun by defining “directive”, and limiting the requirement to use 3-part communications to “directives”, and not requiring it for general day-to-day communications. The entity issuing a “directive” should inform the receiving entity that it is a directive and therefore requires the use of 3-part communications.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes the defined term “Operating Communications” which requires use of three-part communication for any communication when the state or status of an Element or Facility of the BES is changed or altered.</b></p>		
The Empire District Electric Company	Disagree	<p>When and why would a GO, TSP or LSE ever issue a directive? Directives are given by RC's. Use the definition of Third Party Communications provided earlier in this comment form.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes the defined term “Operating Communications”. The SDT appreciates the comments with regards to concerns related to including GOs, TSPs and LSEs that do not own or operate facilities that are a part of the BES. The SDT has removed the TSPs and LSEs because they were not bound by this requirement in the originating SAR. The GO was not included in the draft standard of the requirement.</b></p>		
MRO NERC Standards Review Subcommittee	Disagree	<p>Without defining “directive” the SDT is leaving the industry in the same situation we are currently in. As discussed in the response to Question #1 above, it is our opinion that the definition of Reliability Directive must be developed and included in the discussion of this standard (COM-003-1), and should be as defined in Project 2006-06: “A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.”. Based on the definition</p>

Organization	Yes or No	Question 6 Comment
		<p>of Interoperability Communications, R5 could imply that three-part communications is required to communicate routine operating instructions. We believe this Requirement contradicts the work that has been done and substantially progressed through two other SDTs and creates confusion within the industry. We believe this Requirement would, in fact, be adverse to reliability instead of enhancing reliability by reducing the amount of pre-action communications that may occur prior to taking action because operators may be more concerned with not repeating back during such pre-action, strategic calls and/or discussion. We support the work being done by the RC SDT and RTO SDT which would define a directive based on the determination of the person giving such an order. We believe, it should be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger and auditable and measureable.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes the defined term “Operating Communications”. The SDT is aware of the term Reliability Directive proposed under NERC Project 2006-06 Reliability Coordination. The second draft version of COM-003-1 eliminates the term “Interoperability Communication” and now proposes the term “Operating Communications” which is defined as communications required when the state or status of an Element or Facility of the BES is changed or altered.</p> <p>This standard would apply when verbal “Operating Communications” take place and would apply to any communications involving a change to, or maintenance of, the state, status, output, or input of an Element or Facility of the Bulk Electric System.</p>		
Great River Energy	Disagree	<p>Without defining directive the SDT is leaving the industry in the same situation we are currently in. As discussed in the response to Question #1 above, it is GRE’s opinion that the definition of Reliability Directive must be developed and included in the discussion of this standard. The term directive should be as defined in Project 2006-06: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.. GRE believes it should be left to the entity that needs the action to be taken to establish the need for three-part communications by stating in the communication that they are issuing a directive. This would be a clear trigger and easily auditable and measureable.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 does not use or define the term “directive” and now proposes the defined term “Operating</p>		

Organization	Yes or No	Question 6 Comment
		<p>Communications” which would apply to any communication involving a change to, or maintenance of, the state, status, output, or input of an Element or Facility of the Bulk Electric System. The SDT is aware the term “Reliability Directive” is being proposed under NERC Project 2006-06 Reliability Coordination.</p>



**7. Requirement R6 of the draft COM-003-1 states, “Each Responsible Entity shall use the North Atlantic Treaty Organization (NATO) phonetic alphabet as identified in Attachment 2-COM-003-1 when issuing directives, notifications, directions, instructions, orders or other reliability related operating information that involves alpha-numeric information during verbal Interoperability Communications.” Do you agree with this proposal? If not, please explain in the comment area.**

**Summary Consideration:**

Most stakeholders who responded to this question disagreed with the proposal. Many commenters indicated the use of a phonetic alphabet is not necessary and should not be required, as it will not improve reliability of the BES and indicated that there are no instances where the absence of its use has resulted in reliability problems. The SDT disagrees with this comment and believes that enhanced clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities.

Commenters stated requiring strict adherence to and precise pronunciation of the NATO phonetic alphabet is overly prescriptive, and the proposed standard should allow for other phonetic clarifiers where clarity on alpha-numeric information is necessary. The SDT agrees, and has modified the requirement to allow use of “accurate alpha-numeric clarifiers,” which could include alpha-numeric clarifiers other than the NATO phonetic alphabet.

Commenters pointed out that the requirement is being applied too broadly (e.g. to notifications, directions, instructions, orders and other reliability related operating information). The SDT agrees and has modified the proposed standard by restricting the requirement's applicability only to verbal Operating Communication.

A few commenters showed concern over having operators potentially struggling to remember the NATO phonetic alphabet during emergency situations, rather than focusing on the communication itself, in contradiction with the stated purpose of the standard. The SDT disagrees and believes that adequate training, familiarity with and use of alpha-numeric clarifiers will eliminate struggles for operators and avoid operating errors due to miscommunication.

Still other commenters stated this proposed requirement is a best practice. They suggest that the use of the NATO phonetic alphabet should only be required when needed for clarity. The SDT believes the use of a phonetic alphabet during verbal real-time communication between BES operating entities goes beyond a best practice and should be a mandatory requirement.

Organization	Yes or No	Question 7 Comment
Bureau of	Agree	

Organization	Yes or No	Question 7 Comment
Reclamation		
Consumers Energy	Agree	
ExxonMobil Research and Engineering	Agree	
Kansas City Power & Light	Agree	
Old Dominion Electric Cooperative	Agree	
Oncor Electric Delivery	Agree	
PacifiCorp	Agree	
PEF	Agree	
Sunflower Electric Power Corporation	Agree	
Bonneville Power Administration	Disagree	
Orange and Rockland Utilities, Inc.	Disagree	
American Electric Power	Disagree	AEP does not believe that this should be a requirement. It is understood that three-part communications represent best practices, but it is not necessary to mandate the NATO phonetic alphabet. We are not aware of an instance where the use of “Ed” rather than “Echo” has resulted in a reliability compliance breakdown.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT agrees with your second comment, and has modified the requirement to allow for any accurate alpha-numeric clarifier.</b></p>		

Organization	Yes or No	Question 7 Comment
<p>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities.</p>		
<p>Indiana Municipal Power Agency</p>	<p>Disagree</p>	<p>An entity should not be required to use a specific phonetic alphabet. If a letter needs to be clarified, then boy, bob or beta should be allowed to convey the letter "B". In an emergency, an entity wants its coordinators to be concentrating on the situation and not worrying about using the proper phonetic alphabet word for the letter "B".</p>
<p><b>Response: The SDT thanks you for your comments.</b>                      The SDT agrees with your comments, and has modified the requirement. The new language is in Requirement R1 Part 1.2. "When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers."</p>		
<p>Transmission System Operations</p>	<p>Disagree</p>	<p>As stated in Question #1, the definition of "Interoperability Communication" needs further clarification. Directives, notifications, directions, instructions, orders, and other reliability operating information needs to be clearly defined, including what it consists of and when it is to be utilized.</p>
<p><b>Response: The SDT thanks you for your comments.</b>                      The SDT has eliminated "Interoperability Communication" and is proposing the new term "Operations Communications." "Operations Communications" are communications instructing a change to, or maintenance of, the state, status, output, or input of an Element or Facility of the Bulk Electric System. The use of a phonetic clarifier will be required during verbal "Operating Communications."</p>		
<p>NERC Staff</p>	<p>Disagree</p>	<p>As stated in response to Question 2, NERC staff agrees with the proposal, but would offer the following modification in order to add clarity. We recommend that the phrase "when issuing directives, notifications, directions, instructions, orders or other reliability related operating information that involves alpha-numeric information during verbal Interoperability Communications" be replaced with "when verbal Operating Communications with alpha-numeric information is involved." This would require using the definition of Operating Communications offered in the response to Question 1. This will hopefully eliminate the need to further define what communication is or is not included in the phrase "directives, notifications, directions, instructions, orders or other reliability related operating information."</p>
<p><b>Response: The SDT thanks you for your comments.</b>                      The SDT has eliminated "Interoperability Communication" and is proposing the new term "Operations Communications." "Operations Communications" are communications instructing a change to, or maintenance of, the state, status, output, or input of an Element or Facility of the</p>		

Organization	Yes or No	Question 7 Comment
<p><b>Bulk Electric System. The use of a phonetic clarifier will be required during verbal “Operating Communications.”</b>  <b>The SDT agrees with your second comment, and has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p>		
<p>British Columbia Transmission Corporation</p>	<p>Disagree</p>	<p>BCTC's position: R6 requiring the use of North American Treaty Organization (NATO) phonetic alphabet adds no value and will only cause confusion. Presently an instruction would be issued as: “At Kelly Lake open 5CB4” R6 it will now become: “At Kelly Lake open Fife Charlie Bravo Fow-er”</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication among BES operating entities.</b>  <b>The SDT intends for R6 (new R1 Part 1.2 in the second draft of the standard) to apply to unique facility/element identifiers and not commonly used acronyms such as “CB” for circuit breaker. If “5CBR” is the unique facility/element identifier, then it would apply.</b></p>		
<p>New York State Reliability Council</p>	<p>Disagree</p>	<p>Comments: While NYSRC understands the benefit of utilizing a phonetic alphabet, we question the designation of a specific phonetic alphabet. This prescriptive requirement may result in absurd non-compliance reports, such as, using “Dog” for “D” instead of “Delta”. R6 requires the use of the alphabet when issuing information, but not in the repeat back step. This may be an oversight. Also Does the RC in its communication utilize the abbreviation for the threat type, e.g. PSEA, or does the RC use the NATO-Alphabet? If NATO, then the example in Attachment 1 should state this need.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT agrees, and has modified the Requirement to allow for any accurate alpha numeric clarifier.</b>  <b>The SDT believes that the proposed new requirements in the second draft of the COM-003-01 standard address the concern mentioned in the comment concerning use of the requirement only during the issuing and not the repeating back. The RC would only be required to communicate the abbreviation of verbally conveyed alpha-numeric information using an accurate alpha numeric clarifier or the NATO alphabet if it was during verbal “Operating Communications”. The SDT intends for new Requirement R1 Part 1.2 to apply to unique facility/element identifiers and not commonly used acronyms.</b></p>		
<p>Power South Energy</p>	<p>Disagree</p>	<p>Completely unnecessary to require each operator to learn and use the NATO alphabet for situations that may occur on a very limited basis.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p>		

Organization	Yes or No	Question 7 Comment
<p>The SDT has modified the requirement. The new language is in requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p> <p>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication among BES operating entities.</p>		
<p>Tri-State Generation &amp; Transmission Assoc.</p>	<p>Disagree</p>	<p>Directive is not defined. This poses an undue burden on the operators, which does not improve the reliability of the BES. NERC should only concern themselves with issues related to maintaining the reliability of the BES.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The current draft version of COM-003-1 does not use or define the term “directive” that task is assigned to the RCSDT – Project 2006-06. See Question 6.</p>		
<p>Entergy Services</p>	<p>Disagree</p>	<p>Entergy has 2 concerns with this requirement as written.</p> <p>First, the use of the NATO phonetic alphabet is overly prescriptive to convey alpha-numeric information. For instance, if I use the word “baker” instead of “bravo” in my communications, I would have still successfully communicated the letter “B” to the person receiving my communication. My communication may have supported reliable interconnected operations. However, according to this requirement, I would still have violated the standard.</p> <p>Second, the requirement as written is very broad, applying not just to directives, but also to “notifications, directions, instructions, orders and other reliability related operating information”. These terms are not defined, so I would assume that this covers Reliability Directives, and everything else. If the industry supports using a phonetic alphabet, it should be limited just to directives containing alpha-numeric information. Again, the requirement to use the NATO phonetic alphabet imposes a significant operational burden, creates a human error trap for operating personnel, and does not improve reliability. It should not be included in the new standard.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p> <p>The SDT also agrees with your second comment and has modified the proposed standard by restricting the requirement’s applicability to only those alpha numeric identifiers used during verbal “Operating Communications”.</p>		

Organization	Yes or No	Question 7 Comment
ERCOT ISO	Disagree	ERCOT ISO does not agree with this approach, which seems to be overly prescriptive (“directives, notifications, directions, instructions, orders, or other reliability related information”), which goes beyond the purpose of “during alerts and emergencies”. This is an administrative requirement that would increase communication timing and possibly negatively affect reliability. If using a common language and three part communication for directives is effective this is not required.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT agrees and has modified the proposed standard by restricting the requirement's applicability to only those alpha numeric identifiers used during verbal “Operating Communications”.</b></p> <p><b>The SDT believes that clarity for verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities.</b></p> <p><b>Note that the scope of this standard is not limited to communications related to alerts and emergencies.</b></p>		
SERC OC&SOS Standards Review Group	Disagree	First, please note that “NATO” does not stand for North American Treaty Organization; it stands for North Atlantic Treaty Organization. Use of the NATO phonetic alphabet should be considered a “best practice” and should not be included as a requirement in a reliability standard. One failure, such as saying “Baker” instead of “Bravo”, results in a severe violation without any impact on system reliability. This group is concerned that operating personnel will be focused on using the correct word rather than managing the power system.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT agrees that NATO stands for “North Atlantic Treaty Organization” and that “American” was used in error.</b></p> <p><b>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p> <p><b>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities.</b></p>		
Transmission Owner	Disagree	FPL believes that though aspiring to use a single strict phonetic alphabet is important, it is more important to ensure that ease of communication takes precedence especially under emergency conditions. As such, this requirement should be written more as a best practice or guideline. FPL believes this requirement could be improved by stating that under such emergency conditions, the NATO phonetic alphabet can be used as a base-line reference but that usage of ad-hoc phonetic alternatives that achieve the same real-time communication goal

Organization	Yes or No	Question 7 Comment
		can also be used.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p> <p><b>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities during routine or emergency conditions.</b></p>		
Pepco Holdings, Inc. - Affiliates	Disagree	Having system operators potentially struggle to remember the NATO phonetic alphabet during communications rather than focus on the communication and managing the bulk electric system itself is in contradiction with the purpose of the standard. Use of the NATO phonetic alphabet should be considered a “best practice” and should not be included as a requirement in a reliability standard. One failure, such as saying “Baker” instead of “Bravo”, results in a severe violation without any impact on system reliability.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p> <p><b>The SDT believes that clarity for verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities</b></p>		
Florida Municipal Power Agency (FMPA) and some members	Disagree	How strict are the NATO pronunciations? E.g., “Uniform” is designated as pronouncing the “i” as a long “ee”, most people I know do not do that. Similarly, there are multiple pronunciations of “Quebec”, “Sierra”, “Victor”, “Three”, “Four”, “Five”, and “Nine” to name a few, yet one pronunciation is specified. We presume that if the wrong pronunciation is used in the current draft of the standard, there would be a violation, currently at a high risk factor and high severity level, which seems rather severe. FMPA suggests that the SDT revisit this with an eye towards at least not penalizing someone for saying “five” instead of “fife”, and possibly with an eye towards saying “‘F’ as in ‘frank’” is OK, rather than being strict with NATO nomenclature.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p>		
Sunflower Electric	Disagree	I don't feel we should use NATO phonetic alphabet. Use something in common use in the USA

Organization	Yes or No	Question 7 Comment
Power Corp.		
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The NATO phonetic alphabet is commonly used in the US and Canada. Some examples are the military, police and fire protection, medical industry and the air traffic control system. The BES, as in the previous examples, is a critical system requiring the same level of communication clarity. The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p>		
Progress Energy Carolina, Inc	Disagree	NATO stands for North Atlantic Treaty Organization. This proposed requirement is a best practice and does not serve to increase the reliability of the BES.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT agrees that NATO stands for “North Atlantic Treaty Organization” and that “American” was used in error. The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p> <p>The SDT disagrees with your second comment. The NATO phonetic alphabet is commonly used in the US and Canada. Some examples are the military, police and fire protection, medical industry and the air traffic control system. The BES, as with the previous examples, is a critical system requiring the same level of communication clarity. The use of the NATO alphabet provides this clarity which prevents miscommunication which reduces the risk of a mishap.</p>		
NextEra Energy Resources, LLC	Disagree	NextEra believes that though aspiring to use a single strict phonetic alphabet may be beneficial it is more important to ensure that ease of communication takes precedent especially under emergency conditions. The requirement for 3-part communication already ensures that understanding between two parties occurs. Moreover, it is overly burdensome to require that the phonetic alphabet be used in all communications which would include communications related to mundane interactions between interconnected parties and that might broadly fit the mold of the “interoperability” definition but not truly require the formality or rigor commanded by a phonetic approach.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The second draft version of COM-003-1 proposes in Requirement R1 Part 1.2 to use an accurate alpha-numeric clarifier such as the NATO phonetic alphabet during verbal Operating Communications when alpha-numeric identifiers are involved. Beyond that, its use to clarify confusion over a communication, mundane or otherwise, is not discouraged but is not required.</p>		



Organization	Yes or No	Question 7 Comment
Pacific Northwest Small Utilities Comment Group	Agree	No Comment
<b>Response: The SDT acknowledges No Comment.</b>		
NorthWestern Energy	Disagree	NorthWestern appreciates the opportunity to comment. The requirement, as drafted, appears to open the possibility of sanctions for incorrect use of the NATO phonetic alphabet during any verbal communication between entities. The use of the NATO phonetic alphabet would be difficult when performing local switching orders to field personnel. NorthWestern suggests that the requirement be reworded to state that entities “shall use a phonetic code (e.g., the NATO phonetic alphabet) when necessary, to verify accurate reception of alpha-numeric information.”
<b>Response: The SDT thanks you for your comments. The SDT agrees and has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b>		
Western Area Power Administration	Disagree	Not everyone is familiar with the NATO phonetic alphabet, so it would be another thing for operators to have to memorize or to always have in front of them to refer to.
<b>Response: The SDT thanks you for your comments. The SDT believes that operators will not have difficult problems adapting to the NATO alphabet. With proper training and familiarization it becomes a natural part of an individual’s vocabulary. The SDT also agrees with overall industry comment and has modified the Requirement (R1 Part 1.2 in the second draft of the standard) to require use of an accurate alpha-numeric clarifier such as the NATO phonetic alphabet during verbal Operating Communications when alpha-numeric identifiers are involved.</b>		
ISO New England Inc.	Disagree	Not only does this requirement attempt to determine HOW entities operate with their various footprints, it may change the way many Markets are structured. What is the difference between using the word “Zebra” instead of “Zulu” to signify the letter “Z”? And, why would this be enforceable? Perhaps this would be better served as a guideline document rather than an enforceable Requirement. Also, many organizations may have established communications protocols which are functioning properly and making a change may actually hinder reliable operations by introducing unnecessary confusion.
<b>Response: The SDT thanks you for your comments.</b>		

Organization	Yes or No	Question 7 Comment
<p>The SDT does not understand how this requirement would change market structure, please provide details for us to address.</p> <p>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p> <p>" So “Zebra” instead of “Zulu” to signify the letter “Z” would be acceptable, “Xerox” instead of “Zulu” to signify the letter “Z” would be non compliant.</p>		
Northeast Utilities	Disagree	<p>Not only does this requirement attempt to determine HOW entities operate with their various footprints, it may change the way many Markets are structured. What is the difference between using the word “Zebra” instead of “Zulu” to signify the letter “Z”? And, why would this be enforceable. Perhaps this should be a guideline document rather than an enforceable Requirement. There is no reliability need for this Requirement.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT does not understand how this requirement would change market structure, please provide details for us to address.</p> <p>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p> <p>“Zebra” instead of “Zulu” to signify the letter “Z” would be acceptable, “Xerox” instead of “Zulu” to signify the letter “Z” would be non compliant.</p> <p>The SDT believes there is a critical need for this requirement. The eclectic pattern of communication protocols that exist and those that do not exist across the BES is an ever present risk for miscommunication, which breeds mishaps.</p>		
Westar Energy	Disagree	<p>One of the more common or ad-hoc phonetic alphabets which are easier to remember could be a better fit since these communications happen infrequently. Having operators potentially struggle to remember the NATO phonetic alphabet during communications rather than focus on the communication itself is in contradiction with the stated purpose of the standard.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p>		
Ameren	Disagree	<p>Requirement should be revised to say that Attachment 2 needs to be used when single alphabetic characters, or when needed for clarity, are needed in communications. If we have a Bee Hollow-51 circuit, that is alpha-numeric information. But we wouldn’t support that Bee Hollow needs to be spelled out as Bravo-Echo-Echo-space-Hotel</p>
<p><b>Response: The SDT thanks you for your comments.</b></p>		

Organization	Yes or No	Question 7 Comment
<p>The SDT intends for R6 to apply to a unique Facility/Element identifier and not commonly used acronyms such as “CB” for circuit breaker; or names such as “Bee Hollow”. In the case of this comment the identifier “Bee Hollow Five One” would meet the requirement.</p>		
<p>Southern Company Transmission</p>	<p>Disagree</p>	<p>Southern Company supports the SERC SOS comments. SERC SOS comments: Use of the NATO phonetic alphabet should be considered a “best practice” and should not be included as a requirement in a reliability standard. One failure, such as saying “Baker” instead of “Bravo”, results in a severe violation without any impact on system reliability. This group is concerned that operating personnel will be focused on using the correct word rather than managing the power system.</p> <p><b>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p> <p>Southern Company comments: This requirement should be removed from the standard. Requirement 5 requires understanding by both parties during communication. Requirement 6 requires common identifiers which will enhance the chances of both parties understanding communications. Although using the phonetic alphabet may be necessary some times in order to gain understanding between two parties it should not be required. If both parties understand A as well as they do Alpha the reliability of the system has not been affected. No entity should be found in non-compliance of a Reliability Standard if reliability was not affected.</p> <p><b>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities.</b></p>
<p><b>Response: The SDT thanks you for your comments.</b></p>		
<p>E.ON U.S. LLC</p>	<p>Disagree</p>	<p>The entire standard should only apply to emergency operations, not all communications. If it is the intent that the requirements of this standard apply not only to control room operators but also field personnel (line crews, substation crews, etc.) then E ON U.S. is not in favor of using the NATO phonetic alphabet. The confusion that this change could create in real-time operations outweighs the BES reliability benefit. E ON U.S. suggests that if the objective is to avoid confusion over similarly pronounced words, use of an ad-hoc phonetic alphabet would more easily address the concern. E ON U.S. is also concerned that the attention paid to “how” orders are given and acknowledged may well detract from “what” it is responsible entities are attempting to do. Are responsible entities supposed to spell out each number and word using the phonetic alphabet? The drafting team should be more specific as to what is meant by “alpha-numeric information.”</p>

Organization	Yes or No	Question 7 Comment
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities during routine and emergency operating conditions.</p> <p>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p> <p>The SDT intends for Requirement R1 Part 1.2 to apply to unique Facility/Element alpha-numeric (numbers and letter codes or designators) identifiers and not commonly used acronyms such as “CB” for circuit breaker or names such as “Bee Hollow”. For example the identifier for Bee Hollow 51A circuit would be “Bee Hollow Five One Alpha” circuit.</p>		
American Municipal Power	Agree	The NATO Phonetic alphabet is easy to learn and use. Most people can learn it on their own much faster than it will take the SDT to read all of the comments for COM-003.
<p><b>Response: The SDT thanks you for your comments and your observation.</b></p>		
The Empire District Electric Company	Disagree	The NATO phonetic alphabet is too descriptive as a requirement. A common phonetic alphabet where both parties understand the communication should be a better requirement and left up to the parties in communication with each other as common across the USA.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT disagrees that use of the NATO phonetic alphabet is too descriptive as a requirement, but has modified the requirement based on stakeholder suggestions that other alpha-numeric identifiers should also be acceptable. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p>		
PSEG Companies	Disagree	The PSEG Companies agree with the concerns expressed in the comments filed by the PJM System Operations Subcommittee (SOS) Group.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities.</p> <p>The SDT has modified the Requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p> <p>The SDT believes that adequate training, familiarity with and use of the phonetic alphabet will avoid and eliminate struggles for operators.</p>		

Organization	Yes or No	Question 7 Comment
MRO MRO NERC Standards Review Subcommittee	Disagree	<p>The required use of the phonetic alphabet should be documented in the Entities CPOP per our comments to question #3. While this requirement may represent a good utility practice or even a best practice, it is not so necessary to be enforceable through enforceable requirements.</p> <p>All information passed by a NERC Certified System operator falls under the scope of Requirement 6: “directives, notifications, directions, instructions, orders or other reliability related operating information”. Based on that definition, all communication would fall under this Requirement.</p> <p>The NATO phonetic alphabet does not allow for the use of numbers ten and beyond. An entity WOULD be found non compliant for saying “open switch fourteen bravo”. We do not believe this is reasonable as it adds nothing to the reliability of the BES is too prescriptive and all encompassing and could potentially confuse or slow down the communication process.</p> <p>We recommend that use of the NATO phonetic alphabet be included in the NERC operator certification training program and removed from this standard .As we recommended above, the term “directive” should be replaced with “Reliability Directive”.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT has elected to eliminate the requirement to have a CPOP based on Industry Comment.</b></p> <p><b>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities and warrants being an enforceable requirement.</b></p> <p><b>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p> <p><b>Numbers over nine are referred to by each individual digit for example 14 = “one, four”; 2559 = “two, five, five, nine” when communicating a unique alpha-numeric identifier. The SDT has modified the proposed standard by restricting the requirement's applicability only to verbal “Operating Communications.”</b></p> <p><b>The SDT respectfully considers your recommendation to remove this from the standard and include it in the NERC operator certification training program but elects to keep this as a requirement because it enhances reliability by reducing human error. Its integration into the NERC operator certification training program is a very good recommendation, but beyond the scope of the drafting team.</b></p>		
ATC and ITC	Disagree	<p>The use of the phonetic alphabet should be documented in the Entities CPOP per our comments to question #3. We do not agree that it needs to be included in Requirement 5 because it is too prescriptive and all encompassing and could potentially confuse or slow down the communication process. As we recommended in question 6 the</p>

Organization	Yes or No	Question 7 Comment
		term “directive” should be replaced with “Reliability Directive”.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT has elected to eliminate the requirement to have a CPOP based on Industry Comment.</p> <p>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities. Many critical process industries utilize the NATO alphabet because it is effective in preventing mishaps due to miscommunication. Some examples are the military, medical and air traffic fields. The SDT feels strongly that operation of the BES is a similar critical process and should employ a proven communication protocol.</p> <p>The SDT has modified the second draft of the COM-003 standard by restricting the requirement's applicability only to verbal “Operating Communications”.</p> <p>The RCSDT is developing the term “Reliability Directive” in project 2006-06. The terms, “directive” and “Reliability Directive” are not used in the second draft of COM-003.</p>		
PPL	Disagree	The way this could be interpreted is that every type of communication between every applicable entity would have to use the NATO phonetic alphabet. This would be impractical since many of the current communications do not require this level of specificity.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT has required the use of the NATO Alphabet or an accurate alpha numeric clarifier to clarify alpha numeric identifiers during verbal “Operating Communications” because operations on the BES do require this level of specificity.</p>		
Georgia Transmission Corp	Disagree	This is an operational burden and could easily cause a violation by using a different common identifier. If used, it should only apply to Reliability Directives.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p> <p>The proposed standard is required during both emergency operating states and also normal operating states.</p>		
California Independent System Operator	Disagree	This requirement is a best practice. Maybe the standardized alpha-numeric communication is something that companies should be required to train their personnel on, maybe it could even be a requirement of their CharliePapaOscarPapa. As this requirement is literally written a system operator who used the word ‘cat’ instead of the word ‘Charlie’ when giving a directive would violate a sanctionable standard with a VRF of ‘High’ and a VSL

Organization	Yes or No	Question 7 Comment
		of 'Severe'.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities</b></p> <p><b>The “Charlie, Papa, Oscar, Papa” requirement has been eliminated.</b></p> <p><b>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p> <p><b>The SDT has modified the VRF and VSL to conform to NERC and FERC guidelines.</b></p>		
Puget Sound Energy	Disagree	<p>This requirement is too burdensome when compared to its benefits. The proposed requirement covers many different types of verbal communication and converts a useful communication protocol into mandatory requirement, which carries with it large potential penalties. Under this requirement, an operator’s use of the phrase “M as in Mary” instead of “M as in Mike” would be violation of NERC reliability standards. The requirement for Three-Part Communications covers most of this ground in a much more useful fashion and ensures parties understand the information. The use of this protocol is a matter that should be left for entities to consider for inclusion in their CPOPs, but should not be a mandatory requirement to use the protocol. Further it is again assumed that based on R1, this information is related to real time. As well further examples of what a real time issuing of a "notification" is and what "other reliability related operation information would be needs to be specified.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication among BES operating entities. The implementation of the requirement should not be overly burdensome.</b></p> <p><b>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p> <p><b>The requirement to have a CPOP has been eliminated.</b></p> <p><b>With regard to the value of phonetic alphabet clarification, many critical process industries utilize the NATO alphabet because it is effective in preventing mishaps due to miscommunication. Some examples are the military, medical and air traffic control fields. The SDT feels strongly that operation of the BES is a similar critical process and should employ a proven communication protocol.</b></p>		

Organization	Yes or No	Question 7 Comment
NIPSCO	Disagree	This should not be a requirement, but could be a suggested option. If one were recorded using the wrong phonetic would that be a compliance violation? This doesn't seem reasonable.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>If you use Baker instead of Bravo for “B” that is compliant. If you use Phase instead of Foxtrot for “F” you would be non compliant.</b></p> <p><b>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p>		
Manitoba Hydro	Disagree	<p>To using NATO full time</p> <p>1) Being trained or being familiar with NATO Phonetics is a great idea, but should only be implemented, in bad communication connections, or upon request due to accents, quiet voice, fast talk, too loud, unusual request, etc.</p> <p>2) Communication technology for the most part is exceptionally clear, and the regular use of NATO Phonetics would be difficult to implement and time consuming to use. The RC and neighbouring entities are familiar with common terminology between each other.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>1. The SDT believes that clarity around verbally conveyed alpha-numeric information during “Operating Communications” is critical for ensuring clear and effective real-time communication among BES operating entities. The SDT would not discourage its use outside of “Operating Communications” in the context of your comments.</b></p> <p><b>2. Communication technology may be exceptionally clear for much of the time, but human factors and natural electromagnetic abnormalities do occur on a frequent basis making it important to have structured and clear communication protocols to prevent miscommunication.</b></p>		
Xcel Energy	Disagree	<p>Use of the NATO phonetic alphabet should be a best practice not a reliability requirement. We are not convinced that there is any threat to reliability if someone were to use a different phonetic than what is indicated. Additionally, we do not feel that it is necessary to use the phonetic alphabet unless there is an indication that the initial communication has been misunderstood. If the drafting team feels this requirement should remain in the standard, we feel it should be modified to address:</p> <p>1) There should be an exception for approved acronyms, such as NERC, FERC, etc.,</p> <p><b>The SDT intends for Requirement R1, Part 1.2 in the revised standard to apply to unique Facility/Element alpha-numeric (numbers and letter codes or designators) identifiers and not commonly used acronyms such as “CB” for circuit breaker; or names such as “Bee Hollow”.</b></p>



Organization	Yes or No	Question 7 Comment
		<p>2) it should only be required upon repeat-back, when the first communication was misunderstood, and <b>It will be required when alpha numeric identifiers are used only during verbal “Operating Communications.”</b></p> <p>3) Any phonetic alphabet should be acceptable for use, such as military or police, not just NATO's. <b>The SDT has modified the requirement to allow the use of any phonetic alphabet. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication among BES operating entities.</b></p> <p><b>The SDT believes that adequate training, familiarity with and use of the phonetic alphabet will avoid and eliminate confusion among operators. The military, medical and air traffic control fields utilize the NATO alphabet as a proven means of voice communication clarification.</b></p>		
PJM	Disagree	<p>Use of the NATO phonetic alphabet should be considered a “best practice” and should not be included as a requirement in a reliability standard. One failure, such as saying “Baker” instead of “Bravo”, results in a severe violation without any impact on system reliability. This group is concerned that operating personnel will be focused on using the correct word rather than managing the power system. Also, many organizations may have established communications protocols which are functioning properly and making a change may actually hinder reliable operations by introducing unnecessary confusion.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities.</b></p> <p><b>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p> <p><b>The SDT believes that adequate training, familiarity with and use of the phonetic alphabet will avoid and eliminate confusion among operators. The NATO alphabet is a proven means of voice communication clarification.</b></p>		
PJM SOS Comments	Disagree	<p>Use of the NATO phonetic alphabet should be considered a “best practice” and should not be included as a</p>

Organization	Yes or No	Question 7 Comment
		<p>requirement in a reliability standard. One failure, such as saying “Baker” instead of “Bravo”, results in a severe violation without any impact on system reliability. This group is concerned that operating personnel will be focused on using the correct word rather than managing the power system. Also, many organizations may have established communications protocols which are functioning properly and making a change may actually hinder reliable operations by introducing unnecessary confusion.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities.</b></p> <p><b>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p> <p><b>The SDT believes that adequate training, familiarity with and use of the phonetic alphabet will avoid and eliminate confusion among operators.</b></p> <p><b>The NATO alphabet is a proven means of voice communication clarification.</b></p>		
Santee Cooper	Disagree	<p>Use of the NATO phonetic alphabet should not be a requirement of this standard. This also adds a layer of complexity to the system operator position that is not necessary.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT disagrees and believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities.</b></p> <p><b>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p>		
Electric Market Policy	Disagree	<p>Use of this adds a lot to verbal communication but has little value. Where either the issuing or receiving party is unsure as to which letter was used, their choice of word to associate with the alphabet need not be dictated by a specific phonetic alphabet. If I am unclear, whether I ask “did you say ‘F’ as in Frank or ‘F’ as in Foxtrot, it is my belief that we will both know that I heard the letter F not the letter S. Using Frank instead of Foxtrot will result in a violation of Requirement R6 which carries a High VRF and a Severe VSL; even though there would be no impact on effective communication. There is no compelling reason to require every operator in North America to learn and use the NATO phonetic alphabet. It would be overkill to do so, and it could create some really bizarre conversations. For example, consider a TOP in the eastern time zone who calls his RC (also in the eastern time zone) at 10:00 A.M.to confirm that a line that tripped earlier that morning will be ready to switch back in service at</p>

Organization	Yes or No	Question 7 Comment
		<p>10:35. Taken to the extreme, a strict interpretation of R6 and R4 (the CST requirement) would say that the TOP operator would have to state the estimated time of restoration as “niner tree fife, Alpha Mike, Charlie Sierra Tango”. There is no need for that.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication among BES operating entities.</b></p> <p><b>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p> <p><b>The SDT intends for Requirement R1, Part 1.2 in the revised standard to apply to unique Facility/Element alpha-numeric (numbers and letter codes or designators) identifiers and not commonly used acronyms such as “CB” for circuit breaker; or names such as “Bee Hollow”. Since your example is not a unique Facility/Element alpha-numeric identifier it would read as “0-9-3-5 Central Standard Time” You would not use am/pm as R3 (new Requirement R1 Part 1.1.2) requires the 24 hour format.</b></p> <p><b>Please note under proposed R3 (new requirement R1 Part 1.1.3) The SDT has offered an alternative to the single time zone.</b></p>		
National Grid	Disagree	<p>Using the NATO phonetic alphabet is useful, but to what extent? Does it apply to facility identifications, key words, or every letter of every word? Is it up to the judgment of the operators? If so how will compliance be monitored? If during a communication, personnel used a term different than that in the NATO alphabet i.e. D as in Dog rather than Delta however, the listener understood the message and the correct action was taken would there still be the possibility of a compliance violation?</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p> <p><b>D as in “Dog” rather than “Delta” would be compliant; F as in “phase” rather than “Foxtrot” would be non compliant.</b></p> <p><b>The revised requirement applies during verbal “Operating Communications”, when alpha-numeric information is involved.</b></p>		
NRECA RTF Members	Disagree	<p>We agree that using the NATO phonetic alphabet is a more accurate form of communication for issuing and responding to a directive during verbal Interoperability Communications. However, other forms of phonetic alphabet communications could be utilized to achieve the same results and entities should not be forced to use only the NATO phonetic alphabet. As stated in question 6 we are concerned about the undefined term “directive”. In addition to the NATO alphabet, did the drafting team consider including the 10-Code system many utilities use</p>

Organization	Yes or No	Question 7 Comment
		for verbal communication (ex: 10-4)? If not, why not and if so, why not included?
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT has eliminated “Interoperability Communication” and is proposing the new term “Operations Communications.” “Operations Communications” are communications with the intent to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. The use of a phonetic clarifier will be required only during verbal “Operating Communications” that involve alpha-numeric identifiers.</p> <p>The SDT has modified the Requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p> <p>The SDT believes the ten code system is not appropriate for use with unique Facility/Element alpha numeric identifiers. The ten code system varies over North America and may not exist in Canada. The NATO alphabet, as an example, is more universal, consistent and more applicable.</p>		
Duke Energy	Disagree	We believe that R6 should be deleted, because it is focused on the details of the “how” rather than the “what” in communications. The key is accurate 3-part communications for “directives”, as required by R5. R6 is far too broad in the communications that would be included. Also, we believe that there is no reasonable way to implement, self-certify or audit compliance with this requirement.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The OPCP SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations.</p> <p>The SDT has modified the proposed standard by restricting the requirement's applicability only to verbal “Operating Communications” that involve alpha-numeric identifiers.</p> <p>The measure (now contained within M1 but previously M6) includes types of evidence that may be used to demonstrate compliance with this requirement.</p>		
South Carolina Electric and Gas	Disagree	We believe this should only be required when issuing Reliability Directives.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT has modified the proposed standard by restricting the requirement's applicability only to verbal “Operating Communications” which can include normal, alert and emergency operating conditions and involve alpha-numeric identifiers.</p>		

Organization	Yes or No	Question 7 Comment
NYSEG	Disagree	While it is perhaps a good practice to include the use of phonetics to avoid miscommunications, it should be left up to each entity to determine the appropriateness of adopting such a practice (e.g., field switching, internal instructions, etc.) and should not be included in the Requirement, especially if Interoperability is not further clarified/defined.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT has eliminated “Interoperability Communication” and is proposing the new term “Operations Communications.” “Operations Communications” are communications with the intent to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. The SDT has modified the proposed standard by restricting the requirement’s applicability (Requirement R1, Part 1.2 in the revised standard) only to verbal “Operating Communications” alpha-numeric identifiers.</p>		
Long Island Power Authority	Disagree	While LIPA understands the benefit of utilizing a phonetic alphabet, we question the designation of a specific phonetic alphabet. This prescriptive requirement may result in absurd non-compliance reports, such as, using “Dog” for “D” instead of “Delta”. R6 requires the use of the alphabet when issuing information, but not in the repeat back step. This may be an oversight. Also Does the RC in its communication utilize the abbreviation for the threat type, e.g. PSEA, or does the RC use the NATO-Alphabet? If NATO, then the example in Attachment 1 should state this need.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT has modified the requirement to allow for the "NATO phonetic alphabet or another “accurate alpha numeric clarifier.”, so D as in “Dog” rather than “Delta” would be compliant; F as in “Phase” rather than “Foxtrot” would be non compliant.</p> <p>The SDT intends for Requirement R1, Part 1.2 in the revised standard to apply to unique Facility and Element alpha numeric identifiers and not commonly used acronyms such as “PSEA” for Physical Security Emergency Alert.</p> <p>The SDT has modified the proposed standard by restricting Part 1.2 of the revised requirement’s applicability only to verbal “Operating Communications” that involve alpha-numeric identifiers.</p>		
We Energies	Disagree	While R6 could be recommended as a good utility practice when communicating Reliability Directives, it is not appropriate to enforce it as a requirement for all communications. The focus of the standard should be on the achievement of clear communications, with individual organizations retaining some freedom to implement practices appropriate for their own unique situations. If Violation Severity Levels will be “high” as indicated in Attachment 1-COM-003-1, then the standard must be much more specific as to what constitutes “directives, notifications, directions, instructions, orders or other reliability operating information”. Assigning a high Violation

Organization	Yes or No	Question 7 Comment
		<p>Severity Level to the failure to use a specific phonetic alphabet (NATO) instead of to a failure to use any phonetic alphabet seems unreasonable and is likely to cause as much confusion as failing to use any sort of phonetic pronunciation. If attachment 2 is utilized, it should only be required for situations where Attachment 1 applies. As noted in question 2, R6 should not apply to a TSP or LSE.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT believes that clarity around verbally conveyed alpha-numeric identification information is critical for ensuring clear and effective real-time communication among BES operating entities and should be enforceable.</b></p> <p><b>The SDT agrees with your concerns over applicable communications and has modified the proposed standard by restricting Part 1.2 of the revised requirement's applicability only to verbal "Operating Communications" that involve alpha-numeric identifiers.</b></p> <p><b>The new language is Requirement R1 Part 1.2. "When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers."</b></p> <p><b>The SDT has removed the TSPs and LSEs because they were not bound by this requirement in the originating SAR.</b></p>		
Dynergy	Disagree	<p>While this Requirement may represent a good utility practice in certain situations, it is not necessary to be used in all verbal Interoperability Communications and is certainly not necessary to be included as an enforceable Requirement. Imagine the situation in which an operator says "A as in apple" instead of using the NATO Alpha. Even though the listener should clearly be able to discern the correct meaning, the speaker's company could be sanctioned even if the correct actions were taken as a result of the clear communication. There is no reliability need for this Requirement.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT has modified the proposed standard by deleting the term Interoperability Communications and adding the new term - "Operating Communications".</b></p> <p><b>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. "When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers."</b></p> <p><b>"A as in apple" instead of using the NATO "Alpha" would be compliant; F as in "Phase" rather than "Foxtrot" would be non compliant.</b></p> <p><b>The SDT believes there is a reliability need for this requirement and that it will enhance reliability by clarifying communications to prevent misunderstandings that could cause mishaps on the BES.</b></p>		
Hydro-Québec	Disagree	<p>While this Requirement may represent a good utility practice in certain situations, it is not necessary to be used in</p>

Organization	Yes or No	Question 7 Comment
TransEnergie		<p>all verbal Interoperability Communications, and is certainly not necessary to be included as an enforceable Requirement.</p> <p>For example, a situation in which an operator says “A” as in apple” instead of using the NATO Alpha. Even though the listener should clearly be able to discern the correct meaning, the speaker’s company could be sanctioned even if the correct actions were taken as a result of the clear communication. The objective of good communications is to assure that the parties understand each other. The statement “... shall use the NATO phonetic alphabet” doesn’t make sense for North America. If the Real-Time Operator states “breaker 6-North,” under the NATO phonetic alphabet that would be unacceptable, because the operator did not use the appropriate NATO term “breaker 6-November,” even though the “N” on the one line diagram refers to the “North” breaker and not the “South” breaker. Many organizations may have established communications protocols which are working well. Making a change may actually hinder reliable operations by introducing unnecessary confusion and questioning. Not only does this requirement attempt to determine HOW entities operate with their various footprints, it may change the way many Markets are structured. What is the difference between using the word “Zebra” instead of “Zulu” to signify the letter “Z”? And, why would this be enforceable. Perhaps this should be a guideline document rather than an enforceable Requirement. There is no reliability need for this Requirement. Furthermore, the use of three part communication eliminates the need for a mandatory use of NATO phonetic alphabet.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT believes there is a reliability need for this requirement (Requirement R1, Part R1.2 in the revised standard) and that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities.</b></p> <p><b>The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p> <p><b>“A as in apple” instead of using the NATO “Alpha” would be compliant; F as in “Phase” rather than “Foxtrot” would be non compliant.</b></p> <p><b>With regard to “breaker 6-North,” under the NATO phonetic alphabet and the revision for a correct phonetic alphabet substitute that would be acceptable as long as the operator used either NATO term “breaker 6-November,” or correct phonetic alphabet substitute “breaker 6-North.” If the operator used the term “breaker 6-“N” (pronounced “en”) he or she would be non compliant.</b></p>		
Midwest ISO Standards Collaborators	Disagree	<p>While this Requirement may represent a good utility practice in certain situations, it is not necessary to be used in all verbal Interoperability Communications and is certainly not necessary to be included as an enforceable Requirement. Imagine the situation in which an operator says “A as in apple” instead of using the NATO Alpha.</p>

Organization	Yes or No	Question 7 Comment
		<p>Even though the listener should clearly be able to discern the correct meaning, the speaker’s company could be sanctioned even if the correct actions were taken as a result of the clear communication. There is no reliability need for this Requirement.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities.</b></p> <p><b>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</b></p> <p><b>“A as in apple” instead of using the NATO “Alpha” would be compliant; F as in “Phase” rather than “Foxtrot” would be non compliant.</b></p>		
<p>Northeast Power Coordinating Council</p>	<p>Disagree</p>	<p>While this Requirement may represent a good utility practice in certain situations, it is not necessary to be used in all verbal Interoperability Communications, and is certainly not necessary to be included as an enforceable Requirement. For example, a situation in which an operator says “A as in apple” instead of using the NATO Alpha. Even though the listener should clearly be able to discern the correct meaning, the speaker’s company could be sanctioned even if the correct actions were taken as a result of the clear communication. The objective of good communications is to assure that the parties understand each other. The statement “... shall use the NATO phonetic alphabet” doesn’t make sense for North America. If the Real-Time Operator states “breaker 6-North,” under the NATO phonetic alphabet that would be unacceptable, because the operator did not use the appropriate NATO term “breaker 6-November,” even though the “N” on the one line diagram refers to the “North” breaker and not the “South” breaker. Many organizations may have established communications protocols which are working well. Making a change may actually hinder reliable operations by introducing unnecessary confusion and questioning.</p> <p>Not only does this requirement attempt to determine HOW entities operate with their various footprints, it may change the way many Markets are structured. What is the difference between using the word “Zebra” instead of “Zulu” to signify the letter “Z”? And, why would this be enforceable. Perhaps this should be a guideline document rather than an enforceable Requirement. There is no reliability need for this Requirement.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities and enhances reliability.</b></p>		



Organization	Yes or No	Question 7 Comment
<p>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p> <p>“A as in apple” instead of using the NATO “Alpha” would be compliant; F as in “Phase” rather than “Foxtrot” would be non compliant.</p> <p>With regard to “breaker 6-North,” under the NATO phonetic alphabet and the revision for a correct phonetic alphabet substitute that would be acceptable as long as the operator used either NATO term “breaker 6-November,” or correct phonetic alphabet substitute “breaker 6-North.” If the operator used the term “breaker 6-“N” (pronounced “en”) he or she would be non compliant.</p>		
Great River Energy	Disagree	<p>While this requirement may represent a good utility practice or even a best practice, it is not so necessary to be enforceable through enforceable requirements. The NATO phonetic alphabet does not allow for the use of numbers ten and beyond. An entity WOULD be found non compliant for saying OPEN SWITCH FOURTEEN BRAVO. GRE does not believe this is reasonable as it adds nothing to the reliability of the BES. It is too prescriptive and all encompassing and could potentially confuse or slow down the communication process especially in an emergency situation.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities.</p> <p>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p> <p>If the nomenclature of the switch on the single line is “14B” the requirement would have it read as “One, Four Bravo.” The number “2347” would be read as “Two, Three, Four, Seven” under R6 (new R1 Part 1.2).</p> <p>The SDT believes that adequate training, familiarity with and use of the phonetic alphabet will avoid and eliminate confusion among operators.</p>		
Independent Electricity System Operator	Disagree	<p>While this requirement may represent a good utility practice or even a best practice, it is not so necessary to be enforceable through sanctionable requirements. Similar to R2, having to use the NATO phonetic alphabet is overly prescriptive and forces system operators to learn and remember “languages” in addition to the power system language. System operators should not be penalized for using some means other than the NATO phonetic alphabet to communicate equally effectively. We see no short coming in operations that would require these additional requirements and that the added complexity and additional training requirements may deteriorate reliability.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p>		

Organization	Yes or No	Question 7 Comment
<p>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication among BES operating entities.</p> <p>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p> <p>The SDT believes that adequate training, familiarity with and use of the phonetic alphabet will avoid and eliminate confusion among operators.</p>		
<p>IRC Standards Review Committee</p>	<p>Disagree</p>	<p>While this requirement may represent a good utility practice or even a best practice, it is not so necessary to be enforceable through enforceable requirements. Imagine the situation in which an operator says “A as in apple” instead of using the NATO Alpha. Even though the listener should clearly be able to discern the correct meaning, the speaker’s company could be sanctioned even if the correct actions were taken as a result of the clear communication. Also, many organizations may have established communications protocols which are functioning properly and making a change may actually hinder reliable operations by introducing unnecessary confusion.</p>
<p>Response: The SDT thanks you for your comments.</p> <p>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication among BES operating entities.</p> <p>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p> <p>“A as in apple” instead of using the NATO “Alpha” would be compliant; F as in “Phase” rather than “Foxtrot” would be non compliant.</p> <p>The SDT believes that adequate training, familiarity with and use of the phonetic alphabet will avoid and eliminate confusion among operators.</p>		
<p>FirstEnergy</p>	<p>Disagree</p>	<p>While we agree that using the NATO phonetic alphabet may be a best practice, we feel that it is not practical to regulate its use. This requirement is too prescriptive. The focus should be on the correct understanding of verbal communication which will be accomplished via Three-party Communication, whether an entity uses NATO or "A as in Apple, B as in Boy", this should not be codified within the standard. Substantiating compliance with this requirement is not reasonable to expect, practical to prove, nor does it produce an improvement in reliability.</p>
<p>Response: The SDT thanks you for your comments.</p> <p>The SDT believes that clarity around verbally conveyed alpha-numeric information is critical for ensuring clear and effective real-time communication between BES operating entities.</p> <p>The SDT has modified the requirement. The new language is in Requirement R1 Part 1.2. “When participating in verbal Operating Communications</p>		

Organization	Yes or No	Question 7 Comment
		<p>and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.”</p> <p>“A as in apple” instead of using the NATO “Alpha” would be compliant; F as in “Phase” rather than “Foxtrot” would be non compliant.</p> <p>The SDT believes that adequate training, familiarity with and use of the phonetic alphabet will avoid and eliminate confusion among operators.</p>

- 8. Requirement R7 of the draft COM-003-1 states, “Each Responsible Entity shall use pre-determined, mutually agreed upon line and equipment identifiers during for all verbal and written Interoperability Communications.” Do you agree with this proposal? If not, please explain in the comment area.**

**Summary Consideration:**

Most stakeholders who responded to this comment disagreed with the proposal.

Many commenters said the terms “. . . pre-determined, mutually agreed upon . . .” are confusing and difficult to measure. The SDT agrees and modified the requirement to remove the term “mutually agreed upon”.

Commenters indicated a general consensus for the mandatory use of line and equipment identifiers applying only to interface Elements or Facilities, not Elements or Facilities internal to the footprint of the entity. The SDT agreed, and modified the standard to apply only to interface Elements and Facilities.

There were additional comments that uniform and mutually agreed line and equipment identifiers should not be mandated so long as the identifiers are pre-determined. The SDT agrees documentation of mutual agreement is not necessary, so long as the identifiers are pre-determined, understood and used during Operating Communications. The SDT has modified the requirement to require use of the name specified by the owner(s) of the Transmission interface Element/Facility when referring to that Element/Facility.

Many commenters indicated Requirement R7 should not have been applicable to TSPs and LSEs. The SDT agrees, and has removed TSPs and LSEs from the standard to be consistent with the approved SAR.

Additional commenters indicated the word “equipment” as used in Requirement R7 was too broad. The standard has been modified to use the defined terms “Element” and “Facility” instead.

Other commenters indicated Requirement R7 addressed a planning function already included in TOP-002, and should not be included in COM-003. While the SDT agrees that TOP-002-2a R18 is a planning function, the team believes communications between entities would be improved when use of pre-determined identifiers is required for interface Elements and Facilities. The SDT proposes the concept of R7 be retained and transferred to R1 Part 1.1.4.

Some additional comments were received indicating the previously posted standard was too prescriptive in specifying “how” to communicate, instead of “what.” The SDT proposes that the second draft of COM-003 provides identifies “what” communications protocols to use and when to use them.

Some commenters also indicated the proposed standard was unnecessary and would distract operators from reliably controlling the system. The SDT disagreed based on Blackout Task Force Report recommendation 26, which calls for tightening communication to improve reliability.

Question 8 mis-states R7 in that it inserts the word “all” in the question and it was not in R7. The performance that was specified in Requirement R7 in the initial draft of COM-003 has been modified so it is more narrowly focused and allows greater flexibility in meeting the reliability objective. See Requirement R1, Part 1.1.4 in the second draft of COM-003:

R1. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider shall use the following communications protocols:: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations* ]

1.1. When participating in oral or written Operating Communications:

- 1.1.1. Use the English language when communicating between functional entities, unless another language is mandated by law or regulation.
- 1.1.2. Use the 24-hour clock format when referring to clock times.
- 1.1.3. When communicating with one or more entities in different time zones, include the time, local time zone and indicate whether time is daylight saving time or standard time.
- 1.1.4. When referring to a Transmission interface Element or a Transmission interface Facility, use the name specified by the owner(s) for that Transmission interface Element or Transmission interface Facility. .

Organization	Yes or No	Question 8 Comment
British Columbia Transmission Corporation	Agree	
Bureau of Reclamation	Agree	
ExxonMobil Research and Engineering	Agree	
Georgia	Agree	

Consideration of Comments on OPCP SDT — Project 2007-02

Organization	Yes or No	Question 8 Comment
Transmission Corp		
Hydro-Quebec TransEnergie	Agree	
Northeast Power Coordinating Council	Agree	
Northeast Utilities	Agree	
Old Dominion Electric Cooperative	Agree	
Oncor Electric Delivery	Agree	
Orange and Rockland Utilities, Inc.	Agree	
PacifiCorp	Agree	
PEF	Agree	
PowerSouth Energy	Agree	
South Carolina Electric and Gas	Agree	
Sunflower Electric Power Corp.	Agree	
Sunflower Electric Power Corporation	Agree	
Transmission System Operations	Agree	

Organization	Yes or No	Question 8 Comment
Westar Energy	Agree	
Western Area Power Administration	Agree	
Progress Energy Carolina, Inc	Disagree	
American Electric Power	Disagree	AEP does not believe it is appropriate for the standard to have been edited to remove the clarification that neighboring BAs use uniform line identifiers when communicating information about their lines and to add the addition requirement of using pre-determined "equipment" identifiers.
<p><b>Response: The SDT thanks you for your comments. The SDT developed Requirement R1 Part 1.1.4 in the second draft of the standard to require use of the name specified by the owner(s) of a Transmission interface Element/Facility, when referring to that Element/Facility. The term "interface" is used instead of neighboring for greater clarity.</b></p>		
FirstEnergy	Disagree	Although we agree with moving this current TOP-002 R18 requirement to this standard, we question the use of the phrase "mutually agreed upon". It is not clear how the line and equipment identifiers will be mutually agreed upon and how this will be measured. We suggest using similar wording from the current TOP-002 R18 and reword COM-003-1 R7 as follows: "Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall use uniform line and equipment identifiers for verbal and written communications."
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT modified the requirement to remove the term "mutually agreed upon". The SDT developed Requirement R1 Part 1.1.4 in the second draft of the standard to require use of the name specified by the owner(s) of a Transmission interface Element/Facility, when referring to that Element/Facility during verbal and written Operating Communications.</b></p>		
Puget Sound Energy	Disagree	As discussed in Question 2, Requirement 18 should be removed from TOP-002-2 (or any successor standard) upon adoption of this standard if this requirement is included in this standard. Further the term mutually agreed implies that a discussion has occurred prior to the need to verbalize or write these types of communications. The additional specificity of "pre-determined" is duplicative or leads one to think there is formal guidance as to what the "identifier" should be. Remove "pre-determined". It also begs the question of timeframe which could bring interpretation issues during an audit.

Organization	Yes or No	Question 8 Comment
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The drafting team asserts that communications between entities would be tightened when use of pre-determined identifiers are required for interface Elements/Facilities. The SDT proposes for R7 (R1 Part 1.1.4 in the second draft of this standard) to remain on its own merit. The SDT modified the requirement to remove the term “mutually agreed upon”.</p> <p>The SDT modified the requirement so that during oral and written Operating Communications entities must use the name specified by the owner(s) of a Transmission interface Element/Facility when referring to that Element/Facility.</p>		
Bonneville Power Administration	Disagree	BPA Would like further clarification about what is meant by “pre-determined, mutually agreed upon line and equipment identifiers”. Is it a specified format no matter which part of the system is being used, or is it only for 115 kV and above as it applies to LSE’s and TSP’s. If it only refers to Transmission equipment above 115 kV, then BPA would likely agree.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT modified the requirement to remove the term “mutually agreed upon”. The SDT developed Requirement R1 Part 1.1.4 in the second draft of the standard to require use of the name specified by the owner(s) of a Transmission interface Element/Facility, when referring to that Element/Facility. The new term “Operating Communications” applies when communications involve actions relative to Elements or Facilities of the Bulk Electric System.</p>		
Ameren	Agree	But how does CMEP process check this “mutually agreed”. Much more work needs to be done with this requirement and measures to address this.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT modified the requirement to remove the term “mutually agreed upon”.</p>		
California Independent System Operator	Disagree	CAISO Comments; This Requirement is problematic as it doesn’t actually steer towards standardization. It mandates that companies have potentially scores of agreements agreeing on terms with each party it interacts with, all of which may be different. It ensures the system operator will spend more time ensuring terminology is correct for a given inter-company communication and once again, less time actually reliably operating the system. Standardization can only occur in a meaningful manner at very minimum, the interconnection level. Also the language in the VSL section uses “mutually understood”, which the CAISO supports as opposed to the requirement and measure use “mutually agreed upon”. Mutually agreed upon is overly prescriptive.
<p><b>Response: The SDT thanks you for your comments.</b></p>		



Organization	Yes or No	Question 8 Comment
<p>The SDT does not agree there will more time spent ensuring terminology is correct for a given inter-company communication and less time actually reliably operating the system.</p> <p>The SDT developed Requirement R1 Part 1.1.4 in the second draft of the standard to require use of the name specified by the owner(s) of a Transmission interface Element/Facility, when referring to that Element/Facility. The SDT modified the requirement and VSLs to be consistent with each other.</p> <p>The SDT modified the requirement to remove the term “mutually agreed upon” which should address your concern on multiple agreements.</p>		
NYSEG	Agree	COM-003-1 R7 is more clearly defined than TOP-002 R18 in that R7 and associated M7 speak only to written and verbal Interoperability Communication, where TOP-002 R18 and M10 dictate a more extensive use of the identifier. The adoption of a more narrow purpose is preferred.
<p><b>Response: The SDT thanks you for your comments.</b></p>		
New York State Reliability Council	Agree	Comments: NYSRC notes that R7 in the draft Standard does not match R2 in this question. Specifically the word ALL is not in the Standard.
<p><b>Response: The SDT thanks you for your comments. The SDT appreciates the observation and the word “all” is not in the requirement. It should not have been in the question.</b></p>		
Duke Energy	Disagree	Delete this requirement. See our response to Question #2 above.
<p><b>Response: The SDT thanks you for your comments. Please see the response to Question #2.</b></p>		
ERCOT ISO	Disagree	Does the phrase ‘mutually agreed upon line and equipment identifiers’ mean that identifiers do not have to be identical, but that all parties understand the equipment discussed? If this is the general understanding, then no further comment, otherwise, please clarify. Although the related bullet item in the Background Information section describes that they do not have to be identical, many auditors many only look at the requirement language
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT modified the requirement to remove the term “mutually agreed upon”.</p> <p>The SDT developed Requirement R1 Part 1.1.4 in the second draft of the standard to require use of the name specified by the owner(s) of a Transmission interface Element/Facility, when referring to that Element/Facility. The SDT would expect a single pre-determined name for each interface Element/Facility to reduce the potential for confusion among operators.</p>		

Organization	Yes or No	Question 8 Comment
Pacific Northwest Small Utilities Comment Group	Disagree	DPs and LSEs are typically users, not owners or operators of interconnected BES equipment per the registry criteria. DPs and LSEs should be removed from this requirement.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT appreciates the comments with regards to concerns related to including DPs and LSEs that do not own or operate facilities that are a part of the BES. The SDT has removed the TSPs and LSEs because they were not bound by this requirement in the originating SAR. However, the SDT believes that DPs carry out actions related to the reliability of the Bulk Electric System such as voltage reduction and load shedding. Several existing standards contain requirements concerning operating communications that TSPs, DPs and LSEs must presently comply with that would be governed by the protocols of COM-003-1. It should be noted that the requirements of COM-003-1 are only applicable to “Operating Communications.” To the extent that these entities do not operate or do not take actions that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System, COM-003-1 would not apply.</p>		
MRO NERC Standards Review Subcommittee	Disagree	Field personnel may not have access to the predetermined agreed to line and equipment identifiers. Requiring universal use of these identifiers could lead to confusion with field personnel within and between companies. This could lead to a decrease in the reliability and safety of the BES.As written R7 is expanding the requirement for agreed upon identifiers. We believe it is not necessary or required to have agreed upon equipment identifiers between companies as long as the line identifiers have been agreed upon.TOP-002 R18 states that BA, TOP, GOP TSP and LSE shall use uniform line identifiers when referring to transmission facilities of an interconnected network. COM-003-1, R7 states that each RC, BA, TO, TOP, GOP, TSP, LSE and DP shall use pre-determined, mutually agreed upon line and equipment identifiers for verbal and written Interoperability Communications. TOP-002 allowed the TOP to communicate what the line identifiers were via a list and use during communications. The new requirement implies that the parties must agree upon the line identifiers and that agreement must be documented. We believe the requirement should require the exchange of line identifiers but not impose that they be mutually agreed upon.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT developed Requirement R1 Part 1.1.4 in the second draft of the standard to require use of the name specified by the owner(s) of a Transmission interface Element/Facility, when referring to that Element/Facility.</p> <p>The new term “Operating Communications” applies when communications involve actions relative to Elements or Facilities of the Bulk Electric System.</p>		

Organization	Yes or No	Question 8 Comment
<p><b>The SDT modified the requirement to remove the term “mutually agreed upon”.</b></p>		
<p>Florida Municipal Power Agency (FMPA) and some members</p>	<p>Agree</p>	<p>For clarity, a NERC Glossary defined term is more appropriate than “line or equipment” identifiers, such as “Facility” or “Element” identifiers’ VRF of “High” is not appropriate. Note that TOP-002-2, R18, which this requirement replaces, was “Medium”.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT changed “equipment” to Element or Facility. The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. The SDT believes the new assignments (Medium VRF for each of the requirements in the second draft of the standard) more accurately classify the VRFs assigned to the Requirements in COM-003-1.</b></p>		
<p>Transmission Owner</p>	<p>Disagree</p>	<p>FPL believes that R7 should be withdrawn as it repeats TOP-002 R18 requirements. Please refer to comments on Q3.</p>
<p><b>Response: The SDT thanks you for your comments. SDT feels that this requirement is appropriate under COM-003. The use of the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities during oral and written Operating Communications supports the purpose of COM-003 by preventing miscommunication. Please see response to Q3.</b></p>		
<p>American Municipal Power</p>	<p>Agree</p>	<p>How many substations have the same name? Unique identifiers easily and inexpensively eliminate confusion and errors.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p>		
<p>The Empire District Electric Company</p>	<p>Disagree</p>	<p>I would suggest a more efficient method of designating common pre-determined line and equipment identifiers through the Reliability Coordinator. As similar to the response earlier. A definition of "Equipment" is needed as well.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT believes your recommendation has merit but may be viewed by some stakeholders as overly prescriptive. The SDT developed Requirement R1 Part 1.1.4 in the second draft of the standard to require use of the name specified by the owner(s) of a Transmission interface Element/Facility, when referring to that Element/Facility.</b></p>		

Organization	Yes or No	Question 8 Comment
E.ON U.S. LLC	Disagree	<p>In the absence of evidence that the lack of common identifiers is an imminent and continuing risk to BES reliability, it does not make sense to have operators addressing urgent, real-time situations that bear significant penalty risk should they refer to a BES element by something other than the common identifier. The operator focus at such times should be on resolving the situation not avoiding penalties over nomenclature. Is it the intent of the requirement that the common identifiers be the same for all neighboring parties, all of whom must “agree” to the identification? If not, then an element might be referred to by one identifier with Party A, another with Party B, and so on, which might well defeat the purpose of the requirement. If it is required that there be a single identifier, then all neighbors would have to agree upon the identifier constrained as each may be by, for example, the formatting limitation of their respective SCADA/EMS systems. Cost to modify software to accommodate common identifiers could be significant and NERC should weigh these costs and the aforementioned operational risks against the perceived incremental improvements to the BES reliability.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The Blackout Report Recommendation #26 states, communication protocols should be tightened especially those for alerts and emergency communications. FERC Order 693 P531 directed that communication protocols be tightened and suggested a new COM Reliability Standard as an acceptable approach. The SAR for this SDT charged the team to “tighten communication protocols, especially for communications during alerts and emergencies.” Additionally the SAR required “the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions.”</p> <p>SDT feels that the revised requirement (Requirement R1, Part 1.1.4 in the second draft) is appropriate under COM-003 as the use of identifiers only for interface Elements/Facilities during oral and written Operating Communications supports the purpose of COM-003. A clear knowledge of Facility and Element nomenclature at interface interconnections can only strengthen operator performance through understanding how operating system anomalies could impact their system. It will and has confused operators when they are not familiar with their neighbor’s system and are not prepared to take action to mitigate the disturbance. The SDT would argue that if the operator is not familiar with his or her neighboring system’s Elements and Facilities those operators will likely take even more time to attempt to learn in the “heat of battle.”</p> <p>The SDT disagrees that the cost to modify software would be significant as it would be limited to the interface Elements/Facilities as stated in R1 Part 1.1.4 of the second draft of the standard.</p>		
Kansas City Power & Light	Disagree	<p>Including “equipment” is too broad. This could mean anything and should be limited to transmission devices that could affect the reliable operation of the bulk electric system.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT modified the requirement so that entities must use the names specified by the owner(s)</b></p>		

Organization	Yes or No	Question 8 Comment
<p><b>of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities.</b></p>		
<p>Long Island Power Authority</p>	<p>Agree</p>	<p>LIPA notes that R7 in the draft Standard does not match R2 in this question. Specifically the word ALL is not in the Standard.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT appreciates the observation and the word “all” is not in the requirement. It should not have been in the question.</b></p>		
<p>Manitoba Hydro</p>	<p>Disagree</p>	<p>Move this new requirement R1.3 in COM-002-2. This is similar to Question 4 and should be treated in the same way: (This requirement is moved from TOP-002-2 R18)</p> <p>1) COM-003-1 R7 “Pre-determined, mutually agreed upon line and equipment identifiers” are all planned definitions.</p> <p>2) COM-003-1 purpose is to “convey information effectively” meaning the use of English, NATO, three-part communication, 24 time format are all verbal aspects to accomplish this purpose and not suited to pre-determined or planned items. a. COM-003-1 R7 appears more appropriate and relevant placed in COM-002-2. COM-002-2’s Purpose is “capabilities for addressing real time emergencies and to ensure communications by personnel are effective”.</p> <p>3) Placing “Pre-determined, mutually agreed upon line and equipment identifiers” in COM-002-2 after R1.1 as R1.3 appears to have more of a chronological approach.</p> <p>i. R1.1 states “conditions that could threaten”</p> <p>ii. R1.2 use “pre defined system conditions”</p> <p>iii. R1.3 use “pre determined equipment identifiers</p> <p>”Conclusion: Remove COM-003-1 R7 and replace in COM-002-2 as R1.3</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>SDT respectfully disagrees with shifting what is now Requirement R1, Part 1.1.4 in the second draft of COM-003 to COM-002-2 and feels that Requirement R1, Part 1.1.4 is appropriate under COM-003-1 as the use of pre-determined identifiers only for interface Elements/Facilities during oral and written Operating Communications supports the purpose of COM-003-1.</b></p>		
<p>NERC Staff</p>	<p>Disagree</p>	<p>NERC staff is unaware of any instance where not having a mutually agreed upon nomenclature has led to an adverse reliability event. Rather than requiring a national database for all line and equipment identifiers, it appears that restricting the list to jointly-owned facilities and tie-line would accomplish the team’s goal. We</p>

Organization	Yes or No	Question 8 Comment
		recommend that the phrase “Interoperability Communications” be replaced with “Operating Communications involving jointly-owned Facilities and tie lines.”
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The requirement does not require a national database. The SDT modified the requirement to use pre-determined identifiers only for interface Elements/Facilities during oral and written Operating Communications. The new term “Operating Communications” applies to Element or Facilities of the Bulk Electric System.</p> <p>The SDT modified the requirement to remove the term “mutually agreed upon”.</p>		
NextEra Energy Resources, LLC	Disagree	NextEra believes that R7 should be withdrawn as it repeats TOP-002 R18 requirements. Please refer to comments on Q3.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>SDT feels that this requirement is appropriate in COM-003 as the use of identifiers only for interface Elements/Facilities during oral and written Operating Communications supports the purpose of COM-003.</p> <p>Please see the response to Q3 comments.</p>		
IRC Standards Review Committee	Disagree	Please confirm our understanding of this requirement. We believe that the SDT intends for the requirement to compel all companies to use the same name for all facilities. If this is the intention, we disagree with the requirement. This may represent a good utility practice but it is not necessary to be a requirement. The key question is: “Do the companies’ personnel understand one another?” If I know that my company refers to a tie-line as Alpha and my neighboring company calls it Beta, I know what he means when communicating to me. That is all that matters.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities.</p>		
PJM	Disagree	Requirement R7 in draft COM-003-1 came from TOP-002-2, Requirement R18. The original requirement intended that neighboring Balancing Authorities use uniform line identifiers when communicating information about their tie lines. This requirement drops that clarification and introduces the additional requirement to use pre-determined “equipment” identifiers. Having to mutually agree in advance on identifiers for every switch & transformer is another example of a prescriptive requirement whose violation will not affect system reliability,

Organization	Yes or No	Question 8 Comment
		yet will expose entities to large fines. The key question is: “Do the companies’ personnel understand one another?”
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities.</b></p> <p><b>The SDT removed the term “mutually agreed upon”.</b></p> <p><b>The SDT would respectfully answer your last question “no, not always” and to create a protocol to address that issue is proper.</b></p>		
PJM SOS Comments	Disagree	Requirement R7 in draft COM-003-1 came from TOP-002-2, Requirement R18. The original requirement intended that neighboring Balancing Authorities use uniform line identifiers when communicating information about their tie lines. This requirement drops that clarification and introduces the additional requirement to use pre-determined “equipment” identifiers. Having to mutually agree in advance on identifiers for every switch & transformer is another example of a prescriptive requirement whose violation will not affect system reliability, yet will expose entities to large fines. The key question is: “Do the companies’ personnel understand one another?”
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities.</b></p> <p><b>The SDT modified the requirement to remove the term “mutually agreed upon”.</b></p> <p><b>The SDT would respectfully answer your last question “no, not always” and to create a protocol to address that issue is proper.</b></p>		
PPL	Disagree	Requirement R7 in draft COM-003-1 came from TOP-002-2, Requirement R18. The original requirement intended that neighboring Balancing Authorities use uniform line identifiers when communicating information about their tie lines. This requirement drops that clarification and introduces the additional requirement to use pre-determined “equipment” identifiers. Having to mutually agree in advance on identifiers for every switch & transformer is another example of a prescriptive requirement whose violation will not affect system reliability, yet will expose entities to large fines.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and</b></p>		

Organization	Yes or No	Question 8 Comment
<p><b>Transmission interface Facilities when referring to those Elements and Facilities. The SDT modified the requirement to remove the term “mutually agreed upon”.</b></p>		
<p>SERC OC&amp;SOS Standards Review Group</p>	<p>Disagree</p>	<p>Requirement R7 in draft COM-003-1 came from TOP-002-2, Requirement R18. The original requirement intended that neighboring Balancing Authorities use uniform line identifiers when communicating information about their tie lines. This requirement drops that clarification and introduces the additional requirement to use pre-determined “equipment” identifiers. Having to mutually agree in advance on identifiers for every switch &amp; transformer is another example of a prescriptive requirement whose violation will not affect system reliability, yet will expose entities to large fines.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities. The SDT modified the requirement to remove the term “mutually agreed upon”.</b></p>		
<p>Great River Energy</p>	<p>Disagree</p>	<p>See comments for Question 2</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>Please see response to comments for Q2.</b></p>		
<p>Santee Cooper</p>	<p>Disagree</p>	<p>See previous comment on Question 2. In addition the use of the words “equipment identifiers” could be interpreted to include all pieces of equipment within a line.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>Please see response to comments for Q2.</b>  <b>The SDT modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities.</b></p>		
<p>Southern Company Transmission</p>	<p>Disagree</p>	<p>Southern Company supports the SERC SOS comments.                      SERC SOS comments:                      Requirement R7 in draft COM-003-1 came from TOP-002-2, Requirement R18. The original requirement intended that neighboring Balancing Authorities use uniform line identifiers when communicating information about their tie lines. This requirement drops that clarification and introduces the additional requirement to use pre-</p>



Organization	Yes or No	Question 8 Comment
		determined “equipment” identifiers. Having to mutually agree in advance on identifiers for every switch & transformer is another example of a prescriptive requirement whose violation will not affect system reliability, yet will expose entities to large fines.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities.</b></p> <p><b>The SDT modified the requirement to remove the term “mutually agreed upon”.</b></p>		
PSEG Companies	Disagree	The PSEG Companies agree with the concerns expressed in the comments filed by the PJM System Operations Subcommittee (SOS) Group.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities.</b></p> <p><b>The SDT modified the requirement to remove the term “mutually agreed upon”.</b></p>		
Entergy Services	Disagree	The requirement as it was written in TOP-002-2 pertained to communication between neighbors for shared lines and facilities. That intent has been lost in this version of the requirement. Also a term “equipment identifiers” has been added, but it is not clear what additional equipment is covered by this requirement, or what reliability concern is being addressed by these changes. Entergy recommends that this requirement be changed to be similar to the language that exists in TOP-002-2 R18 “Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use pre-determined mutually agreed upon line identifiers when referring to transmission facilities of an interconnected network.”
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT agrees and has modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities.</b></p> <p><b>The new term “Operating Communications” applies when communications involve actions relative to Elements or Facilities of the Bulk Electric System.</b></p>		
National Grid	Disagree	The way this and TOP-002 R18 requirements are written they could be interpreted to mean that the line identifiers have to be unique. The requirement should be written similar to the bullet on page 7 of the comment

Organization	Yes or No	Question 8 Comment
		<p>form also listed below.”TOP-002 R18. Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network.””Pre-determined Line and Equipment Identifiers: COM-003-1 requires the use of predetermined line and equipment identifiers in Requirement R7 however the Requirement does not stipulate a single/unique identifier as long as all parties mutually agree on the identifier for the line or equipment. The mutual agreement shall be reached in advance of the use of the identifiers as described in the functional entity’s CPOP”</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities.</b></p> <p><b>The SDT modified the requirement to remove the term “mutually agreed upon”.</b></p> <p><b>In the revised standard the requirement to have a CPOP has been eliminated.</b></p>		
<p>Tri-State Generation &amp; Transmission Assoc.</p>	<p>Disagree</p>	<p>This is not NERC’s responsibility to define. There are too many lines and too much equipment to identify each as a NERC definition. Definitions are already agreed upon between operating entities.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities.</b></p> <p><b>The new term “Operating Communications” applies to Element or Facilities of the Bulk Electric System. The new term “Operating Communications” applies when communications involve actions relative to Elements or Facilities of the Bulk Electric System. It will be the owner’s responsibility to define names for its interface Elements/Facilities.</b></p>		
<p>Dynegy</p>	<p>Disagree</p>	<p>This may represent a good utility practice but it is not necessary to be included as a Requirement. The key question is: “Do the companies’ personnel understand one another?” If I know that my company refers to a tie-line as Alpha and my neighboring company calls it Beta, I know what he means when communicating to me. That is all that matters. This is a “how” based Requirement that should be eliminated.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT would respectfully answer your question “no, not always” and to create a protocol to address that issue is proper.</b></p>		

Organization	Yes or No	Question 8 Comment
<p>SDT feels that this requirement is appropriate in COM-003 as the use of pre-determined identifiers only for interface Elements/Facilities during oral and written Operating Communications supports the purpose of COM-003. The SDT is proposing a single predetermined name to reduce the potential for confusion. The SDT developed Requirement R1 Part 1.1.4 in the second draft of the standard to require use of the name specified by the owner(s) of a Transmission interface Element/Facility, when referring to that Element/Facility.</p>		
<p>Independent Electricity System Operator</p>	<p>Disagree</p>	<p>This may represent a good utility practice but it is not necessary to be a requirement. The key is whether or not operation personnel understand one another. Similar comments as in Q4 and Q7 also apply here.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The Blackout Report Recommendation #26 states communication protocols should be tightened, “especially” those for alerts and emergency communications. FERC Order 693 P531 directed that communication protocols be tightened and suggested a new COM Reliability Standard as an acceptable approach. The SAR for this SDT charged the team to “tighten communication protocols, especially for communications during alerts and emergencies.” Additionally the SAR required “the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions.”</p> <p>Please see response to comments for Q4 and Q7.</p>		
<p>Midwest ISO Standards Collaborators</p>	<p>Disagree</p>	<p>This may represent a good utility practice but it is not necessary to be included as a Requirement. The key question is: “Do the companies’ personnel understand one another?” If I know that my company refers to a tie-line as Alpha and my neighboring company calls it Beta, I know what he means when communicating to me. That is all that matters. This is a “how” based Requirement that should be eliminated.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT would respectfully answer your question “no, not always” and to create a protocol to address that issue is proper.</p> <p>SDT feels that this requirement is appropriate in COM-003 as the use of pre-determined names only for interface Elements/Facilities during oral and written Operating Communications supports the purpose of COM-003. The SDT is proposing a single predetermined identifier to reduce the potential for confusion.</p>		
<p>NIPSCO</p>	<p>Disagree</p>	<p>This question includes a mis-statement in quotes. This is not what the requirement says. Furthermore, the word "Neighboring" was removed from the TOP-002 R18 which changes the meaning and intent of the requirement. Why not bring in R18 verbatim?</p>
<p><b>Response: The SDT thanks you for your comments.</b></p>		

Organization	Yes or No	Question 8 Comment
<p>The SDT appreciates the observation and the word “all” is not in the requirement. It should not have been in the question.</p> <p>The SDT modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities. The SDT decided to leave R18 in TOP-002 because it represents a planning function. Requirement R7 will remain in the second draft of COM 003 as Requirement R1, Part 1.1.4, specifying when to use those identifiers.</p>		
<p>Pepco Holdings, Inc. - Affiliates</p>	<p>Disagree</p>	<p>This requirement came from TOP-002 R18 and is fundamentally different from the new proposed requirement in COM-003-1 R7. TOP-002 R18 states that the BA, TOP, GO, LSE and TSP shall use uniform line identifiers when referring to transmission facilities of an interconnected network. The requirement in COM-003-1 R7 introduces an additional requirement to use pre-determined “equipment” identifiers is another example of a prescriptive requirement that will not impact bulk electric system reliability and will expose entities to large fines. PHI believes the TOP-002 R18 could be included in COM-003-1 but included as defined in TOP-002 R18.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities. The SDT is proposing a single predetermined identifier established by the owner of the Element/Facility to reduce the potential for confusion.</p> <p>The SDT decided to leave R18 in TOP-002 because it represents a planning function. Requirement R7 will remain in the second draft of COM 003 as Requirement R1, Part 1.1.4, specifying when to use those identifiers.</p>		
<p>Consumers Energy</p>	<p>Disagree</p>	<p>This requirement is better served under the TOP Standards. The TOP standards already require this (TOP-002-2 R18), and the requirement should not be duplicated.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT decided to leave R18 in TOP-002 because it represents a planning function. Requirement R7 will remain in the second draft of COM 003 as Requirement R1, Part 1.1.4, specifying when to use those identifiers.</p>		
<p>ATC and ITC</p>	<p>Disagree</p>	<p>TOP-002 R18 states that BA, TOP, GOP TSP and LSE shall use uniform line identifiers when referring to transmission facilities of an interconnected network. COM-003 R7 states that each RC, BA, TO, TOP, GOP, TSP, LSE and DP shall use pre-determined, mutually agreed upon line and equipment identifiers for verbal and written Interoperability Communications. TOP-002 allowed the TOP to communicate what the line identifiers were via a list and use during communications. The new requirement implies that the parties must agree upon the line identifiers and that agreement must be documented. ATC believes that the requirement should state that “mutual</p>

Organization	Yes or No	Question 8 Comment
		<p>agreement” allows for multiple identifiers. We believe that this is needed in order to avoid the following issues.</p> <ol style="list-style-type: none"> <li>1) This clarification will avoid any need for arbitration or formal dispute resolution steps.</li> <li>2) If the standard does not allow for this provision entities will be forced to deviate from their own line naming convention and will result in entities to modify their drawings, field signs, and SCADA systems.</li> </ol>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT decided to leave R18 in TOP-002 because it represents a planning function. Requirement R7 will remain in the second draft of COM-003 as Requirement R1, Part 1.1.4, specifying when to use those identifiers. The SDT is proposing a single predetermined identifier established by the owner of the Element/Facility to reduce the potential for confusion.</p> <p>The SDT modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities.</p> <p>The new term “Operating Communications” applies when communications involve actions relative to Elements or Facilities of the Bulk Electric System.</p> <p>The SDT modified the requirement to remove the term “mutually agreed upon”.</p>		
We Energies	Disagree	<p>TOP-002-2 R18 requires uniform line identifiers. The wording of R7 and the statement by the SDT that “the Requirement does not stipulate a single/unique identifier as long as all parties mutually agree” is in conflict with TOP-002-2 R18. Allowing multiple line and equipment identifiers to be used does not improve reliability or improve communications in an emergency. TOP-002-2 applies to Transmission Facilities of an Interconnected Network...R7 should do the same for clarity. Having the term “mutually agreed upon” in a standard is unworkable, since it allows a non-cooperative party to disrupt the genuine efforts of others and to exploit unfair leverage in discussions or negotiations. A better approach is having the Transmission Owners develop identifiers for transmission, and Generation Operators develop identifiers for generation. The process should be defined such that comments are solicited and input within a pre-specified convention, and then a specific entity is given the ability to make the final determination. Again, R7 is more appropriate as a best practices recommendation, rather than a requirement.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT decided to leave R18 in TOP-002 because it represents a planning function. Requirement R7 will remain in the second draft of COM 003 as Requirement R1, Part 1.1.4, specifying when to use those identifiers.</p> <p>The SDT modified the requirement to remove the term “mutually agreed upon”.</p>		

Organization	Yes or No	Question 8 Comment
<p>The SDT modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities.</p>		
<p>ISO New England Inc.</p>	<p>Agree</p>	<p>We agree that the stipulation of a single/unique identifier is unnecessary as long as all parties mutually agree on the identifier for the line or equipment, and therefore, support this change to the existing Requirement in TOP-002.</p>
<p>Response: The SDT thanks you for your comments.</p>		
<p>NRECA RTF Members</p>	<p>Agree</p>	<p>We agree using pre-determined, mutually agreed upon line and equipment identifiers during for all verbal and written Interoperability Communications is a more accurate form of communication and should remain as a requirement of this standard.</p>
<p>Response: The SDT thanks you for your comments.</p>		
<p>Xcel Energy</p>	<p>Disagree</p>	<p>We feel this requirement needs clarification, particularly regarding how granular an entity would have to go into the various pieces of equipment/lines. We would also recommend that R7 be modified to not require mutual agreement. We feel the owner (or majority owner) of the line or equipment should be the one setting the identifiers. For example, R7 could instead read like this: "Owner-determined line and equipment identifiers shall be used for all verbal and written Interoperability Communications."</p>
<p>Response: The SDT thanks you for your comments.</p> <p>The SDT modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities.</p> <p>The SDT modified the requirement to use pre-determined identifiers only for interface Elements/Facilities during oral and written Operating Communications. The new term "Operating Communications" applies when communications involve actions relative to Element or Facilities of the Bulk Electric System.</p> <p>The SDT modified the requirement to remove the term "mutually agreed upon".</p>		
<p>Electric Market Policy</p>	<p>Agree</p>	<p>While we agree conceptually, it is our experience that Interoperability Communications concerning BES elements do not usually specifically identify the element or facility when the BA, RC or TOP is communicating with the TSP, LSE or GOP. This may have to do with concerns about Standards/Codes of Conduct or may be because specific identification of the element or facility isn't required in order to communicate action(s) that entity is required to take.</p>

Organization	Yes or No	Question 8 Comment
		<p>Response: The SDT thanks you for your comments.</p> <p>The SDT has eliminated the term Interoperability Communications. The SDT has proposed a new term “Operating Communication”.</p> <p>The SDT modified the requirement so that entities must use the names specified by the owner(s) of Transmission interface Elements and Transmission interface Facilities when referring to those Elements and Facilities. If an interface Element/Facility is not used in the Operating Communication, it would not be subject to this requirement.</p>

**9. Attachment 1-COM-003-1 is based upon work performed by the Reliability Coordinator Working Group (RCWG). Do you have any concerns or suggestions for improvement of the attachment? If yes, please provide in the comment area. (If you are involved in the field testing of the Alert Level Guide please share any comments regarding the use of the guideline as it relates to the field test.)**

**Summary Consideration:**

Most stakeholders who responded to this question indicated the attachment needs improvement.

Commenters indicate the alert for the Physical Emergency and the Cyber Alert are nearly identical and should be combined.

Many commenters indicated that Attachment 1 includes actions only for the RC. Therefore, there is no reason to have the other Functions listed as having responsibility for Attachment 1.

Commenters suggest that the use of a “color code” adds an unnecessary level of complexity, adds no value to the Alert Level guidelines, and could result in confusion with Home Land Security terrorist alerts.

Commenters recommend that Distribution Service Provider be changed to Distribution Provider and that change was made.

Commenters stated that the introductory paragraph in COM-003 - Attachment 1 conflicts with the Alert Level Guide.

The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.

Organization	Yes or No	Question 9 Comment
American Municipal Power	Agree	
Bureau of Reclamation	Agree	
Georgia Transmission Corp	Agree	



Organization	Yes or No	Question 9 Comment
Sunflower Electric Power Corporation	Agree	
Western Area Power Administration	Agree	
Oncor Electric Delivery	Disagree	
Orange and Rockland Utilities, Inc.	Disagree	
Pacific Northwest Small Utilities Comment Group	Disagree	
PacifiCorp	Disagree	
Santee Cooper	Disagree	
Transmission Owner	Disagree	
Florida Municipal Power Agency (FMPA) and some members	Agree	<p>(FMPA assumes that commenting "agree" means "yes, we have suggestions for improvement")It seems that the first two tables on Physical and Cyber Emergency Alerts are nearly identical. Why not combine them?</p> <p>On the third table on IROLs, are IROLs the only emergencies, e.g., how about a capacity / energy emergency? Shouldn't that be in a table as well?</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
American Electric Power	Agree	<p>“Transmission Loading” should be replaced with “IROLs(on the transmission system).” The attachment is very prescriptive as to the notifications are to take place, but not on conveyance of information to be communicated</p>

Organization	Yes or No	Question 9 Comment
		during alerts and emergencies. The attachment is not a good fit in this standard.
<p><b>Response: The SDT thanks you for your comments. The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
Manitoba Hydro	Disagree	<p>1) Attachment 1-COM-003-1 qualifies for all three requirements stated below and would be better suited in this Standard.</p> <p>a.CIP-001-1 Purpose:”sabotage to be reported to appropriate bodies” and includes the following requirements;</p> <p>R1. Procedure for recognition</p> <p>R2. Procedure for communication</p> <p>R3. Response guideline</p> <p>2) OR COM-003-1 Attachment 1 could also be placed in COM-002-2. COM-002-2’s Purpose is “capabilities for addressing real time emergencies and to ensure communications by personnel are effective.”</p> <p>3) COM-003-1 purpose is to “convey information effectively” meaning the use of English, NATO, three-part communication, 24 time format are all verbal aspects to accomplish this purpose and not suited to pre-defined or planned items.</p> <p>4) COM-003-1 Attachment 1 also defines Physical Security threats and notifications which fulfills the purpose of COM-002-2 more thoroughly (then in COM-003-1) and could even be made as an requirement.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
The Empire District Electric Company	Disagree	Again this attachment is redundant to the NERC Alert process.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>Yes. The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define</b></p>		

Organization	Yes or No	Question 9 Comment
<p><b>various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
<p>MRO NERC Standards Review Subcommittee</p>	<p>Agree</p>	<p>As Attachment 1 is written it only applies to the RC and is a one-way communications path. The BA, DP, GOP, TOP, and TO are to be notified by the RC but the attachment doesn't state what they are to do with the information. COM-003-1, R1 states that the RC, BA, TO, TOP, GOP, TSP, LSE and DP are to have a CPOP with the elements in R2 through R7, which refer to Attachment 1. If Attachment 1 is applicable only to the RC, as we recommend, there is no reason to have the other Functions listed for Attachment 1. Requirement R2 and Measure M2 need to be revised to be applicable to the RC only. Attachment 1 makes reference to "Distribution Service Providers". There is no definition of a Distribution Service Provider in the NERC Functional Model, and we believe this should either be revised to Distribution Provider, or deleted entirely from the list.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a "communication protocol" – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
<p>Pepco Holdings, Inc. - Affiliates</p>	<p>Agree</p>	<p>As noted in our comments to Question 4, Attachment 1 has examples for Reliability Coordinators only. It is not a good guide for other Interoperability Communications. Additionally, Attachment 1 identifies the Level 1, Level 2 and Level 3 communications by color codes that are not referenced in the sample messages. PHI finds the addition of color codes to not be helpful and possibly confused with national security Alert Levels. The color coding should be eliminated and examples for entities in addition to the Reliability Coordinator should be included.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a "communication protocol" – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
<p>Ameren</p>	<p>Agree</p>	<p>As stated earlier, this is an excellent document for RC interactions. But it is wholly unclear how this impacts other entity-to-entity relationships in pre-defining states. And as mentioned having only Attachment 1 seems to ignore the energy balance alerts/emergencies</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined</b></p>		

Organization	Yes or No	Question 9 Comment
<p>that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</p>		
Entergy Services	Agree	<p>As written, the actions that fall into interoperability communications in requirement 2 are much broader than the set of conditions described in the table in attachment 1. To the extent that the communications are outside of the ones in the table, entities will be non-compliant because their communications are not pre-defined. Recommend that requirement 2 be changed to indicate that “Any Reliability Coordinator or <i>Transmission Operator</i> experiencing a physical security emergency, cyber security emergency, or transmission emergency will communicate their status using the conditions and processes in Attachment 1.” Is this a better write up for R1 (New)</p>
<p><b>Response: The SDT thanks you for your comments.</b>                      The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</p>		
We Energies	Agree	Attachment 1 is written for an RC. Usage of Attachment 1 by entities other than an RC should be clarified.
<p><b>Response: The SDT thanks you for your comments.</b>                      The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</p>		
California Independent System Operator		<p>CAISO Comments; Information regarding the Alert Level Guide field test has not been widely circulated and unproductive as of late. Does not the Alert Level Guide need to be approved prior to any standard which references the guide be approved? What was the outcome of the field testing? Was reliability enhanced? Attachment 1 describes ‘normal, alert, and emergency operating conditions’, then goes on to never use those terms again in any meaningful manner. To further confuse it then mixes color coding of steps with levels. Which is it, Condition Red or Level 3? The attachment directs Reliability Coordinators to make vague notifications to the functional entities in its footprint. It directs Reliability Coordinators to make these vague notifications to entities that do not use, in our case the WECCNet. Is it really anticipated that the Reliability Coordinator calling on the telephone every DP in its footprint with a vague notification will be an enhancement to reliability?</p>
<p><b>Response: The SDT thanks you for your comments.</b></p>		

Organization	Yes or No	Question 9 Comment
<p>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</p>		
<p>New York State Reliability Council</p>	<p>Agree</p>	<p>Comments: In addition to the response to Question 4, NYSRC does not understand why there are Levels and color designations since only the threat level numeral is being communicated. Attachment 1-Com-003 is very prescriptive in the use pre-defined terminology, colors and levels. There is no benefit (Verbatim?) to specifying the specific terminology. Requiring system Operators to state Colors and Levels would seem to result in slower and more confused communication.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</p>		
<p>E.ON U.S. LLC</p>	<p>Disagree</p>	<p>E.ON U.S. has many concerns with this proposed attachment. The use of color coding and multiple types of alerts adds unnecessary levels of complexity. Any proposed alert level should be consistent throughout the suite of reliability standards, e.g. level 1,2,3. Also, as previously noted in our comment to question 4 above, E.ON U.S. suggests integrating attachment 1 and the relative alert levels into the EOP standards and focusing the COM standards on the requirements of communications protocol.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</p>		
<p>Long Island Power Authority</p>	<p>Agree</p>	<p>In addition to the response to Question 4, LIPA does not understand why there are Levels and color designations since only the threat level numeral is being communicated. Attachment 1-Com-003 is very prescriptive in the use pre-defined terminology, colors and levels. There is no benefit to specifying the specific terminology. Requiring system Operators to state Colors and Levels would seem to result in slower and more confused communication.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert</p>		

Organization	Yes or No	Question 9 Comment
<p><b>levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
<p>Bonneville Power Administration</p>	<p>Agree</p>	<p>In Attachment #1 - Operating State Alert Levels, for the Transmission Emergency Alert (TEA) Level 2 definition, a “why” needs to be incorporated into the definition. It appears that the reason we’re going to TEA 2 is to avoid violation of an SOL but it needs to be called out. The color scheme may be confusing with (DHS) Homeland Security’s terrorist alert levels. (The RC makes the notifications to all based upon the Operator’s reported conditions per the scheme.). Suggest only using the Emergency Energy Alert numerical levels versus the color scheme, to avoid confusion with Homeland Security alerts. An example: A red alert is a breakup like 2003 and 1996, not shedding of load to prevent it, The color scheme does not work for this. Agree with Notifications for Physical Security and Cyber Security. Disagree with Notifications for Transmission Emergency Alerts. This appears to be only IROL related, but could progress to SOL. May have too many of these issued. Suggest the following: Yellow - approaching IROL limit; Orange - procedures implemented to correct IROL; RED - shedding firm to respect an IROL.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
<p>Hydro-Québec TransEnergie</p>	<p>Agree</p>	<p>It is not clear what value is realized by declaring an alert status particularly with regard to cyber and physical attacks. There do not appear to be any differing actions taken based on the alert status. Given that no differing actions are taken for cyber and physical attacks, it seems it would be more beneficial to use specific information, for example 12 substations have been physically or cyber attacked. This is more meaningful than issuing a red alert that would only indicate more than one site has been attacked.</p> <p>Furthermore, we question the value of communicating the physical and cyber alerts. How does this notification help the BES reliability? Consider the following example. One BA in Oklahoma is 34,323 sq miles. Communicating that an attack occurred in the BA and RC tells other operators that somewhere in Oklahoma an attack occurred. This notification does not present any information that could require actions on the operators’ parts, and will only generate phone calls for more information.</p> <p>Furthermore, PSE and CSE is a type of sabotage already reported in CIP-001 R2. TEA Alerts are already covered in IRO-006-East-1, IRO-009, IRO-010, IRO-014.01 R2.</p> <p>Also it has been the experience of several entities during the field test of these Alert Levels that there are</p>

Organization	Yes or No	Question 9 Comment
		<p>inconsistencies as to when to implement various stages of Alerts, and this introduces more confusion than exists today. Reliability has not been enhanced.</p> <p>Attachment 1 contains a conflict. The last sentence of the opening paragraph of Attachment 1 reads, “The time frame for declaration of these Alert states shall be consistent with the approach used to declare EEAs and would normally apply to Real Time declarations and not forecast conditions.” In Transmission Emergency Alerts Condition Yellow, Orange and RED: The Reliability Coordinator or Transmission Operator foresees or is experiencing conditions where all available generation resources are committed to respect the IROL and/or is concerned about its ability to respect the IROL. Foresees is a forecast condition.</p> <p>There is an inconsistency between the inclusion of Attachment 1 and what is stated in the document posted with the standard entitled Disposition of Requirements Identified in the SAR for Operations Communications Protocols as Possibly Needing either Modification or Movement. The document states that the standard focuses on “how to” communicate rather than on specified scenarios of “to whom” or “when to” communicate; however, Attachment 1 does just the opposite. In condition Orange and Red for TEA Level Two/Three, the initial notification requirements are redundant with IRO-006-East-1 R3.2.</p> <p>Under the Make Final Notifications, is curtailed intended to mean canceled or terminated? The term Curtailed in operations generally means cuts for schedules/tags. EEA’s use terminated. Terminated is the preferred term.</p> <p>Distribution Service Providers should be Distribution Provider to be consistent with the Functional Model. Refer to the response to Question #4.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
Independent Electricity System Operator	Agree	<p>It is not clear what value is realized by declaring an alert status particularly with cyber and physical attacks. There does not appear to be any differing actions taken based on the alert status. Given that no differing actions are taken for cyber and physical attacks, it seems it would be more beneficial to use specific information such as the number of substations that have been physically or cyber attacked, etc. This is more meaningful than issuing a red alert that would only indicate more than one site has been attacked. Also, please see our comments under Q4.</p>

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<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard. Please see our response to Q4.</b></p>		
<p>ISO New England Inc.</p>	<p>Agree</p>	<p>It is not clear what value is realized by declaring an alert status particularly with regard to cyber and physical attacks. There do not appear to be any differing actions taken based on the alert status. Given that no differing actions are taken for cyber and physical attacks, it seems it would be more beneficial to use specific information, for example 12 substations have been physically or cyber attacked. This is more meaningful than issuing a red alert that would only indicate more than one site has been attacked.</p> <p>Furthermore, we question the value of communicating the physical and cyber alerts. How does this notification help the BES reliability? Consider the following example. One BA in Oklahoma is 34,323 sq miles. Communicating that an attack occurred in the BA and RC tells other operators that somewhere in Oklahoma an attack occurred. This notification does not present any information that could require actions on the operators’ parts, and will only generate phone calls for more information.</p> <p>Furthermore, PSE and CSE is a type of sabotage already reported in CIP-001 R2. TEA Alerts are already covered in IRO-006-East-1, IRO-009, IRO-010, IRO-014.01 R2.</p> <p>Also it has been the experience of several entities during the field test of these Alert Levels that there are inconsistencies as to when to implement various stages of Alerts, and this introduces more confusion than exists today. Reliability has not been enhanced.</p> <p>Attachment 1 contains a conflict. The last sentence of the opening paragraph of Attachment 1 reads, “The time frame for declaration of these Alert states shall be consistent with the approach used to declare EEAs and would normally apply to Real Time declarations and not forecast conditions.” In Transmission Emergency Alerts Condition Yellow, Orange and RED: The Reliability Coordinator or Transmission Operator foresees or is experiencing conditions where all available generation resources are committed to respect the IROL and/or is concerned about its ability to respect the IROL. Foresees is a forecast condition.</p> <p>In condition Orange and Red for TEA Level Two/Three, the initial notification requirements are redundant with IRO-006-East-1 R3.2.</p>



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<p>Northeast Power Coordinating Council</p>	<p>Agree</p>	<p>It is not clear what value is realized by declaring an alert status particularly with regard to cyber and physical attacks. There do not appear to be any differing actions taken based on the alert status. Given that no differing actions are taken for cyber and physical attacks, it seems it would be more beneficial to use specific information, for example 12 substations have been physically or cyber attacked. This is more meaningful than issuing a red alert that would only indicate more than one site has been attacked.</p> <p>Furthermore, we question the value of communicating the physical and cyber alerts. How does this notification help the BES reliability? Consider the following example. One BA in Oklahoma is 34,323 sq miles. Communicating that an attack occurred in the BA and RC tells other operators that somewhere in Oklahoma an attack occurred. This notification does not present any information that could require actions on the operators’ parts, and will only generate phone calls for more information.</p> <p>Furthermore, PSE and CSE is a type of sabotage already reported in CIP-001 R2. TEA Alerts are already covered in IRO-006-East-1, IRO-009, IRO-010, IRO-014.01 R2.</p> <p>Also it has been the experience of several entities during the field test of these Alert Levels that there are inconsistencies as to when to implement various stages of Alerts, and this introduces more confusion than exists today. Reliability has not been enhanced.</p> <p>Attachment 1 contains a conflict. The last sentence of the opening paragraph of Attachment 1 reads, “The time frame for declaration of these Alert states shall be consistent with the approach used to declare EEAs and would normally apply to Real Time declarations and not forecast conditions.” In Transmission Emergency Alerts Condition Yellow, Orange and RED: The Reliability Coordinator or Transmission Operator foresees or is experiencing conditions where all available generation resources are committed to respect the IROL and/or is concerned about its ability to respect the IROL. Foresees is a forecast condition.</p>

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Dynergy	Disagree	<p>It is not clear what value is realized by declaring an alert status particularly with regard to cyber and physical attacks. There do not appear to be any differing actions taken based on the alert status. Given that no differing actions are taken for cyber and physical attacks, it seems it would be more beneficial to use specific information, for example 12 substations have been physically or cyber attacked. This is more meaningful than issuing a red alert that would only indicate more than one site has been attacked.</p> <p>Furthermore, we question the value of communicating the physical and cyber alerts. How does this notification help the BES reliability? Consider the following example. One BA in Oklahoma is 34,323 sq miles. Communicating that an attack occurred in the BA and RC tells other operators that somewhere in Oklahoma an attack occurred. This notification does not present any information that could require actions on the operators’ parts, and will only generate phone calls for more information.</p> <p>Furthermore, PSE and CSE is a type of sabotage already reported in CIP-001 R2. TEA Alerts are already covered in IRO-006-East-1, IRO-009, IRO-010, IRO-014.01 R2.</p>

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<p>IRC Standards Review Committee</p>	<p>Disagree</p>	<p>It is not clear what value is realized by declaring an alert status particularly with regard to cyber and physical attacks. There do not appear to be any differing actions taken based on the alert status. Given that no differing actions are taken for cyber and physical attacks, it seems it would be more beneficial to use specific information, for example 12 substations have been physically or cyber attacked. This is more meaningful than issuing a red alert that would only indicate more than one site has been attacked.</p> <p>Furthermore, we question the value of communicating the physical and cyber alerts. How does this notification help the BES reliability? Consider the following example. One BA in Oklahoma is 34,323 sq miles. Communicating that an attack occurred in the BA and RC tells other operators that somewhere in Oklahoma an attack occurred. This notification does not present any information that could require actions on the operators’ parts, and will only generate phone calls for more information.</p> <p>Furthermore, PSE and CSE is a type of sabotage already reported in CIP-001 R2. TEA Alerts are already covered in IRO-006-East-1, IRO-009, IRO-010, IRO-014.01 R2.</p> <p>Also it has been the experience of several entities during the field test of these Alert Levels that there are inconsistencies as to when to implement various stages of Alerts, and this introduces more confusion than exists today. It certainly has not enhanced Reliability.</p> <p>Attachment 1 contains a conflict. The last sentence of the opening paragraph of Attachment 1 reads, “The time frame for declaration of these Alert states shall be consistent with the approach used to declare EEAs and would normally apply to Real Time declarations and not forecast conditions.” In Transmission Emergency Alerts Condition Yellow, Orange and RED: The Reliability Coordinator or Transmission Operator foresees or is experiencing conditions where all available generation resources are committed to respect the IROL and/or is concerned about its ability to respect the IROL. Foresees is a forecast condition.</p> <p>In condition Orange and Red for TEA Level Two/Three, the initial notification requirements are redundant with IRO-006-East-1 R3.2.</p> <p>Under the Make Final Notifications, is curtailed intended to mean canceled or terminated? The term Curtailed in</p>

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		<p>operations generally means cuts for schedules/tags. EEA’s use terminated. Terminated is the preferred term. Distribution Service Providers should be Distribution Provider to be consistent with the Functional Model</p>
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<p>Midwest ISO Standards Collaborators</p>	<p>Disagree</p>	<p>It is not clear what value is realized by declaring an alert status particularly with regard to cyber and physical attacks. There do not appear to be any differing actions taken based on the alert status. Given that no differing actions are taken for cyber and physical attacks, it seems it would be more beneficial to use specific information, for example 12 substations have been physically or cyber attacked. This is more meaningful than issuing a red alert that would only indicate more than one site has been attacked.</p> <p>Furthermore, we question the value of communicating the physical and cyber alerts. How does this notification help the BES reliability? Consider the following example. One BA in Oklahoma is 34,323 sq miles. Communicating that an attack occurred in the BA and RC tells other operators that somewhere in Oklahoma an attack occurred. This notification does not present any information that could require actions on the operators’ parts, and will only generate phone calls for more information.</p> <p>Furthermore, PSE and CSE is a type of sabotage already reported in CIP-001 R2. TEA Alerts are already covered in IRO-006-East-1, IRO-009, IRO-010, IRO-014.01 R2.</p> <p>Attachment 1 contains a conflict. The last sentence of the opening paragraph of Attachment 1 reads, “The time frame for declaration of these Alert states shall be consistent with the approach used to declare EEAs and would normally apply to Real Time declarations and not forecast conditions.” In Transmission Emergency Alerts Condition Yellow, Orange and RED: The Reliability Coordinator or Transmission Operator foresees or is experiencing conditions where all available generation resources are committed to respect the IROL and/or is concerned about its ability to respect the IROL. Foresees is a forecast condition.</p> <p>In condition Orange and Red for TEA Level Two/Three, the initial notification requirements are redundant with IRO-006-East-1 R3.2.</p> <p>Under the Make Final Notifications, is curtailed intended to mean canceled or terminated? The term Curtailed in operations generally means cuts for schedules/tags. EEA’s use terminated. Terminated is the preferred term.</p>

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Transmission System Operations	Agree	<p>It should be made clear that Attachment 1 applies to the RC’s. It is not specifically stated in R2 that it is the RC’s responsibility to make notifications. In Attachment 1, we believe the wording under “Initial Notifications” should be changed. For example, on the 2nd row and 1st column of the matrix, it states that the RC makes initial notification and states that “...there is a Physical Emergency Alert, PSEA Level One within...” Nowhere is it ever mentioned that there is a “Condition Yellow”. Since it is never mentioned by the RC in the notification that the Condition is “Yellow”, what is the use or benefit of having the conditions?</p> <p>It should also be made clear that when the RC states, for example, that “There is a Physical Security Emergency Alert-PSEA Level One within...” that this refers to specific definitions given in Attachment 1 of EOP-002-2.1. This fact is mentioned at the top of the matrix, but the wording of this explanation is not consistent with the wording used in the body of the matrix.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
NERC Staff	Agree	<p>NERC staff recommends that a line be added to each table that provides the expectation for entities communicating events to the Reliability Coordinator. Using the existing tables, all expectations and requirements rest solely on the Reliability Coordinator. We also recommend eliminating the color designations of yellow, orange, red and the Alerts be changed to Level One, Two and Three for consistency. The use of colors does not appear to add anything to the clarity or effectiveness in conveying the content of an Alert and may be inconsistent with the Department of Homeland Security’s threat level system. Additionally, the team should update Attachment 1 to include the criteria and notifications for Energy Emergency Alerts.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined</b></p>		

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<p>that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</p>		
NIPSCO	Disagree	No comment
PPL		No comments either way since this applies specifically to RCs.
Northeast Utilities	Disagree	No concerns or suggestions (Disagree = No)
Westar Energy	Agree	no suggestions
NextEra Energy Resources, LLC	Disagree	None at this time.
Consumers Energy		None.
<p><b>Response: The SDT thanks you for your participation</b></p>		
PJM	Agree	<p>Our concern is that the Alert Level Guides of Attachment 1 were written for Reliability Coordinators, not the industry as a whole, and now they are being incorporated into an industry-wide standard.</p> <p>This attachment is very prescriptive as to how the notifications take place, such as through the RCIS. If the RCIS is not functioning and the hotline is used instead, is the entity vulnerable to a violation by virtue of the fact that these alert guides are included in the standard?</p> <p>We believe that the color-coded system condition terminology should be defined/required externally to the COM standards. The use of clear &amp; consistent alert level terminology, while important, does not fit in well with the reliability-related communication standards, especially at these high violation severity levels.</p> <p>It is our suggestion that the Alert Level Guides be balloted separately, and include the Energy Emergency Alerts (EEA) as well. EEA requirements currently exist in NERC Standard EOP-002-2.</p> <p>It is not clear what value is realized by declaring an alert status particularly with regard to cyber and physical attacks. There do not appear to be any differing actions taken based on the alert status. Given that no differing actions are taken for cyber and physical attacks, it seems it would be more beneficial to use specific information, for example 12 substations have been physically or cyber attacked. This is more meaningful than issuing a red alert that would only indicate more than one site has been attacked.</p> <p>Furthermore, we question the value of communicating the physical and cyber alerts. How does this notification</p>

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<p><b>Response: The SDT thanks you for your comments. The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
PJM SOS Comments	Agree	<p>Our concern is that the Alert Level Guides of Attachment 1 were written for Reliability Coordinators, not the industry as a whole, and now they are being incorporated into an industry-wide standard.</p> <p>This attachment is very prescriptive as to how the notifications take place, such as through the RCIS. If the RCIS is not functioning and the hotline is used instead, is the entity vulnerable to a violation by virtue of the fact that these alert guides are included in the standard?</p> <p>We believe that the color-coded system condition terminology should be defined/required externally to the COM standards. The use of clear &amp; consistent alert level terminology, while important, does not fit in well with the</p>

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<p>requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</p>		
<p>SERC OC&amp;SOS Standards Review Group</p>	<p>Agree</p>	<p>Our concern is that the Alert Level Guides of Attachment 1 were written for Reliability Coordinators, not the industry as a whole, and now they are being incorporated into an industry-wide standard.</p> <p>This attachment is very prescriptive as to how the notifications take place, such as through the RCIS. If the RCIS is not functioning and the hotline is used instead, is the entity vulnerable to a violation by virtue of the fact that these alert guides are included in the standard?</p> <p>We believe that the color-coded system condition terminology should be defined/required externally to the COM standards.</p> <p>The use of clear &amp; consistent alert level terminology, while important, does not fit in well with the reliability-related communication standards, especially at these high violation severity levels.</p> <p>It is our suggestion that the Alert Level Guides be balloted separately, and includes the Energy Emergency Alerts (EEA) as well. EEA requirements currently exist in NERC Standard EOP-002-2.1</p>
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<p>PEF</p>	<p>Agree</p>	<p>PEF recommends that the color coding and definitions that are used by Homeland Security also be used for the notification of physical and cyber emergency alerts reported to the RC. This would follow the ES-ISAC standard already adopted by the electric industry. If the attachment is adopted as is, PEF recommends adding the EEA levels to provide “pre-defined system condition terminology.”</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
<p>Xcel Energy</p>	<p>Agree</p>	<p>Please see our response to question 4.</p>
<p>National Grid</p>	<p>Disagree</p>	<p>Please see response to Question 4.</p>

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<p><b>Response: The SDT thanks you for your comments.</b>  <b>See response to comments to Question 4.</b></p>		
<p>Progress Energy Carolina, Inc</p>	<p>Agree</p>	<p>R2 which links with Attachment 1 is applicable to a host of entities while the Attachment seems to only provide pre-defined system condition terminology for use during notifications by the RC to other entities. PEC feels that unscripted specific language used by RCs now on RCIS and in verbal communications currently provides the necessary awareness and information to entities without personnel having to refer to a procedure or remember color codes to decipher the meaning. This attachment does not serve to increase the reliability of the BES.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
<p>Puget Sound Energy</p>	<p>Disagree</p>	<p>See discussion in Question 4. Also the attachment applies to Reliability Coordinators only, yet the requirement referencing the attachment applies to additional entities. Those entities should be removed from Requirement 2 or the attachment and Requirement 2 should be clarified to address what those additional entities’ responsibilities are under the attachment.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>See response to comments to Question 4.</b>  <b>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
<p>ATC and ITC</p>	<p>Disagree</p>	<p>See question #4.</p>
<p>South Carolina Electric and Gas</p>	<p>Agree</p>	<p>See question 4.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>See response to comments to Question 4.</b></p>		
<p>Electric Market</p>	<p>Agree</p>	<p>See response to question 4. In addition, there seems to be an inconsistency between the inclusion of Attachment</p>

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Policy		1 and what is stated in the document posted with the standard entitled Disposition of Requirements Identified in the SAR for Operations Communications Protocols as Possibly Needing either Modification or Movement. The document states that the standard focuses on “how to” communicate rather than on specified scenarios of “to whom” or “when to” communicate; however, Attachment 1 does just the opposite.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</p> <p>See response to comments to Question 4.</p>		
British Columbia Transmission Corporation	Agree	Should a move to a standard time be required then the move should be to Universal Time
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>See response to comments to Question 5.</p>		
Southern Company Transmission	Agree	<p>Southern Company supports the SERC SOS comments.</p> <p>SERC SOS comments: Our concern is that the Alert Level Guides of Attachment 1 were written for Reliability Coordinators, not the industry as a whole, and now they are being incorporated into an industry-wide standard. This attachment is very prescriptive as to how the notifications take place, such as through the RCIS. If the RCIS is not functioning and the hotline is used instead, is the entity vulnerable to a violation by virtue of the fact that these alert guides are included in the standard?</p> <p>We believe that the color-coded system condition terminology should be defined/required externally to the COM standards.</p> <p>The use of clear &amp; consistent alert level terminology, while important, does not fit in well with the reliability-related communication standards, especially at these high violation severity levels.</p> <p>It is our suggestion that the Alert Level Guides be balloted separately, and includes the Energy Emergency Alerts (EEA) as well. EEA requirements currently exist in NERC Standard EOP-002-2.1</p>
<p><b>Response: The SDT thanks you for your comments. Please see the response to the SERC SOS comments.</b></p>		

Organization	Yes or No	Question 9 Comment
Kansas City Power & Light	Disagree	The attachment is inappropriate for this standard and should be removed. See response to question #4.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</p> <p>Please see response to comments to question #4.</p>		
ERCOT ISO	Agree	The intent is for a simple way to look and know the high-level status of an area. This goes way too far into HOW to do it instead of stating what must be done.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</p>		
Tri-State Generation & Transmission Assoc.	Agree	<p>The Operating State Alert Levels can be confused with DHS security levels.</p> <p>DSPs should not be included because they are not subject to BES standards because they do not operate the BES that responsibility resides with the TOP. The title Distribution Service Providers should be changed to Distribution Provider to correlate with the NERC functional model.</p> <p>Under Additional Communication the posting of the alert level should be determined by each entities internal procedure and not included in this standard. This attachment is too invasive and restrictive.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
NYSEG	Agree	There does not appear to be any compelling practical or reliability reason to adopt the Attachment.
<p><b>Response: The SDT thanks you for your comments. The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the</b></p>		

Organization	Yes or No	Question 9 Comment
<p>requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</p>		
Sunflower Electric Power Corp.		Use a Phonetic alphabet in common use in the USA
<p><b>Response: The SDT thanks you for your comments. See response to Question 7.</b></p>		
FirstEnergy	Disagree	<p>We do not support Att. 1 and feel that it should be removed. This attachment is too convoluted, creates confusion among system operators, and not necessary with regard to the goal of this standard. This standard mandates proper three-part communication in all reliability-related communication. Other standards should define and mandate rules associated with the specifics surrounding urgent action situations (i.e. CIP, TOP, EOP standards). Together these standards will arrive at proper communication between entities during alert level situations.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
ExxonMobil Research and Engineering	Disagree	We have no concerns or suggestions for improvement.
<p><b>Response: The SDT thanks you for your comments.</b></p>		
Duke Energy	Agree	<p>We support the development of this attachment, but question whether it belongs in this standard, especially since it is under field trial. We think it belongs in the EOP standards.</p> <p>We note the Attachment 1 is only associated with notifications by the RC, so we question whether these are Interoperability Communications as that term is defined.</p> <p>Also, the introduction on Attachment is very confusing. Attachment 1 states that definitions for Transmission Loading, Physical and Cyber Security Alert states align with the Emergency Energy Alert (EEA) states as already described in Standard EOP-002-2.1. EOP-002-2.1 and associated EEA Levels provides guidance on Energy and Capacity Emergencies rather than Transmission or Physical/Cyber Alerts.</p>

Organization	Yes or No	Question 9 Comment
		<p>Energy Emergency is defined as a condition when a LSE has exhausted all other options and can no longer provide its customers’ expected energy requirements. This is a totally different classification of Emergency Alert. We suggest deleting the 2nd and 3rd sentences of the introduction to Attachment 1. In addition, Attachment 1 does not contain four system condition alerts, as the SDT has proposed.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT reviewed Requirement R2 and the associated attachment and, based on stakeholder comments and additional deliberations, determined that Requirement R2 is not a requirement that defines a “communication protocol” – rather the requirement was attempting to define various alert levels. The SDT removed the requirement from the second draft of the standard as outside the scope of this standard.</b></p>		
PSEG Companies	Agree	<p>Yes. The PSEG Companies agree with the concerns and suggestions expressed in the comments filed by the PJM System Operations Subcommittee (SOS) Group.</p>
<p><b>Response: The SDT thanks you for your comments. Please see the response to PJM SOS Group.</b></p>		

**10. Are you aware of any regional variances that would be required as a result of this standard? If yes, please identify the regional variance.**

**Summary Consideration:**

Commenters stated that if the Central Standard Time zone were required as proposed in R4, there should be a regional variance to allow the WECC to select the time zone to use as a standard. The standard R4 (new Requirement R1, Part 1.1.2) and (new Part 1.1.3) of COM-003-1 is shown below:

1.1.2 Use the 24-hour clock format when referring to clock times.

1.1.3. When the communication is between entities in different time zones, include the time, time zone and indicate whether time is daylight saving time or standard time.

Commenters raised questions about requiring the use of “English” which may conflict with legal requirements of non-English speaking Regions covered by NERC’s standards. The draft standard has been modified to account for law and regulation that mandates another language other than English.

1.1.1. Use the English language when communicating between functional entities, unless another language is mandated by law or regulation.

There were comments expressing concern that “blast” or “all-call” communications used by many RCs conflict with FERC Standards of Conduct issues, especially with respect to Distribution Providers and Generator Operators. The standard no longer references communications that involve “blast” or “all-call” communications.

Organization	Yes or No	Question 10 Comment
American Municipal Power	Agree	
Bureau of Reclamation	Agree	
American Electric Power	Disagree	
ATC and ITC	Disagree	

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Organization	Yes or No	Question 10 Comment
Bonneville Power Administration	Disagree	
British Columbia Transmission Corporation	Disagree	
Duke Energy	Disagree	
Dynergy	Disagree	
E.ON U.S. LLC	Disagree	
Entergy Services	Disagree	
ERCOT ISO	Disagree	
Georgia Transmission Corp	Disagree	
Great River Energy	Disagree	
Independent Electricity System Operator	Disagree	
Kansas City Power & Light	Disagree	
Manitoba Hydro	Disagree	
Midwest ISO Standards Collaborators	Disagree	



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Organization	Yes or No	Question 10 Comment
NorthWestern Energy	Disagree	
NYSEG	Disagree	
Oncor Electric Delivery	Disagree	
PacifiCorp	Disagree	
PEF	Disagree	
PPL	Disagree	
Santee Cooper	Disagree	
South Carolina Electric and Gas	Disagree	
Southern Company Transmission	Disagree	
Sunflower Electric Power Corporation	Disagree	
Transmission Owner	Disagree	
Tri-State Generation & Transmission Assoc.	Disagree	
We Energies	Disagree	

Organization	Yes or No	Question 10 Comment
Western Area Power Administration	Disagree	
Xcel Energy	Disagree	
Northeast Utilities	Disagree	(Disagree = No)
Florida Municipal Power Agency (FMPA) and some members	Disagree	(FMPA assumes "disagree" means that we are not aware of any regional variances)
<b>Response: The SDT thanks you for your comments.</b>		
Pacific Northwest Small Utilities Comment Group	Agree	<p>(This is a yes or no questions)Yes, The RC in the WECC region has no communication with any entity other than the sixteen listed in <a href="http://www.bpa.gov/corporate/business/reliability/Docs/2007/PNSC_RE_Data_Letter_2_070723.pdf">http://www.bpa.gov/corporate/business/reliability/Docs/2007/PNSC_RE_Data_Letter_2_070723.pdf</a>. Although the linked document is on PNSC letterhead, WECC as RC continues this policy. Communication paths involving the RC and any other entity in the west other than the sixteen should be exempt from all the requirements in this standard.</p> <p>If DPs and LSEs must be included in this standard, then there should be an agreement in force beforehand between them and their RC, BA and TOP that they may receive directives, or require the RC, BA and TOP to list those DPs and LSEs that would not receive directives.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The LSEs were eliminated as responsible entities from this standard but some DPs are applicable depending on the impact they have on the BES. We have discussed the use of the letter cited in your comments with our WECC SDT member and he advises us that this arrangement is obsolete as the WECC RC does NOT continue to follow that policy. The WECC RC communicates with all registered Balancing Authorities and Transmission Operators within the Western Interconnection on a regular basis. In accordance with NERC Standard IRO-001-1.1 R3, the RC shall have clear decision-making authority to act and to direct actions to be taken by the Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to</b></p>		

Organization	Yes or No	Question 10 Comment
<p>preserve the integrity and reliability of the Bulk Electric System. In accordance with NERC Standard IRO-001-1.1 R8, Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements.</p> <p>While it is typical for WECC RC to communicate, advise and direct Balancing Authorities or Transmission Operators, it is important for other registered entities to recognize that the RC may contact them directly if the situation requires such. Based on this scenario the requirements in COM 003 would apply to those entities if BES conditions warrant it.</p>		
<p>NERC Staff</p>	<p>Agree</p>	<p>Although no questions were asked about Requirement R3, NERC staff is aware that some areas in North America require a language other than English for official communication. In addition, it may be hard to define what “internal communications” are. NERC staff recommends that the phrase “Interoperability Communications. Responsible Entities may use an alternate language for internal communications” be replaced with “Operating Communications between functional entities, unless prohibited by law.” In addition, regions that exist solely in one time zone may ask for a variance from the requirement to use CST for communication.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT appreciates the comments with regards to the possible legal issues associated with the requirement to use English for oral and written Operating Communications. The draft standard has been modified to exempt entities from use of the English language where another language is mandated by law or regulation.</p> <p>The definition for “Interoperability Communication” has been removed and a new definition has been proposed for the term “Operating Communications”.</p> <p>The second draft of COM-003 does not mandate the use of the Central Time Zone and should obviate the need for the identified variance. The second draft of COM-003 includes the following as a replacement for the requirement to use the Central Time Zone:</p> <p><b>1.1.3. When the communication is between entities in different time zones, include the time, local time zone and indicate whether time is daylight saving time or standard time.</b></p>		
<p>California Independent System Operator</p>	<p>Agree</p>	<p>CAISO Comments; The proposed requirement R7 will cause regions operating in any time zone other than Central to draft regional standards to avoid this non-reliability supporting requirement.</p>
<p><b>Response: The SDT thanks you for your comments:</b></p> <p>The SDT has developed an alternative for the common time zone. Instead of requiring the use of a single continent-wide time zone, the</p>		

Organization	Yes or No	Question 10 Comment
<p>standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone and indicate whether time is daylight saving time or standard time when communicating with one or more entities in a different time zone.</p>		
Puget Sound Energy		I might suggest one for R4 by each region that is not in the Central Standard Time zone.
<p><b>Response: The SDT thanks you for your comments</b>                      The SDT has developed an alternative for the common time zone. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone and indicate whether time is daylight saving time or standard time when communicating with one or more entities in a different time zone</p>		
MRO NERC Standards Review Subcommittee	Agree	If the Central Standard time zone is required as noted in R4, we believe there should be a regional variance to allow the WECC to select the time zone to use as a standard.
<p><b>Response: The SDT thanks you for your comments</b>                      The SDT has developed an alternative for the common time zone. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone and indicate whether time is daylight saving time or standard time when communicating with one or more entities in a different time zone.</p>		
Hydro-Québec TransEnergie	Agree	In the Province of Quebec, the use of French is mandatory, according to law, for communication within the Province.R3 should include: Within the Québec Interconnection, the French language shall be used for verbal and written interoperability communication between entities (RC, BA, TO, TOP, GOP, TSP, LSE and DP). For their interoperability communication with entities outside of the Québec Interconnection, they shall use the English language.
<p><b>Response: The SDT thanks you for your comments.</b>                      The SDT appreciates the comments with regards to the possible legal issues associated with the requirement to use English for oral and written Operating Communications. The draft standard has been modified to exempt entities from use of the English language where another language is mandated by law or regulation.</p>		
IRC Standards Review Committee	Agree	Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the parties such as Distribution Provider and Generation Operator cannot have access to these systems due FERC standards of conduct requirements. Requirement 2 and the listing of functional entities

Organization	Yes or No	Question 10 Comment
		<p>required to be notified within the RC footprint in attachment 1 create a de facto requirement for them to have RCIS access or an unnecessary burden to communicate with all functional entities listed separately. Having to communicate to all functional entities in that list verbally and individually would create an unnecessary burden that distracts the RC from actual system operation and represents a detriment to reliability.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT has deleted COM-003 - Attachment 1 and Requirement R2 from the second draft of COM-003 in response to stakeholder concerns.</b></p>		
<p>ISO New England Inc.</p>	<p>Agree</p>	<p>Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the parties such as Distribution Provider and Generation Operator cannot have access to these systems due FERC standards of conduct requirements. Requirement 2 and the listing of functional entities required to be notified within the RC footprint in attachment 1 create a de facto requirement for them to have RCIS access or an unnecessary burden to communicate with all functional entities listed separately. Having to communicate to all functional entities in that list verbally and individually would create an unnecessary burden that distracts the RC from actual system operation and represents a detriment to reliability.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT deleted Requirement R2 and the associated COM-003 - Attachment 1 from the second draft of the standard in response to stakeholder concerns.</b></p>		
<p>Northeast Power Coordinating Council</p>	<p>Agree</p>	<p>Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the parties such as Distribution Provider and Generation Operator cannot have access to these systems due FERC standards of conduct requirements. Requirement 2 and the listing of functional entities required to be notified within the RC footprint in Attachment 1 creates a de facto requirement for them to have RCIS access or an unnecessary burden to communicate with all functional entities listed separately. Having to communicate to all functional entities in that list verbally and individually would create that unnecessary burden, and distract the RC from actual system operation. This is a detriment to reliability.</p> <p>Some ISO/RTOs have market rules which allow participants to elect NOT to follow instructions issued by their market operator (who may also perform BA, TOP and/or RC entity functions) unless an Emergency exists.</p> <p>In the Province of Québec, the use of French is mandatory, according to law, for communication within the Province. R3 should include: Within the Québec Interconnection, the French language shall be used for verbal and written interoperability communication between entities (RC, BA, TO, TOP, GOP, TSP, LSE and DP). For their</p>

Organization	Yes or No	Question 10 Comment
		interoperability communication with entities outside of the Québec Interconnection, they shall use the English language.
<p><b>Response: The SDT thanks you for your comments. The SDT deleted Requirement R2 and the associated COM-003 - Attachment 1 from the second draft of the standard in response to stakeholder concerns.</b></p> <p><b>The SDT appreciates the comments with regards to the possible legal issues associated with the requirement to use English for oral and written Operating Communications. The draft standard has been modified to exempt entities from use of the English language where another language is mandated by law or regulation.</b></p>		
PJM SOS Comments	Agree	Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the parties such as Distribution Provider and Generation Operator cannot have access to these systems due FERC standards of conduct requirements. Requirement 2 and the listing of functional entities required to be notified within the RC footprint in attachment 1 create a de facto requirement for them to have RCIS access or an unnecessary burden to communicate with all functional entities listed separately. Having to communicate to all functional entities in that list verbally and individually would create an unnecessary burden that distracts the RC from actual system operation and represents a detriment to reliability.
<p><b>Response The SDT thanks you for your comments.</b></p> <p><b>The SDT deleted Requirement R2 and the associated COM-003 - Attachment 1 from the second draft of the standard in response to stakeholder concerns.</b></p>		
PJM	Disagree	Many RC communications are issued to multiple parties using blast communication systems such as the RCIS. Several of the parties such as Distribution Provider and Generation Operator cannot have access to these systems due FERC standards of conduct requirements. Requirement 2 and the listing of functional entities required to be notified within the RC footprint in attachment 1 create a de facto requirement for them to have RCIS access or an unnecessary burden to communicate with all functional entities listed separately. Having to communicate to all functional entities in that list verbally and individually would create an unnecessary burden that distracts the RC from actual system operation and represents a detriment to reliability.
<p><b>Response: The SDT thanks you for your comments. The SDT deleted Requirement R2 and the associated COM-003 - Attachment 1 from the second draft of the standard in response to stakeholder concerns.</b></p>		
The Empire District Electric	Agree	NO

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Organization	Yes or No	Question 10 Comment
Company		
PSEG Companies	Disagree	No regional variances would be required to the best of PSEG's knowledge.
SERC OC&SOS Standards Review Group	Disagree	No, we are not aware of any regional variances.
National Grid	Disagree	None
NIPSCO	Disagree	none
NextEra Energy Resources, LLC	Disagree	None at this time.
Consumers Energy		None.
Westar Energy	Agree	not aware
Orange and Rockland Utilities, Inc.	Disagree	Not aware
FirstEnergy		Not aware of any
<b>Response: The SDT thanks you for your comments.</b>		
Pepco Holdings, Inc. - Affiliates	Agree	PHI asserts that WECC would say NO to Central Standard Time.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT has developed an alternative for the common time zone. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
NRECA RTF	Agree	POSSIBLE FRCC VARIENCE - FRCC appears to have developed a communication protocol in which “any or all

Organization	Yes or No	Question 10 Comment
Members		conversations on the phone are considered a directive. If this case, we suggest that the drafting team review the FRCC approach and determine if a regional variance should be included in this standard or consider utilizing the FRCC approach for clearly defining the term “directive” for inclusion in the NERC Glossary.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT cannot comprehend how every conversation could be a directive. The SDT would have to understand the rationale and logic of such a communication protocol before rendering a response.</b></p>		
Transmission System Operations	Agree	Refer to Question #5; we do not agree with using Central Standard Time.
<p><b>Response: The SDT thanks you for your comments. The SDT has developed an alternative for the common time zone. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
Electric Market Policy	Agree	Some ISO/RTOs have market rules which allow participants to elect NOT to follow instructions issued by their market operator (who may also perform BA, TOP and/or RC entity functions) unless an Emergency exists.
<p><b>Response The SDT thanks you for your comments. The SDT recognizes different regions may have various market rules, but feels that the NERC Reliability Standards clearly identify requirements to follow reliability directives and indicate acceptable reasons for not complying with a directive.</b></p>		
ExxonMobil Research and Engineering	Disagree	We are not aware of any regional variances that would be required as a result of this standard.
<p><b>Response: The SDT thanks you for your comments.</b></p>		



**11. Are you aware of any conflicts between the proposed standard and any regulatory function, rule order, tariff, rate schedule, legislative requirement or agreement? If yes, please identify the conflict.**

**Summary Consideration:**

Commenters again point out requiring use of “English” may conflict with legal requirements of non-English speaking footprints covered by NERC. The draft standard has been modified to exempt entities bound by law or regulation from applicability of R3 (new Requirement R1, Part 1.1.1).

1.1.1. Use the English language when communicating between functional entities, unless another language is mandated by law or regulation.

Comments regarding a common Central Standard Time zone reference warned of confusion and cost impacting commercial electric power capacity and energy markets. R3 (new Requirement R1, Part 1.1.2 and 1.1.3) of COM-003-1 has been modified to:

1.1.2. Use the 24-hour clock format when referring to clock times.

1.1.3. When the communication is between entities in different time zones, include the time, local time zone and indicate whether time is daylight saving time or standard time.

*(Example: 1500 EST or Eastern Standard Time).*

Commenters state that TSPs, DPs and LSEs may not own or operate any Facilities, and indicated that inclusion of these entities as proposed in COM-003 is an unnecessary burden. The SDT removed TSPs and LSEs from the applicability of COM-003 as they were not identified in the SAR. The specified role of the DP to shed load justifies the retention of the DP as an applicable Entity. The requirements of COM-003-1 are only applicable to Operating Communications. To the extent that entities do not operate, or do not take actions that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System, COM-003-1 would not apply.

Commenters raised concern that requirements of the proposed COM-003 Standard conflict with Energy Policy Act of 2005 by shifting real time operator’s focus from reliable operation of the BES to complying with communication protocol. The SDT respectfully disagrees, and believes that COM-003 will lead to a tightening of communications, which in turn will contribute to enhanced reliable operations of the BES.

Organization	Yes or No	Question 11 Comment
American	Agree	

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Organization	Yes or No	Question 11 Comment
Municipal Power		
American Electric Power	Disagree	
ATC and ITC	Disagree	
Bonneville Power Administration	Disagree	
British Columbia Transmission Corporation	Disagree	
California Independent System Operator	Disagree	
Duke Energy	Disagree	
Dynegy	Disagree	
Entergy Services	Disagree	
ERCOT ISO	Disagree	
Georgia Transmission Corp	Disagree	
Great River Energy	Disagree	
Independent Electricity System Operator	Disagree	
Kansas City Power & Light	Disagree	

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Organization	Yes or No	Question 11 Comment
Long Island Power Authority	Disagree	
Manitoba Hydro	Disagree	
Midwest ISO Standards Collaborators	Disagree	
New York State Reliability Council	Disagree	
NYSEG	Disagree	
Oncor Electric Delivery	Disagree	
Pepco Holdings, Inc. - Affiliates	Disagree	
PPL	Disagree	
South Carolina Electric and Gas	Disagree	
Sunflower Electric Power Corporation	Disagree	
The Empire District Electric Company	Disagree	
Transmission Owner	Disagree	
Transmission System Operations	Disagree	

Organization	Yes or No	Question 11 Comment
Tri-State Generation & Transmission Assoc.	Disagree	
Western Area Power Administration	Disagree	
Xcel Energy	Disagree	
Northeast Utilities	Disagree	(Disagree = No)
Florida Municipal Power Agency (FMPA) and some members	Disagree	(FMPA assumes that "Disagree" means that we are not aware of any conflicts)
<b>Response: The SDT thanks you for your comments.</b>		
Pacific Northwest Small Utilities Comment Group	Agree	(This is a Yes or No Questions)Yes, see our comments to Q2.
<b>Response: The SDT thanks you for your comments. Please see SDT response to Q2 comments.</b>		
Santee Cooper	Agree	A lot of the requirements in this standard could be considered a “best practice” for the industry rather than reliability related.
<b>Response: The SDT thanks you for your comments. The SDT believes these requirements play an important role in managing the human factor to eliminate miscommunication that would result in adverse effects on the BES.</b>		
NERC Staff	Agree	Although no questions were asked about Requirement R3, NERC staff is aware that some areas in North America require a language other than English for official communication. In addition, it may be hard to define what “internal communications” are. NERC staff recommends that the phrase “Interoperability Communications. Responsible Entities may use an alternate language for internal communications” be replaced

Organization	Yes or No	Question 11 Comment
		with “Operating Communications between functional entities, unless prohibited by law.”
<p><b>Response: The SDT thanks you for your comments. The draft standard has been modified to exempt entities from use of the English language where another language is mandated bylaw or regulation. The second draft of the standard clarifies that the requirement to use English only applies with the Operating Communication involves more than one functional entity.</b></p> <p><b>The definition for “Interoperability Communication” has been removed and a new definition has been proposed for the term “Operating Communications” in the current draft of the standard.</b></p>		
Bureau of Reclamation	Disagree	As indicated in the previous response the standard conflicted with DHS notifications.
<p><b>Response: The SDT thanks you for your comments. The SDT removed Requirement R2 and the associated attachment from the revised standard.</b></p>		
MRO NERC Standards Review Subcommittee	Agree	Attachment 1, Physical Security is a basis for the SAR for Project 2009-02, Disturbance and Sabotage reporting SDT.
<p><b>Response: The SDT thanks you for your comments and bringing that reference for PSEA to our attention. The SDT removed Requirement R2 and the associated attachment from the revised standard. The SDT has recommended that Project 2009-01 – Disturbance and Sabotage Reporting pick up the requirement to issue notifications to operating entities when the BES is in an alert or emergency state.</b></p>		
PacifiCorp	Disagree	Currently, PacifiCorp’s Open Oasis Access Same-Time Information System (OASIS) allows time to be shown displays time in Pacific Standard Time. Mandating all Interoperability Communications to be held in Central Standard Time may cause confusion with regard to transactions and activities conducted on OASIS - which ultimately relate to real-time operations.
<p><b>Response: The SDT thanks you for your comments. The SDT has developed an alternative for the common time zone. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
E.ON U.S. LLC	Disagree	If the requisite protocols are intended to be followed by all field personnel, applicability of these requirements to Distribution Providers could run afoul of FPA Section 215(a) codified in 18CFR39.1.
<p><b>Response: The SDT thanks you for your comments. The SDT requires more detail on how FPA Section 215(a) codified in 18CFR39.1 is affected by the protocols of COM- 003-01. The second draft of COM-003 provides greater clarity on when to use the various communication protocols.</b></p>		

Organization	Yes or No	Question 11 Comment
<p>Please review the second draft of the standard to see if you still have concerns about the applicability of these protocols.</p>		
We Energies	Agree	<p>In general, establishing CST as a uniform time zone may conflict with individual Tariffs regarding references to wholesale electric market commercial activities and could cause additional confusion if commercial market time zone references are independent of reliability time zone references.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT has developed an alternative for the common time zone. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
Hydro-Québec TransEnergie	Agree	<p>In some market structures, TSPs and LSE do not own or operate equipment. Thus, including them in the requirements is an unnecessary burden for these areas. The requirement to use CST attempts to determine HOW entities operate within their various footprints and it would significantly change the way many Markets are structured. To implement this into existing Markets would cost significant time, and resources while not enhancing reliability in these areas. When operating across time-zones, simply referencing “Central Standard Time” or “Eastern Standard Time” is sufficient for other operating entities to reliably operate. Many entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We are strongly opposed to this requirement.</p>
<p><b>Response: The SDT thanks you for your comments.</b>  <b>The SDT appreciates the comments with regards to concerns related to including TSPs and LSEs that do not own or operate facilities that are a part of the BES. The SDT has removed the TSPs and LSEs because they were not bound by this requirement in the originating SAR.</b>  <b>The SDT has modified Requirement R4 (Now Requirement R1, Part 1.1.3 of the second draft) and believes it has addressed the concerns identified in your comments about time zones. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</b></p>		
IRC Standards Review Committee	Agree	<p>In some market structures, TSPs and LSE do not own or operate equipment. Thus, including them in the requirements is an unnecessary burden for these areas. The requirement to use CST attempts to determine HOW entities operate within their various footprints and it would significantly change the way many Markets are structured. To implement this into existing Markets would cost significant time, money and resources while not enhancing reliability in these areas. We believe that, when operating across time-zones, simply referencing</p>

Organization	Yes or No	Question 11 Comment
		<p>“Central Standard Time” or “Eastern Standard Time” is sufficient for other operating entities to reliably operate; also, let’s not lose sight of HOW MANY entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We are strongly opposed to this requirement.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT appreciates the comments with regards to concerns related to including TSPs and LSEs that do not own or operate Facilities that are a part of the BES. The SDT has removed the TSPs and LSEs because they were not bound by this requirement in the originating SAR.</p> <p>The SDT has modified Requirement R4 (Now Requirement R1, Part 1.1.3 of the second draft). Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
<p>ISO New England Inc.</p>	<p>Agree</p>	<p>In some market structures, TSPs and LSE do not own or operate equipment. Thus, including them in the requirements is an unnecessary burden for these areas.</p> <p>The requirement to use CST attempts to determine HOW entities operate within their various footprints and it would significantly change the way many Markets are structured. To implement this into existing Markets would cost significant time, money and resources while not enhancing reliability in these areas. We believe that, when operating across time-zones, simply referencing “Central Standard Time” or “Eastern Standard Time” is sufficient for other operating entities to reliably operate; also, let’s not lose sight of HOW MANY entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We are strongly opposed to this requirement.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT appreciates the comments with regards to concerns related to including TSPs and LSEs that do not own or operate facilities that are a part of the BES. The SDT has removed the TSPs and LSEs because they were not bound by this requirement in the originating SAR.</p> <p>The SDT has modified Requirement R4 (Now Requirement R1, Part 1.1.3 of the current draft). Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
<p>Northeast Power Coordinating Council</p>	<p>Agree</p>	<p>In some market structures, TSPs and LSE do not own or operate equipment. Thus, including them in the requirements is an unnecessary burden for these areas.</p> <p>The requirement to use CST attempts to determine HOW entities operate within their various footprints and it would significantly change the way many Markets are structured. To implement this into existing Markets</p>

Organization	Yes or No	Question 11 Comment
		<p>would cost significant time, and resources while not enhancing reliability in these areas. When operating across time-zones, simply referencing “Central Standard Time” or “Eastern Standard Time” is sufficient for other operating entities to reliably operate. Many entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We are strongly opposed to this requirement.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT appreciates the comments with regards to concerns related to including TSPs and LSEs that do not own or operate facilities that are a part of the BES. The SDT has removed the TSPs and LSEs because they were not bound by this requirement in the originating SAR.</p> <p>The SDT has modified Requirement R4 (Now Requirement R1, Part 1.1.3 of the current draft). Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time when communicating with one or more entities in a different time zone.</p>		
Progress Energy Carolina, Inc		no
National Grid	Disagree	None
NIPSCO	Disagree	none
NextEra Energy Resources, LLC	Disagree	None at this time.
Consumers Energy		None.
Westar Energy	Agree	not aware
Orange and Rockland Utilities, Inc.	Disagree	Not aware
FirstEnergy		Not aware of any
<p><b>Response: The SDT thanks you for your participation.</b></p>		
PEF	Agree	PEF recommends that the color coding and definitions that are used by Homeland Security also be used for the notification of physical and cyber emergency alerts reported to the RC. This would follow the ES-ISAC standard



Organization	Yes or No	Question 11 Comment
		already adopted by the electric industry.
<p><b>Response: The SDT thanks you for your comments. The SDT removed Requirement R2 and the associated attachment from the revised standard.</b></p>		
Electric Market Policy	Agree	PJM members are only required to comply during an Emergency.
<p><b>Response: The SDT thanks you for your comments. Please provide the specific Requirements and terms of those requirements that PJM members “are only required to comply during an Emergency.”</b></p>		
Southern Company Transmission	Agree	Southern Company supports the SERC SOS comments. SERC SOS comments: We do see a potential conflict with the Energy Policy Act 2005, which set the framework for the Electric Reliability Organization (ERO). The ERO’s mission is to oversee and protect the reliability of the Bulk Electric System. This standard seems to cross the line between reliability-related activities and other types of operating actions. The concern here is that system operators will focus on the letter of the standard rather than on good operating practice. The fear of a violation among operators may have a greater impact on reliability than the violation itself.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT appreciates the comments with regard to concerns that COM-003 conflicts with the Energy Policy Act of 2005. The SDT respectfully disagrees, and believes that COM-003 will lead to a tightening of communications, which in turn will contribute to reliable operations of the BES. The Blackout Report Recommendation #26 states, communication protocols should be tightened especially those for alerts and emergency communications. FERC Order 693 P531 directed that communication protocols be tightened and suggested a new COM Reliability Standard as an acceptable approach. The SAR for this SDT charged the team to “tighten communication protocols, especially for communications during alerts and emergencies.” Additionally the SAR required “the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions.” As one element of complying with this charge, the SDT has captured the industry wide practice of three part communications as an integral element of this standard. This requirement is currently in COM-002-2 R2.</b></p>		
ExxonMobil Research and Engineering	Disagree	We are not aware of any conflicts.
<p><b>Response: The SDT thanks you for your participation.</b></p>		
PJM	Agree	We do see a potential conflict with the Energy Policy Act 2005, which set the framework for the Electric Reliability Organization (ERO). The ERO’s mission is to oversee and protect the reliability of the Bulk Electric

Organization	Yes or No	Question 11 Comment
		<p>System. This standard seems to cross the line between reliability-related activities and other types of operating actions which may be better suited for NAESB action. The concern here is that system operators will focus on the letter of the standard rather than on good operating practice. The fear of a violation among operators may have a greater impact on reliability than the violation itself. In some market structures, TSPs and LSE do not own or operate equipment. Thus, including them in the requirements is an unnecessary burden for these areas.</p> <p>The requirement to use CST attempts to determine HOW entities operate within their various footprints and it would significantly change the way many Markets are structured. To implement this into existing Markets would cost significant time, money and resources while not enhancing reliability in these areas. We believe that, when operating across time-zones, simply referencing “Central Standard Time” or “Eastern Standard Time” is sufficient for other operating entities to reliably operate; also, let’s not lose sight of HOW MANY entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We are strongly opposed to this requirement.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT appreciates the comments with regard to concerns that COM-003 conflicts with the Energy Policy Act of 2005. The SDT respectfully disagrees, and believes that COM-003 will lead to a tightening of communications, which in turn will contribute to reliable operations of the BES. The Blackout Report Recommendation #26 states, communication protocols should be tightened especially those for alerts and emergency communications. FERC Order 693 P531 directed that communication protocols be tightened and suggested a new COM Reliability Standard as an acceptable approach. The SAR for this SDT charged the team to “tighten communication protocols, especially for communications during alerts and emergencies.” Additionally the SAR required “the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions.” As one element of complying with this charge, the SDT has captured the industry wide practice of using three part communications as an integral element of this standard. This requirement is currently in COM-002-2 R2.</p> <p>The SDT appreciates the comments with regards to concerns related to including TSPs and LSEs that do not own or operate facilities that are a part of the BES, The SDT has removed the TSPs and LSEs because they were not bound by this requirement in the originating SAR.</p> <p>The SDT has modified Requirement R4 (Now Requirement R2, Part 1.1.3 of the current draft). Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
PJM SOS Comments	Agree	We do see a potential conflict with the Energy Policy Act 2005, which set the framework for the Electric Reliability Organization (ERO). The ERO’s mission is to oversee and protect the reliability of the Bulk Electric

Organization	Yes or No	Question 11 Comment
		<p>System. This standard seems to cross the line between reliability-related activities and other types of operating actions which may be better suited for NAESB action.</p> <p>The concern here is that system operators will focus on the letter of the standard rather than on good operating practice. The fear of a violation among operators may have a greater impact on reliability than the violation itself.</p> <p>In some market structures, TSPs and LSE do not own or operate equipment. Thus, including them in the requirements is an unnecessary burden for these areas.</p> <p>The requirement to use CST attempts to determine HOW entities operate within their various footprints and it would significantly change the way many Markets are structured. To implement this into existing Markets would cost significant time, money and resources while not enhancing reliability in these areas. We believe that, when operating across time-zones, simply referencing “Central Standard Time” or “Eastern Standard Time” is sufficient for other operating entities to reliably operate; also, let’s not lose sight of HOW MANY entities would have to modify their existing practices, hardware, software, Control System, billing systems, bidding systems, etc. We are strongly opposed to this requirement.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT appreciates the comments with regard to concerns that COM-003 conflicts with the Energy Policy Act of 2005. The SDT respectfully disagrees, and believes that COM-003 will lead to a tightening of communications, which in turn will contribute to reliable operations of the BES. The Blackout Report Recommendation #26 states, communication protocols should be tightened especially those for alerts and emergency communications. FERC Order 693 P531 directed that communication protocols be tightened and suggested a new COM Reliability Standard as an acceptable approach. The SAR for this SDT charged the team to “tighten communication protocols, especially for communications during alerts and emergencies.” Additionally the SAR required “the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions.” As one element of complying with this charge, the SDT has captured the industry wide practice of using three part communications as an integral element of this standard. This requirement is currently in COM-002-2 R2. The SDT appreciates the comments with regards to concerns related to including TSPs and LSEs that do not own or operate facilities that are a part of the BES, The SDT has removed the TSPs and LSEs because they were not bound by this requirement in the originating SAR.</p> <p>The SDT has modified Requirement R4 (Now Requirement R1, Part 1.1.3 of the current draft). Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>		
SERC OC&SOS	Agree	We do see a potential conflict with the Energy Policy Act of 2005, which set the framework for the Electric

Organization	Yes or No	Question 11 Comment
Standards Review Group		<p>Reliability Organization (ERO). The ERO’s mission is to oversee and protect the reliability of the Bulk Electric System. This standard seems to cross the line between reliability-related activities and other types of operating actions.</p> <p>The concern here is that system operators will focus on the letter of the standard rather than on good operating practice. The fear of a violation among operators may have a greater impact on reliability than the violation itself.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT appreciates the comments with regard to concerns that COM-003 conflicts with the Energy Policy Act of 2005. The SDT respectfully disagrees, and believes that COM-003 will lead to a tightening of communications, which in turn will contribute to reliable operations of the BES. The Blackout Report Recommendation #26 states, communication protocols should be tightened especially those for alerts and emergency communications. FERC Order 693 P531 directed that communication protocols be tightened and suggested a new COM Reliability Standard as an acceptable approach. The SAR for this SDT charged the team to “tighten communication protocols, especially for communications during alerts and emergencies.” Additionally the SAR required “the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions.” As one element of complying with this charge, the SDT has captured the industry wide practice of using three part communications as an integral element of this standard. This requirement is currently in COM-002-2 R2.</p>		
PSEG Companies	Agree	<p>Yes. The PSEG Companies agree with the concerns expressed in the comments filed by the PJM System Operations Subcommittee (SOS) Group.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT appreciates the comments with regard to concerns that COM-003 conflicts with the Energy Policy Act of 2005. The SDT respectfully disagrees, and believes that COM-003 will lead to a tightening of communications, which in turn will contribute to reliable operations of the BES. The Blackout Report Recommendation #26 states, communication protocols should be tightened especially those for alerts and emergency communications. FERC Order 693 P531 directed that communication protocols be tightened and suggested a new COM Reliability Standard as an acceptable approach. The SAR for this SDT charged the team to “tighten communication protocols, especially for communications during alerts and emergencies.” Additionally the SAR required “the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions.” As one element of complying with this charge, the SDT has captured the industry wide practice of using three part communications as an integral element of this standard. This requirement is currently in COM-002-2 R2.</p>		

Organization	Yes or No	Question 11 Comment
		<p>The SDT appreciates the comments with regards to concerns related to including TSPs and LSEs that do not own or operate facilities that are a part of the BES, The SDT has removed the TSPs and LSEs because they were not bound by this requirement in the originating SAR.</p> <p>The SDT has modified Requirement R4 (Now Requirement R1, Part 1.1.3 of the current draft). Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when communicating with one or more entities in a different time zone.</p>

**12. Do you have any other comments to improve the draft standard? If yes, please elaborate in the comment area.**

**Summary Consideration:**

Many commenters stated high VRFs and severe VSLs are too harsh for the requirements of this standard. The potential penalties associated with violating these requirements could be very significant for violating a communication protocol even if no adverse impact occurs on the BES. The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in COM-003-1. In the second draft of the standard all VRFs are Medium.

Some commenters suggested modifications to COM-002-3 should be switched from Project 2006-06 and absorbed into COM-003-1 to simplify coordination of the changes on each of these standards. The Operating Personnel Communications Protocol SDT has been directed by the NERC Standards Committee to coordinate with the RC SDT and continue development of both standards simultaneously. Note however, that the OPCP SDT proposes retirement of COM-002 when COM-003 becomes effective.

Commenters pointed out the effective date listed in the proposed standard did not agree with the effective date shown in the COM-003-1 Implementation Plan. After comparing the effective dates listed in the COM-003-1 Implementation Plan and the proposed standard, the SDT has modified the Implementation Plan to match the proposed standard's effective date, providing entities at least six months after approvals before the standard becomes effective.

One commenter indicated that the Data Retention period should be expressed in days instead of months because of the inconsistency in the number of days per month. The SDT agrees that that the data retention periods should be expressed in a term other than months.

Commenters questioned if the standard should apply to Transmission Owners, Generator Owners, Distribution Providers, Interchange Authorities (Interchange Coordinators), Load-Serving Entities, and Purchasing-Selling Entities. The second draft of the

The Quality Review team recommended that the OPCP SDT modify Requirements R2 and R3 to clarify that these requirements for performance of three-part communication exclude Reliability Directives. This eliminates the double jeopardy issue that may have existed if both COM-002 and COM-003 were approved.

Thus – the revised COM-003 does include the term, Reliability Directive. In addition, the implementation plan was revised to no longer recommend retirement of COM-002. As modified, the two standards can exist without conflict. COM-002 requires the issuer of an Operating Communication to identify that communication as a “Reliability Directive” which gives recipients notice that the directive is associated with an “Emergency”. COM-003 now specifically identifies that the requirements for three part communication do not include “Reliability Directives.”

Per Standards Committee guidance, the SDT did not revise all the responses in this report that indicate COM-003 does not include the term, “Reliability Directive” nor did the team revise all the responses that indicated the team recommended retirement of COM-002.

standard has eliminated the Transmission Owner, Load-Serving Entity, and Purchasing-Selling Entity from the list of applicable entities. The SDT did not remove the Distribution Provider and did not add the Generator Owner or the Interchange Authority (Interchange Coordinator). The intent of the proposed standard is to apply only to those entities that send or receive Operating Communications and operate Facilities on the BES as a result of those communications, thus eliminating both the Transmission Owner and Transmission Service Provider from the standard. Because the Distribution Provider does participate in real-time communications for actions such as load shedding, the Distribution Provider was not removed from the second draft of the standard.

A commenter stated that the requirement in the Data Retention section for an entity found to be non-compliant to retain data until found compliant does not belong in a standard, because it is already mandated in the NERC Compliance Violation Investigation process. The SDT developed this language to be consistent with the NERC Standard Drafting Team Guidelines.

A commenter recommends the word “timely” should be removed from the Purpose statement since none of the requirements specify a time period. Since none of the Requirements specify a time limit for executing the required communications, the SDT removed “timely” from the second draft of COM-003.

Organization	Yes or No	Question 12 Comment
American Municipal Power	Agree	
Bureau of Reclamation	Agree	
ERCOT ISO	Agree	
ATC and ITC	Disagree	
British Columbia Transmission Corporation	Disagree	
Entergy Services	Disagree	
Georgia Transmission Corp	Disagree	

Organization	Yes or No	Question 12 Comment
Kansas City Power & Light	Disagree	
Manitoba Hydro	Disagree	
NYSEG	Disagree	
Oncor Electric Delivery	Disagree	
PacifiCorp	Disagree	
Pepco Holdings, Inc. - Affiliates	Disagree	
Sunflower Electric Power Corporation	Disagree	
Western Area Power Administration	Disagree	
Florida Municipal Power Agency (FMPA) and some members	Agree	<p>(FMPA assumes that "Agree" means "Yes, we do have other comments")</p> <p>The Violation Risk Factor for R2 should be “Low”, not “High”. It is administrative in nature.</p> <p><b>The SDT removed Requirement R2 from the revised standard.</b></p> <p>The Measures make the types of evidence an “or” statement, e.g., “(e)vidence may include ... voice recording, transcripts, operating logs, OR on site observations” (emphasis added). The Data Retention section seems to make evidence an “and” statement, e.g., “Each ... (Responsible Entity) shall retain ... dated operator logs for the most recent 12 months AND voice recordings or transcripts ... for ... 3 months” (emphasis added). These statements are inconsistent with each other and both ought to be “or” statements.</p> <p><b>The SDT appreciates the comment in regard to the difference between the Data Retention requirement and the documentation listed in Measure 2 (new standard format). The Data Retention section “format” for standards has been modified to eliminate the specificity in the section. As a result the AND language has been eliminated</b></p>



Organization	Yes or No	Question 12 Comment
		<p>and the conflict is eliminated.</p> <p><b>After consideration, the SDT has decided to modify the language of</b> Due to the variability of the length of a month, data retention ought to be expressed in days rather than months, e.g., 90 days instead of 3 months.</p> <p><b>The SDT agrees that that the data retention periods should be expressed in a term other than months. The SDT revised the standard so that the data retention now says, “the most recent 365 days.”</b></p> <p>Why is the Transmission Owner included in the applicability of the standard? What “Interoperability Communications” are they involved with? If the Transmission Owner is included, why isn’t the Generation Owner? Explain the inconsistent treatment of Transmission Owners and Generator Owners.R3</p> <p><b>With regard to COM-003-1 the second draft of the standard does not apply to Transmission Owners or Generator Owners as (according to the Functional Model) they don’t engage in real-time Operating Communications. The intent of the proposed standard is to apply only to those entities that send or receive Operating Communications and operate facilities on the BES as a result of those communications.</b></p> <p>- what if an entity starts to communicate in a language other than English, but, as part of the 3 part communication process changes to English and completes all steps of 3-part communication in English, is that entity non-compliant or compliant?</p> <p><b>The SDT would like to point out that R3 is now requirement R1 Part 1.1.1 in the revised standard and uses the term “Operating Communications”. As envisioned, the oral or written Operating Communication would be in English no matter what language previous conversations took place in unless another language is mandated law or regulation.</b></p> <p>How should EOP-001-0, R4.1 coordinate with COM-003-1? Should EOP-001-0, R4.1 focus on internal Entity communications?</p> <p><b>R4.1 of EOP-001 as a whole requires “plans” for mitigating emergencies. These communication protocols differ from COM-003 protocols in that R4.1 (now R3.1 in EOP-001-2b) involves actions and tasks for mitigating operational emergencies and for coordinating activities; not how to communicate.</b></p>

Organization	Yes or No	Question 12 Comment
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Pacific Northwest Small Utilities Comment Group</p>	<p>Agree</p>	<p>(This is a Yes or No Questions)The proposed standard seems to have just thrown everyone into the pot, and not considered how registered entities interact with the BES or what other standard requirements apply to them. We cannot lose sight of the original objective of, not only ERO Compliance, but the “purpose” described in regards to the development of this standard (Posted as background information on Project 2007-02). The stated purpose is, “To ensure that reliability-related information is conveyed effectively, accurately, consistently, and timely to ensure mutual understanding by all key parties, especially during alerts and emergencies.”With this said, The BA’s, TOP’s and RC’s are the key registered entities that have the power to take action, they are the key players in the communication of information which “impacts” the BES. We fail to see the value added by including DP’s and LSE in most of the requirements of this standard. If anything, we see the opposite affect taking place by adding DP &amp; LSE’s. This may be an extra tier of unnecessary communication that would not only slow down this process, but just may contribute to greater inefficiencies. Please note that many DP &amp; LSE in the WECC region are very small utilities that do not have 24 by 7 coverage.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT has modified R4 and R5 (now requirement R1 Parts 1.3.1, 1.3.2 and 1.3.3 in the second draft of COM-003) to address your concerns. The revisions made narrow the list of responsible entities to just those that actually are involved in “Operating Communication” – defined as communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.</b></p> <p><b>The SDT appreciates the comments with regards to concerns related to including DPs and LSEs. The SDT has removed the LSEs because they were not bound by this requirement in the originating SAR. The specified role of the DP to shed load justifies the retention of the DP as an applicable Entity.</b></p> <p><b>COM-003-1 does not address the required real time response or the required coverage for small utilities. To the extent they operate BES assets they must comply with applicable standards.</b></p>		
<p>Xcel Energy</p>	<p>Agree</p>	<p>1) Recommend removal of the references to measures in the data retention section of the standard. It is only necessary to refer to the requirements, which is already included.</p> <p>2) The data retention section should also be modified to refer generically to evidence, instead of "dated operator logs... and voice recordings or transcripts of voice recordings...". This is because the measures specifically allow for other types of evidence, as stated: "Evidence of use may include but is not limited to voice recordings, transcripts, operating logs, or on site observations."</p>

Organization	Yes or No	Question 12 Comment
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>1 The SDT appreciates the comment in regard to the Data Retention section referring to Requirements instead of Measures. The drafting team has reviewed the Drafting Team Guideline document and notes that on page 41, both Requirements and Measures appear in Data Retention.</b></p> <p><b>2 The SDT agrees with the comment regarding the use of “evidence” in the Data Retention section and has modified the Data Retention section to eliminate the specific references to types of evidence in support of your suggestion.</b></p>		
Consumers Energy	Agree	Amplification of the communication process is needed but this draft reaches beyond Communication to the start of drafting procedures for three separate emergency conditions while it leaves one alone. Focusing on the communication process is in order.
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT removed Requirement R2 and the associated Attachment from the second draft of COM-003 based on stakeholder comments and concerns that the required performance went beyond requiring use of specific communications protocols.</b></p>		
Duke Energy	Agree	<p>As a general comment, all the requirements other than R1 are High VRFS with only Severe VSLs. As this standard is written to apply broadly to routine as well as emergency communications between entities, we believe that failure to meet these requirements would rarely impact the reliability of the Bulk Electric System. For example if in routine switching an operator says “Baker” instead of “Bravo”, the entity is subject to FERC’s most severe penalty.</p> <p>Clearly the basis for this standard needs to be reassessed. If we use the test that if a requirement or a standard supports/encourages reliability and security, then entities should invest the time and effort to track performance to ensure auditable compliance. For example - Does DCS compliance support/encourage reliability/security? The industry would generally say yes - so the tracking and determination of auditable compliance is justified. But would auditable compliance to this draft of COM-003-1 support/encourage reliability/security? We don’t think so, given the vague and general nature of this draft. It certainly would not justify the amount of work and effort it would take to ensure auditable compliance with this COM-003-1 draft, given the amount of effort it would take to monitor all recorded communications that fit within this vague draft standard. Bottom line is that we think COM-003 is not needed. As proposed, it is a “how” and not a “what” based standard that will create more distraction from reliability/security than any value it might add.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. The VRFs in the second draft are all Medium.</b></p>		

Organization	Yes or No	Question 12 Comment
<p>Additionally, the SDT modified the requirement to approve accurate “accurate alpha-numeric clarifiers” to address the example you provided. (See Requirement R1, Part 1.2 in the second draft of COM-003.)</p> <p>The Blackout Report Recommendation #26 states, communication protocols should be tightened especially those for alerts and emergency communications. FERC Order 693 P531 directed that communication protocols be tightened and suggested a new COM Reliability Standard as an acceptable approach. The SAR for this SDT charged the team to “tighten communication protocols, especially for communications during alerts and emergencies.” Additionally the SAR required “the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions.”</p> <p>The OPCP SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations. In short COM 003 is needed and required.</p>		
<p>New York State Reliability Council</p>	<p>Agree</p>	<p>Comments: R1 requires each entity to create a CPOP. There is not a requirement to coordinate CPOP’s amongst entities beyond the requirements in the Standard. There is no requirement to exchange CPOP’s between entities with an operating relationship. The SDT should consider adding a requirement either that allows entities with operating relationships to request and be provided a copy of the other’s CPOP, or a requirement requiring the exchange of CPOP between entities with operating relationships.</p> <p>Additionally, we cannot understand how all requirements but R1 have been determined to have a HIGH VRF when, many of them are dictating HOW communications should take place and not when and why or what. High Risk Factor requirement (a) is one that, if violated, could directly cause or contribute to bulk power system instability, separation, or a cascading sequence of failures, or could place the bulk power system at an unacceptable risk of instability, separation, or cascading failures. NYSRC does not believe that any requirement in this Standard if violated would have the results specified in the definition of a High VRF, especially since these requirements are addressing the HOW of communication.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>Many of the comments we received pointed out that having a CPOP is an administrative activity. The SDT deleted the requirement for a CPOP in the second draft of COM-003-1.</p> <p>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. In the second draft of the standard all VRFs are Medium. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in COM-003-1.</p>		
<p>ExxonMobil</p>	<p>Agree</p>	<p>Compliance paragraph 1.4 bullet 2 implies that all entities retain 3 months worth of telephone voice recordings</p>

Organization	Yes or No	Question 12 Comment
Research and Engineering		<p>through its use of the word ‘and’ in the statement “Distribution Provider shall retain for Requirement 2 through 7, Measure 2 through 7, dated operator logs for the most recent 12 months and voice recordings or transcripts of voice recordings for the most recent 3 months”. While many utility companies employ the use of voice recorders, many industrial facilities do not. When a facility does not currently employ the use of voice recorders, is it the intent of this document to require the facility to install the infrastructure necessary to record and store telephone conversations? If so, what is the time line for deploying the infrastructure necessary to record and store telephone conversations?</p> <p>Currently, we maintain a log of our communications which includes the question or instruction and our (or in the case of a question the third party’s) response. Does this satisfy the evidence criteria as defined in measures M2 through M7 of the proposed standard?</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT appreciates the comment in regard to the difference between the Data Retention requirement and the documentation listed in Measures 2 through 7. After consideration, the SDT has decided to modify the language of the Data Retention section to eliminate specific references to types of evidence.</b></p> <p><b>Recorded voice conversations are one of several measurement options. The entity is permitted to use any measurement method to demonstrate compliance. Written transcripts with appropriate and accurate information or on site observations are acceptable forms of evidence.</b></p>		
FirstEnergy	Agree	<p>Coordination of SDT Efforts - We feel that the NERC Standards Committee should direct the Reliability Coordination SDT to hand over COM-002 to this OPCPSDT since those requirements will eventually be moved to COM-003-1. It is difficult to coordinate all these changes on a separate basis and moving the development to one SDT would help better coordinate these efforts. The current path forward is inefficient and causes confusion, not only for industry but also for the two drafting teams.</p> <p>Purpose Statement - We feel the phrase "especially during alerts and emergencies" implies that using proper communications protocol during normal operating situations is not as important as during emergencies. It is not appropriate to include this phrase in the purpose statement of a standard, and we suggest it be removed. Also, we suggest removing the word "timely" since this standard does not mandate time limits on communications.</p> <p>Compliance Section 1.4 Data Retention - We do not agree with the following statement for data retention "If a Transmission Operator, Transmission Owner, Balancing Authority, Reliability Coordinator, Generator Operator, Transmission Service Provider, Load Serving Entity or Distribution Provider is found non-compliant, it shall keep information related to the non-compliance until found compliant." We feel that this is not appropriate in a</p>

Organization	Yes or No	Question 12 Comment
		<p>reliability standard since it is already mandated through Compliance Violation Investigations (CVI). Also, we feel that it is more applicable to NERC’s Rules of Procedure. Therefore, we suggest it be removed from the standard.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT sees some merit in your recommendation to hand over COM-002 to this OPCP SDT but the RC SDT and the OPCP SDT are at a stage in the standards development process where that change would impede progress on both initiatives. The drafting teams are coordinating the efforts of the two SDTs to address issues and to ensure there are no conflicts. As envisioned, the COM-002 standard will be retried when COM-003 becomes effective.</p> <p>The SDT also agrees with your statement that using proper communications protocol during normal operating situations is as important as during emergencies. We have removed the phrase "especially during alerts and emergencies" from the purpose statement. It now reads:                      “To specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of the BES.”</p> <p>In addition, the SDT created the proposed term “Operations Communications” that applies to any communications that will change the state of the BES.</p> <p>The SDT appreciates the comment in regard to the word “timely” being used in the Purpose statement of the proposed standard. Since none of the Requirements specify a time limit for executing the required communications, the SDT removed “timely”.</p> <p>The SDT appreciates the comment in regard to Data Retention for an entity which is found to be non-compliant. The SDT developed this language to be consistent with the NERC Standard Drafting Team Guidelines. This has been updated to now say, “until mitigation is complete”</p>		
Great River Energy	Agree	<p>GRE believes that the existing standard COM-002 is actually better than this standard. This standard actually causes more confusion and ambiguity and creates unnecessary or overly cumbersome requirements that add little or no value to reliability.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT feels that the current version of the draft COM-003-1 standard clarifies a lot of industry concerns and will contribute greater value to reliability.</b></p>		
PPL	Agree	<p>If this draft standard would be approved as it is currently proposed, the implementation plan is way too short considering all the process and system changes that are needed to comply with the numerous additional requirements.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT has made several changes to the draft standard that will simplify the Implementation Plan. The SDT has reviewed the Implementation Plan</p>		

Organization	Yes or No	Question 12 Comment
<p><b>and extended it to give a minimum of six months following approval before the new requirements become effective.</b></p>		
<p>NextEra Energy Resources, LLC</p>	<p>Agree</p>	<p>In the case of nuclear plant operations, NRC communication requirements and the requirements of NERC NUC-001 for nuclear facilities more than adequately cover communication requirements. COM-003 should not be applicable to Nuclear Generator Operators since doing so will introduce an additional, unnecessary, and potentially conflicting level of requirements.</p> <p>Measures: Next Era suggests that the SDT clarify the periodicity of providing evidence of compliance and on what constitutes sufficient evidence of CPOP acceptance.</p> <p>Violation Severity Levels: Next Era encourages the SDT to revisit the violation severity levels. In the case of most of the requirements it is unreasonable to levy Severe penalties in instances where the operator may have deviated from the requirements but the communication occurred in an unencumbered and successful manner as evidenced by the use/acknowledgement outcomes of three-part communication.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT has reviewed NUC 001, specifically R9.4 and could not readily find a conflict with the second draft of COM 003. The SDT would expect the entities affected to incorporate the Requirements of COM 003 where applicable.</b></p> <p><b>The SDT has deleted the requirement for a CPOP in the second draft of COM-003-1.</b></p> <p><b>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. All requirements in the second draft of the standard have been assigned a Medium VRF. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in COM-003-1.</b></p>		
<p>Transmission Owner</p>	<p>Agree</p>	<p>In the case of nuclear plant operations, NRC communication requirements and the requirements of NERC NUC-001 for nuclear facilities more than adequately cover communication requirements. COM-003 should not be applicable to Nuclear Generator Operators since doing so will introduce an additional, unnecessary, and potentially conflicting level of requirements</p> <p>Measures: FPL suggests that the SDT clarify the periodicity of providing evidence of compliance and on what constitutes sufficient evidence of CPOP acceptance.</p> <p>Violation Severity Levels: FPL encourages the SDT to revisit the violation severity levels. In the case of most of the requirements it is unreasonable to levy severe penalties in instances where the operator may have deviated from the requirements but the communication occurred in an unencumbered and successful manner as evidenced by the use/acknowledgement outcomes of three-part communication.</p>

Organization	Yes or No	Question 12 Comment
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT has reviewed NUC 001, specifically R9.4 and could not readily find a conflict with the second draft of COM 003. The SDT would expect the entities affected to incorporate the Requirements of COM 003 where applicable.</p> <p>The SDT has deleted the requirement for a CPOP in the second draft of COM-003-1.</p> <p>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. All requirements in the second draft of the standard have been assigned a Medium VRF. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in COM-003-1.</p>		
Northeast Utilities	Agree	<p>Many of the requirement proposed in this posting either reiterate the drafts as posted (i.e. English language) or introduce confusion when compared to the drafts as posted. The scope should be limited to R2 and R7, so as not to duplicate or contradict the on-going work of other SDTs. (Agree = Yes)</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT feels that the requirements in the second draft of COM 003 are appropriate because they comply with the purpose identified in the SAR. The SDT also is aware of the efforts and progress of other SDTs and coordinates with them in order to avoid duplicative efforts or contradiction.</p>		
NERC Staff	Agree	<p>NERC staff questions whether this standard applies to the Transmission Service Provider and the Transmission Owner. It is unclear from the functional model where they would be involved in real-time operations communications.</p> <p>It is also unclear why the Violation Risk Factor for every requirement is High, and the Violation Severity Level for all but the first requirement is Severe. This automatically elevates any violation of any of these requirements to the highest penalty level that is imposed. The NERC staff recommends that the SDT review the latest guidelines for assignment of VSLs and consider alternatives that could expand/graduate the VSLs to account for varying severity of non-compliances.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT appreciates the comments with regards to concerns related to including TSPs. The SDT has removed the TSPs because they were not bound by this requirement in the originating SAR. The SDT removed the Transmission Service Provider and Transmission Owner from the second draft of the standard. The intent of the proposed standard is to apply only to those entities that send or receive "Operating Communications." The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. All requirements in the second draft of the standard have been assigned a Medium VRF. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in COM-</p>		



Organization	Yes or No	Question 12 Comment
<b>003-1.</b>		
Westar Energy	Agree	no additional comments
Orange and Rockland Utilities, Inc.	Disagree	No additional Comments
<b>Response: The SDT thanks you for your participation.</b>		
NorthWestern Energy	Agree	NorthWestern feels that the current communication standards are sufficient for reliable BES Operations.
<b>Response: The SDT thanks you for your comments. The SDT respectfully points out that various FERC Orders and Directives (FERC Order 693 P531 ) supported by the findings of the Blackout Report Recommendation #26 states, communication protocols should be tightened especially those for alerts and emergency communications. That communication protocols be tightened and suggested a new COM Reliability Standard as an acceptable approach. The SAR for this SDT charged the team to “tighten communication protocols, especially for communications during alerts and emergencies.” Additionally the SAR required “the use of specific communication protocols, enabling information to be efficiently conveyed and mutually understood for all operating conditions.”</b>		
PEF	Agree	<p>PEF believes additional NERC defined entities (such as Generators Owners) should be made applicable to this standard. Specifically, PEF believes that the Interchange Authority should be added due to the communications required between the Reliability Coordinator and the Interchange Authority.</p> <p>PEF also believes that the adoption of R4 would have major implications on the tagging process. PEF believes that all tagging would be required to be done using CST due to schedule check-out between BAs, TSPs, LSEs and RCs. Therefore, PSEs should be made applicable as well for R3 and R4.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The proposed standard has been made applicable to the Functional Entities defined by the SAR. The intent of the proposed standard is to apply only to those entities that send or receive Operating Communications and own and operate Facilities on the BES as a result of those communications.</p> <p>The SDT understands your concerns and is proposing an alternative requirement in the second draft of COM 003 which we believe will address your concerns. Instead of requiring the use of a single continent-wide time zone, the standard now requires that during Operating Communication an applicable entity shall explicitly state the time and time zone, and indicate whether the time is daylight saving or standard time, when</p>		

Organization	Yes or No	Question 12 Comment
<p><b>communicating with one or more entities in a different time zone.</b></p>		
<p>Long Island Power Authority</p>	<p>Agree</p>	<p>R1 requires each entity to create a CPOP. There is not a requirement to coordinate CPOP’s amongst entities beyond the requirements in the Standard. There is no requirement to exchange CPOP’s between entities with an operating relationship. The SDT should consider adding a requirement either that allows entities with operating relationships to request and be provided a copy of the other’s CPOP, or a requirement requiring the exchange of CPOP between entities with operating relationships.</p> <p>Additionally, we cannot understand how all requirements but R1 have been determined to have a HIGH VRF when, many of them are dictating HOW communications should take place and not when and why or what. High Risk Factor requirement (a) is one that, if violated, could directly cause or contribute to bulk power system instability, separation, or a cascading sequence of failures, or could place the bulk power system at an unacceptable risk of instability, separation, or cascading failures. LIPA does not believe that any requirement in this Standard if violated would have the results specified in the definition of a High VRF, especially since these requirements are addressing the HOW of communication.</p>
<p><b>Response: The SDT thanks you for your comments. Many of the comments we received pointed out that this is an administrative function and not a reliability function. It has been decided by the SDT to delete the requirement for a CPOP in the second draft of COM-003-1.</b></p> <p><b>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. All requirements in the second draft of the standard have been assigned a Medium VRF. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in the second draft of COM-003-1.</b></p>		
<p>Bonneville Power Administration</p>	<p>Agree</p>	<p>R3 creates a special need for multi language operators. US and US-involved entities need to use English in all instances, not only for reliability purposes, but for internal communication purposes and to be able to hire replacements without competing for an artificially small set of operators and to be auditable by NERC.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT agrees that English is the mandatory language for “Operating Communications“ except where another language is mandated by law or regulation.</b></p>		
<p>We Energies</p>	<p>Agree</p>	<p>Remove “timely” from the Purpose section, since a time period is not part of any requirement.</p> <p>According to the NERC Reliability Standards Development Procedure, Compliance Monitoring Period and Reset are required elements, and should be included. M1 through M7 should indicate which requirement they pertain to.</p> <p>Compliance enforcement should be focused on Reliability Directives only. Rather than proving 100% compliance,</p>

Organization	Yes or No	Question 12 Comment
		<p>it is more practical if each party is obligated to report instances of unclear communication to the other party/parties involved in the Reliability Directive(s). Defining a remediation plan could be part of the requirement, with a measure being whether or not the remediation was implemented.</p> <p>An overall observation is that the intended communication updates could be implemented through modification of existing COM-001 &amp; COM-002 standards without the need for another overlapping standard. Additional industry focus regarding communication protocols could be further emphasized through NERC System Operation Certification Program requirements and training.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The word “timely” has been removed from the purpose statement in the second draft of COM 003--1.</p> <p>The requirement for Compliance Monitoring Period and Reset has been removed from the RSDP – the RSDP was retired some time ago. Standards are now developed in accordance with the Standard Processes Manual.</p> <p>For the second draft of the standard, the SDT has added a reference to each Measure to identify the requirement it supports.</p> <p>Compliance will be applicable to all “Operating Communications” that alter the state of the Bulk Electric System. The terms “directive” and “Reliability Directive” have not been included in the second draft of COM-003.</p> <p>With regard to your proposal to report unclear communication, the SDT has changed the standard’s requirement to direct both parties involved in operating communications to repeat information until clarity is achieved among all parties. (See Requirements R2and R3 in the second draft of COM-003.)The SDT believes this will address your concern.</p> <p>The SDT feels that the existing COM standards are not clear in some instances and do not cover important communication protocols. The proposed plan is to retire COM-002 and any of its successors when COM-003 becomes effective.</p>		
Southern Company Transmission	Agree	<p>Southern Company supports SERC SOS comments.</p> <p>SERC SOS comments:</p> <p>This review group has identified several problems with this standard, as noted above.</p> <p>Other observations include:</p> <p>The effective dates in the draft standard and in the implementation plan do not seem to match. In the standard, the effective date mentions one calendar year following regulatory approval, while the implementation plan refers to the third calendar quarter after regulatory approval.</p> <p><b>The SDT has made several changes to the draft Standard that required changes to the Implementation Plan. The SDT updated the Implementation Plan to ensure the changes can be made in an appropriate time frame</b></p>

Organization	Yes or No	Question 12 Comment
		<p><b>and accurately reflect the changes to the Standard. In the second drafts of the COM-003 standard and Implementation Plan, the effective dates are identical and provide at least six months for entities to become compliant.</b></p> <p>Furthermore, we do not feel that any of the requirements in this standard warrant Violation Risk Factors or Violation Severity Levels in the high or severe category. In summary, this review group feels that COM-003-1 is not yet ready to be acted upon and may have been posted too soon.</p> <p><b>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. In the second draft of the standard, all requirements have been assigned a Medium VRF. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in the second draft of COM-003-1.</b></p> <p>There does not seem to be sufficient coordination between the drafting teams of all the COM standards, or any attempt to integrate these standards.</p> <p><b>The SDT is working with the RC SDT to avoid conflicts – and proposes retiring COM-002 when COM-003 becomes effective.</b></p> <p>One example is the inconsistency between COM-003-1 and COM-002-3 regarding the meaning of three-part communication (mentioned in our response to Question 1 above). As noted above, we feel that many of the requirements prescribe specific “how to” methods for compliance rather than focusing on the “what” of the requirement.</p> <p><b>Another way of looking at the requirements for three-part communication would be to say that the requirements specify “what” by requiring confirmation that the message was accurately received.</b></p> <p>Overall, COM-003-1 is much too prescriptive to be tied to million dollar-level fines.</p> <p>Southern Company comments:</p> <p>There are possible inconsistencies with the references to the term “CIP Free Form” and a more generic term “Free Form” in the tables described in Attachment 1 - COM-003-1 - Operating State Alert Levels. Reference the</p>

Organization	Yes or No	Question 12 Comment
		<p>fields where functional entities “outside” the Reliability Coordinator Area are identified for both the initial alert notification and the end of alert notification.</p> <ul style="list-style-type: none"> <li>• For Physical Security, the field mentions only RC’s using the “CIP Free Form.” For Cyber Security, the field mentions RC’s and CIP Participants using the “CIP Free Form.”</li> <li>• For Transmission Emergency Alerts, the field mentions only RC’s using the generic “Free Form.” Is there a distinction between the two forms?</li> <li>• Is it consistent to reference CIP Participants only for Cyber Security alerts and not for Physical or Transmission?</li> </ul> <p><b>The SDT has reviewed and addressed the form and participation issues you raised. The requirements associated with the Alert Levels have been removed from the second draft of the standard.</b></p> <p>Although this standard is well intentioned it is not ready for presentation to the ballot body. When this standard is applicable is in question just by the way the Title and Purpose are written. The Purpose needs to make it absolutely clear to all parties, complying entities as well as compliance enforcement, when the standard is applicable. For example, the Purpose of the standard is subject to interpretation. Does this standard apply all of the time or just during Alerts and Emergencies? Or does the word especially mean that a non-compliance during an emergency is more severe? Is the phonetic alphabet required when an alert is declared or just after the alert is declared?</p> <p><b>The SDT believes the Title is straightforward and has revised the Purpose Statement to read: “To specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of the BES.” We believe this more accurately defines the problem and the solution.</b></p> <p><b>This standard has a charge: to address the requirements of the SAR, FERC Order 693 and the Blackout Report – item 26.</b></p> <p><b>The draft revisions, based on stakeholder comments, clarify applicability with the proposed definition of Operating Communications which could include routine as well as alert and emergency conditions.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
California	Agree	The Drafting team should take a hard look at the VRFs and VSLs established in this standard and contrast them

Organization	Yes or No	Question 12 Comment
Independent System Operator		<p>against VRFs and VSLs for other adopted standards. We do not feel, as an example, that the use of Spanish in a normal communication between two companies, while improper, should carry a VRF of ‘high’ with a VSL of ‘severe’. The draft standard focuses too much attention on prescriptive remedy than ensuring understanding.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. In the second draft of the standard, all requirements have been assigned a Medium VRF. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in the second draft of COM-003-1.</b></p>		
Hydro-Québec TransEnergie	Agree	<p>The existing standard COM-002 is better than this proposed Standard. This Standard actually causes more confusion and ambiguity, and creates unnecessary or overly cumbersome requirements that add little or no value to reliability. All requirements with the exception of R1 have been determined to have a HIGH VRF, when many of them are dictating HOW communications should take place and not when, why, or what.COM-002 retirement does not appear to be consistent with the direction of the RC SDT in Project 2006-06. The RC SDT is adding requirements. More coordination is required between the Standard Drafting Teams. Again, we support the work being done by the RC SDT and RTO SDT and do not believe this adds more necessary requirements.</p> <p><b>The SDT respectfully disagrees with you statement regarding COM-002 as a superior standard. We do not see it as comparative nor do we feel the second draft of COM-003 creates unnecessary or overly cumbersome requirements that add little or no value to reliability. The SDTs are coordinating issues to ensure there are no conflicts and that one standard supports the requirements of the other. Note that the implementation plan for COM-003 includes retirement of COM-002.</b></p> <p>Many of the requirements proposed in this posting either reiterate the drafts as posted (i.e. English language) or introduce confusion when compared to the drafts as posted.</p> <p>The SDTs should limit their scope to R2 and R7, so as not to duplicate or contradict the on-going work of other SDTs.</p> <p><b>The SDT feels that the requirements in the second draft of COM 003 are appropriate because they support the purpose identified in the SAR.</b></p> <p>The SDT appears to have adopted severe violations for every infraction. There should be some gradations, using</p>

Organization	Yes or No	Question 12 Comment
		<p>increasing severity based on the number of or severity of any infractions.</p> <p><b>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. In the second draft of the standard, all requirements have been assigned a Medium VRF. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the requirements in second draft of COM-003-1.</b></p> <p>Definitions: The standard should define other terms, as well, including the following:</p> <ul style="list-style-type: none"> <li>o reliability-related information,</li> <li>o "... state or status of an element or facility of the BES ...</li> </ul> <p><b>The SDT has eliminated the three original definitions to the proposed COM-003-1 standard and defined Operating Communication in the revised draft to address industry comments.</b></p> <p><b>Note that in the second draft of COM-003, the SDT did capitalize the terms, "Element" and "Facility" to ensure their meaning is clear.</b></p> <p>"The standard should also have provision to include the boundaries (components) of an "element," and the meaning of the terms "state or status" in the written communication protocol. For example, is the gas compressor of a 345kV breaker considered part of this element, and so would a change in its "state or status" be covered?</p> <p><b>Element is a defined term in the NERC Glossary – in the revised standard the term has been capitalized for clarity.</b></p> <p>The VRFs for R2-R7 are all "High", and the VSLs are all "Severe" are too harsh. Failing to comply with one of the requirements does not automatically mean that a miscommunication occurred that caused a reliability problem. There should be a "Moderate" VSL for failure to comply with a requirement, but no miscommunication occurred. There should be a "High" VSL for failure to comply with a requirement that caused a miscommunication but resulted in no violation of another reliability standard. The "Severe" VSL should only apply to failures to comply with a requirement that caused a miscommunication that lead to a violation of another reliability standard, or caused a reliability problem.</p> <p><b>SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. In the second draft of</b></p>

Organization	Yes or No	Question 12 Comment
		<p><b>the standard, all requirements have been assigned a Medium VRF. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in the second draft of COM-003-1.</b></p> <p>In addition, as stated earlier, this Standard focuses on “how” certain tasks should be performed and conflicts with NERC’s position of pursuing performance based and results based Standards.</p> <p><b>The SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations.</b></p> <p><b>The SDT does not believe its work to be inconsistent with results-based principles. The Need or Problem Statement for this standard is that miscommunication can lead to action or inaction harmful to the reliability of the BES. This was identified by the NERC President in his January 2011 report to the industry as one of the eight top priority issues for BPS reliability, and there are a number of events that have occurred in the past where miscommunication was a contributing factor to the event or exacerbated the severity of the event. The goal, therefore, is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication. The key objective to accomplish this goal is to use communication protocols to reduce or correct misunderstandings. The requirements have been revised to better accomplish this objective, and are risk-mitigating requirements (while operator performance is measured, the actions themselves are primarily designed to mitigate the risk of miscommunication that could lead to poor BES performance). We believe this standard is consistent with results-based principles, and it will improve the reliability of the BES.</b></p> <p>Based on these considerations, work on this Standard should be stopped until work on Project 2006-06 has been completed and approved. This approach is consistent with the August 2003 Blackout Recommendation #26 “failure to identify emergency conditions and communicate that status to neighboring systems, and upgrade communication system hardware where appropriate” which actually focused on communications during emergencies, which is the scope of Project 2006-06. After Project 2006-06 is completed, a determination can be made on the disposition of this Standard. This Standard should be effective uniformly continent-wide.</p> <p><b>The SDT respectfully disagrees with your statement that the team should stop work on COM-003-1 until project 2006-6 is complete.</b></p> <p><b>The SDT is working in accordance with the August 2003 Blackout Recommendation #26 and FERC Order 693</b></p>



Organization	Yes or No	Question 12 Comment
		directives.
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Northeast Power Coordinating Council</p>	<p>Agree</p>	<p>The existing standard COM-002 is better than this proposed Standard. This Standard actually causes more confusion and ambiguity, and creates unnecessary or overly cumbersome requirements that add little or no value to reliability. All requirements with the exception of R1 have been determined to have a HIGH VRF, when many of them are dictating HOW communications should take place and not when, why, or what.COM-002 retirement does not appear to be consistent with the direction of the RC SDT in Project 2006-06. The RC SDT is adding requirements. More coordination is required between the Standard Drafting Teams. Again, we support the work being done by the RC SDT and RTO SDT and do not believe this adds more necessary requirements.</p> <p><b>The SDT respectfully disagrees with you statement regarding COM-002 as a superior standard. We do not see it as comparative nor do we feel the second draft of COM-003 creates unnecessary or overly cumbersome requirements that add little or no value to reliability. The SDTs are coordinating issues to ensure there are no conflicts and that one standard supports the requirements of the other. Note that the implementation plan for COM-003 includes retirement of COM-002.</b></p> <p>Many of the requirement proposed in this posting either reiterate the drafts as posted (i.e. English language) or introduce confusion when compared to the drafts as posted.</p> <p>The SDTs should limit their scope to R2 and R7, so as not to duplicate or contradict the on-going work of other SDTs.</p> <p><b>The SDT feels that the requirements in the second draft of COM 003 are appropriate because they support the purpose identified in the SAR.</b></p> <p>The SDT appears to have adopted severe violations for every infraction. There should be some gradations, using increasing severity based on the number of or severity of any infractions.</p> <p>Definitions: The standard should define other terms, as well, including the following:</p> <ul style="list-style-type: none"> <li>o reliability-related information,</li> <li>o "... state or status of an element or facility of the BES ...</li> </ul> <p><b>The SDT has eliminated the 3 original definitions to the proposed COM-003-1 standard and defined Operating</b></p>

Organization	Yes or No	Question 12 Comment
		<p><b>Communication in the revised draft to address industry comments. The SDT believes the two terms identified are well understood and do not need further definition. Note that in the second draft of COM-003, the SDT did capitalize the terms, “Element” and “Facility” to ensure their meaning is clear.</b></p> <p>”The standard should also have provision to include the boundaries (components) of an “element,” and the meaning of the terms “state or status” in the written communication protocol. For example, is the gas compressor of a 345kV breaker considered part of this element, and so would a change in its “state or status” be covered? Similarly, is the heat trace inside a 345kV breaker control cabinet part of this element or not?</p> <p><b>Element is a defined term in the NERC Glossary – in the revised standard the term has been capitalized for clarity.</b></p> <p>The VRFs for R2-R7 are all “High”, and the VSLs are all “Severe” are too harsh. Failing to comply with one of the requirements does not automatically mean that a miscommunication occurred that caused a reliability problem. There should be a “Moderate” VSL for failure to comply with a requirement, but no miscommunication occurred. There should be a “High” VSL for failure to comply with a requirement that caused a miscommunication but resulted in no violation of another reliability standard. The “Severe” VSL should only apply to failures to comply with a requirement that caused a miscommunication that lead to a violation of another reliability standard, or caused a reliability problem.</p> <p><b>SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. In the second draft of the standard, all requirements have been assigned a Medium VRF. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in the second draft of COM-003-1.</b></p> <p>In addition, as stated earlier, this Standard focuses on “how” certain tasks should be performed and conflicts with NERC’s position of pursuing performance based and results based Standards.</p> <p><b>The SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations.</b></p> <p><b>The SDT does not believe its work to be inconsistent with results-based principles. The Need or Problem Statement for this standard is that miscommunication can lead to action or inaction harmful to the reliability of the BES. This was identified by the NERC President in his January 2011 report to the industry as one of the</b></p>

Organization	Yes or No	Question 12 Comment
		<p>eight top priority issues for BPS reliability, and there are a number of events that have occurred in the past where miscommunication was a contributing factor to the event or exacerbated the severity of the event. The Goal, therefore, is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication. The key Objective to accomplish this Goal is to use communication protocols to reduce or correct misunderstandings. The requirements have been revised to better accomplish this Objective, and are risk-mitigating requirements (while operator performance is measured, the actions themselves are primarily designed to mitigate the risk of miscommunication that could lead to poor BES performance). We believe this standard is consistent with results-based principles, and it will improve the reliability of the BES.</p> <p>Based on these considerations, work on this Standard should be stopped until work on Project 2006-06 has been completed and approved. This approach is consistent with the August 2003 Blackout Recommendation #26 “failure to identify emergency conditions and communicate that status to neighboring systems, and upgrade communication system hardware where appropriate” which actually focused on communications during emergencies, which is the scope of Project 2006-06. After Project 2006-06 is completed, a determination can be made on the disposition of this Standard. This Standard should be effective uniformly continent-wide.</p> <p><b>The SDT respectfully disagrees with your statement that the team should stop work on COM-003-1 until project 2006-6 is complete.</b></p> <p><b>The SDT is working in accordance with the August 2003 Blackout Recommendation #26 and FERC Order 693 directives.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Transmission Agency of Northern California</p>	<p>Agree</p>	<p>The requirements of this standard as drafted should not be applicable to Transmission Owners (TO). This standard pertains to real-time operations, whereas the TO function does not have real-time operational responsibilities according to the currently effective and proposed NERC Reliability Functional Model, Versions 4 and 5, respectively.</p>
<p><b>Response: The SDT appreciates the comment in regard to COM-003-1 applying to Transmission Owners and the SDT has deleted the Transmission Owners from the second draft of the standard. The intent of the proposed standard is to apply only to those operating entities that send or receive Operating Communications.</b></p>		

Organization	Yes or No	Question 12 Comment
Santee Cooper	Agree	The SDT has put a lot of work into this standard and we appreciate their effort. The SDT of COM-002 and COM-003 may need to integrate the reliability related requirements of these two standards into one standard that the industry can approve. This standard as written could lead to some extremely high dollar fines when in reality the reliability of the bulk electric system has not been affected at all.
<p><b>Response</b> The SDT thanks you for your comments and recommendation.</p> <p>The SDTs are coordinating issues to ensure consistency and to avoid duplication and conflict. The implementation plan for COM-003 includes retirement of COM-002 to avoid duplication.</p>		
South Carolina Electric and Gas	Agree	The SDT should consider vertically integrated utilities, where communication between functional entities is internal.
<p><b>Response:</b> The SDT thanks you for your comments. The SDT determined that operations communications that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System are subject to the requirements of the proposed COM-003-1 standard whether they be external or internal.</p>		
Electric Market Policy	Agree	The VRFs for R2-R7 are all “High”, and the VSLs are all “Severe”. That is too harsh. Failing to comply with one of the requirements does not automatically mean that a miscommunication occurred that caused a reliability problem. There should be a “Moderate” VSL for failure to comply with a requirement but no miscommunication occurred. There should be a “High” VSL for failure to comply with a requirement that caused a miscommunication but resulted in no violation of another reliability standard. The “Severe” VSL should only apply to failures to comply with a requirement that caused a miscommunication that lead to a violation of another reliability standard. If approved, this standard will require a number of distracting things be added to each entity’s control center with little value added. Clock - set to the ‘standard time’ Attachment 1 - COM-003 (all 3 versions) Attachment 2 - COM-003
<p><b>Response:</b> The SDT thanks you for your comments.</p> <p>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. The second draft of the standard proposes assigning a Medium VRF to each of the requirements. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in the second draft of COM-003-1.</p> <p>The SDT would like clarification on your comment “Clock - set to the ‘standard time’ Attachment 1 - COM-003 (all 3 versions) Attachment 2 - COM-003” if the current draft of the Standard does not address your concerns.</p>		

Organization	Yes or No	Question 12 Comment
Progress Energy Carolina, Inc	Agree	This proposed revision, if implemented, may introduce unnecessary complications into communications between entities which may lead to delays and misunderstandings, potentially decreasing the reliability of the BES.
<p><b>Response: The SDT thanks you for your comments. The SDT does not recognize any specific details in your comment. If the revised draft of the Standard does not address your specific concerns please provide details for the SDT to address.</b></p>		
The Empire District Electric Company	Disagree	This proposed standard seems to be a redundant standard to many other already approved NERC standards such as CIP-001, EOP-001, EOP-004, as well as the NERC alert process. I see little to no benefit from this standard as proposed.
<p><b>Response: The SDT thanks you for your comments. The SDT does not see any redundant requirements in the standards you cite in your comments.</b></p>		
SERC OC&SOS Standards Review Group	Agree	<p>This review group has identified several problems with this standard, as noted above. Other observations include:</p> <p>The effective dates in the draft standard and in the implementation plan do not seem to match. In the standard, the effective date mentions one calendar year following regulatory approval, while the implementation plan refers to the third calendar quarter after regulatory approval.</p> <p><b>The SDT has made several changes to the draft standard that resulted in changes to the Implementation Plan. The effective dates in the second drafts of the standard and Implementation Plan are identical and provide at least six months for entities to become compliant.</b></p> <p>Furthermore, we do not feel that any of the requirements in this standard warrant Violation Risk Factors or Violation Severity Levels in the high or severe category</p> <p><b>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. In the second draft of the standard the SDT proposed a Medium VRF for each of the requirements. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in the second draft of COM-003-1.</b></p> <p>In summary, this review group feels that COM-003-1 is not yet ready to be acted upon and may have been posted too soon. There does not seem to be sufficient coordination between the drafting teams of all the COM standards, or any attempt to integrate these standards. One example is the inconsistency between COM-003-1</p>

Organization	Yes or No	Question 12 Comment
		<p>and COM-002-3 regarding the meaning of three-part communication (mentioned in our response to Question 1 above).</p> <p><b>The OPCP SDT has been and is aware of the progress and content of other COM standard development teams. The implementation plan for COM-003 includes retirement of COM-002 to avoid duplication.</b></p> <p>As noted above, we feel that many of the requirements prescribe specific “how to” methods for compliance rather than focusing on the “what” of the requirement.</p> <p><b>The OPCP SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations.</b></p> <p>Overall, COM-003-1 is much too prescriptive to be tied to million dollar-level fines.</p> <p><b>The SDT acknowledges your concerns and wishes to balance them with the need for reliability on the BES. With the changes to VRFs, (Medium in the second draft of COM-003) the fear of million dollar-level fines should be relieved.</b></p> <p>“The comments expressed herein represent a consensus of the views of the named members of the SERC OC&amp;SOS Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers.”</p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
NIPSCO	Disagree	<p>This standard is based on COM-002-3 however that standard has not been voted-in or NERC approved yet. I think this COM-003 effort should be put on hold until the 2006-06 project is complete. At that time the term "directive" should be replaced by "Operational Directive" and "Reliability Directive" based on context and all of these terms should be defined in the NERC Glossary of Terms.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT respectfully disagrees with your statement that the team should stop work on COM-003-1 until project 2006-6 is complete. The SDTs are coordinating issues to ensure consistency, eliminate conflict and avoid duplication. The implementation plan for COM-003 includes retirement of COM-002 to avoid duplication.</b></p> <p><b>The SDT has eliminated the term “Interoperability Communications” and revised the draft standard to include the new term “Operating</b></p>		

Organization	Yes or No	Question 12 Comment
<p><b>Communications". The SDT feels this term will clarify the issues you have raised. The term "Reliability Directive" is being developed in a different standard by the RC SDT.</b></p>		
<p>Indiana Municipal Power Agency</p>	<p>Agree</p>	<p>This standard is not needed because requirement two in COM-002 takes into account the use of Three-part Communication which is the main reliability requirement from COM-003. The use of a procedure (R1), the English language (R3), a standard time zone (R4), the NATO phonetic alphabet (R6), and a pre-defined system condition terminology (R2) are administrative requirements (not performance based requirements) and if not used, all of them definitely do not have a high VRF. If an entity does not use a procedure, but ensures they follow requirement 2 of COM-002 and both parties have a clear understanding of the directive what other reliability requirement is necessary. One recommendation might be for the COM-002 Standard Drafting Team or another SDT to come up with a definition for a directive.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT sees the Requirements of COM 003-1 as key operations communication protocols that will standardize the manner in which Functional entities communicate BES matters thereby reducing the potential for mishaps due to miscommunications. The SDT does not feel that they are "administrative requirements".</b></p> <p><b>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. In the second draft of the standard the SDT proposed a Medium VRF for each of the requirements. The SDT believes the new assignments more appropriately classify the VRFs and VSLs assigned to the Requirements in the second draft of COM-003-1.</b></p> <p><b>The Implementation Plan calls for COM -002 R2 to be retired when COM-003-1 becomes effective.</b></p> <p><b>The SDT has eliminated the term "Interoperability Communications" and revised COM-003 to include the new term "Operating Communications". The SDT feels this term will clarify your concerns. The term "Reliability Directive" is being developed in a standard under development, COM-002-3, by the RC SDT.</b></p>		
<p>Tri-State Generation &amp; Transmission Assoc.</p>	<p>Agree</p>	<p>This standard should not apply to DPs, LSEs or TSPs as they do not have control over the BES. That responsibility resides entirely with the TOP. Additionally, it is concerning that the term "directive" is not defined. The proposed definition for Interoperability Communication could be interpreted to include all communication between entities. This is too restrictive.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p><b>The SDT appreciates the comments with regards to concerns related to including TSPs, DPs and LSEs that do not own or operate facilities that are a part of the BES. The SDT has removed the TSPs and LSEs because they were not bound by this requirement in the originating SAR. The specified role</b></p>		

Organization	Yes or No	Question 12 Comment
<p>of the DP to shed load justifies the retention of the DP as an applicable Entity.</p> <p>The SDT has eliminated the term “Interoperability Communications” and revised the draft standard to include the new term “Operating Communications”. The SDT feels this term will address your concerns. The term “Reliability Directive” is being developed in a standard under development, COM-002-3, by the RC SDT.</p>		
E.ON U.S. LLC	Disagree	<p>This standard should only apply to alerts and emergencies. E.ON U.S. suggests eliminating “especially” in the purpose statement of COM-003-1. During emergency situations, operational focus on the semantics of how communications are to occur does little to enhance the reliability of the system. High VRFs with Severe VSLs may add stress and distraction to operation personnel during times of emergency thus potentially harming, not improving reliability.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The term “especially” has been removed from the Purpose Statement. It now reads: “To specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES.”</p> <p>The SDT disagrees with the statement “This standard should only apply to alerts and emergencies”. Is there a difference if a miscommunication causing a reliability event occurs during routine operations or during alerts or emergency operations? The SDT believes the impact on the BES would be the same.</p> <p>The SDT has no knowledge that “stress and distraction induced by high VSRs and VSL severity levels to operation personnel during times of emergency thus potentially harming, not improving” reliability will occur, and has no response to that comment. Note, however, that the SDT revised the VRFs and VSLs in the second draft of COM-003 to better align with NERC and FERC guidelines – and the VRFs for the revised requirements are “Medium.”</p>		
American Electric Power	Agree	<p>Unfortunately, the standard seems to be losing its value as the emphasis overly focusing on procedures while missing the intent. The SDT should reconsider the standard in the context of “what” rather than “how.” Lastly, we do not believe that this standard is ready to advance and needs significant re-working before the revised draft is posted. The SDT should attempt to better coordinate with the necessary other drafting teams as these standards are integrated.</p>
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>The SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations.</p> <p>The SDT has made significant changes to the original draft to address valid concerns from the Industry.</p>		



Organization	Yes or No	Question 12 Comment
<p>The SDTs involved with various COM standard projects have been and are coordinating to ensure consistency, to avoid conflict and to avoid duplication.</p>		
<p>Independent Electricity System Operator</p>	<p>Agree</p>	<p>We believe that the existing standard COM-002 can be simply modified to cover the 3-part communication requirement. This COM-003 standard actually causes more confusion and ambiguity, and creates unnecessary or overly cumbersome requirements that add little or no value to reliability. This standard is not needed.</p>
<p><b>Response: The SDT thanks you for your comments</b>  <b>The SDT believes the revised COM-003-1 standard is more appropriate as a location for three-part communications because it focuses on communications protocol.</b>  <b>The SDT respectfully disagrees with your comments regarding “This COM-003 standard actually causes more confusion and ambiguity, and creates unnecessary or overly cumbersome requirements that add little or no value to reliability.” We also respectfully disagree with your comments that “This standard is not needed”.</b></p>		
<p>IRC Standards Review Committee</p>	<p>Agree</p>	<p>The existing standard COM-002 is better than this proposed Standard. This Standard actually causes more confusion and ambiguity, and creates unnecessary or overly cumbersome requirements that add little or no value to reliability. All requirements with the exception of R1 have been determined to have a HIGH VRF, when many of them are dictating HOW communications should take place and not when, why, or what.COM-002 retirement does not appear to be consistent with the direction of the RC SDT in Project 2006-06. The RC SDT is adding requirements. More coordination is required between the Standard Drafting Teams. Again, we support the work being done by the RC SDT and RTO SDT and do not believe this adds more necessary requirements.</p> <p><b>The SDT respectfully disagrees with you statement regarding COM-002 as a superior standard. We do not see it as comparative nor do we feel the second draft of COM-003 creates unnecessary or overly cumbersome requirements that add little or no value to reliability.</b></p> <p><b>The COM related SDTs are coordinating to ensure there are no conflicts and that one standard supports the requirements of the other. The implementation plan for COM-003 includes retirement of COM-002 to avoid duplication.</b></p> <p><b>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. In the second draft of the standard the SDT proposed a Medium VRF for each of the requirements. The SDT believes the new assignments more appropriately classify the VRFs and VSLs assigned to the Requirements in the second draft of COM-003-1.</b></p>

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		<p>Recommendation 26 of the August 14, 2003 blackout report is cited as a driver for extending three-part communications. We believe the title of Recommendation 26 is misleading and when reviewed separately from the supporting text of the recommendation and direct and contributing factors in the report results in an incorrect interpretation. “Failure to identify emergency conditions and communicate that status to neighboring systems” is one of the contributing factors and the supporting text of the recommendation clearly refer to shoring up communications during emergency and anticipated emergency conditions and establishing an emergency broadcast communication system to alert regulatory, state and local officials. The supporting text of Recommendation 26 only mentions addressing alerts, emergencies or other critical situations. Some have incorrectly inferred the initial clause of Recommendation 26, “Tighten communication protocols”, means the recommendation applies to all routine communications.</p> <p><b>The SDT cites additional “Recommendation 26 of the August 14, 2003 Blackout Report” text from the from the same section you are referencing:</b></p> <p><b>“On August 14, 2003, reliability coordinator and control area communications regarding conditions in northeastern Ohio were in some cases ineffective, unprofessional, and confusing. Ineffective communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade. Consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability. “</b></p> <p><b>There are several key points here:</b></p> <p><b>Clearly, ineffective, unprofessional, and confusing communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade.</b></p> <p><b>Note the context of this statement especially the word “particularly (“Consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability.”). It is apparent to the SDT that this means all communication should be subject to consistent, structured protocols. The use of “particularly” and “especially” (used in the Recommendation text) are used for emphasis only for alerts and emergencies and the intent is not to exclude other types of communications.</b></p> <p><b>The SDT believes the text of Recommendation 26 is very clear and is in no way misleading or confusing and that the Recommendation means exactly what it says: Tighten communications protocols, especially for communications during alerts and emergencies.</b></p>

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		<p><b>Also please read FERC Order 693 paragraph 532 to review clarification on the application of three-part communications to routine directives. The SDT is working in accordance with the August 2003 Blackout Recommendation #26 and FERC Order 693 directives.</b></p> <p>The first paragraph in Attachment 1 of COM-003-1 an EEA is stated as being an Emergency Energy Alert rather than an Energy Emergency Alert. This should be corrected for consistency with other standards and to avoid confusion. Also in this paragraph, the term "states" should be replaced with "levels" in order to maintain consistency with the tables in the Attachment as well as EOP-002-2.1 to which this Attachment refers.</p> <p><b>The SDT has removed the requirement that required use of alert levels from the second draft of the standard.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
<p>ISO New England Inc.</p>	<p>Agree</p>	<p>The existing standard COM-002 is better than this proposed Standard. This Standard actually causes more confusion and ambiguity, and creates unnecessary or overly cumbersome requirements that add little or no value to reliability. All requirements with the exception of R1 have been determined to have a HIGH VRF, when many of them are dictating HOW communications should take place and not when, why, or what.COM-002 retirement does not appear to be consistent with the direction of the RC SDT in Project 2006-06. The RC SDT is adding requirements. More coordination is required between the Standard Drafting Teams. Again, we support the work being done by the RC SDT and RTO SDT and do not believe this adds more necessary requirements.</p> <p><b>The SDT respectfully disagrees with you statement regarding COM-002 as a superior standard. We do not see it as comparative nor do we feel the second draft of COM-003 creates unnecessary or overly cumbersome requirements that add little or no value to reliability. The SDTs are coordinating issues to ensure there are no conflicts and that one SDT supports the requirements of the other.</b></p> <p><b>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. In the second draft of the standard the SDT proposed a Medium VRF for each of the requirements. The SDT believes the new assignments more appropriately classify the VRFs and VSLs assigned to the Requirements in the second draft of COM-003-1.</b></p> <p>Recommendation 26 of the August 14, 2003 blackout report is cited as a driver for extending three-part communications. We believe the title of Recommendation 26 is misleading and when reviewed separately from the supporting text of the recommendation and direct and contributing factors in the report results in an</p>

Organization	Yes or No	Question 12 Comment
		<p>incorrect interpretation. “Failure to identify emergency conditions and communicate that status to neighboring systems” is one of the contributing factors and the supporting text of the recommendation clearly refer to shoring up communications during emergency and anticipated emergency conditions and establishing an emergency broadcast communication system to alert regulatory, state and local officials. The supporting text of Recommendation 26 only mentions addressing alerts, emergencies or other critical situations. Some have incorrectly inferred the initial clause of Recommendation 26, “Tighten communication protocols”, means the recommendation applies to all routine communications.</p> <p>The SDT cites additional “Recommendation 26 of the August 14, 2003 Blackout Report” text from the from the same section you are referencing:</p> <p>“On August 14, 2003, reliability coordinator and control area communications regarding conditions in northeastern Ohio were in some cases ineffective, unprofessional, and confusing. Ineffective communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade. Consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability. “</p> <p>There are several key points here:</p> <p>Clearly, ineffective, unprofessional, and confusing communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade.</p> <p>Note the context of this statement especially the word “particularly (“Consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability.”). It is apparent to the SDT that this means all communication should be subject to consistent, structured protocols. The use of “particularly” and “especially” (used in the Recommendation text) are used for emphasis only for alerts and emergencies and the intent is not to exclude other types of communications.</p> <p>The SDT believes the text of Recommendation 26 is very clear and is in no way misleading or confusing and that the Recommendation means exactly what it says: Tighten communications protocols, especially for communications during alerts and emergencies.</p> <p>Also please read FERC Order 693 paragraph 532 to review clarification on the application of three-part communications to routine directives. The SDT is working in accordance with the August 2003 Blackout Recommendation #26 and FERC Order 693 directives.</p>

Organization	Yes or No	Question 12 Comment
		<p>Lastly, this on-line submittal asks many questions that are YES/NO in nature (i.e. "do you have any concerns with...", or "if, yes, please explain...") but the radial selections are "agree/disagree" which may be taken out of context. We suggest changing the on-line submittal back to YES/NO.</p> <p><b>Finally the SDT will pass on your recommendation regarding changing the on line submittal to YES/NO.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
National Grid	Agree	<p>We believe that the existing standard COM-002 is actually better than this standard. This standard actually causes more confusion and ambiguity and creates unnecessary or overly cumbersome requirements that add little or no value to reliability. Additionally, we cannot understand how all requirements but R1 have been determined to have a HIGH VRF when, many of them are dictating HOW communications should take place and not when and why or what. COM-002 retirement does not appear to be consistent with the direction of the RC SDT. The RC SDT appears to be adding requirements. More coordination is required between these two teams.</p>
<p><b>Response: The SDT thanks you for your comments</b></p> <p><b>The SDT disagrees with you statement regarding COM-002 as a superior Standard. We do not see it as comparative nor do we feel the second draft of COM-003 creates unnecessary or overly cumbersome requirements that add little or no value to reliability.</b></p> <p><b>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in the second draft of COM-003-1.</b></p> <p><b>The SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations.</b></p> <p><b>The SDT feels that the Requirements in the second draft of COM-003 are appropriate because they support the purpose identified in the SAR.</b></p> <p><b>The SDTs involved with COM standard development have been and are coordinating to ensure consistency, to avoid conflict and to avoid duplication.</b></p> <p><b>The implementation plan for COM-003 includes retirement of COM-002 to avoid duplication.</b></p>		
Dynergy	Agree	<p>We believe that the existing standard COM-002 is better than this proposed Standard. This Standard actually causes more confusion and ambiguity and creates unnecessary or overly cumbersome requirements that add little or no value to reliability. Additionally, we cannot understand how all requirements but R1 have been determined to have a HIGH VRF when, many of them are dictating HOW communications should take place and not when and why or what. The stated retirement of COM-002 does not appear to be consistent with the direction of the RC SDT in Project 2006-06. The RC SDT is adding requirements. More coordination is certainly</p>

Organization	Yes or No	Question 12 Comment
		<p>required between these two teams .In addition, as stated earlier, this Standard focuses on “how” certain tasks should be performed and conflicts with NERC’s position of pursuing performance based and results based Standards.</p>
<p><b>Response: The SDT thanks you for your comments</b></p> <p>The SDT disagrees with you statement regarding COM-002 as a superior Standard. We do not see it as comparative nor do we feel the second draft of COM-003 creates unnecessary or overly cumbersome requirements that add little or no value to reliability.</p> <p>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. In the second draft of the standard the SDT proposed a Medium VRF for each of the requirements. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in the second draft of COM-003-1.</p> <p>The SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations.</p> <p>The SDT feels that the Requirements in the second draft of COM-003 are appropriate because they support the purpose identified in the SAR.</p> <p>The SDTs involved with COM standards development have been and are coordinating to ensure consistency, to avoid conflict and to avoid duplication. The implementation plan for COM-003 includes retirement of COM-002 to avoid duplication.</p> <p>The SDT does not believe its work to be inconsistent with results-based principles. The Need or Problem Statement for this standard is that miscommunication can lead to action or inaction harmful to the reliability of the BES. This was identified by the NERC President in his January 2011 report to the industry as one of the eight top priority issues for BPS reliability, and there are a number of events that have occurred in the past where miscommunication was a contributing factor to the event or exacerbated the severity of the event. The Goal, therefore, is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication. The key Objective to accomplish this Goal is to use communication protocols to reduce or correct misunderstandings. The requirements have been written to accomplish this Objective, and are risk-mitigating requirements (while operator performance is measured, the actions themselves are primarily designed to mitigate the risk of miscommunication that could lead to poor BES performance). We believe this standard is consistent with results-based principles, and it will improve the reliability of the BES.</p>		
Midwest ISO Standards Collaborators	Agree	<p>We believe that the existing standard COM-002 is better than this proposed Standard. This Standard actually causes more confusion and ambiguity and creates unnecessary or overly cumbersome requirements that add little or no value to reliability. Additionally, we cannot understand how all requirements but R1 have been determined to have a HIGH VRF when, many of them are dictating HOW communications should take place and not when and why or what. COM-002 retirement does not appear to be consistent with the direction of the RC</p>

Organization	Yes or No	Question 12 Comment
		<p>SDT in Project 2006-06. The RC SDT is adding requirements. More coordination is certainly required between these two teams</p> <p>.In addition, as stated earlier, this Standard focuses on “how” certain tasks should be performed and conflicts with NERC’s position of pursuing performance based and results based Standards. Based on these considerations, we suggest that work on this Standard be stopped until work on Project 2006-06 has been completed and approved.</p> <p>This approach is consistent with the August 2003 Blackout Recommendation #26 which actually focused on communications during emergencies which is the scope of Project 2006-06.</p> <p><b>The SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations.</b></p> <p><b>The SDT does not believe its work to be inconsistent with results-based principles. The Need or Problem Statement for this standard is that miscommunication can lead to action or inaction harmful to the reliability of the BES. This was identified by the NERC President in his January 2011 report to the industry as one of the eight top priority issues for BPS reliability, and there are a number of events that have occurred in the past where miscommunication was a contributing factor to the event or exacerbated the severity of the event. The goal, therefore, is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication. The key objective to accomplish this goal is to use communication protocols to reduce or correct misunderstandings. The requirements have been written to accomplish this objective, and are risk-mitigating requirements (while operator performance is measured, the actions themselves are primarily designed to mitigate the risk of miscommunication that could lead to poor BES performance). We believe this standard is consistent with results-based principles, and it will improve the reliability of the BES.</b></p> <p><b>The SDT cites additional “Recommendation 26 of the August 14, 2003 Blackout Report” text from the from the same section you are referencing:</b></p> <p><b>“On August 14, 2003, reliability coordinator and control area communications regarding conditions in northeastern Ohio were in some cases ineffective, unprofessional, and confusing. Ineffective communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade. Consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability. “</b></p> <p><b>There are several key points here:</b></p>

Organization	Yes or No	Question 12 Comment
		<p>Clearly, ineffective, unprofessional, and confusing communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade.</p> <p>Note the context of this statement especially the word “particularly (“Consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability.”). It is apparent to the SDT that this means all communication should be subject to consistent, structured protocols. The use of “particularly” and “especially” (used in the Recommendation text) are used for emphasis only for alerts and emergencies and the intent is not to exclude other types of communications.</p> <p>The SDT believes the text of Recommendation 26 is very clear and is in no way misleading or confusing and that the Recommendation means exactly what it says: Tighten communications protocols, especially for communications during alerts and emergencies.</p> <p>Also please read FERC Order 693 paragraph 532 to review clarification on the application of three-part communications to routine directives. The SDT is working in accordance with the August 2003 Blackout Recommendation #26 and FERC Order 693 directives.</p> <p>After Project 2006-06 is completed, a determination can be made if this Standard is even required.</p> <p><b>The SDT respectfully disagrees with your statement that the team should stop work on COM-003-1 until project 2006-6 is complete. The implementation plan for COM-003 includes retirement of COM-002 to avoid duplication.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
PJM	Agree	<p>We have identified several problems with this standard, as noted above.</p> <p>Other observations include:</p> <p>The effective dates in the draft standard and in the implementation plan do not seem to match. In the standard, the effective date mentions one calendar year following regulatory approval, while the implementation plan refers to the third calendar quarter after regulatory approval.</p> <p><b>The SDT revised the standard and the implementation plan – and made the effective dates the same in both documents – the first day of the first calendar quarter six months after applicable approvals.</b></p> <p>Furthermore, we do not feel that any of the requirements in this standard warrant Violation Risk Factors or</p>



Organization	Yes or No	Question 12 Comment
		<p>Violation Severity Levels in the high or severe category. In summary, this review group feels that COM-003-1 is not yet ready to be acted upon and may have been posted too soon.</p> <p><b>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. In the second draft of the standard the SDT proposed a Medium VRF for each of the requirements. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in COM-003-1.</b></p> <p>There does not seem to be sufficient coordination between the drafting teams of all the COM standards, or any attempt to integrate these standards. One example is the inconsistency between COM-003-1 and COM-002-3 regarding the meaning of three-part communication (mentioned in our response to Question 1 above).</p> <p><b>he SDTs involved with COM standard development have been and are coordinating issues to ensure consistency, to avoid conflict and to avoid duplication. The implementation plan for COM-003 includes retirement of COM-002 to avoid duplication.</b></p> <p>Recommendation 26 of the August 14, 2003 blackout report is cited as a driver for extending three-part communications. We believe the title of Recommendation 26 is misleading and when reviewed separately from the supporting text of the recommendation and direct and contributing factors in the report results in an incorrect interpretation. “Failure to identify emergency conditions and communicate that status to neighboring systems” is one of the contributing factors and the supporting text of the recommendation clearly refer to shoring up communications during emergency and anticipated emergency conditions and establishing an emergency broadcast communication system to alert regulatory, state and local officials. The supporting text of Recommendation 26 only mentions addressing alerts, emergencies or other critical situations. Some have incorrectly inferred the initial clause of Recommendation 26, “Tighten communication protocols”, means the recommendation applies to all routine communications.</p> <p><b>The SDT cites additional “Recommendation 26 of the August 14, 2003 Blackout Report” text from the from the same section you are referencing:</b></p> <p><b>“On August 14, 2003, reliability coordinator and control area communications regarding conditions in northeastern Ohio were in some cases ineffective, unprofessional, and confusing. Ineffective communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade. Consistent application of effective communications protocols, particularly during alerts and emergencies, is</b></p>

Organization	Yes or No	Question 12 Comment
		<p>essential to reliability.”</p> <p>There are several key points here:</p> <p>Clearly, ineffective, unprofessional, and confusing communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade.</p> <p>Note the context of this statement especially the word “particularly” (“Consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability.”). It is apparent to the SDT that this means all communication should be subject to consistent, structured protocols. The use of “particularly” and “especially” (used in the Recommendation text) are used for emphasis only for alerts and emergencies and the intent is not to exclude other types of communications.</p> <p>The SDT believes the text of Recommendation 26 is very clear and is no way misleading or confused and that the Recommendation means exactly what it says: Tighten communications protocols, especially for communications during alerts and emergencies.</p> <p>Also please read FERC Order 693 paragraph 532 to review clarification on the application of three-part communications to routine directives. The SDT is working in accordance with the August 2003 Blackout Recommendation #26 and FERC Order 693 directives.</p> <p>As noted above, we feel that many of the requirements prescribe specific “how to” methods for compliance rather than focusing on the “what” of the requirement. Overall, COM-003-1 is much too prescriptive to be tied to million dollar-level fines</p> <p><b>The SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
PJM SOS Comments	Agree	<p>We have identified several problems with this standard, as noted above.</p> <p>Other observations include:</p> <p>The effective dates in the draft standard and in the implementation plan do not seem to match. In the standard, the effective date mentions one calendar year following regulatory approval, while the implementation plan refers to the third calendar quarter after regulatory approval.</p> <p><b>The SDT revised the standard and the implementation plan – and made the effective dates the same in both</b></p>

Organization	Yes or No	Question 12 Comment
		<p><b>documents – the first day of the first calendar quarter six months after applicable approvals.</b></p> <p>Furthermore, we do not feel that any of the requirements in this standard warrant Violation Risk Factors or Violation Severity Levels in the high or severe category.</p> <p><b>The SDT has modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. In the second draft of the standard the SDT proposed a Medium VRF for each of the requirements. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in the second draft of COM-003-1.</b></p> <p>In summary, this review group feels that COM-003-1 is not yet ready to be acted upon and may have been posted too soon. There does not seem to be sufficient coordination between the drafting teams of all the COM standards, or any attempt to integrate these standards. One example is the inconsistency between COM-003-1 and COM-002-3 regarding the meaning of three-part communication (mentioned in our response to Question 1 above).</p> <p><b>The SDTs involved with COM standard development have been and are coordinating issues to ensure consistency, to avoid conflict and to avoid duplication. The implementation plan for COM-003 includes retirement of COM-002 to avoid duplication.</b></p> <p>Recommendation 26 of the August 14, 2003 blackout report is cited as a driver for extending three-part communications. We believe the title of Recommendation 26 is misleading and when reviewed separately from the supporting text of the recommendation and direct and contributing factors in the report results in an incorrect interpretation. “Failure to identify emergency conditions and communicate that status to neighboring systems” is one of the contributing factors and the supporting text of the recommendation clearly refer to shoring up communications during emergency and anticipated emergency conditions and establishing an emergency broadcast communication system to alert regulatory, state and local officials. The supporting text of Recommendation 26 only mentions addressing alerts, emergencies or other critical situations. Some have incorrectly inferred the initial clause of Recommendation 26, “Tighten communication protocols”, means the recommendation applies to all routine communications.</p> <p><b>The SDT cites additional “Recommendation 26 of the August 14, 2003 Blackout Report” text from the from the</b></p>

Organization	Yes or No	Question 12 Comment
		<p>same section you are referencing:</p> <p>“On August 14, 2003, reliability coordinator and control area communications regarding conditions in northeastern Ohio were in some cases ineffective, unprofessional, and confusing. Ineffective communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade. Consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability.”</p> <p>There are several key points here:</p> <p>Clearly, ineffective, unprofessional, and confusing communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade.</p> <p>Note the context of this statement especially the word “particularly” (“Consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability.”). It is apparent to the SDT that this means all communication should be subject to consistent, structured protocols. The use of “particularly” and “especially” (used in the Recommendation text) are used for emphasis only for alerts and emergencies and the intent is not to exclude other types of communications.</p> <p>The SDT believes the text of Recommendation 26 is very clear and is no way misleading or confused and that the Recommendation means exactly what it says: Tighten communications protocols, especially for communications during alerts and emergencies.</p> <p>Also please read FERC Order 693 paragraph 532 to review clarification on the application of three-part communications to routine directives. The SDT is working in accordance with the August 2003 Blackout Recommendation #26 and FERC Order 693 directives.</p> <p>As noted above, we feel that many of the requirements prescribe specific “how to” methods for compliance rather than focusing on the “what” of the requirement. Overall, COM-003-1 is much too prescriptive to be tied to million dollar-level fines <b>The SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
NRECA RTF		We recommend replacing the term “Distribution Service Providers” in Attachment 1 with the term “Distribution

Organization	Yes or No	Question 12 Comment
Members		<p>Provider” as stated in the Applicability of this standard. In addition, please see our response to Question 3 regarding a modification to the Applicability portion of the standard to address concerns about the inclusion of Distribution Providers and Load Serving Entities. We are concerned with the onerous communication requirements for Load Serving Entities and Distribution Providers with field personnel that have rare or possibly no opportunities to communicate with personnel working at an entity registered as a Transmission Operator, Transmission Owner, Balancing Authority, Reliability Coordinator, Generator Operator or Transmission Service Provider.</p>
<p><b>Response: The SDT thanks you for your comments. We agree with your recommendation on the term “Distribution Provider” and this change is reflected in the second draft of COM-003. We also note your comments on applicability in Question 3 and have provided our response there.</b></p>		
Transmission System Operations	Agree	<p>We think the SDT should coordinate their work closely with the team of the Reliability Coordination Project 2006-06, especially regarding new definitions related to communications and reliability directives.</p>
<p><b>Response: The SDT thanks you for your comments. The SDT agrees and the SDTs involved with COM standard development have been and are coordinating issues to ensure consistency, to avoid conflict and to avoid duplication.</b></p> <p><b>The SDT has revised the definitions to the proposed COM-003-1 Standard to define Operating Communication that should address your concerns over the applicability of three-part communications. The implementation plan for COM-003 includes retirement of COM-002 to avoid duplication.</b></p>		
Ameren		<p>We understand the binary function of VSL that forces Severe for most requirements. However, the standard itself seems to offer some hope with the definition to address the VSL issue better. The definition has at the end, “especially during alerts and emergencies” Given that this implies stratification, couldn’t Severe VSL be assigned to violations during emergencies, High be assigned to alerts, and moderate to all other system conditions. When emergency conditions exist, entities should have their “A” game on, and failure to communicate during these times is a more severe violation of the communication protocols than during the thousands of daily interactions that are not likely to affect BES, (alternatively, the VRF could be adjusted for the situation)</p>
<p><b>Response: The SDT thanks you for your comments</b></p> <p><b>The SDT has reviewed and modified the VRFs and VSLs to comply with approved NERC and FERC guidelines. The SDT believes the new assignments more accurately classify the VRFs and VSLs assigned to the Requirements in the second draft of COM-003-1. In the second draft of COM-003 the requirements are all assigned a “Medium” VRF – and the VSLs are more graduated.</b></p>		
MRO NERC Standards Review	Agree	<p>Without “Directive” being defined, this proposed standard still leaves a huge area that will cause problems and issues within the industry. We believe the SDT should replace “directive” with “Reliability Directive” and use the</p>

Organization	Yes or No	Question 12 Comment
Subcommittee		<p>definition developed in Project 20006-06: “A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.”</p> <p><b>COM 002 -3 and Reliability Directive are under development by the RC SDT. The term, “Reliability Directive” is not used in the second draft of COM-003.</b></p> <p>We believe Reliability Standard COM-003-1 is entirely too prescriptive, and is in actuality a procedure and not a standard. The Standard needs to focus on the “What” and not the “How”. If the industry is going to truly embrace the Results Based Standards Initiative, this standard must be significantly revised to reflect that philosophy.</p> <p><b>The SDT believes that the requirements in the second draft of COM 003 are appropriate because they support the purpose identified in the SAR. If you believe Reliability Standard COM-003-1 is entirely too prescriptive, and is in actuality a procedure and not a standard it should have been addressed in the SAR development process. The SDT was chartered to develop Communication Protocols for Operating Personnel. The SDT proposes that the second draft of the standard is more focused on “what” protocols to use in specific situations.</b></p> <p><b>The SDT does not believe its work to be inconsistent with results-based principles. The Need or Problem Statement for this standard is that miscommunication can lead to action or inaction harmful to the reliability of the BES. This was identified by the NERC President in his January 2011 report to the industry as one of the eight top priority issues for BPS reliability, and there are a number of events that have occurred in the past where miscommunication was a contributing factor to the event or exacerbated the severity of the event. The Goal, therefore, is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication. The key Objective to accomplish this Goal is to use communication protocols to reduce or correct misunderstandings. The requirements have been written to accomplish this Objective, and are risk-mitigating requirements (while operator performance is measured, the actions themselves are primarily designed to mitigate the risk of miscommunication that could lead to poor BES performance). We believe this standard is consistent with results-based principles, and it will improve the reliability of the BES.</b></p> <p>We believe that the existing standard COM-002 is actually better than this standard. This standard actually</p>

Organization	Yes or No	Question 12 Comment
		<p>causes more confusion and ambiguity and creates unnecessary or overly cumbersome requirements that add little or no value to reliability.</p> <p><b>The SDT respectfully disagrees with your statement that “COM-002 is actually better than this standard and this standard actually causes more confusion and ambiguity and creates unnecessary or overly cumbersome requirements that add little or no value to reliability.” COM 002-2 is too vague and has left much doubt in the stakeholders’ minds. The SDT believes COM 003 adds clarity to the communication standards.</b></p>
<p><b>Response: The SDT thanks you for your comments. Please see our responses above.</b></p>		
PSEG Companies	Agree	<p>Yes. The PSEG Companies agree with the concerns expressed in the comments filed by the PJM System Operations Subcommittee (SOS) Group.</p>
<p><b>Response: The SDT thanks you for your. Please see our response to the comments from filed by the PJM System Operations Subcommittee (SOS) Group.</b></p>		

## Standard Development Roadmap

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

### Development Steps Completed:

1. The Standards Committee (SC) approved the Standard Authorization Request (SAR) for posting on March 1, 2007.
2. The SAR was posted for comment from March 19 through April 17, 2007.
3. The SC sought SAR drafting team nominations April 18 through May 2, 2007.
4. The SAR drafting team posted reply comments to industry comments received on the first posting SAR on June 8, 2007.
5. Standard drafting team appointed by SC Executive Committee on June 28, 2007.
6. Version 1 draft of Standard posted November 2009 for Informal Comments closed January 15, 2010.

### Description of Current Draft:

This is the second draft of a new standard requiring the use of standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The drafting team requests posting for a 30-day concurrent Formal Comment period and Ballot.

### Future Development Plan:

Anticipated Actions	Anticipated Date
1. Drafting team considers comments, makes conforming changes, and requests SC approval to proceed to pre-ballot comment period.	March 2012
2. First ballot of standards.	June 2012
3. Successive Ballot of Standards	September 2012
4. Recirculation ballot of standards.	October 2012
5. Board adopts standards.	November 2012



### **Definitions of Terms Used in Standard**

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

*When using terms or phrases contained in the Reliability Standards Glossary of Terms Used in NERC Reliability Standards it should be cited as the source. When used in written communications, terms or phrases contained in the Reliability Standards Glossary of Terms Used in Reliability Standards are capitalized.*

**Operating Communication** — Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.

Reliability Directives are a type of Operating Communications, to the extent they change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.

## A. Introduction

1. **Title:** Operating Personnel Communications Protocols
2. **Number:** COM-003-1
3. **Purpose:** To specify clear, formal and universally-applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES.
4. **Applicability:**
  - 4.1. **Functional Entities**
    - 4.1.1 Reliability Coordinator
    - 4.1.2 Transmission Operator
    - 4.1.3 Balancing Authority
    - 4.1.4 Generator Operator
    - 4.1.5 Distribution Provider
5. **Effective Date:** First day of the first calendar quarter, six calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter a year from the date of Board of Trustees adoption.

## B. Requirements

- R1. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider shall use the following communications protocols: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations* ]
  - 1.1. When participating in oral or written Operating Communications:
    - 1.1.1. Use the English language when communicating between functional entities, unless another language is mandated by law or regulation.
    - 1.1.2. Use the 24-hour clock format when referring to clock times.
    - 1.1.3. When the communication is between entities in different time zones, include the time and time zone and indicate whether the time is daylight saving time or standard time.
    - 1.1.4. When referring to a Transmission interface Element or a Transmission interface Facility, use the name specified by the owner(s) for that Transmission interface Element or Transmission interface Facility.
  - 1.2. When participating in oral Operating Communications and using alpha-numeric identifiers, use accurate alpha-numeric clarifiers.<sup>1</sup>

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<sup>1</sup>The North Atlantic Treaty Organization (NATO) Spelling Alphabet is one example of a set of alpha-numeric clarifiers.

**R2.** Each Reliability Coordinator, Transmission Operator and Balancing Authority that issues an oral, two-party, person-to-person Operating Communication, excluding Reliability Directives shall:

**2.1.** Issue the Operating Communication and wait for a response from the receiver.

**2.2.** After the response is received, or if no response is received, do one of the following:

- Confirm the receiver's response, if the repeated information is correct (not necessarily verbatim).
- Reissue the Operating Communication if the repeated information is incorrect or if the receiver does not issue a response.
- Reissue the Operating Communication, if requested by the receiver.

*[Violation Risk Factor Medium][Time Horizon: Real-Time]*

**R3.** Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider that receives an oral two-party, person-to-person Operating Communication, excluding Reliability Directives, shall take one of the following actions:

- Repeat the Operating Communication (not necessarily verbatim) and wait for confirmation from the issuer that the repetition was correct.
- Request that the issuer reissue the Operating Communication.

*[Violation Risk Factor: Medium][Time Horizon: Real-Time]*

### **C. Measures**

**M1.** Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall provide evidence that the communication protocols specified by the requirement were implemented during Operating Communications. For requirement R1, Part 1.1.1, provide a copy of the law or regulation that mandates use of a language other than English. Evidence may include, but is not limited to, voice recordings, transcripts of voice recordings, operating logs, on-site observations, or other equivalent evidence. (R1)

**M2.** Each Reliability Coordinator, Transmission Operator and Balancing Authority, shall provide evidence that the communication protocol specified by the requirement was implemented. Evidence may include, but is not limited to, voice recordings, transcripts of voice recordings, on-site observations, or other equivalent evidence. (R2)

**M3.** Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider shall provide evidence that the communication protocol specified by the requirement was implemented. Evidence may include, but is not limited to, voice recordings, transcripts of voice recordings, on-site observations, or other equivalent evidence. (R3)

## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance Enforcement Authority**

The Regional Entity shall serve as the Compliance Enforcement Authority (CEA), unless the applicable entity is owned, operated, or controlled by the Regional Entity. In such cases, the ERO or a Regional Entity approved by FERC or other applicable governmental authority shall serve as the CEA.

#### **1.2. Data Retention**

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall keep data or evidence to show compliance, as identified below, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider shall retain evidence for Requirement R1 Measure M1 for the most recent 365 calendar days.
- Each Reliability Coordinator, Transmission Operator and Balancing Authority shall retain evidence for Requirement R2, Measure M2, for the most recent 180 calendar days.
- Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider shall retain evidence for Requirement R3, Measure M3, for the most recent 180 calendar days.

If a Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator or Distribution Provider is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

#### **1.3. Compliance Monitoring and Assessment Processes**

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

**1.4. Additional Compliance Information**

None

**Table of Compliance Elements**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Real-time Operations	Medium	N/A	<p>The responsible entity did not correctly implement <b>one (1) of the four (4) parts</b> of Requirement R1, Part 1.1 when it was appropriate to use all four parts.</p> <p>OR</p> <p>The responsible entity did not correctly implement <b>Part 1.2</b> of the requirement.</p>	<p>The responsible entity did not correctly implement <b>two (2) of the four (4) parts</b> of Requirement R1, Part 1.1 when it was appropriate to use all four parts.</p> <p>OR</p> <p>The responsible entity did not correctly implement <b>one (1) of the four (4) parts</b> of the requirement when it was appropriate to use three of the four parts.</p>	<p>The responsible entity did not correctly implement <b>any of the parts</b> of Requirement R1, Part 1.1 when it was appropriate to use all four parts.</p> <p>OR</p> <p>The responsible entity did not correctly implement <b>three (3) or more of the four (4) parts</b> of Requirement R1, Part 1.1 when it was appropriate to use all four parts.</p> <p>OR</p> <p>The responsible entity did not correctly implement <b>two (2) of the four (4) parts</b> of Requirement R1, Part 1.1 when it was appropriate to use three of the four parts.</p> <p>OR</p> <p>The responsible entity did not correctly</p>

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
						implement <b>one (1) of the four (4) parts</b> of Requirement R1, Part 1.1 when it was appropriate to use two of the four Parts of Requirement R1.
<b>R2</b>	Real-time Operations	Medium		The responsible entity issued a verbal person-to-person Operating Communication and did not confirm the receiver's response was correct. (Part 2.2, first bullet)	The responsible entity issued a verbal person-to-person Operating Communication and did not reissue the Operating Communication when requested by the receiver. (Part 2.2, third bullet)	The responsible entity issued a verbal person-to-person Operating Communication and did not wait for a response from the receiver. (Part 2.1) Or The responsible entity issued a verbal person-to-person Operating Communication and did not reissue the Operating Communication when the response was incorrect or when there was no response (Part 2.2, second bullet).
<b>R3</b>	Real-time Operations	Medium			The responsible entity received a verbal person-to-person Operating Communication and did not wait for confirmation that the repetition was	The responsible entity received a verbal person-to-person Operating Communication and did not repeat the Operating Communication and did

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
					correct. (R3, first bullet)	not request that the issuer reissue the Operating Communication. (R3)



**E. Regional Variances**

None.

**F. Associated Documents**

North Atlantic Treaty Organization (NATO) Phonetic Alphabet or International Radiotelephony Spelling Alphabet

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>

## Project 2007-02 Operating Personnel Communications Protocols

*Unofficial Comment Form for Standard COM-003-1 —Operating Personnel Communications Protocols*

Please **DO NOT** use this form. Please use the [electronic comment form](#) located at the link below to submit comments on the proposed draft COM-003-1 Operating Personnel Communications Protocols standard. Comments must be submitted by **June 20, 2012**. If you have questions please contact Joseph Krisiak at [Joseph.Krisiak@nerc.net](mailto:Joseph.Krisiak@nerc.net) or by telephone at 609-651-0903.

[http://www.nerc.com/filez/standards/Op\\_Comm\\_Protocol\\_Project\\_2007-02.html](http://www.nerc.com/filez/standards/Op_Comm_Protocol_Project_2007-02.html)

### *Background Information:*

Effective communication is critical for Real-time operations. Failure to successfully communicate clearly can create misunderstandings resulting in improper operations increasing the potential for failure of the BES.

The Standard Authorization Request (SAR) for this project was initiated on March 1, 2007 and approved by the Standards Committee on June 8, 2007. It established the scope of work for the Project 2007-02 Operating Personnel Communications Protocols Standard Drafting Team (OPCP SDT). The scope described in the SAR is to establish essential elements of communications protocols and communications paths such that operators and users of the North American Bulk Electric System will efficiently convey information and ensure mutual understanding. The August 2003 Blackout Report, Recommendation Number 26, calls for a tightening of communications protocols. FERC Order 693 Paragraph 532 amplifies this need and applies it to all Operating Communications. This proposed standard's goal is to ensure that effective communication is practiced and delivered in clear language and standardized format via pre-established communications paths among pre-identified operating entities.

The SAR indicated that references to communication protocols in other NERC Reliability Standards may be moved to this new standard. The SAR instructed the standard drafting team to consider incorporating the use of Alert Level Guidelines and three-part communications in developing this new standard to achieve high level consistency across regions. The SDT believes the Alert Level Guidelines, while valuable, belong in a separate standard and has petitioned the Standards Committee to approve the transfer to another standard or to start a separate project.

The standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators, and Distribution Providers. These requirements ensure that communications include essential elements such that information is efficiently conveyed and mutually understood for communicating changes to real-time operating conditions and responding to directives, notifications, directions, instructions, orders, or other reliability related operating information.

The Purpose statement of COM 003-1 states: “To specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES.”

Based on stakeholder comments and observations from the Quality Review team, the OPCP SDT made the following changes to COM-003-1:

- **New NERC Glossary terms:**  
The SDT has eliminated the definitions; Communications Protocol, Three-part Communication and Interoperability Communication proposed in the first draft of the standard and added a definition for *Operating Communications*. Operating Communications more accurately defines the broad class of communications that deal with changing or altering the state of the BES. Changes to the BES operating state with unclear communications create increased opportunities for *events that could place* the BES at an unacceptable risk of instability, separation, or cascading failures.
- **Communication Protocol Operating Procedure (CPOP):**  
The SDT eliminated the CPOP from the standard based on stakeholder comments indicating this is administrative in nature.
- **English Language:**  
The SDT modified the standard (R3 in the first draft of COM-003-1, R1 Part 1.1.1 in the second draft of COM-003-1) to address comments which point out that in some regions, the use of another language other than English may be mandated by law.
- **Pre-defined System Condition Terminology:**  
The Alert Level Guide document was originally prepared by the Reliability Coordinator Working Group (RCWG) in accordance with a U.S./Canada Task Force Blackout Report Recommendation. Recommendation #20 called for the establishment of clear definitions of normal, alert, and emergency operational system conditions, and to clarify the roles, responsibilities, and authorities of Reliability Coordinators and other responsible entities under each condition.  
  
After many comments and much discussion the SDT believes the Alert Level Guide is better suited in its own standard or in a standard that deals with alert conditions and notification. The content was not related to communication protocols designed to clarify operating communication on the BES. The SDT has petitioned the Standards Committee to approve of a transfer to another standard or to a new standard as it deems appropriate.
- **Time Zone Reference:**  
The first draft of COM-003-1 included a requirement to use Central Standard Time for operating communications (R4) and stakeholders identified that unless people are communicating in different time zones, this requirement may be a distraction. The SDT modified the standard to require inclusion of time zone references only in those situations where communication is between entities in different time zones.

- **Three-part Communication:**  
The first draft of COM-003-1 included a single requirement for use of three-part communication (R5). Several stakeholders noted that three-part communication is being addressed in two standards. While the OPCP SDT originally planned on proposing retirement of COM-002-3, the team has been convinced that keeping three part communication in both COM-002-3 and COM-003-1 has value.
  - The three-part communications in COM-002-3 are limited to Reliability Directives and have a “High” VRF.
  - The three-part communications in COM-003-1 are focused on Operating Communication except for Reliability Directives which are a subset of Operating Communications. The requirements for three-part communications in COM-003 have a “Medium” VRF.

The OPCP SDT split the three-part communication requirement into two separate proposed requirements; R2 and R3 to address responsibilities of the issuer and of the receiver respectively during Operating Communications. The SDT also clarified that repeat-back does not have to be exactly verbatim; however the message must be accurately conveyed and understood.

- **NATO Alphabet or Correct alpha numeric clarifiers:**  
The first draft of COM-003-1 had a requirement for use of the NATO Alphabet during operating communications (R6). Many stakeholders indicated that the NATO Alphabet is only one way of providing clarity and proposed that other alpha-numeric clarifies should be acceptable. In response the modified the standard to require use of the NATO Phonetic Alphabet or a correct alpha-numeric clarifier when issuing and replying to verbal Operating Communications that involve alpha-numeric information. The revised standard clarifies that the use of another correct alphanumeric clarifier is permitted as long as the content is fully and accurately conveyed. During spoken communications certain sounds become difficult to discern because they are audibly similar. The use of the NATO Phonetic Alphabet or proper phonetically correct clarifiers is not intended for all verbal communications but is required for Operating Communications involving alpha-numeric identifiers. (See Requirement R1, Part 1.2 in the second draft of COM-003-1.)
- **Line and Equipment Identifiers:**  
The first draft of COM-003-1 had a requirement (R7) for use of pre-determined, mutually agreed upon line and equipment identifiers for verbal and written operating communications. Stakeholders indicated that obtaining such agreements was not necessary and recommended narrowing the scope of this requirement. In response, the OPCP SDT modified the scope of the requirement so it only applies to oral and written operating communications involving a Transmission interface Element or Facility and replaced the need for an agreement with use of the name of the Facility/Element specified by the owner of that Transmission interface Element or Facility. (See Requirement R1, Part 1.1.4 in the second draft of COM-003-1.)
- **VSL and VRF Changes from version one:**  
The OPSDT reviewed the VRFs and VSLs associated with R1, R2 and R3 and made changes to more closely conform to NERC and FERC guidelines. Where the first draft of COM-003-1 proposed having a

“High” VRF for all real-time communications, the second draft of COM-003-1 proposes a “Medium” VRF for each of the three remaining requirements.

The choice of VRFs was made on the basis of the potential impact on the Bulk Electric System of a miscommunication during Operating Communications. Requirements R1, R2 and R3 are assigned a Medium Violation Risk Factor – a violation of one of these requirements, by itself, could directly affect the electrical state or the capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System, but a violation by itself would not lead to Bulk Electric System instability, separation, or Cascading failures.

The VSLs in the second draft of COM-003-1 are all new.

The drafting team is posting the standard for industry comment for a 45-day comment period.

The Operating Personnel Communications Protocols Drafting Team would like to receive industry comments on this draft standard. Accordingly, we request that you include your comments on this form by **June 20, 2012**.

*\*Please use the [electronic comment form](#) to submit your final comments to NERC.*

1. Do you agree with the addition of “Operating Communication” as a proposed new definition for the NERC Glossary and the elimination of “Communication Protocol,” “Interoperability Communication” and “Three part Communications” proposed in the first draft of COM-003-1?

**Operating Communication:** Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.

If not, please explain in the comment area.

Yes

No

Comments:

2. The SDT eliminated the requirement to have a Communications Protocol Operating Procedure from the proposed standard because it is administrative in nature. Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments:

3. The SDT has proposed to transfer the requirement to use Alert Levels in Attachment 1 to another more closely aligned standard or to a separate new standard. Do you agree with this transfer? If not, please explain in the comment area.

Yes

No

Comments:

4. The SDT modified the standard to allow an exemption from the requirement to use English language where the use of another language is mandated by law or regulation. (See Requirement R1, Part 1.1.1) Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments:

5. The SDT modified the standard to mandate utilization of a 24 hour clock for all times and to mandate the use of a time zone and indicate whether the time is daylight saving time or standard time reference when Operating Communications occur between different time zones. (See Requirement R1, Part 1.1.3) Do you agree with this modification? If not, please explain in the comment area.

Yes

No

Comments:

6. The SDT modified the requirement for use of three-part communications for Operating Communications to clarify that this is not applicable for Reliability Directives and split the single requirement into two requirements: one for the issuer (R2) and another for the receiver (R3). Do you agree with this modification?

Yes

No

Comments:

7. The SDT modified the requirement for use of the NATO phonetic alphabet to allow use of another correct alpha numeric clarifier. (See Requirement R1, Part 1.2.) Do you agree with this modification?

Yes

No

Comments:

8. The SDT modified the requirement for use of identifiers to limit the applicability to operating communications involving Transmission interface Elements/Facilities and to require use of the name for that Element/Facilities specified by the Element/Facility's owner(s). Do you agree with this modification?

Yes

No

Comments:

**9. Do you agree with the VRFs and VSLs for Requirements R1, R2 and R3?**

Yes

No

Comments:

**10. If you have any other comments or suggestions to improve the draft standard that you have not already provided in response to the previous questions please provide them here.**

Comments:



## Implementation Plan

Project 2007-02 - Operating Personnel Communications Protocols

### Implementation Plan for COM-003-1 – Operating Personnel Communications Protocols

#### *Approvals Required*

COM-003-1 – Operating Personnel Communications Protocols

#### *Prerequisite Approvals*

None.

#### *Revisions to Glossary*

The following term is proposed for addition to the NERC Glossary of Terms:

**Operating Communication** — Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.

#### *Applicable Entities*

Balancing Authority  
Distribution Provider  
Generator Operator  
Reliability Coordinator  
Transmission Operator

#### *Revisions or Retirements to Approved Standards*

Approved Requirement to be Retired	Proposed Replacement Requirement(s)
<p>COM-001-1.1 Requirement R4</p> <p>R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.</p>	<p>COM-003-1 Requirement R1 Part 1.1.1</p> <p>R1. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider shall use the following communications protocols:</p> <p>1.1. When participating in oral or written Operating Communications:</p> <p style="padding-left: 40px;">1.1.1. Use the English language when communicating between functional entities, unless</p>

	another language is mandated by law or regulation.
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### *Conforming Changes to Other Standards*

Revisions to COM-001-1.1- are under development in two projects. Project 2006-06 includes revisions to Requirements R1-R3 and R5-R6 and Project 2007-02 includes revisions to R4.

### *Effective Dates*

COM-003-1 shall become effective the first day of the first calendar quarter, six calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter a year from the date of Board of Trustee adoption.

- If the version of COM-001-2 revised under Project 2006-06 is approved before COM-003-1 is approved, then the remaining requirement (R4) from COM-001-1.1 shall expire midnight of the day immediately prior to the Effective Date of COM-003-1 in the particular jurisdiction in which COM-003-1 is becoming effective.
- If the version of COM-001-2 revised under Project 2006-06 is not approved before COM-003-1 is approved, then COM-001-1.1 shall expire midnight of the day immediately the version of COM-001-2 developed under Project 2007-02 shall become effective on the first day of the first calendar quarter, six calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter a year from the date of Board of Trustee adoption.

## Implementation Plan for COM-003-1 — Operating Personnel Communications Protocols

### Approvals Required

COM-003-1 – Operating Personnel Communications Protocols

### **Prerequisite Approvals**

None

### Revisions to Glossary

The following term is proposed for addition to the NERC Glossary of Terms:

**Operating Communication** — Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.

### ~~Conforming Changes to Requirements in Already Approved Standards~~

- ~~• Remove R4 from COM-001-1~~
- ~~• Move R2 (or subsequent replacements) from COM-002-3 into COM-003-1 and retire COM-002-3~~

### **Standard Summary**

~~The OPCP SDT developed this new standard and is proposing removing requirements R4 from COM-001-1 and R2 (or subsequent replacements) from COM-002-3 for inclusion in this standard. This standard addresses part of Blackout Recommendation #26 and issues in FERC Order 693.~~

### Compliance with Standards**Applicable Entities**

Once these standards become effective, the responsible entities identified in the Applicability section of the standard must comply with the requirements. These include:

- Reliability Coordinator
- Balancing Authority
- ~~• Transmission Owner~~
- Transmission Operator
- Generator Operator
- Distribution Provider
- ~~• Transmission Service Provider~~
- ~~• Load Serving Entity~~

## Revisions or Retirements to Approved Standards

<u>Approved Requirement to be Retired</u>	<u>Proposed Replacement Requirement(s)</u>
<p><u>COM-001-1.1 Requirement R4</u></p> <p><u>R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.</u></p>	<p><u>COM-003-1 Requirement R1 Part 1.1.1</u></p> <p><u>R1. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider shall use the following communications protocols:</u></p> <p><u>1.1. When participating in oral or written Operating Communications:</u></p> <p><u>1.1.1. Use the English language when communicating between functional entities, unless another language is mandated by law or regulation.</u></p>

## Conforming Changes to Other Standards

Revisions to COM-001-1.1- are under development in two projects. Project 2006-06 includes revisions to Requirements R1-R3 and R5-R6 and Project 2007-02 includes revisions to R4.

## **Effective Date**

COM-003-1 shall become ~~The proposed effective date for this standard is~~ the first day of the ~~third~~ first calendar quarter, ~~six calendar months following after~~ applicable regulatory approval; ~~or, s~~ ~~have been received (or the Reliability Standard otherwise becomes effective the first day of the~~ third calendar quarter after BOT adoption in those jurisdictions where ~~no~~ regulatory approval is ~~not required,)-~~ the first day of the first calendar quarter a year from the date of Board of Trustees adoption.

- If the version of COM-001-2 revised under Project 2006-06 is approved before COM-003-1 is approved, then the remaining requirement (R4) from COM-001-1.1 shall expire midnight of the day immediately prior to the Effective Date of COM-003-1 in the particular jurisdiction in which COM-003-1 is becoming effective.
- If the version of COM-001-2 revised under Project 2006-06 is not approved before COM-003-1 is approved, then COM-001-1.1 shall expire midnight of the day immediately the version of COM-001-2 developed under Project 2007-02 shall become effective on the first day of the first calendar quarter, six calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required,



the first day of the first calendar quarter a year from the date of Board of Trustee adoption.

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Most of the requirements in COM-003-1 are new – the only requirement from COM-001 associated with COM-003 is COM-001, Requirement R4.

## Project 2007-02: Operating Personnel Communication Protocols

Mapping Document

**Mapping Document Showing Translation of COM-001-1, R4 – Telecommunications into COM-003-1– Operating Personnel Communications Protocol**

Requirement in Approved Standard	Translation to New Standard or Other Action	Comments
<p>R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations</p>	<p>Moved into COM 003-1 R1, Part 1.1.1</p>	<p>R1. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider shall use the following communications protocols: [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations ]</p> <p>1.1. When participating in oral or written Operating Communications:</p> <p>1.1.1. Use the English language when communicating between functional entities, unless another language is mandated by law or regulation.</p>

## Project 2007-2 – Operating Personnel Communications Protocol

### **VRF and VSL Justifications**

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in COM 003-1 Operating Personnel Communications Protocols.

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Operations Personnel Communications Protocol Standard Drafting Team applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSLs for the requirements under this project:

### **NERC Criteria - Violation Risk Factors**

#### **High Risk Requirement**

A requirement that, if violated, could directly cause or contribute to Bulk Electric System instability, separation, or a Cascading sequence of failures, or could place the Bulk Electric System at an unacceptable risk of instability, separation, or Cascading failures; or a requirement in a planning time frame that, if violated, could, under Emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to Bulk Electric System instability, separation, or a Cascading sequence of failures, or could place the Bulk Electric System at an unacceptable risk of instability, separation, or Cascading failures, or could hinder restoration to a normal condition.

#### **Medium Risk Requirement**

A requirement that, if violated, could directly affect the electrical state or the capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System. However, violation of a medium risk requirement is unlikely to lead to Bulk Electric System instability, separation, or Cascading failures; or a requirement in a planning time frame that, if violated, could, under Emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the Bulk

Electric System; or the ability to effectively monitor, control, or restore the Bulk Electric System. However, violation of a medium risk requirement is unlikely, under Emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to Bulk Electric System instability, separation, or Cascading failures, nor to hinder restoration to a normal condition.

### **Lower Risk Requirement**

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System; or a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the Emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the Bulk Electric System, or the ability to effectively monitor, control, or restore the Bulk Electric System. A planning requirement that is administrative in nature.

### **FERC Violation Risk Factor Guidelines**

#### **Guideline (1) — Consistency with the Conclusions of the Final Blackout Report**

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the bulk power system:

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings



- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief

**Guideline (2) — Consistency within a Reliability Standard**

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

**Guideline (3) — Consistency among Reliability Standards**

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

**Guideline (4) — Consistency with NERC's Definition of the Violation Risk Factor Level**

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC's definition of that risk level.

**Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation**

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC's VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC's Reliability Standards and implies that these requirements should be assigned a "High" VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

**NERC Criteria - Violation Severity Levels**

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
<p>Missing a minor element (or a small percentage) of the required performance The performance or product measured has significant value as it almost meets the full intent of the requirement.</p>	<p>Missing at least one significant element (or a moderate percentage) of the required performance. The performance or product measured still has significant value in meeting the intent of the requirement.</p>	<p>Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component. The performance or product has limited value in meeting the intent of the requirement.</p>	<p>Missing most or all of the significant elements (or a significant percentage) of the required performance. The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.</p>

**FERC Order on Violation Severity Levels**

In its June 19, 2008 Order on Violation Severity Levels, FERC indicated it would use the following four guidelines for determining whether to approve VSLs:

**Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance**

Compare the VSLs to any prior Levels of Non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when Levels of Non-compliance were used.

**Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties**

Guideline 2a: A violation of a “binary” type requirement must be a “Severe” VSL.

Guideline 2b: Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

**Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement**

VSLs should not expand on what is required in the requirement.

**Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations**

. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

VRF Justifications – COM 003-1, R1	
Proposed VRF	Medium
NERC VRF Discussion	R1 is a requirement that, if violated, could directly affect the electrical state or the capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System. However, violation of the requirement is unlikely to lead to Bulk Electric System instability, separation, or Cascading failures. The VRF for this requirement is “Medium,” which is consistent with NERC guidelines
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard:</b> Consistency within a Reliability Standard. The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned, so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> Consistency among Reliability Standards. This requirement calls for the use of communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. This requirement is analogous to R2 of COM-002-2, which requires the use of communication protocols. The VRF for this requirement (COM-002-2, R2) is “Medium,” which is consistent with COM-003-1 R1 at a “Medium.” The SDT considers “Medium” as the proper assignment because it is consistent with NERC and FERC guidelines.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System. However, violation of the requirement is unlikely to lead to Bulk Electric System instability, separation, or Cascading failures. The VRF for this requirement is “Medium,” which is consistent with NERC guidelines.
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R1 contains only one objective, which is to specify clear, formal and universally-applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.

Proposed VSLs for R1			
Lower	Moderate	High	Severe
N/A	<p>The responsible entity did not correctly implement one (1) of the four (4) parts of Requirement R1, Part 1.1 when it was appropriate to use all four parts.</p> <p>OR</p> <p>The responsible entity did not correctly implement Part 1.2 of the requirement.</p>	<p>The responsible entity did not correctly implement two (2) of the four (4) parts of Requirement R1, Part 1.1 when it was appropriate to use all four parts.</p> <p>OR</p> <p>The responsible entity did not correctly implement one (1) of the four (4) parts of the requirement when it was appropriate to use three of the four parts.</p>	<p>The responsible entity did not correctly implement any of the parts of Requirement R1, Part 1.1 when it was appropriate to use all four Parts.</p> <p>OR</p> <p>The responsible entity did not correctly implement three (3) or more of the four (4) parts of Requirement R1, Part 1.1 when it was appropriate to use all four parts.</p> <p>OR</p> <p>The responsible entity did not correctly implement two (2) of the four (4) parts of Requirement R1, Part 1.1 when it was appropriate to use three of the four parts.</p> <p>OR</p> <p>The responsible entity did not correctly implement one (1) of the four (4) parts of Requirement R1, Part 1.1 when it was appropriate to use two of the four parts.</p>

VSL Justifications – COM 003-1, R1	
<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>The most comparable requirement is COM-002-2, R2. Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of common communication protocols. If no communication protocols are used at all or if the number of required protocols falls below the listed thresholds, then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:</p> <ul style="list-style-type: none"> <li>• The VSL assignment for R1 is not binary.</li> </ul> <p>Guideline 2b:</p> <ul style="list-style-type: none"> <li>• The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</li> </ul>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the 'weakest link' characteristic, should apply binary VSLs</p>	<p>Non CIP</p>

<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	<p>Non CIP</p>
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<p>VRF Justifications – COM 003-1, R2</p>	
<p>Proposed VRF</p>	<p>Medium</p>
<p>NERC VRF Discussion</p>	<p>R2 is a requirement that, if violated, could directly affect the electrical state or the capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System. However, violation of the requirement is unlikely to lead to Bulk Electric System instability, separation, or Cascading failures. The VRF for this requirement is “Medium,” which is consistent with NERC guidelines</p>
<p>FERC VRF G2 Discussion</p>	<p><b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements; only one VRF was assigned, so there is no conflict. No one subrequirement is a “Low” or a “High,” so a VRF of “Medium” was assigned.</p>
<p>FERC VRF G3 Discussion</p>	<p><b>Guideline 3- Consistency among Reliability Standards:</b> Consistency among Reliability Standards. This requirement calls for use of formal three-part communication by the issuer of an Operating Communication. This requirement is analogous to R2 of COM-002-2, which describes a communication protocol required for operating personnel to use when giving a directive. The VRF for this requirement is “Medium,” which is consistent with COM-003-1 R2 at a “Medium.” The SDT considers “Medium” as the proper assignment because it is consistent with NERC and FERC guidelines.</p>
<p>FERC VRF G4 Discussion</p>	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to utilize formal communication protocols could directly affect the electrical state or the capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System. However, violation of the requirement is unlikely to lead to Bulk Electric System instability, separation, or Cascading failures. The VRF for this requirement is “Medium,” which is consistent with NERC guidelines.</p>

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VRF Justifications – COM 003-1, R2

FERC VRF G5 Discussion

**Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:**

COM-003-1, Requirement R2 contains only one objective; which is to use formal, listed communications protocols. Since the requirement has only one objective, only one VRF was assigned.



Proposed VSLs for R2			
Lower	Moderate	High	Severe
	The responsible entity issued a verbal person-to-person Operating Communication and did not confirm the receiver's response was correct. (Part 2.2, first bullet)	The responsible entity issued a verbal person-to-person Operating Communication and did not reissue the Operating Communication when requested by the receiver. (Part 2.2, third bullet)	The responsible entity issued a verbal person-to-person Operating Communication and did not wait for a response from the receiver. (Part 2.1) Or The responsible entity issued a verbal person-to-person Operating Communication and did not reissue the Operating Communication when the response was incorrect or when there was no response (Part 2.2, second bullet).

VSL Justifications – COM 003-1, R2	
<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>The most comparable requirement is COM 002-2, R2. Based on the VSL Guidance, the SDT developed three VSLs based on misapplication of three-part communication. If the communication did not include the critical steps required for confirmation or for additional repetition, then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:</p> <ul style="list-style-type: none"> <li>• The VSL assignment for R2 is not binary.</li> </ul> <p>Guideline 2b:</p> <ul style="list-style-type: none"> <li>• The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</li> </ul>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the 'weakest link' characteristic, should apply binary VSLs</p>	<p>Non CIP</p>
<p><b>FERC VSL G6</b></p>	<p>Non CIP</p>

VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence	
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VRF Justifications – COM 003-1, R3	
Proposed VRF	Medium
NERC VRF Discussion	R3 is a requirement that, if violated, could directly affect the electrical state or the capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System. However, violation of the requirement is unlikely to lead to Bulk Electric System instability, separation, or Cascading failures. The VRF for this requirement is “Medium,” which is consistent with NERC guidelines.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has no sub-requirements; only one VRF was assigned, so there is no conflict. A VRF of “Medium” was assigned.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> Consistency among Reliability Standards. This requirement calls for use of formal three-part communication by the receiver of an Operating Communication. This requirement is analogous to R2 of COM-002-2, which describes a communication protocol required for operating personnel to use when given a directive. The VRF for this requirement (COM-002-2,2R) is “Medium,” which is consistent with COM-003-1 R3 at a “Medium.” The SDT considers “Medium” as the proper assignment because it is consistent with NERC and FERC guidelines.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to utilize formal communication protocols could directly affect the electrical state or the capability of the Bulk Electric System, or the ability to effectively monitor and control the Bulk Electric System. However, violation of the requirement is unlikely to lead to Bulk Electric System instability, separation, or Cascading failures. The VRF for this requirement is “Medium,” which is consistent with NERC guidelines.
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R3 contains only one objective; which is to use formal listed communications protocols

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**VRF Justifications – COM 003-1, R3**

	utilize. Since the requirement has only one objective, only one VRF was assigned.
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Proposed VSLs for R3			
Lower	Moderate	High	Severe
		The responsible entity received a verbal person-to-person Operating Communication and did not wait for confirmation that the repetition was correct. (R3, first bullet)	The responsible entity received a verbal person-to-person Operating Communication and did not repeat the Operating Communication and did not request that the issuer reissue the Operating Communication. (R3)

VSL Justifications – COM 003-1, R2	
<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>The most comparable requirement is COM 002-2, R2. Based on the VSL Guidance, the SDT developed two VSLs based on misapplication of three part communication. If the communication did not include the critical steps required for confirmation or for additional repetition, then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:</p> <ul style="list-style-type: none"> <li>• The VSL assignment for R3 is not binary.</li> </ul> <p>Guideline 2b:</p> <ul style="list-style-type: none"> <li>• The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</li> </ul>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</p>
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the 'weakest link' characteristic, should apply binary VSLs</p>	<p>Non CIP</p>
<p><b>FERC VSL G6</b></p>	<p>Non CIP</p>

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## VSL Justifications – COM 003-1, R2

VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence	
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**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# COM-003-1

## Operating Communications Protocols White Paper

May 2012

**RELIABILITY | ACCOUNTABILITY**



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## Introduction

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Communication (COM) Standard COM-003-1 features requirements, the purpose of which is to provide clear, formal and universally applied communication protocols that reduce the possibility of miscommunication that could lead to action or inaction that is detrimental to the reliability of the Bulk Electric System (BES). Significant events have occurred on the BES when unclear communication created or exacerbated misunderstandings that led to instability and separation. Communication protocols used in many industries, militaries and government departments have added clarity to oral and written communications and have prevented potential errors that would have resulted in catastrophic events.

### Purpose

The Operations Personnel Communications Protocol Standards Drafting Team (OPCP SDT) drafted a Standard Authorization Request (SAR) for Project 2007-02. The purpose of the proposed standard is to: “Require that real time System Operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.”

The purpose of this paper is to establish the reliability value of requiring three-part communication for all operations on the BES described in the proposed definition of COM-003 - 1 “Operating Communications.” Additionally, it addresses the reliability benefit of other communication protocols featured in COM 003-1 that provide addition clarity for “Operating Communications.”

### Background

NERC Project 2007-02 was created from the 2003 Blackout Report, Recommendation 26. In April 2004, the “Blackout Report” was submitted to the President of the United States of America and the Prime Minister of Canada.

The Blackout Report stated that:

“Ineffective communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade. Consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability.”

The report also recommended that industry,

“Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate.”

FERC Order No. 693, Paragraph 532 directs the ERO and the industry to develop communication protocols based on the following guidelines:

“532. While we agree with EEI that EOP-001-0, Requirement R4.1 requires communications protocols to be used during emergencies, we believe, and the ERO agrees, that the communications protocols need to be tightened to ensure Reliable Operation of the Bulk-Power System. We also believe an integral component in tightening the protocols is to establish communication uniformity as much as practical on a continent-wide basis. This will eliminate possible ambiguities in communications during normal, alert and emergency conditions. This is important because the Bulk-Power System is so tightly interconnected that System impacts often cross several operating entities’ areas.”

In response to this recommendation in FERC Order No. 693, a SAR team was established in April of 2007. These reports, directives and approved guidance documents provide the framework from which the OPCP SDT derived the concepts that contributed to the development of the COM-003-1 requirements.

## Three-Part Communication

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### Overview

Three-part communication, sometimes known as the “repeat back” method of communications, is used to communicate changes to physical Facility equipment during work activities via face-to-face, telephone, or radio communications. This communication protocol requires three oral exchanges between a sender and a receiver to promote a reliable transfer of information and understanding. The person originating the communication is the sender and is responsible for verifying that the receiver understands the message, as intended. The receiver makes sure he or she understands what the sender is saying and repeats back the message to the sender.

### Steps for Three Part Communication

COM-003-1 requires the use of three-part communication for “Operating Communications,” which is defined as, “Communication of instruction to change or maintain the state, status, output, or input of an Element<sup>1</sup> or Facility<sup>2</sup> of the Bulk Electric System.”

#### **This is a general description of how three-part communication functions:**

1. First - The sender orally transmits information (face-to-face, telephonic or other electronic equivalent) clearly and concisely to the receiver, directing them to alter an element that could impact the BES.
2. Second - The receiver orally acknowledges the communication by repeating the message back to the sender. The receiver does not need to repeat every part of the communication verbatim, but he or she must restate the equipment-related information exactly as spoken by the sender. If the receiver does not understand the message, he or she must ask for clarification.
3. Third - The sender acknowledges the reply and confirms to the receiver that the message is correct and properly understood by stating the communication was correct. If the sender does not understand the receiver’s reply, the sender must then respond by saying, “That is wrong,” (or words to that effect) and then restate the original message. If corrected, the receiver must acknowledge the corrected message and repeat back the message to the sender.

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<sup>1</sup> In the NERC Glossary of Terms, Element is defined as, “Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components.”

<sup>2</sup> In the NERC Glossary of Terms, Facility is defined as “a set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.)”

Verbal three-part communication should be used during the operation or alteration of Facility equipment. Applicable entities are to use three-part communications when performing steps or actions using an approved procedure that impact equipment or activities, the safety of personnel, the environment, or the Facility. Finally, three-part communication should be implemented for tasks where the consequences of a mishap are unacceptable and could lead to instability, uncontrolled separation, or Cascading.

As a best practice, it may also be used when discussing the condition of Facility equipment or the value of an important parameter in utility operations.

## Phonetic Alphabet or Alpha-numeric Clarifiers

### Overview

Several letters in the English language sound alike and can be confused in stressful or noisy situations. For example, some letters sound alike when spoken, and can easily be confused; such as “D” and “B.” The phonetic alphabet specifies a common word for each letter of the English alphabet. By using a word for each letter, there is less chance that the person listening will confuse the letters. Using the phonetic alphabet, “Delta” and “Bravo” are more easily differentiated. The effects of noise, weak telephone or radio signals, and an individual's accent are reduced through the use of the phonetic alphabet.

People use the phonetic alphabet and unit designators when describing unique identifiers for specific components. When the only distinguishing difference between two component labels is a single letter, then the phonetic alphabet form of the letter should be substituted for the distinguishing character. For example, 2UL-18L and 2UL-18F would be stated, “two Uniform Lima dash one eight Lima” and “two Uniform Lima dash one eight Foxtrot.”

### COM-003-1 Featured Phonetic Alphabet

<u>Letter - Word</u>	<u>Letter - Word</u>	<u>Letter - Word</u>	<u>Letter - Word</u>
A - Alpha	H - Hotel	O - Oscar	V - Victor
B - Bravo	I - India	P - Papa	W - Whiskey
C - Charlie	J - Juliet	Q - Quebec	X - X-ray
D - Delta	K - Kilo	R - Romeo	Y - Yankee
E - Echo	L - Lima	S - Sierra	Z - Zulu
F - Foxtrot	M - Mike	T - Tango	
G - Golf	N - November	U – Uniform	

<u>Number</u>	<u>pronounced as:</u>	<u>Number</u>	<u>pronounced as:</u>
1 - One	(wun)	6 - Six	(six)
2 - Two	(too)	7 – Seven	(sev-en)
3 - Three	(tree)	8 – Eight	(ait)
4 - Four	(fow-er)	9 – Nine	(nin-er)
5 – Five	(fife)	0 – Zero	(zee-row)

The phonetic alphabet or a correct alpha-numeric clarifier is to be used for any, “Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.”

## COM-003-1 Operating Personnel Communication Protocols

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The nature of communication between people can be complex and subject to many variables. Accents, moods, regional jargon, cultural interpretations, multiple languages, individual skill sets, and physiological conditions are but a few of the universe of factors that can and do have an impact on the clarity of two-party, person-to-person communication. Until the human factor is completely eliminated, there will be the risk of human error due to miscommunication.

Miscommunication has created unintended results on the Bulk Electric System (BES) that have led to outages and, in some cases, the inability of an operator to prevent the spread of Cascading. Although the potential for human error can never be completely eliminated, successful, proven communication protocols from other industries that also deal with critical processes and systems can be implemented to reduce the risk to BES reliability. The successful implementation of these widely-accepted communication protocols from other industries into the requirements of COM-003-1 will have a significant, positive impact on the reliability of the BES.

COM-003-1 requires the use of three-part communication for all Operating Communications. The reliability benefits of using three-part communication is threefold:

1. The removal of any doubt that communication protocols will be used and when they will be used. This will reduce the opportunity for confusion and misunderstanding among entities that may have different doctrine. An example is: One entity uses three-part for emergencies, and the other uses it for all operating conditions.
2. There will be no mental “transition” when operating conditions shift from normal to Emergency. The communication protocols for the operators will remain standard during transitions through all conditions.
3. The formal requirement for three-part communication will create a heightened sense of awareness in operators that the task they are about to execute is critical, and recognize the risk to the reliable operation of the BES is increased if the communication is misunderstood.

## Electric Utility Industry Communication Practices

The risk of BES failure due to miscommunication is very significant in the electric power industry. Blackouts that affect millions of customers in major cities are guaranteed to create undesirable media attention. The public at large in North America is heavily dependent on technology and is intolerant of massive blackouts. The public is conditioned to 24/7 access to technology, climate control and lighting. A sudden loss of service quickly causes immediate public frustration. If the root cause was determined to be industry operating miscommunication instead of uncontrollable environmental factors, criticism increases even more dramatically. Other industries that currently deal with risks, challenges and potentially widespread consequences similar to the electric utility industry have successfully reduced miscommunication by implementing uniform communication protocols similar to those identified in and required by COM 003-1.

### Table of Communication Practices of the Electric Utility Industry

The examples listed in the table below represent the communication practices of many major registered entities that engage in three part communication when altering the operating state of the BES. These registered entities account for a large amount of the generation, load and customers served in North America.

**Table 1-A Registered Entities that Currently Use Three-Part Communication during Both Emergencies and Non-emergencies<sup>3</sup>**

Registered Entity Location and Description	Generation Operations	Transmission Operations	Distribution Operations	Normal Operations	Emergency Operations	Customers Impacted	Load
South/Central US Entity (large)	Yes	Yes	Yes	Yes	Yes	23 Million	82 GW
Large Southern Entity #1	Yes	Yes	Yes	Yes	Yes	4.4 Million	43 GW
Large Mid Atlantic RTO Entity	Yes	Yes	NA	Yes	Yes	60 Million	185 GW
Large Southern Entity #2	Yes	Yes	Yes	Yes	Yes	2.8 Million	30 GW
Large West Coast Entity#1	Yes	Yes	Yes	Yes	Yes	5.1 Million	Not Available
Large Canadian HYDRO	Yes	Yes	Yes	Yes	Yes	1.3 Million	27 GW
Large	Yes	Yes	Yes	Yes	Yes	3.4	17 GW

<sup>3</sup> Industry use of three part communication analysis is based on publicly published documents, policies, procedures and internal standards.



Registered Entity Location and Description	Generation Operations	Transmission Operations	Distribution Operations	Normal Operations	Emergency Operations	Customers Impacted	Load
Midwestern/Western Utility						Million	
Large Florida TOP	Yes	Yes	Yes	Yes	Yes	4.5 Million	43GW
Midwestern RTO Entity	Yes	Yes	NA	Yes	Yes	39 Million	110 GW
DOE	Yes	Yes	Yes	Yes	Yes	NA	NA
INPO	Yes	Yes	Yes	Yes	Yes	NA	NA

This is strong evidence of an embedded electric utility practice that establishes, without doubt, the significant element of reliability value of three-part communications and the other communications protocols. The fact that the majority of BES entities already employ three-part (or repeat back) communications for routine, alert and Emergency operations (and document it in very strong language in their policy and procedures) demonstrates that the electric utility industry recognizes this significant element of value.

## Human Factor Considerations

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As previously discussed, there are a myriad of reasons that miscommunications occur. Beyond the typical environmental concerns (loud background noise, radio static, dialects, etc.), humans are very likely to have misunderstandings based on other factors. Humans are susceptible to expectation errors, relating to context and meaning, which will often drive understanding. People often discern what they want to hear, usually at a subconscious level. The importance of verifying what is heard becomes the first step in assuring that the message was understood.

When a person hears a message, an interpretation emerges from the different pieces of conversation data; this is called data-driven or bottom-up processing. Perception can be largely data-driven because one wants to make sure their understanding accurately reflect events in the outside world; in this case, the message from the sender. A person wants the interpretation of a message to be determined mostly by data (perception), then to understand the information in the environment (comprehension), and to make the appropriate decision from the senses; not by the listener's expectations. This data-driven processing can lead to miscommunications and may affect situational awareness because if the perception of the information is wrong, the chances of correct understanding and making proper future decisions are dramatically reduced.<sup>4</sup>

Situation awareness is fundamentally based on one's understanding of a system, how it operates, its characteristics, and performance parameters; couplings within itself and other systems and how one interacts with it. This understanding is referred to as one's mental model. It is a representation of the surrounding world, the relationships between its various parts and a person's intuitive perception about his or her own actions and their consequences. One's mental model helps to shape one's behavior and define one's approach to solving problems (a personal algorithm) and carrying out tasks, especially within a system. Mental models can be partially or completely right or wrong, complete or incomplete, and most often are unique for each individual. Sometimes mental models are carried throughout an organization through operating norms and commonly understood practices. Part of building a mental model for a particular problem or event is to gain information through active communication with others. Miscommunication can hamper immediate decisions and can also lay in waiting as a latent error, which can expose itself later when the incorrect information is retrieved or used in the processing of decision making.

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<sup>4</sup> Endsley, M. R. (1995). Toward a theory of situation awareness in dynamic systems. Human Factors, 37(1), 32-64.

## Communication Practices External to the Electric Utility Industry

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The purpose of effective communication is to create mutual understanding between two or more people. Effective communication is an important defense in the prevention of errors and events. Many industries mandate communication protocols due to the high potential for catastrophic results if an important communication is misunderstood. While the effects of critical mishaps from ineffective communications differ, the offending organization and associated industry will find itself dealing with legal, regulatory, financial, market and political consequences.

### Medical Field Industry

Ineffective communication is a root cause for nearly 66 percent of all sentinel events (events that signal the need for immediate investigation and response) reported in the medical industry. In other words, 66 percent of all reported deaths or serious injuries (accidents) in healthcare from 1995-2005 were related to ineffective communication.<sup>5</sup>

One step the medical industry is implementing to solve ineffective communication problems in the healthcare industry is to implement a “read-back” process for taking verbal or telephone orders.

Oral communication possesses a greater risk of misunderstanding compared to written forms of communication. Misunderstandings are most likely to occur when the individuals involved have different understandings, or mental models, of the current work situation or use terms that are potentially confusing. Therefore, confirmation of verbal exchanges of operational information between individuals must occur to promote understanding and reliability of the communication. In addition, the medical industry is standardizing abbreviations, acronyms, and symbols used throughout the field, to include compiling a list of those abbreviations, acronyms, and symbols that are not to be used.

### Commercial Air Transportation Industry

Based on available data, in the last 67 years there have been 274 commercial airline accidents involving at least 60 fatalities or more. Miscommunication between pilots and controllers can clearly be identified as a causal factor in 36 (13 percent) of these tragedies. Based on this analysis, the aviation community has implemented interpersonal communication tools like three-part communications and language standardization.

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<sup>5</sup> JCAHO1 Root Causes and Percentages for Sentinel Events (All Categories) January 1995–December 2005.

### Military Communication Protocols

Military organizations have a long history of communication protocols that they have developed and have improved over time. Firing orders, shipboard orders to the helm, aircraft launch and recovery contain elements of three-part communication and alpha numeric clarifiers. The reasons these communication protocols are required are due to the extreme risks and consequences that exist if miscommunication occurs. Military organizations also make use of the NATO alphabet and various shorthand codes to provide a status or update.

### Railroad Operations

Rail operations have similar risks of catastrophic results due to miscommunication. Switching rails, moving cars, coupling, decoupling and loading freight necessitate clear communication and require three-part communication and formal protocols.

### Other Organizations

Police and fire dispatch, the Department of Energy, and The Institute of Nuclear Power Operations (INPO) are among other organizations that value and mandate communication protocols similar to those in COM-003-01.

## Performance of the Electric Utility Industry

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Of all of the System events that NERC has either analyzed or investigated, 50 percent of those have involved findings of a deficiency of clear, concise communications. These events have either impacted, or potentially impacted, a significant amount of Load and/or generation.

Significant blackout events, such as the Northeastern Blackout of 2003 and the Florida Blackout of 2008, have communication issues listed among the top contributors to loss of Load and generation.

This analysis highlights the fact that industry Operating Communication performance over the last 10 years still has room for significant improvement. The lack of clear standard communication protocols when operating the BES will continue to create unacceptable levels of risk for large-scale failures.

Table 1 indicates that, across electric power industry, internal policies specify three-part communications for all BES operations, including routine or normal operations. This high level of compliance can be associated with the history of enforcement of COM 002-2a, R2, which requires three-part communication for all directives. This requirement has been mandated and has been enforceable for several years. When compared to COM 002-2a, COM 003-1 features improved approaches and structure for three-part communication that assigns proper responsibility for the “issuer” (sender) and for the “receiver.” When combined with the proposed definition of “Operating Communications,” COM 003 clarifies the circumstances of when to use three-part communication. The other improvement COM 003-1 offers, to improve the reliability of the BES, is the addition of several proven communication protocols that will clarify Operating Communications to reduce the risk of mistakes. Clarifying several key elements of an “Operating Communication,” such as time, time zone, equipment identifiers, a common language and alpha-numeric clarifiers, all contribute to reducing misunderstandings and reduce the risk of a grave error during BES operations.

### Summary

The BES across North America is a “tightly” interconnected System where instability can spread quickly. When a decision is made to alter the state of an Element on the BES, there is an increased threat to reliability, no matter what type of operating condition (normal, alert, Emergency) exists. The transition from normal to Emergency operation can be sudden and indistinguishable until recognized, often after the damage is done. There are multiple human factors during communication that occur naturally and contribute to unclear communication, which increases the risk to reliable operation of the BES.

The electric power industry widely deploys communication protocols such as three-part communications for all BES Operating Communications. The uniform deployment of these protocols in the three Interconnections is in part due to Requirement 2 in the mandatory and

enforceable Reliability Standard COM-002-2a. Industry's widespread utilization of three-part communications for BES Operating Communication is a confirmation of the reliability value of the protocol.

The official results of the 2003 Blackout Report cites unclear communications as a major factor in the cause, spread, and impedance of restoration of major BES failures. Other industries have successfully implemented universal communication protocols, which have resulted in fewer accidents and fatalities caused by miscommunications. Preventable blackouts or widespread loss of generation or load continues to be politically, socially and economically unacceptable in North America.

### Conclusion

The critical nature of BES configuration and its impact on reliability demands, that any action planned to alter the System under any condition should be systematically and clearly conveyed. Given the extent of human involvement in the process, the risk of miscommunication increases based on our own human tendencies and perceptions.

COM 003-1 takes communication protocols for the BES to the next level of reliability by requiring protocols that will reduce the risk of miscommunication. It clarifies when to use three-part communication. It provides a superior requirement structure that properly assigns the elements of three-part communication to the "issuer" (sender) and "receiver" and requires additional communication protocols that provide greater clarity when engaged in operating communication on the BES. Based on the facts listed above, communication protocols, as contained in proposed Standard COM-003-1, will provide a strong and much improved reliability benefit to address existing communication reliability gaps that continue to negatively impact the reliable operation of the BES.

The proposed communication protocols in COM 003-1 have been successfully developed and proven in other organizations' processes. The use of repeat backs and the added layer of value they provide to BES reliability make them essential to all "Operating Communications." The OPCP SDT endorses the use of these protocols.

Requirement R4 was assigned to Project 2007-02. All other requirements were assigned to Project 2006-06 and are being revised or retired under Project 2006-06.

**A. Introduction**

- 1. Title:** **Telecommunications**
- 2. Number:** COM-001-2
- 3. Purpose:** Each Reliability Coordinator, Transmission Operator and Balancing Authority needs adequate and reliable telecommunications facilities internally and with others for the exchange of Interconnection and operating information necessary to maintain reliability.
- 4. Applicability**
  - 4.1.** Transmission Operators.
  - 4.2.** Balancing Authorities.
  - 4.3.** Reliability Coordinators.
  - 4.4.** NERCNet User Organizations.
- 5. (Proposed) Effective Date:** First day of the first calendar quarter, six calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter a year from the date of Board of Trustee adoption.

**B. Requirements**

- R1.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information:
  - R1.1.** Internally.
  - R1.2.** Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities.
  - R1.3.** With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability.
  - R1.4.** Where applicable, these facilities shall be redundant and diversely routed.
- R2.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.
- R3.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas.
- R4.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities.
- R5.** Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, “NERCNet Security Policy.”

**C. Measures**

- M1.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to communication facility test-procedure documents, records of testing, and maintenance records for communication facilities or equivalent that will be used to confirm that it manages, alarms, tests and/or actively monitors vital telecommunications facilities. (Requirement 2 part 1)
- M2.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request its current operating instructions and procedures, either electronic or hard copy, that will be used to confirm that it meets Requirement 4.
- M3.** The NERCnet User Organization shall have and provide upon request evidence that could include, but is not limited to, documented procedures, operator logs, voice recordings or transcripts of voice recordings, electronic communications, etc., that will be used to determine if it adhered to the (User Accountability and Compliance) requirements in Attachment 1-COM-001. (Requirement 5)

## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance Monitoring Responsibility**

NERC shall be responsible for compliance monitoring of the Regional Reliability Organizations  
Regional Reliability Organizations shall be responsible for compliance monitoring of all other entities

#### **1.2. Compliance Monitoring and Reset Time Frame**

One or more of the following methods will be used to assess compliance:

- Self-certification (Conducted annually with submission according to schedule.)
- Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)
- Periodic Audit (Conducted once every three years according to schedule.)
- Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 calendar days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)

The Performance-Reset Period shall be 12 months from the last finding of non-compliance.

#### **1.3. Data Retention**

For Measure 1 each Reliability Coordinator, Transmission Operator, Balancing Authority shall keep evidence of compliance for the previous two calendar years plus the current year.

For Measure 2, each Reliability Coordinator, Transmission Operator, Balancing Authority shall have its current operating instructions and procedures to confirm that it meets Requirement 4.

For Measure 3, each Reliability Coordinator, Transmission Operator, Balancing Authority and NERCnet User Organization shall keep 90 days of historical data (evidence).

If an entity is found non-compliant the entity shall keep information related to the noncompliance until found compliant or for two years plus the current year, whichever is longer.



Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor.

The Compliance Monitor shall keep the last periodic audit report and all requested and submitted subsequent compliance records.

**1.4. Additional Compliance Information**

Attachment 1 — COM-001 — NERCnet Security Policy

**2. Levels of Non-Compliance for Transmission Operator, Balancing Authority or Reliability Coordinator**

**2.1. Level 1:** Not applicable.

**2.2. Level 2:** Not applicable.

**2.3. Level 3:** There shall be a separate Level 3 non-compliance for every one of the following requirements that is in violation:

**2.3.1** There are no written operating instructions and procedures to enable continued operation of the system during the loss of telecommunication facilities, as specified in R4.

**2.4. Level 4:** Telecommunication systems are not actively monitored, tested, managed or alarmed, as specified in R2.

**3. Levels of Non-Compliance — NERCnet User Organization**

**3.1. Level 1:** Not applicable.

**3.2. Level 2:** Not applicable.

**3.3. Level 3:** Not applicable.

**3.4. Level 4:** Did not adhere to the requirements in Attachment 1-COM-001, NERCnet Security Policy.

**E. Regional Differences**

None Identified.

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
1.1	October 29, 2008	BOT adopted errata changes; updated version number to “1.1”	Errata

### Attachment 1 — COM-001 — NERCnet Security Policy

#### Policy Statement

The purpose of this NERCnet Security Policy is to establish responsibilities and minimum requirements for the protection of information assets, computer systems and facilities of NERC and other users of the NERC frame relay network known as “NERCnet.” The goal of this policy is to prevent misuse and loss of assets.

For the purpose of this document, information assets shall be defined as processed or unprocessed data using the NERCnet Telecommunications Facilities including network documentation. This policy shall also apply as appropriate to employees and agents of other corporations or organizations that may be directly or indirectly granted access to information associated with NERCnet.

The objectives of the NERCnet Security Policy are:

- To ensure that NERCnet information assets are adequately protected on a cost-effective basis and to a level that allows NERC to fulfill its mission.
- To establish connectivity guidelines for a minimum level of security for the network.
- To provide a mandate to all Users of NERCnet to properly handle and protect the information that they have access to in order for NERC to be able to properly conduct its business and provide services to its customers.

#### NERC’s Security Mission Statement

NERC recognizes its dependency on data, information, and the computer systems used to facilitate effective operation of its business and fulfillment of its mission. NERC also recognizes the value of the information maintained and provided to its members and others authorized to have access to NERCnet. It is, therefore, essential that this data, information, and computer systems, and the manual and technical infrastructure that supports it, are secure from destruction, corruption, unauthorized access, and accidental or deliberate breach of confidentiality.

#### Implementation and Responsibilities

This section identifies the various roles and responsibilities related to the protection of NERCnet resources.

#### NERCnet User Organizations

Users of NERCnet who have received authorization from NERC to access the NERC network are considered users of NERCnet resources. To be granted access, users shall complete a User Application Form and submit this form to the NERC Telecommunications Manager.

#### Responsibilities

It is the responsibility of NERCnet User Organizations to:

- Use NERCnet facilities for NERC-authorized business purposes only.
- Comply with the NERCnet security policies, standards, and guidelines, as well as any procedures specified by the data owner.
- Prevent unauthorized disclosure of the data.
- Report security exposures, misuse, or non-compliance situations via Reliability Coordinator Information System or the NERC Telecommunications Manager.
- Protect the confidentiality of all user IDs and passwords.
- Maintain the data they own.
- Maintain documentation identifying the users who are granted access to NERCnet data or applications.
- Authorize users within their organizations to access NERCnet data and applications.

- Advise staff on NERCnet Security Policy.
- Ensure that all NERCnet users understand their obligation to protect these assets.
- Conduct self-assessments for compliance.

### **User Accountability and Compliance**

All users of NERCnet shall be familiar and ensure compliance with the policies in this document.

Violations of the NERCnet Security Policy shall include, but not be limited to any act that:

- Exposes NERC or any user of NERCnet to actual or potential monetary loss through the compromise of data security or damage.
- Involves the disclosure of trade secrets, intellectual property, confidential information or the unauthorized use of data.

Involves the use of data for illicit purposes, which may include violation of any law, regulation or reporting requirement of any law enforcement or government body.

Requirement R4 was assigned to Project 2007-02. All other requirements were assigned to Project 2006-06 and are being revised or retired under Project 2006-06.

## A. Introduction

1. **Title:** Telecommunications
2. **Number:** COM-001-~~1.12~~
3. **Purpose:** Each Reliability Coordinator, Transmission Operator and Balancing Authority needs adequate and reliable telecommunications facilities internally and with others for the exchange of Interconnection and operating information necessary to maintain reliability.
4. **Applicability**
  - 4.1. Transmission Operators.
  - 4.2. Balancing Authorities.
  - 4.3. Reliability Coordinators.
  - 4.4. NERCNet User Organizations.
5. **(Proposed) Effective Date:** First day of the first calendar quarter, six calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter a year from the date of Board of Trustee adoption. ~~May 13, 2009~~

## B. Requirements

- R1. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information:
  - R1.1. Internally.
  - R1.2. Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities.
  - R1.3. With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability.
  - R1.4. Where applicable, these facilities shall be redundant and diversely routed.
- R2. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.
- R3. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas.

~~R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.~~

~~R5.~~R4. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities.

~~R6-R5.~~ Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, “NERCNet Security Policy.”

### C. Measures

**M1.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to communication facility test-procedure documents, records of testing, and maintenance records for communication facilities or equivalent that will be used to confirm that it manages, alarms, tests and/or actively monitors vital telecommunications facilities. (Requirement 2 part 1)

~~M2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request its current operating instructions and procedures, either electronic or hard copy, that will be used to confirm that it meets Requirement 4. The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine compliance to Requirement 4.~~

~~M3. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request its current operating instructions and procedures, either electronic or hard copy that will be used to confirm that it meets Requirement 5.~~

~~M4.~~**M3.** The NERCnet User Organization shall have and provide upon request evidence that could include, but is not limited to, documented procedures, operator logs, voice recordings or transcripts of voice recordings, electronic communications, etc., that will be used to determine if it adhered to the (User Accountability and Compliance) requirements in Attachment 1-COM-001. (Requirement ~~65~~)

### D. Compliance

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##### 1.1. Compliance Monitoring Responsibility

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One or more of the following methods will be used to assess compliance:

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The Performance-Reset Period shall be 12 months from the last finding of non-compliance.

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For Measure ~~3~~2, each Reliability Coordinator, Transmission Operator, Balancing Authority shall have its current operating instructions and procedures to confirm that it meets Requirement ~~5~~4.

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#### 1.4. Additional Compliance Information

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2.1. Level 1: Not applicable.

2.2. Level 2: Not applicable.

2.3. Level 3: There shall be a separate Level 3 non-compliance, for every one of the following requirements that is in violation:

~~2.3.1 — The Transmission Operator, Balancing Authority or Reliability Coordinator used a language other than English without agreement as specified in R4.~~

~~2.3.2.3.1~~ There are no written operating instructions and procedures to enable continued operation of the system during the loss of telecommunication facilities, as specified in ~~R5~~R4.

2.4. Level 4: Telecommunication systems are not actively monitored, tested, managed or alarmed, as specified in R2.

### 3. Levels of Non-Compliance — NERCnet User Organization

3.1. Level 1: Not applicable.

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## E. Regional Differences

None Identified.

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0	April 1, 2005	Effective Date	New
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- Ensure that all NERCnet users understand their obligation to protect these assets.
- Conduct self-assessments for compliance.

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- Involves the disclosure of trade secrets, intellectual property, confidential information or the unauthorized use of data.

Involves the use of data for illicit purposes, which may include violation of any law, regulation or reporting requirement of any law enforcement or government body.

## Standards Announcement

### Project 2007-02 – Operating Personnel Communications Protocols

Initial Ballot and Non-Binding Poll Open Through 8 p.m. Wednesday,  
June 20, 2012

#### [Now Available](#)

An initial ballot of COM-003-1 – Operating Personnel Communications and Protocols and a non-binding poll of the associated VRFs/VSLs is open through **8 p.m. Eastern on Wednesday, June 20, 2012.**

#### Instructions

Members of the ballot pools associated with this project may log in and submit their vote for the Standard and opinion in the non-binding poll of the associated VRFs and VSLs by clicking [here](#).

Due to modifications to NERC's balloting software, voters will no longer be able to submit comments via the balloting software

#### Next Steps

The drafting team will consider all comments received during the formal comment period and initial ballot and determine whether to make changes to the standard and associated documents. After the standards and associated documents are revised, the drafting team will submit its work for quality review prior to the next posting.

#### Background

There are two projects that have the modification of the COM family of standards in the scope of their SAR. This project, Project 2007-02 – Operating Personnel Communications Protocols, is concerned with communication protocols for normal and emergency operations. The other project, Project 2006-06 – Reliability Coordination has limited the scope of its modifications to the COM family of standards to those that address communication during emergency operations. The Project 2006-06 team has proposed a new term, "Reliability Directive," to specifically address those communications. The proposed definition of Reliability Directive is "A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact." The Project 2006-06 drafting team is proposing to require three-part communication for Reliability Directives, with a VRF of High for those requirements.

Since Project 2007-02 – Operating Personnel Communications Protocols must address communication protocols for both normal and emergency operations, the Project 2007-02 drafting team is proposing a new term, "Operating Communication." The proposed definition for Operating Communication is

“Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.” Given that Reliability Directives are a subset of Operating Communications, and to avoid any possibility of double jeopardy, the Project 2007-02 SDT is proposing to require three-part communication for all Operating Communications other than Reliability Directives, and has proposed a Medium VRF for these requirements. Having a High VRF for a violation of three-part communication involving a Reliability Directive and having a Medium VRF for a violation of three-part communication involving other Operating Communications supports the appropriate differentiation of risk for normal and emergency communications.

Additional information is available on the [project webpage](#).

### **Standards Development Process**

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact Monica Benson,  
Standards Process Administrator, at [monica.benson@nerc.net](mailto:monica.benson@nerc.net) or at 404-446-2560.*

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404-446-2560 | [www.nerc.com](http://www.nerc.com)

## Standards Announcement

### Project 2007-02 – Operating Personnel Communications Protocols White Paper on Operating Communications Protocols now Posted

#### [Now Available](#)

A white paper on Operating Communications protocols has been posted with the clean version COM-003-1 – Operating Personnel Communications Protocols that has been posted for a 45-day formal comment period, initial ballot and non-binding poll. The drafting team prepared this white paper to aid in the evaluation of proposed COM-003-1 and the associated proposed definition of Operating Communication.

#### **Background**

NERC Project 2007-02 was created from the 2003 Blackout Report, Recommendation 26. In April 2004, the “Blackout Report” was submitted to the President of the United States of America and the Prime Minister of Canada.

The Blackout Report stated that:

“Ineffective communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade. Consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability.”

The report also recommended that industry,

“Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate.”

FERC Order No. 693, Paragraph 532 directs the ERO and the industry to develop communication protocols based on the following guidelines:

“532. While we agree with EEI that EOP-001-0, Requirement R4.1 requires communications protocols to be used during emergencies, we believe, and the ERO agrees, that the communications protocols need to be tightened to ensure Reliable Operation of the Bulk-Power System. We also believe an integral component in tightening the protocols is to establish communication uniformity as much as practical on a continent-wide basis. This will eliminate possible ambiguities in communications during normal, alert and emergency conditions. This is important because the Bulk- Power System is so tightly interconnected that System impacts often cross several operating entities’ areas.”

The purpose of the white paper is to establish the reliability value of requiring three-part communication for all operations on the BES described in the proposed definition of COM-003 -1 “Operating Communication.” Additionally, it addresses the reliability benefit of other communication protocols featured in COM 003-1 that provide addition clarity for “Operating Communication.”

The requirements in COM-003-1 also support one of the eight high priority issues identified in the NERC President’s Top Priority Issues for BPS Reliability Issued January 7, 2011:

Ambiguous or incomplete voice communications – Out of longstanding tradition, system operators and reliability coordinators are comfortable with informal communications with field and power plant personnel and neighboring systems. Experience from analyzing various events indicates there is often a sense of awkwardness when personnel transition from conversational discussion to issuing reliability instructions. It is also human nature to be uncomfortable in applying formal communication procedures after personnel have developed informal styles over many years. Confusion in making the transition from normal conversation to formal communications can introduce misunderstandings and possibly even incorrect actions or assumptions. Further, once the need to transition to more formal structure is recognized, the transition is often not complete or effective. Results can include unclear instructions, confusion whether an instruction is a suggestion or a directive, whether specific action is required or a set of alternative actions are permissible, and confusion over what elements of the system are being addressed.

The drafting team is in the process of preparing for a webinar on the proposed COM-003-1. The webinar is scheduled to be held on Thursday June 7, 2012 from 1:30—3:30 p.m. Eastern Daylight Time. An announcement for the webinar with additional details is forthcoming.

### Standards Development Process

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. For more information or assistance, please contact Monica Benson at [monica.benson@nerc.net](mailto:monica.benson@nerc.net).

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## Standards Announcement

### Project 2007-02 – Operating Personnel Communications Protocols

Ballot Pools Forming: May 7 – June 5, 2012

Formal Comment Period Open: May 7 – June 20, 2012

Ballot Windows Open for Initial Ballot and Non-Binding Poll:  
June 11 – June 20, 2012

#### [Now Available](#)

A clean version COM-003-1 – Operating Personnel Communications Protocols has been posted for a 45-day formal comment period, initial ballot and non-binding poll. The drafting team has also posted its implementation plan, mapping document, justification for Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs) and proposed changes to COM-001. The drafting team has not posted a redline of COM-003-1 because the changes to the last posted version of COM-003-1 are so extensive that a redline is not useful.

#### **Instructions for Joining Ballot Pools**

Registered Ballot Body members must join the ballot pools to be eligible to vote in the upcoming ballot of Project 2007-02 Operating Personnel Communications Protocols by clicking [here](#) for the Initial ballot and the non-binding poll of the associated Violation Risk Factors and Violation Severity Levels.

During the pre-ballot windows, members of the ballot pools may communicate with one another by using their “ballot pool list servers.” (Once the balloting begins, ballot pool members are prohibited from using the ballot pool list servers.) The list servers for the ballot pools are:

**Initial ballot:** [bp-2007-02\\_COM-003-1\\_in@nerc.com](mailto:bp-2007-02_COM-003-1_in@nerc.com)

**Non-binding poll:** [bp-2007-02\\_COM-003-1\\_NB\\_in@nerc.com](mailto:bp-2007-02_COM-003-1_NB_in@nerc.com)

The ballot pools are open **through 8 a.m. Eastern on Tuesday, June 5, 2012.**

#### **Instructions for Commenting**

A formal comment period is open through **8 p.m. Eastern on Wednesday, June 20, 2012.** Please use this [electronic comment form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Monica Benson at [monica.benson@nerc.net](mailto:monica.benson@nerc.net). An off-line, unofficial copy of the comment form is posted on the [project page](#).

Commenters and voters must submit comments through the [electronic comment form](#). Due to modifications to NERC's balloting software, voters are no longer able to submit comments via the balloting software.

### Next Steps

The drafting team will consider all comments received during the formal comment period and, if needed, make revisions to the standard. If the comments do not show the need for significant revisions, the standard will proceed to a recirculation ballot.

### Background

There are two projects that have the modification of the COM family of standards in the scope of their SAR. This project, Project 2007-02 – Operating Personnel Communications Protocols, is concerned with communication protocols for normal and emergency operations. The other project, Project 2006-06 – Reliability Coordination has limited the scope of its modifications to the COM family of standards to those that address communication during emergency operations. The Project 2006-06 team has proposed a new term, "Reliability Directive," to specifically address those communications. The proposed definition of Reliability Directive is "A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact." The Project 2006-06 drafting team is proposing to require three part communication for Reliability Directives, with a VRF of High for those requirements.

Since Project 2007-02 – Operating Personnel Communications Protocols must address communication protocols for normal and emergency operations, the Project 2007-02 drafting team is proposing a new term, "Operating Communication." The proposed definition for Operating Communication is "Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System." Given that Reliability Directives are a subset of Operating Communications, and to avoid any possibility of double jeopardy, the Project 2007-02 SDT is proposing to require three part communication for all Operating Communications other than Reliability Directives, and has proposed a Medium VRF for these requirements. Having a High VRF for a violation of three part communication involving a Reliability Directive and having a Medium VRF for a violation of three part communication involving other Operating Communications supports the appropriate differentiation of risk for normal and emergency communications.

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Since Project 2007-02 – Operating Personnel Communications Protocols must address communication protocols for normal and emergency operations, the Project 2007-02 drafting team is proposing a new term, "Operating Communication." The proposed definition for Operating Communication is "Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System." Given that Reliability Directives are a subset of Operating Communications, and to avoid any possibility of double jeopardy, the Project 2007-02 SDT is proposing to require three part communication for all Operating Communications other than Reliability Directives, and has proposed a Medium VRF for these requirements. Having a High VRF for a violation of three part communication involving a Reliability Directive and having a Medium VRF for a violation of three part communication involving other Operating Communications supports the appropriate differentiation of risk for normal and emergency communications.

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## Standards Announcement

### Project 2007-02 – Operating Personnel Communications Protocols

#### Initial Ballot and Non-Binding Poll Results

##### [Now Available](#)

An initial ballot of COM-003-1 – Operating Personnel Communications Protocols and non-binding polls of the associated VRFs and VSLs concluded Wednesday, June 20, 2012.

Voting statistics for each ballot are listed below, and the [Ballots Results](#) page provides a link to the detailed results.

Approval	Non-binding Poll Results
Quorum: 84.14%	Quorum: 81.01%
Approval: 21.11 %	Supportive Opinions: 28.78%

#### Next Steps

The drafting team will consider all comments submitted, and based on the comments will determine whether to make additional changes. If the drafting team decides to make substantive revisions, the drafting team will submit the revised standard and consideration of comments received for a quality review prior to posting for a parallel formal 30-day comment period and successive ballot.

#### Background

There are two projects that have the modification of the COM family of standards in the scope of their SAR. This project, Project 2007-02 – Operating Personnel Communications Protocols, is concerned with communication protocols for normal and emergency operations. Project 2006-06 – Reliability Coordination has limited the scope of its modifications to the COM family of standards to those that address communication during emergency operations. The Project 2006-06 team has proposed a new term, “Reliability Directive,” to specifically address those communications. The proposed definition of a Reliability Directive is “A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.” The Project 2006-06 drafting team is proposing to require three-part communication for Reliability Directives, with a VRF of High for those requirements.

Since Project 2007-02 – Operating Personnel Communications Protocols must address communication protocols for normal and emergency operations, the Project 2007-02 drafting team is proposing a new

term, “Operating Communication.” The proposed definition for Operating Communication is “Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.” Given that Reliability Directives are a subset of Operating Communications, and to avoid any possibility of double jeopardy, the Project 2007-02 SDT is proposing to require three-part communication for all Operating Communications other than Reliability Directives, and has proposed a Medium VRF for these requirements. Having a High VRF for a violation of three-part communication involving a Reliability Directive, and having a Medium VRF for a violation of three-part communication involving other Operating Communications, supports the appropriate differentiation of risk for normal and emergency communications.

Additional information is available on the [project page](#).

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- Current Ballots
- Ballot Results
- Registered Ballot Body
- Proxy Voters

Home Page

Ballot Results	
<b>Ballot Name:</b>	Project 2007-02 COM-003-1
<b>Ballot Period:</b>	6/11/2012 - 6/20/2012
<b>Ballot Type:</b>	Initial
<b>Total # Votes:</b>	366
<b>Total Ballot Pool:</b>	435
<b>Quorum:</b>	<b>84.14 % The Quorum has been reached</b>
<b>Weighted Segment Vote:</b>	21.11 %
<b>Ballot Results:</b>	<b>The drafting team will consider comments received.</b>

Summary of Ballot Results									
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Abstain # Votes	No Vote	
			# Votes	Fraction	# Votes	Fraction			
1 - Segment 1.	110	1	20	0.233	66	0.767	3	21	
2 - Segment 2.	11	1	1	0.1	9	0.9	1	0	
3 - Segment 3.	103	1	15	0.165	76	0.835	3	9	
4 - Segment 4.	39	1	12	0.387	19	0.613	0	8	
5 - Segment 5.	93	1	14	0.197	57	0.803	5	17	
6 - Segment 6.	53	1	10	0.222	35	0.778	1	7	
7 - Segment 7.	0	0	0	0	0	0	0	0	
8 - Segment 8.	12	0.9	2	0.2	7	0.7	0	3	
9 - Segment 9.	5	0.1	0	0	1	0.1	1	3	
10 - Segment 10.	9	0.6	1	0.1	5	0.5	2	1	
<b>Totals</b>	<b>435</b>	<b>7.6</b>	<b>75</b>	<b>1.604</b>	<b>275</b>	<b>5.996</b>	<b>16</b>	<b>69</b>	

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Ameren Services	Kirit Shah	Negative	
1	American Electric Power	Paul B. Johnson	Negative	
1	American Transmission Company, LLC	Andrew Z Pusztai	Negative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman	Negative	
1	ATCO Electric	Glen Sutton	Affirmative	
1	Austin Energy	James Armke	Negative	
1	Avista Corp.	Scott J Kinney	Negative	

1	Balancing Authority of Northern California	Kevin Smith	Negative
1	Baltimore Gas & Electric Company	Gregory S Miller	Abstain
1	BC Hydro and Power Authority	Patricia Robertson	Negative
1	Beaches Energy Services	Joseph S Stonecipher	Affirmative
1	Black Hills Corp	Eric Egge	
1	Bonneville Power Administration	Donald S. Watkins	Negative
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	Negative
1	Bryan Texas Utilities	John C Fontenot	Affirmative
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Negative
1	Central Electric Power Cooperative	Michael B Bax	
1	City of Pasadena	Marco A Sustaita	Negative
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative
1	City Utilities of Springfield, Missouri	Jeff Knottek	Negative
1	City Water, Light & Power of Springfield	Shaun Anders	Negative
1	Clark Public Utilities	Jack Stamper	Negative
1	Cleco Power LLC	Danny McDaniel	Negative
1	Colorado Springs Utilities	Paul Morland	Affirmative
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Negative
1	Consumers Power Inc.	Stuart Sloan	Negative
1	CPS Energy	Richard Castrejana	
1	Dairyland Power Coop.	Robert W. Roddy	Negative
1	Dayton Power & Light Co.	Hertzel Shamash	
1	Deseret Power	James Tucker	Affirmative
1	Dominion Virginia Power	Michael S Crowley	Negative
1	Duke Energy Carolina	Douglas E. Hils	Negative
1	Empire District Electric Co.	Ralph F Meyer	
1	Entergy Services, Inc.	Edward J Davis	Negative
1	FirstEnergy Corp.	William J Smith	Negative
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative
1	Florida Power & Light Co.	Mike O'Neil	Negative
1	Gainesville Regional Utilities	Richard Bachmeier	Affirmative
1	Georgia Transmission Corporation	Jason Snodgrass	Affirmative
1	Great River Energy	Gordon Pietsch	Negative
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon	
1	Hydro One Networks, Inc.	Ajay Garg	Negative
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Negative
1	Idaho Power Company	Molly Devine	Affirmative
1	Imperial Irrigation District	Tino Zaragoza	
1	International Transmission Company Holdings Corp	Michael Moltane	Negative
1	JEA	Ted Hobson	
1	KAMO Electric Cooperative	Walter Kenyon	Negative
1	Kansas City Power & Light Co.	Michael Gammon	Negative
1	Keys Energy Services	Stanley T Rzad	
1	Lakeland Electric	Larry E Watt	
1	Lee County Electric Cooperative	John W Delucca	Affirmative
1	LG&E Energy Transmission Services	Bradley C. Young	Negative
1	Long Island Power Authority	Robert Ganley	Affirmative
1	Los Angeles Department of Water & Power	John Burnett	Negative
1	Lower Colorado River Authority	Martyn Turner	
1	M & A Electric Power Cooperative	William Price	
1	Manitoba Hydro	Joe D Petaski	Negative
1	MEAG Power	Danny Dees	Negative
1	MidAmerican Energy Co.	Terry Harbour	Negative
1	Minnesota Power, Inc.	Randi K. Nyholm	Negative
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Negative
1	National Grid USA	Michael Jones	Negative
1	Nebraska Public Power District	Cole C Brodine	Negative
1	New York Power Authority	Bruce Metruck	Negative
1	New York State Electric & Gas Corp.	Raymond P Kinney	Negative
1	Northeast Missouri Electric Power Cooperative	Kevin White	Negative
1	Northeast Utilities	David Boguslawski	Negative
1	Northern Indiana Public Service Co.	Kevin M Largura	Negative
1	NorthWestern Energy	John Canavan	Abstain
1	NStar Gas and Electric	John Robertson	
1	Ohio Valley Electric Corp.	Robert Matthey	Negative

1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Negative	
1	Omaha Public Power District	Doug Peterchuck	Negative	
1	Oncor Electric Delivery	Jen Fiegel	Negative	
1	Orlando Utilities Commission	Brad Chase		
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan		
1	PacifiCorp	Ryan Millard	Affirmative	
1	PECO Energy	Ronald Schloendorn	Negative	
1	Platte River Power Authority	John C. Collins		
1	Portland General Electric Co.	John T Walker	Negative	
1	Potomac Electric Power Co.	David Thorne	Negative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Abstain	
1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Negative	
1	Public Utility District No. 2 of Grant County, Washington	Rod Noteboom	Affirmative	
1	Puget Sound Energy, Inc.	Denise M Lietz	Negative	
1	Rochester Gas and Electric Corp.	John C. Allen	Negative	
1	Sacramento Municipal Utility District	Tim Kelley	Negative	
1	Salt River Project	Robert Kondziolka	Negative	
1	Santee Cooper	Terry L Blackwell	Negative	
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Sho-Me Power Electric Cooperative	Denise Stevens		
1	Sierra Pacific Power Co.	Rich Salgo	Negative	
1	Snohomish County PUD No. 1	Long T Duong	Negative	
1	South California Edison Company	Steven Mavis	Affirmative	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Negative	
1	Southern Illinois Power Coop.	William Hutchison		
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	
1	Tampa Electric Co.	Beth Young		
1	Tennessee Valley Authority	Larry Akens	Negative	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		
1	United Illuminating Co.	Jonathan Appelbaum	Negative	
1	Westar Energy	Allen Klassen	Negative	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Xcel Energy, Inc.	Gregory L Pieper	Negative	
2	Alberta Electric System Operator	Mark B Thompson	Affirmative	
2	BC Hydro	Venkataramakrishnan Vinnakota	Negative	
2	California ISO	Rich Vine	Abstain	
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Negative	
2	Independent Electricity System Operator	Barbara Constantinescu	Negative	
2	ISO New England, Inc.	Kathleen Goodman	Negative	
2	Midwest ISO, Inc.	Marie Knox	Negative	
2	New Brunswick System Operator	Alden Briggs	Negative	
2	New York Independent System Operator	Gregory Campoli	Negative	
2	PJM Interconnection, L.L.C.	stephanie monzon	Negative	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Negative	
3	Alabama Power Company	Richard J. Mandes	Negative	
3	Alameda Municipal Power	Douglas Draeger	Negative	
3	Ameren Services	Mark Peters	Negative	
3	APS	Steven Norris	Affirmative	
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Negative	
3	Atlantic City Electric Company	NICOLE BUCKMAN	Negative	
3	Avista Corp.	Robert Lafferty	Negative	
3	BC Hydro and Power Authority	Pat G. Harrington	Negative	
3	Blachly-Lane Electric Co-op	Bud Tracy	Negative	
3	Bonneville Power Administration	Rebecca Berdahl	Negative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Negative	
3	Central Electric Power Cooperative	Adam M Weber	Negative	
3	Central Lincoln PUD	Steve Alexanderson	Negative	
3	City of Austin dba Austin Energy	Andrew Gallo	Negative	
3	City of Bartow, Florida	Matt Culverhouse	Affirmative	
3	City of Clewiston	Lynne Mila	Affirmative	
3	City of Farmington	Linda R Jacobson	Abstain	



3	City of Garland	Ronnie C Hoeinghaus	Negative	
3	City of Green Cove Springs	Gregg R Griffin		
3	City of Lodi, California	Elizabeth Kirkley	Negative	
3	City of Palo Alto	Eric R Scott	Negative	
3	City of Redding	Bill Hughes	Negative	
3	City of Ukiah	Colin Murphey	Negative	
3	City Water, Light & Power of Springfield	Roger Powers	Negative	
3	Clearwater Power Co.	Dave Hagen	Negative	
3	Cleco Corporation	Michelle A Corley	Negative	
3	Colorado Springs Utilities	Charles Morgan	Affirmative	
3	ComEd	Bruce Krawczyk	Negative	
3	Consolidated Edison Co. of New York	Peter T Yost	Negative	
3	Consumers Energy	Richard Blumenstock	Negative	
3	Consumers Power Inc.	Roman Gillen	Negative	
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Negative	
3	Cowlitz County PUD	Russell A Noble		
3	CPS Energy	Jose Escamilla		
3	Delmarva Power & Light Co.	Michael R. Mayer	Abstain	
3	Detroit Edison Company	Kent Kujala	Negative	
3	Dominion Resources, Inc.	Connie B Lowe	Negative	
3	Duke Energy Carolina	Henry Ernst-Jr	Negative	
3	Entergy	Joel T Plessinger	Negative	
3	Fall River Rural Electric Cooperative	Bryan Case	Negative	
3	FirstEnergy Energy Delivery	Stephan Kern	Negative	
3	Florida Municipal Power Agency	Joe McKinney	Affirmative	
3	Florida Power Corporation	Lee Schuster	Negative	
3	Georgia Power Company	Danny Lindsey	Negative	
3	Georgia System Operations Corporation	Scott McGough	Affirmative	
3	Great River Energy	Brian Glover	Negative	
3	Gulf Power Company	Paul C Caldwell	Negative	
3	Hydro One Networks, Inc.	David Kiguel	Negative	
3	KAMO Electric Cooperative	Theodore J Hilmes		
3	Kansas City Power & Light Co.	Charles Locke	Negative	
3	Kissimmee Utility Authority	Gregory D Woessner		
3	Lakeland Electric	Mace D Hunter	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Negative	
3	Lincoln Electric System	Jason Fortik	Negative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Negative	
3	Louisville Gas and Electric Co.	Charles A. Freibert	Negative	
3	M & A Electric Power Cooperative	Stephen D Pogue	Negative	
3	Manitoba Hydro	Greg C. Parent	Negative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Negative	
3	Mississippi Power	Jeff Franklin	Negative	
3	Modesto Irrigation District	Jack W Savage	Affirmative	
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Negative	
3	Muscatine Power & Water	John S Bos	Negative	
3	Nebraska Public Power District	Tony Eddleman	Negative	
3	New York Power Authority	David R Rivera	Negative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Negative	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann	Negative	
3	Northern Indiana Public Service Co.	William SeDoris	Negative	
3	Northern Lights Inc.	Jon Shelby	Negative	
3	NW Electric Power Cooperative, Inc.	David McDowell	Negative	
3	Omaha Public Power District	Blaine R. Dinwiddie		
3	Orange and Rockland Utilities, Inc.	David Burke	Negative	
3	Orlando Utilities Commission	Ballard K Mutters	Abstain	
3	Owensboro Municipal Utilities	Thomas T Lyons	Negative	
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	Pacific Northwest Generating Cooperative	Rick Paschall	Negative	
3	PacifiCorp	Dan Zollner	Affirmative	
3	Platte River Power Authority	Terry L Baker	Negative	
3	PNM Resources	Michael Mertz	Negative	
3	Portland General Electric Co.	Thomas G Ward	Negative	
3	Potomac Electric Power Co.	Robert Reuter		
3	Progress Energy Carolinas	Sam Waters	Negative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Negative	
3	Puget Sound Energy, Inc.	Erin Apperson	Negative	

3	Raft River Rural Electric Cooperative	Heber Carpenter	Negative
3	Rutherford EMC	Thomas M Haire	Affirmative
3	Sacramento Municipal Utility District	James Leigh-Kendall	Negative
3	Salmon River Electric Cooperative	Ken Dizes	Negative
3	Salt River Project	John T. Underhill	Negative
3	Santee Cooper	James M Poston	Negative
3	Seattle City Light	Dana Wheelock	Affirmative
3	Seminole Electric Cooperative, Inc.	James R Frauen	Negative
3	Sho-Me Power Electric Cooperative	Jeff L Neas	
3	South Carolina Electric & Gas Co.	Hubert C Young	Negative
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative
3	Tampa Electric Co.	Ronald L. Donahey	
3	Tennessee Valley Authority	Ian S Grant	Negative
3	Tri-County Electric Cooperative, Inc.	Mike Swearingen	Affirmative
3	Tri-State G & T Association, Inc.	Janelle Marriott	Affirmative
3	Umatilla Electric Cooperative	Steve Eldrige	Negative
3	Westar Energy	Bo Jones	Negative
3	Wisconsin Electric Power Marketing	James R Keller	Negative
3	Xcel Energy, Inc.	Michael Ibold	Negative
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Negative
4	American Municipal Power	Kevin Koloini	Negative
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative
4	Central Lincoln PUD	Shamus J Gamache	Negative
4	City of Austin dba Austin Energy	Reza Ebrahimian	
4	City of Clewiston	Kevin McCarthy	Affirmative
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Affirmative
4	City of Redding	Nicholas Zettel	Negative
4	City Utilities of Springfield, Missouri	John Allen	Negative
4	Consumers Energy	David Frank Ronk	Negative
4	Cowlitz County PUD	Rick Syring	
4	Detroit Edison Company	Daniel Herring	
4	Flathead Electric Cooperative	Russ Schneider	Negative
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative
4	Fort Pierce Utilities Authority	Cairo Vanegas	
4	Georgia System Operations Corporation	Guy Andrews	Affirmative
4	Illinois Municipal Electric Agency	Bob C. Thomas	Negative
4	Imperial Irrigation District	Diana U Torres	Affirmative
4	Indiana Municipal Power Agency	Jack Alvey	Negative
4	LaGen	Richard Comeaux	
4	Madison Gas and Electric Co.	Joseph DePoorter	Negative
4	Modesto Irrigation District	Spencer Tacke	Affirmative
4	Northern California Power Agency	Tracy R Bibb	
4	Ohio Edison Company	Douglas Hohlbaugh	Negative
4	Oklahoma Municipal Power Authority	Ashley Stringer	Negative
4	Old Dominion Electric Coop.	Mark Ringhausen	Affirmative
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Negative
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Negative
4	Sacramento Municipal Utility District	Mike Ramirez	Negative
4	Seattle City Light	Hao Li	Affirmative
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Negative
4	South Mississippi Electric Power Association	Steven McElhaney	
4	Southern Minnesota Municipal Power Agency	Richard L Koch	
4	Tacoma Public Utilities	Keith Morissette	Affirmative
4	Turlock Irrigation District	Steven C Hill	Affirmative
4	West Oregon Electric Cooperative, Inc.	Marc M Farmer	Negative
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative
4	WPPI Energy	Todd Komplin	Negative
5	AEP Service Corp.	Brock Ondayko	Negative
5	AES Corporation	Leo Bernier	
5	Amerenue	Sam Dwyer	Negative
5	Arizona Public Service Co.	Edward Cambridge	Affirmative
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	
5	Avista Corp.	Edward F. Groce	Negative
5	BC Hydro and Power Authority	Clement Ma	Negative

5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	Abstain
5	Bonneville Power Administration	Francis J. Halpin	Negative
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative
5	Calpine Corporation	Phillip Porter	
5	City and County of San Francisco	Daniel Mason	Affirmative
5	City of Austin dba Austin Energy	Jeanie Doty	Negative
5	City of Redding	Paul A. Cummings	Negative
5	City of Tallahassee	Karen Webb	Negative
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative
5	Cleco Power	Stephanie Huffman	Negative
5	Cogentrix Energy, Inc.	Mike D Hirst	
5	Colorado Springs Utilities	Jennifer Eckels	Affirmative
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Negative
5	Consumers Energy Company	David C Greyerbiehl	Negative
5	Cowlitz County PUD	Bob Essex	
5	Dairyland Power Coop.	Tommy Drea	
5	Deseret Power	Philip B Tice Jr	Affirmative
5	Detroit Edison Company	Christy Wicke	Negative
5	Dominion Resources, Inc.	Mike Garton	Negative
5	Duke Energy	Dale Q Goodwine	Negative
5	Dynegy Inc.	Dan Roethemeyer	Negative
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain
5	Edison Mission Marketing & Trading Inc.	Brenda J Frazer	Negative
5	Electric Power Supply Association	John R Cashin	
5	Essential Power, LLC	Patrick Brown	Negative
5	Exelon Nuclear	Michael Korchynsky	Negative
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative
5	FirstEnergy Solutions	Kenneth Dresner	Negative
5	Florida Municipal Power Agency	David Schumann	Affirmative
5	Great River Energy	Preston L Walsh	Negative
5	Hydro-Québec Production	Roger Dufresne	Negative
5	ICF International	Brent B Hebert	
5	Imperial Irrigation District	Marcela Y Caballero	Affirmative
5	JEA	John J Babik	Negative
5	Kansas City Power & Light Co.	Brett Holland	Negative
5	Kissimmee Utility Authority	Mike Blough	Affirmative
5	Lakeland Electric	James M Howard	Affirmative
5	Liberty Electric Power LLC	Daniel Duff	Negative
5	Lincoln Electric System	Dennis Florom	
5	Los Angeles Department of Water & Power	Kenneth Silver	Negative
5	Luminant Generation Company LLC	Mike Laney	
5	Manitoba Hydro	S N Fernando	Negative
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain
5	MEAG Power	Steven Grego	Negative
5	MidAmerican Energy Co.	Christopher Schneider	Negative
5	Muscatine Power & Water	Mike Avesing	
5	Nebraska Public Power District	Don Schmit	Negative
5	New York Power Authority	Wayne Sipperly	Negative
5	NextEra Energy	Allen D Schriver	Negative
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative
5	Northern Indiana Public Service Co.	William O. Thompson	
5	Occidental Chemical	Michelle R DAntuono	Negative
5	Omaha Public Power District	Mahmood Z. Safi	Negative
5	Orlando Utilities Commission	Richard Kinas	
5	Pacific Gas and Electric Company	Richard J. Padilla	Affirmative
5	PacifiCorp	Sandra L. Shaffer	
5	Platte River Power Authority	Roland Thiel	Negative
5	Portland General Electric Co.	matt E jastram	Negative
5	PowerSouth Energy Cooperative	Tim Hattaway	Negative
5	PPL Generation LLC	Annette M Bannon	Negative
5	Progress Energy Carolinas	Wayne Lewis	Negative
5	PSEG Fossil LLC	Tim Kucey	Negative
5	Public Utility District No. 1 of Lewis County	Steven Grega	
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Affirmative

5	Puget Sound Energy, Inc.	Tom Flynn	Negative
5	Sacramento Municipal Utility District	Bethany Hunter	Negative
5	Salt River Project	William Alkema	Negative
5	Santee Cooper	Lewis P Pierce	Negative
5	Seattle City Light	Michael J. Haynes	Affirmative
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	
5	Snohomish County PUD No. 1	Sam Nietfeld	Negative
5	South Carolina Electric & Gas Co.	Edward Magic	Negative
5	Southeastern Power Administration	Douglas Spencer	
5	Southern California Edison Co.	Denise Yaffe	Affirmative
5	Southern Company Generation	William D Shultz	Negative
5	Tacoma Power	Chris Mattson	Affirmative
5	Tampa Electric Co.	RJames Rocha	Abstain
5	Tenaska, Inc.	Scott M. Helyer	Abstain
5	Tennessee Valley Authority	David Thompson	Negative
5	TransAlta Corporation	Rebbekka McFadden	Negative
5	U.S. Army Corps of Engineers	Melissa Kurtz	Negative
5	U.S. Bureau of Reclamation	Martin Bauer	Negative
5	Westar Energy	Bryan Taggart	Negative
5	Wisconsin Electric Power Co.	Linda Horn	Negative
5	WPPI Energy	Steven Leovy	Negative
5	Xcel Energy, Inc.	Liam Noailles	Negative
6	AEP Marketing	Edward P. Cox	Negative
6	Ameren Energy Marketing Co.	Jennifer Richardson	Negative
6	APS	Randy A. Young	Abstain
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Negative
6	Bonneville Power Administration	Brenda S. Anderson	Negative
6	City of Austin dba Austin Energy	Lisa L Martin	Negative
6	City of Redding	Marvin Briggs	Negative
6	Cleco Power LLC	Robert Hirschak	Negative
6	Colorado Springs Utilities	Lisa C Rosintoski	Affirmative
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Negative
6	Constellation Energy Commodities Group	Donald Schopp	Negative
6	Discount Power, Inc.	David Feldman	
6	Dominion Resources, Inc.	Louis S. Slade	Negative
6	Duke Energy	Greg Cecil	Negative
6	Entergy Services, Inc.	Terri F Benoit	Negative
6	FirstEnergy Solutions	Kevin Querry	Negative
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative
6	Great River Energy	Donna Stephenson	Negative
6	Imperial Irrigation District	Cathy Bretz	Affirmative
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative
6	Lakeland Electric	Paul Shipps	Affirmative
6	Lincoln Electric System	Eric Ruskamp	Negative
6	Los Angeles Department of Water & Power	Brad Packer	
6	Luminant Energy	Brad Jones	
6	Manitoba Hydro	Daniel Prowse	Negative
6	MidAmerican Energy Co.	Dennis Kimm	Negative
6	Modesto Irrigation District	James McFall	Affirmative
6	Muscatine Power & Water	John Stolley	Negative
6	New York Power Authority	Saul Rojas	Negative
6	Northern Indiana Public Service Co.	Joseph O'Brien	Negative
6	NRG Energy, Inc.	Alan Johnson	
6	Omaha Public Power District	David Ried	Negative
6	PacifiCorp	Scott L Smith	Affirmative
6	Platte River Power Authority	Carol Ballantine	Negative
6	Progress Energy	John T Sturgeon	Negative
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Negative
6	Public Utility District No. 1 of Chelan County	Hugh A. Owen	
6	Sacramento Municipal Utility District	Diane Enderby	Negative
6	Salt River Project	Steven J Hulet	Negative
6	Santee Cooper	Michael Brown	Negative
6	Seattle City Light	Dennis Sismaet	Affirmative
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Negative
6	Snohomish County PUD No. 1	William T Moojen	Negative

6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Southern Company Generation and Energy Marketing	John J. Ciza	Negative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Negative	
6	Westar Energy	Grant L Wilkerson	Negative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney		
6	Xcel Energy, Inc.	David F. Lemmons	Negative	
8		Edward C Stein	Affirmative	
8		Roger C Zaklukiewicz	Negative	
8		James A Maenner	Affirmative	
8	APX	Michael Johnson		
8	INTELLIBIND	Kevin Conway	Negative	
8	JDRJC Associates	Jim Cyrulewski	Negative	
8	Massachusetts Attorney General	Frederick R Plett		
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Negative	
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon	Negative	
8	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman	Negative	
8	Volkman Consulting, Inc.	Terry Volkman	Negative	
9	California Energy Commission	William M Chamberlain		
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Negative	
9	National Association of Regulatory Utility Commissioners	Diane J. Barney		
9	Oregon Public Utility Commission	Jerome Murray	Abstain	
9	Public Utilities Commission of Ohio	Klaus Lambeck		
10	Florida Reliability Coordinating Council	Linda Campbell		
10	Midwest Reliability Organization	William S Smith	Negative	
10	New York State Reliability Council	Alan Adamson	Negative	
10	Northeast Power Coordinating Council	Guy V. Zito	Negative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	
10	SERC Reliability Corporation	Carter B Edge	Negative	
10	Southwest Power Pool RE	Emily Pennel	Abstain	
10	Texas Reliability Entity, Inc.	Donald G Jones	Negative	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Abstain	

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A New Jersey Nonprofit Corporation

# Non-binding Poll Results

Project 2007-02 COM-003-1

Non-binding Poll Results	
<b>Ballot Name:</b>	Project 2007-02 Non-binding Poll COM-003-1
<b>Ballot Period:</b>	6/11/2012 - 6/20/2012
<b>Total # Opinions:</b>	320
<b>Total Ballot Pool:</b>	395
<b>Summary Results:</b>	81.01% of those who registered to participate provided an opinion or abstention; 28.30% of those who provided an opinion indicated support for the VRFs and VSLs.

Individual Ballot Pool Results				
Segment	Organization	Member	Opinions	
1	Ameren Services	Kirit Shah	Negative	
1	American Electric Power	Paul B. Johnson	Abstain	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman	Negative	
1	ATCO Electric	Glen Sutton	Affirmative	
1	Austin Energy	James Armke	Negative	
1	Avista Corp.	Scott J Kinney	Negative	
1	Balancing Authority of Northern California	Kevin Smith	Negative	
1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher	Affirmative	
1	Black Hills Corp	Eric Egge		
1	Bonneville Power Administration	Donald S. Watkins	Negative	
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	Negative	
1	Bryan Texas Utilities	John C Fontenot	Affirmative	
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Negative	
1	Central Electric Power Cooperative	Michael B Bax		
1	City of Pasadena	Marco A Sustaita	Negative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City Utilities of Springfield, Missouri	Jeff Knottek	Negative	
1	City Water, Light & Power of Springfield	Shaun Anders	Negative	
1	Clark Public Utilities	Jack Stamper	Negative	
1	Cleco Power LLC	Danny McDaniel	Negative	
1	Colorado Springs Utilities	Paul Morland	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Negative	
1	CPS Energy	Richard Castrejana		
1	Dairyland Power Coop.	Robert W. Roddy	Negative	
1	Dayton Power & Light Co.	Hertzal Shamash		
1	Deseret Power	James Tucker	Affirmative	

1	Dominion Virginia Power	Michael S Crowley	Abstain	
1	Duke Energy Carolina	Douglas E. Hils	Negative	
1	Empire District Electric Co.	Ralph F Meyer		
1	Entergy Services, Inc.	Edward J Davis	Negative	
1	FirstEnergy Corp.	William J Smith	Negative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative	
1	Florida Power & Light Co.	Mike O'Neil	Negative	
1	Gainesville Regional Utilities	Richard Bachmeier		
1	Georgia Transmission Corporation	Jason Snodgrass	Affirmative	
1	Great River Energy	Gordon Pietsch	Negative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon		
1	Hydro One Networks, Inc.	Ajay Garg	Negative	
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Abstain	
1	Idaho Power Company	Molly Devine	Affirmative	
1	Imperial Irrigation District	Tino Zaragoza		
1	International Transmission Company Holdings Corp	Michael Moltane		
1	JEA	Ted Hobson		
1	KAMO Electric Cooperative	Walter Kenyon	Negative	
1	Kansas City Power & Light Co.	Michael Gammon	Negative	
1	Keys Energy Services	Stanley T Rzad		
1	Lakeland Electric	Larry E Watt		
1	Lee County Electric Cooperative	John W Delucca	Affirmative	
1	LG&E Energy Transmission Services	Bradley C. Young	Negative	
1	Long Island Power Authority	Robert Ganley	Affirmative	
1	Los Angeles Department of Water & Power	John Burnett		
1	Lower Colorado River Authority	Martyn Turner		
1	M & A Electric Power Cooperative	William Price		
1	Manitoba Hydro	Joe D Petaski	Affirmative	
1	MEAG Power	Danny Dees	Negative	
1	MidAmerican Energy Co.	Terry Harbour	Negative	
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Negative	
1	National Grid USA	Michael Jones	Negative	
1	Nebraska Public Power District	Cole C Brodine	Abstain	
1	New York Power Authority	Bruce Metruck	Negative	
1	New York State Electric & Gas Corp.	Raymond P Kinney	Negative	
1	Northeast Missouri Electric Power Cooperative	Kevin White	Negative	
1	Northeast Utilities	David Boguslawski	Negative	
1	Northern Indiana Public Service Co.	Kevin M Largura	Negative	
1	NorthWestern Energy	John Canavan	Abstain	
1	NStar Gas and Electric	John Robertson		
1	Ohio Valley Electric Corp.	Robert Matthey	Abstain	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Negative	
1	Omaha Public Power District	Doug Peterchuck	Negative	
1	Oncor Electric Delivery	Jen Fiegel	Negative	
1	Orlando Utilities Commission	Brad Chase		
1	Pacific Gas and Electric Company	Bangalore		

		Vijayraghavan		
1	PacifiCorp	Ryan Millard	Abstain	
1	PECO Energy	Ronald Schloendorn	Negative	
1	Platte River Power Authority	John C. Collins		
1	Portland General Electric Co.	John T Walker	Negative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Abstain	
1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Abstain	
1	Public Utility District No. 2 of Grant County, Washington	Rod Noteboom	Affirmative	
1	Puget Sound Energy, Inc.	Denise M Lietz	Negative	
1	Rochester Gas and Electric Corp.	John C. Allen	Abstain	
1	Sacramento Municipal Utility District	Tim Kelley	Negative	
1	Salt River Project	Robert Kondziolka	Negative	
1	Santee Cooper	Terry L Blackwell	Negative	
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Sho-Me Power Electric Cooperative	Denise Stevens		
1	Snohomish County PUD No. 1	Long T Duong	Negative	
1	South California Edison Company	Steven Mavis	Affirmative	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Negative	
1	Southern Illinois Power Coop.	William Hutchison		
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	
1	Tampa Electric Co.	Beth Young		
1	Tennessee Valley Authority	Larry Akens	Abstain	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Negative	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Xcel Energy, Inc.	Gregory L Pieper		
2	Alberta Electric System Operator	Mark B Thompson	Affirmative	
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Rich Vine	Abstain	
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Abstain	
2	Independent Electricity System Operator	Barbara Constantinescu	Negative	
2	ISO New England, Inc.	Kathleen Goodman	Abstain	
2	Midwest ISO, Inc.	Marie Knox	Negative	
2	New Brunswick System Operator	Alden Briggs	Abstain	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	stephanie monzon	Abstain	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Abstain	
3	Alabama Power Company	Richard J. Mandes	Negative	
3	Alameda Municipal Power	Douglas Draeger		
3	Ameren Services	Mark Peters	Negative	
3	APS	Steven Norris	Affirmative	



3	Associated Electric Cooperative, Inc.	Chris W Bolick	Negative	
3	Avista Corp.	Robert Lafferty		
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Bonneville Power Administration	Rebecca Berdahl	Negative	
3	Central Electric Power Cooperative	Adam M Weber	Negative	
3	Central Lincoln PUD	Steve Alexanderson	Negative	
3	City of Austin dba Austin Energy	Andrew Gallo	Negative	
3	City of Bartow, Florida	Matt Culverhouse	Affirmative	
3	City of Clewiston	Lynne Mila	Affirmative	
3	City of Farmington	Linda R Jacobson	Abstain	
3	City of Garland	Ronnie C Hoeinghaus	Negative	
3	City of Green Cove Springs	Gregg R Griffin		
3	City of Lodi, California	Elizabeth Kirkley	Negative	
3	City of Palo Alto	Eric R Scott		
3	City of Redding	Bill Hughes	Negative	
3	City of Ukiah	Colin Murphey	Negative	
3	Cleco Corporation	Michelle A Corley	Negative	
3	Colorado Springs Utilities	Charles Morgan	Affirmative	
3	ComEd	Bruce Krawczyk	Negative	
3	Consolidated Edison Co. of New York	Peter T Yost	Negative	
3	Consumers Energy	Richard Blumenstock	Negative	
3	Cowlitz County PUD	Russell A Noble		
3	CPS Energy	Jose Escamilla		
3	Detroit Edison Company	Kent Kujala	Negative	
3	Duke Energy Carolina	Henry Ernst-Jr	Negative	
3	Entergy	Joel T Plessinger	Negative	
3	FirstEnergy Energy Delivery	Stephan Kern	Negative	
3	Florida Municipal Power Agency	Joe McKinney	Affirmative	
3	Florida Power Corporation	Lee Schuster	Negative	
3	Georgia Power Company	Danny Lindsey	Negative	
3	Georgia System Operations Corporation	Scott McGough	Affirmative	
3	Great River Energy	Brian Glover	Negative	
3	Gulf Power Company	Paul C Caldwell	Negative	
3	Hydro One Networks, Inc.	David Kiguel	Negative	
3	KAMO Electric Cooperative	Theodore J Hilmes		
3	Kansas City Power & Light Co.	Charles Locke	Negative	
3	Kissimmee Utility Authority	Gregory D Woessner		
3	Lakeland Electric	Mace D Hunter	Affirmative	
3	Lincoln Electric System	Jason Fortik	Negative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Negative	
3	Louisville Gas and Electric Co.	Charles A. Freibert		
3	M & A Electric Power Cooperative	Stephen D Pogue	Negative	
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Negative	
3	Mississippi Power	Jeff Franklin	Negative	
3	Modesto Irrigation District	Jack W Savage	Affirmative	
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Negative	
3	Muscatine Power & Water	John S Bos	Negative	

3	Nebraska Public Power District	Tony Eddleman	Negative	
3	New York Power Authority	David R Rivera	Negative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Negative	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann	Negative	
3	Northern Indiana Public Service Co.	William SeDoris	Negative	
3	NW Electric Power Cooperative, Inc.	David McDowell	Negative	
3	Orange and Rockland Utilities, Inc.	David Burke	Negative	
3	Owensboro Municipal Utilities	Thomas T Lyons	Negative	
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	PacifiCorp	Dan Zollner	Abstain	
3	Platte River Power Authority	Terry L Baker	Negative	
3	PNM Resources	Michael Mertz		
3	Portland General Electric Co.	Thomas G Ward	Negative	
3	Potomac Electric Power Co.	Robert Reuter		
3	Progress Energy Carolinas	Sam Waters	Negative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Abstain	
3	Puget Sound Energy, Inc.	Erin Apperson	Negative	
3	Rutherford EMC	Thomas M Haire	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Negative	
3	Salmon River Electric Cooperative	Ken Dizes	Negative	
3	Salt River Project	John T. Underhill		
3	Santee Cooper	James M Poston	Negative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Negative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas		
3	South Carolina Electric & Gas Co.	Hubert C Young	Abstain	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L. Donahey		
3	Tennessee Valley Authority	Ian S Grant	Abstain	
3	Tri-County Electric Cooperative, Inc.	Mike Swearingen	Affirmative	
3	Tri-State G & T Association, Inc.	Janelle Marriott	Affirmative	
3	Westar Energy	Bo Jones	Negative	
3	Wisconsin Electric Power Marketing	James R Keller		
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini	Negative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Abstain	
4	City of Austin dba Austin Energy	Reza Ebrahimian		
4	City of Clewiston	Kevin McCarthy	Affirmative	
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Affirmative	
4	City of Redding	Nicholas Zettel	Negative	
4	City Utilities of Springfield, Missouri	John Allen	Negative	
4	Consumers Energy	David Frank Ronk	Negative	
4	Cowlitz County PUD	Rick Syring		
4	Detroit Edison Company	Daniel Herring		

4	Flathead Electric Cooperative	Russ Schneider	Negative	
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Cairo Vanegas		
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Imperial Irrigation District	Diana U Torres	Affirmative	
4	Indiana Municipal Power Agency	Jack Alvey	Abstain	
4	LaGen	Richard Comeaux		
4	Madison Gas and Electric Co.	Joseph DePoorter	Negative	
4	Modesto Irrigation District	Spencer Tacke	Affirmative	
4	Northern California Power Agency	Tracy R Bibb		
4	Ohio Edison Company	Douglas Hohlbaugh	Negative	
4	Oklahoma Municipal Power Authority	Ashley Stringer	Negative	
4	Old Dominion Electric Coop.	Mark Ringhausen	Affirmative	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Negative	
4	Sacramento Municipal Utility District	Mike Ramirez	Negative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Negative	
4	South Mississippi Electric Power Association	Steven McElhaney		
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative	
4	WPPI Energy	Todd Komplin	Negative	
5	AEP Service Corp.	Brock Ondayko	Abstain	
5	AES Corporation	Leo Bernier		
5	Amerenue	Sam Dwyer	Negative	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit		
5	Avista Corp.	Edward F. Groce	Negative	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	Affirmative	
5	Bonneville Power Administration	Francis J. Halpin	Negative	
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative	
5	Calpine Corporation	Phillip Porter		
5	City and County of San Francisco	Daniel Mason	Negative	
5	City of Austin dba Austin Energy	Jeanie Doty	Negative	
5	City of Redding	Paul A. Cummings	Negative	
5	City of Tallahassee	Karen Webb	Negative	
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative	
5	Cleco Power	Stephanie Huffman	Negative	
5	Cogentrix Energy, Inc.	Mike D Hirst		
5	Colorado Springs Utilities	Jennifer Eckels	Affirmative	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Negative	
5	Consumers Energy Company	David C Greyerbiehl	Negative	
5	Cowlitz County PUD	Bob Essex		
5	Dairyland Power Coop.	Tommy Drea		

5	Deseret Power	Philip B Tice Jr	Affirmative	
5	Detroit Edison Company	Christy Wicke	Negative	
5	Dominion Resources, Inc.	Mike Garton		
5	Duke Energy	Dale Q Goodwine	Negative	
5	Dynegy Inc.	Dan Roethemeyer	Negative	
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain	
5	Edison Mission Marketing & Trading Inc.	Brenda J Frazer	Negative	
5	Electric Power Supply Association	John R Cashin		
5	Essential Power, LLC	Patrick Brown	Negative	
5	Exelon Nuclear	Michael Korchynsky	Negative	
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative	
5	FirstEnergy Solutions	Kenneth Dresner	Negative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	
5	Great River Energy	Preston L Walsh	Negative	
5	Hydro-Québec Production	Roger Dufresne	Negative	
5	Imperial Irrigation District	Marcela Y Caballero	Affirmative	
5	JEA	John J Babik	Negative	
5	Kansas City Power & Light Co.	Brett Holland	Negative	
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Affirmative	
5	Liberty Electric Power LLC	Daniel Duff	Negative	
5	Lincoln Electric System	Dennis Florom		
5	Los Angeles Department of Water & Power	Kenneth Silver	Negative	
5	Luminant Generation Company LLC	Mike Laney		
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Negative	
5	MidAmerican Energy Co.	Christopher Schneider	Negative	
5	Muscatine Power & Water	Mike Avesing		
5	Nebraska Public Power District	Don Schmit	Negative	
5	New York Power Authority	Wayne Sipperly	Negative	
5	NextEra Energy	Allen D Schriver	Negative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative	
5	Northern Indiana Public Service Co.	William O. Thompson		
5	Occidental Chemical	Michelle R DAntuono	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Negative	
5	Orlando Utilities Commission	Richard Kinas		
5	Pacific Gas and Electric Company	Richard J. Padilla	Affirmative	
5	PacifiCorp	Sandra L. Shaffer		
5	Platte River Power Authority	Roland Thiel	Negative	
5	Portland General Electric Co.	matt E jastram	Negative	
5	PowerSouth Energy Cooperative	Tim Hattaway	Negative	
5	PPL Generation LLC	Annette M Bannon	Negative	
5	Progress Energy Carolinas	Wayne Lewis	Negative	
5	PSEG Fossil LLC	Tim Kucey	Abstain	
5	Public Utility District No. 1 of Lewis County	Steven Grega		

5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Affirmative	
5	Puget Sound Energy, Inc.	Tom Flynn	Negative	
5	Sacramento Municipal Utility District	Bethany Hunter	Negative	
5	Salt River Project	William Alkema	Negative	
5	Santee Cooper	Lewis P Pierce	Negative	
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins		
5	Snohomish County PUD No. 1	Sam Nietfeld	Negative	
5	South Carolina Electric & Gas Co.	Edward Magic	Negative	
5	Southeastern Power Administration	Douglas Spencer		
5	Southern California Edison Co.	Denise Yaffe	Affirmative	
5	Southern Company Generation	William D Shultz	Negative	
5	Tacoma Power	Chris Mattson	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Affirmative	
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Abstain	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Negative	
5	U.S. Bureau of Reclamation	Martin Bauer	Abstain	
5	Wisconsin Electric Power Co.	Linda Horn		
5	WPPI Energy	Steven Leovy	Negative	
5	Xcel Energy, Inc.	Liam Noailles	Negative	
6	AEP Marketing	Edward P. Cox	Abstain	
6	Ameren Energy Marketing Co.	Jennifer Richardson	Negative	
6	APS	Randy A. Young	Abstain	
6	Bonneville Power Administration	Brenda S. Anderson	Negative	
6	City of Austin dba Austin Energy	Lisa L Martin	Negative	
6	City of Redding	Marvin Briggs	Negative	
6	Cleco Power LLC	Robert Hirschak	Negative	
6	Colorado Springs Utilities	Lisa C Rosintoski	Affirmative	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Negative	
6	Duke Energy	Greg Cecil	Negative	
6	Entergy Services, Inc.	Terri F Benoit	Negative	
6	FirstEnergy Solutions	Kevin Querry	Negative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative	
6	Great River Energy	Donna Stephenson	Negative	
6	Imperial Irrigation District	Cathy Bretz	Affirmative	
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	
6	Lakeland Electric	Paul Shipps	Affirmative	
6	Lincoln Electric System	Eric Ruskamp	Negative	
6	Los Angeles Department of Water & Power	Brad Packer	Negative	
6	Luminant Energy	Brad Jones		
6	Manitoba Hydro	Daniel Prowse	Affirmative	
6	MidAmerican Energy Co.	Dennis Kimm	Negative	
6	Modesto Irrigation District	James McFall	Affirmative	
6	Muscatine Power & Water	John Stolley	Negative	

6	New York Power Authority	Saul Rojas	Negative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Negative	
6	NRG Energy, Inc.	Alan Johnson		
6	Omaha Public Power District	David Ried	Negative	
6	PacifiCorp	Scott L Smith	Abstain	
6	Platte River Power Authority	Carol Ballantine	Negative	
6	Progress Energy	John T Sturgeon	Negative	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Abstain	
6	Sacramento Municipal Utility District	Diane Enderby	Negative	
6	Salt River Project	Steven J Hulet	Negative	
6	Santee Cooper	Michael Brown	Negative	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Negative	
6	Snohomish County PUD No. 1	William T Moojen	Negative	
6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Southern Company Generation and Energy Marketing	John J. Ciza	Negative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Abstain	
6	Westar Energy	Grant L Wilkerson	Negative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney		
8		Roger C Zaklukiewicz	Negative	
8		James A Maenner	Affirmative	
8		Edward C Stein	Affirmative	
8	APX	Michael Johnson		
8	JDRJC Associates	Jim Cyrulewski	Negative	
8	Massachusetts Attorney General	Frederick R Plett		
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon	Abstain	
8	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman	Negative	
8	Volkman Consulting, Inc.	Terry Volkman	Negative	
9	California Energy Commission	William M Chamberlain		
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Negative	
9	Public Utilities Commission of Ohio	Klaus Lambeck		
10	Florida Reliability Coordinating Council	Linda Campbell		
10	Midwest Reliability Organization	William S Smith	Negative	
10	New York State Reliability Council	Alan Adamson	Negative	
10	Northeast Power Coordinating Council	Guy V. Zito	Negative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Negative	
10	SERC Reliability Corporation	Carter B Edge	Abstain	
10	Southwest Power Pool RE	Emily Pennel	Abstain	
10	Texas Reliability Entity, Inc.	Donald G Jones	Abstain	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Abstain	

**Individual or group. (94 Responses)**  
**Name (64 Responses)**  
**Organization (64 Responses)**  
**Group Name (30 Responses)**  
**Question 1 (74 Responses)**  
**Question 1 Comments (94 Responses)**  
**Question 2 (76 Responses)**  
**Question 2 Comments (94 Responses)**  
**Question 3 (66 Responses)**  
**Question 3 Comments (94 Responses)**  
**Question 4 (78 Responses)**  
**Question 4 Comments (94 Responses)**  
**Question 5 (75 Responses)**  
**Question 5 Comments (94 Responses)**  
**Question 6 (77 Responses)**  
**Question 6 Comments (94 Responses)**  
**Question 7 (76 Responses)**  
**Question 7 Comments (94 Responses)**  
**Question 8 (74 Responses)**  
**Question 8 Comments (94 Responses)**  
**Question 9 (59 Responses)**  
**Question 9 Comments (94 Responses)**  
**Question 10 (0 Responses)**  
**Question 10 Comments (94 Responses)**  
**Lead Contact (30 Responses)**

Group
Northeast Power Coordinating Council
No
The proposed Operating Communication term is not markedly different from the originally proposed term (Interoperability Communication). The proposal continues to expand the scope of the SAR from the concept of tightening the protocols associated with Emergencies by now applying to all communications. The text box in the draft standard indicates that Reliability Directives are a type of Operating Communications, to the extent they change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. There is little difference between the two terms despite the SDT's assessment that Reliability Directive is a type (or a subset) of Operating Communication. If the intent is to use the proposed new term to require three-part communication (as suggested in R2 and R3), then that intent can be accomplished by using the term Reliability Directive as it covers not only the emergency state but also instructions needed to address Adverse Reliability Impacts. Both the Blackout Report and the FERC directive deal with tightening protocols for Emergencies. The proposed requirements completely fail to address emergencies and focus solely on developing non-emergency protocols.
No
An alternative approach would be to introduce communications protocols as a mandatory non-standard (e.g. as a requirement for certification) that would center on a corporate communications manual that encourages three-part communications; and that includes how monitoring would be audited internally. Such an alternative would change the requirement from monitoring personnel mistakes to a requirement monitoring corporate culture.
No
A general suggestion for all reliability standards that has been made is that standards' requirements be eliminated that do not address reliability problems. No available information indicates that language is causing reliability problems. In the absence of such evidence that this is a reliability problem, consideration should be given to eliminating this requirement.
No

This requirement is outside the scope of the approved SAR which proposes responding to the Blackout Recommendation to tighten communications protocols especially during emergencies. This proposed requirement is both procedural and does not address tightening communications of situational awareness. As an alternative a standard could require the Functional Entities to have a communications protocol that could indeed include this, but it should not be a requirement on personnel. By adopting an alternative category (i.e. not making this a standard) a Reliability Entity could adopt a progressive best practice approach without concern for violating the strictest features of the proposed best practice.

No

There are a number of references appearing that state "excluding Reliability Directives". If Reliability Directive is going to be defined in a separate project (Project 2006-06), how will stakeholders understand what is really being excluded for the purposes of this Standard's scope? It also needs to be made clear when an action is a Reliability Directive. Will each entity be required to define what is to be included as a Reliability Directive? With the definition of Operating Communication, three-part communications is expanded to include communications beyond directives, communications that might not warrant governance by this Standard. The proposed exception (specifically Reliability Directives used during emergencies) does not support the reason the SAR was proposed--to improve protocols during emergencies. The term Operating Communications is not significantly different from the term Reliability Directives (see comments to Q1). Using the term Reliability Directives to support the requirements for 3-part communication can avoid (a) any confusion with the requirement in COM-002-3, (b) potential double jeopardy of violating both COM-002 and COM-003, and (c) the need to exercise 3-part communication for routine operating instructions. Suggest consider removing the term Operating Communications. Are Requirements R2 and R3 needed if Reliability Directives already cover non-emergency conditions (instructions/actions that are needed to address potential Adverse Reliability Impact)? The requirement to exercise three-part communication to handle Reliability Directives is thus duly addressed in COM-002-3. It hasn't been shown that three-part communication is necessary for routine operating instructions. Realistically the definition of Operating Communications covers all communications. Only Reliability Directives should require three-part communications, and should be enforceable if a miscommunication results in an error on the BES.

No

What determines whether a clarifier used is an "accurate alpha-numeric clarifier"? What dictates non-compliance? This is a procedural issue. The Standard should require the Functional Entities to have a communications protocol that could include this, but it should not be a standard on personnel. Complexity is being added to communications, not improvement. There are equipment designations that are commonly used and understood, and to force the use of clarifiers will disrupt operating communications.

No

The applicability of this Standard is unclear in the case of Distribution Providers. The definition of Operating Communication includes "Elements" that could impact the BES. The NERC Glossary definition for Elements includes non-BES devices and equipment. Additionally, the Purpose section of the Standard states "harmful to the reliability of the BES." Since non-BES Elements could affect the BES this Standard could be deemed applicable to non-BES devices. If it is the intent of the SDT to apply this Standard to All Operating Communications concerning both BES and non-BES Facilities this should be explicitly stated in the applicability section for transparency. Otherwise clarifying language should be added to exclude non-BES Facilities. This is a procedural issue. Suggest that the Standard should require the Functional Entities to have a communications protocol that could indeed include this suggestion, but it should not be a standard on personnel.

No

The white paper discusses many non-utility industries use of the three-part communication. However, they are not out of compliance if they fail to use three-part communications. Only the Reliability Directives should require three-part communications (and dictate compliance). This should be enforceable only if the miscommunication results in an error on the BES. We support the use of three-part communications with limitations. There is concern over the potential for being out of compliance when there is no BES impact. Failure to meet Requirement R2, part 2.2 bullets 1 or 3 is either a Moderate or High. Failure to meet bullet 2 is a Severe VSL. It is not clear why this differentiation was adopted. The White Paper reflects on Human Performance, and how miscommunications can cause a



BES error resulting in an outage, or possible cascading effects. Then the Standard (and the associated out of compliance) should apply when, and to the extent that communications lapse (e.g., when there is an impactful violation of bullets 1, 2 and/or 3) results in an impactful error on the BES. Otherwise, an out of compliance is inappropriate. Non-impactful violations should be rated "Lower VSL."

The three-part communications in COM-003-1 are expanded beyond reliability directives which unnecessarily forces the inclusion of conversations which may be impractical or unnecessary. Good practice dictates that three part communication be used as a tool, but it should not be a requirement. The Standard is specifying how to accomplish, not just what is required. "1.1.4 When referring to a Transmission interface Element or a Transmission interface Facility, use the name specified by the owner(s) for that Transmission interface Element or Transmission interface Facility" may create a detriment to reliability. Oftentimes, for switching, TOs have very detailed names for individual elements, devices, equipment which may not translate into the TOP/RC systems. However, it is known what equipment is being talked about. The requirement is unnecessary, unreasonable and burdensome. The communications protocol to be followed in the event that there is a situation that requires the removal of BES (or any other power system equipment for that matter) from service on an immediate and emergency basis to protect the health and safety of the public and/or an employee/s needs to be addressed. The instructions issued to meet this condition fall under the definition of Operating Communication, but in an emergency situation the time taken for the required repetition could be catastrophic. This also applies to BES (or any other power system) equipment that is in imminent danger of failure, phase angle regulator or transformer tap changer runaway, or other emergency conditions. This is also true of situations where the BES response to a disturbance results in a facility or facilities being overloaded real time over their STE and LTE ratings, and those facility loadings have to be reduced below their STE and LTE ratings within five and fifteen minutes respectively. The time spent for the necessary three part communication could mean the difference between maintaining continuity of service, or having to shed load. Suggest that wording be added to address the emergency situations described by recognizing the possibility that an operator might have to respond to a situation by issuing a "one way" order, then have a requirement for after the fact communications which would be informational as to what emergency actions were taken, and then resume normal communications protocols for subsequent actions. Regarding the wording for the issuer in R2 "...that issues an oral, two-party, person-to-person Operating Communication", and the wording for the receiver in R3 "...that receives an oral two-party, person-to-person Operating Communication", what is the significance of the use of the comma after "oral" in R2? What is the difference between two-party and person-to-person communication? Also regarding R2, the Generator Operator should be included as an authority to issue an Operating Communication. It is not necessary to separate normal and emergency communications into two standards (COM-003, COM-002). One standard should encompass both. But having two Standards, the communication protocols in COM-003 R1 should be incorporated in COM-002. The proposals expand the scope of the SAR by ignoring communications protocols used during emergencies and focusing on procedures imposed on personnel during normal situations. This standard overreaches into routine operations by requiring three-part communication for all instructions that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. Because of the real-time frequency of use these instructions, requiring operating personnel to apply a three-part communication procedure for these instructions is unnecessary and can in fact adversely affect reliability. Any requirement for three-part communication for routine operating instructions should be removed.

Guy Zito

Individual

Hertzel Shamash

The Dayton Power and Light Company

No

We have concerns with the true scope and depth of this standard. How far does this standard reach? A tie line utility wants us to utilize three part communication for tie line check outs, which we assume is not part of 'operating communications'. Not sure this is the intent of the standard, but seems to be a coverall by them. One could argue the tie line data (which is up to 23 hours old by the time we check out, is an output from the BES) How do resolve this? Operating Communications is a very broad term that could be interpreted differently by the many individuals we interact with leading to 'overuse' of three part communication when in doubt. This may counteract the importance of its use for the conditions we truly need to utilize this protocol.

No
This standard specifically excludes "Reliability Directives" which is a term that does not currently exist in the list of definitions, rather it is proposed in a separate standard (COM-002-3) which is currently in the approval process. Not sure how you can reference a term from a pending standard.
No
This requires using a 'correct' alpha numeric clarifier, while the proposed standard is written as 'accurate'. It would be great if there were consistency between the proposed standard and the comment form. Not sure how one can define accurate or correct. The standard indicates that NATO has one, but there are others as well. The moniker for "A" in the LAPD definition is ADAM, while NATO is ALPHA. Both are 'accurate and/or correct' but if I use one version and the person I'm talking to uses another, is this a violation of the standard? The language in this proposed version is better than the last (where they required the use of the NATO language) but I'm still not comfortable this proposal fixes the problem.
Individual
D Mason
HHWP
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
No
Recommend that R1.1.4 incorporate use of the term Uniform Line Identifiers, in conformance with R18 of TOP-002.
No
VSL should provide for a Lower Violation Severity Level for first occurrences of the violation. For the most part violation of this standard should be addressable through FFT process.
Group
ACES Power Marketing Standards Collaborators
No
1. We do not agree with the need to use three-part communication for all operations on the BES. Requiring entities to employ three-part communication for routine operating instructions is excessive and burdensome. The 2003 Blackout Report recommended that industry, "Tighten communications protocols, especially for communications during alerts and emergencies." We strongly support using

three-part communication for the execution of Reliability Directives as defined in the proposed COM-002-3 draft standard in Project 2006-06 but not for routine operating instructions. 2. The COM-003-1 Operating Communications Protocols White Paper states three reliability benefits of using three-part communication as follows: a. "The removal of any doubt that communication protocols will be used and when they will be used. This will reduce the opportunity for confusion and misunderstanding among entities that may have different doctrine." We don't agree with the premise that implementing three-part communications for all operating instructions will reduce confusion. If there is a standard such as draft COM-002-3 that requires the use of three-part communication for Reliability Directives and the issuer is required to state that a Reliability Directive is being issued, then there should be no confusion. The example provided in this bullet where "one entity uses three-part for emergencies, and the other uses it for all operating conditions" is used to support the premise. However, Table 1-A of the White Paper only lists 11 entities that currently use three-part communication during both emergencies and non-emergencies. Eleven out of how many entities? The paragraph immediately following Table 1-A states, "The fact that the majority of BES entities already employ three-part (or repeat back) communications for routine...operations..." Eleven entities do not make a majority. We don't believe the actions of a few should dictate the actions of all. Much stronger evidence to support this "fact" is needed. b. "There will be no mental "transition" when operating conditions shift from normal to Emergency." Once again, if there is a standard such as COM-002-3 that requires three-part communication for Reliability Directives and the issuer is required to state that a Reliability Directive is being issued, then there should be no confusion. System Operators are trained to make mental transitions every day. It is an inherent characteristic of the job. Operators should be able to mentally "transition" when a Reliability Directive is issued. c. "The formal requirement for three-part communication will create a heightened sense of awareness in operators that the task they are about to execute is critical..." Not all operating instructions are "critical" so this premise is flawed. This bullet makes perfect sense for Reliability Directives because the actions taken to address those would be considered critical based on the proposed definition of Reliability Directive in COM-002-3. It does not make sense for routine operating instructions. 3. Based on the above, we do not agree with the definition of Operating Communication as proposed in this draft standard since we do not support the use of three-part communication for all operations on the BES.

Yes

Yes

Yes

No

1. The SDT should consider clarifying that use of relative times will not be subject to this requirement. For example, if a System Operator communicates that they will begin switching in 10 minutes, no 24 hour clock requirement is necessary.

No

1. We do not agree that excluding Reliability Directives is a good idea. We would prefer to see COM-003-1 and COM-002-3 combined and have the requirements only apply to Reliability Directives. If these protocols should be used for any type of communication, we believe they should be used for Reliability Directives as we've stated in our comments in Question 1. The definition of a Reliability Directive as proposed in COM-002-3 is "where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact." There is no type of communication more important than a Reliability Directive, therefore, the protocols outlined in R2 and R3 of COM-003-1 should be applicable to them. During the webinar on June 7, 2012, it was said that the only distinctions between COM-002-3 and COM-003-1 are the VRF/VSL levels and that a Reliability Directive must be stated as such when issued. There is no reason both standards can't be combined into a single standard and simply split out the VRF/VSL levels for Reliability Directives while keeping the requirement where the RC, TOP and BA shall identify the action as a Reliability Directive when one is issued. We suggest that the SDTs consider combining their efforts in this manner. 2. However, if both projects are to continue along separate paths, we'd like to see the requirements in both mirror one another so entities aren't wondering what the distinction is between the two descriptions of three-part communication. COM-003-1 is more detailed in outlining the steps that should be taken when using three-part

communication than COM-002-3. COM-002-3 R2 states that the recipient “shall repeat, restate, rephrase or recapitulate...” COM-003-1 doesn’t use these words. It simply states that the receiver shall “repeat” or “request the issuer reissue...” 3. We do agree with splitting the single requirement into two requirements: one for the issuer and one for the receiver. However, we suggest the SDT develop a flow chart that demonstrates the communication paths and the loop flow of the steps to further clarify what needs to be done and when. For example, in R2 Part 2.2, after an Operating Communication is reissued at the request of the receiver (bullet 3), the receiver should repeat the information to make sure they received it correctly (R3 bullet 1) and the issuer should confirm the receiver’s response (Part 2.2 bullet 1). As the parts are written currently, the loop flow of the steps isn’t clear. It may seem intuitive but a literal reading doesn’t capture the loop flow as intended. R3 even has a gap in that the recipient can choose to repeat the Operating Communication or they can request it be reissued. Thus, if they request it is reissued, they don’t have to repeat it back. 4. In R3, we suggest adding the words, “before taking action” to the end of the first bullet to further emphasize the importance of receiving confirmation from the issuer. If action is taken prior to confirmation, a critical mistake could be made if the instruction was heard and repeated back incorrectly.

No

1. First the requirement uses the word “accurate” instead of “correct” as stated in this question. 2. What is meant by the term “accurate alpha-numeric clarifiers?” Can someone make up their own alpha-numeric clarifiers in the heat of the moment and expect the other party to mentally “transition” and understand what they mean? Or does it have to be another established and recognized alpha-numeric clarifier? A made up alpha-numeric clarifier could be confusing to someone who isn’t familiar with the clarifiers being used. This is more of a mental “transition” than determining the difference between an Emergency (which will be stated up front as a Reliability Directive as proposed in draft COM-002-3) and a normal operating instruction. We suggest that only established alpha-numeric clarifiers be used.

No

1. We don’t believe this requirement is necessary. A similar requirement was removed from TOP-002-2 Project 2007-03. From the Project 2007-03 mapping document: “R18. Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network.” Project 2007-03 SDT’s reason for deletion of R18 from TOP-002-2: “This requirement adds no reliability benefit. Entities have existing processes that handle this issue. There has never been a documented case of the lack of uniform line identifiers contributing to a System reliability issue. The bottom line is that this situation is handled by the operators as part of their normal responsibilities, and no one is aware of a switching error caused by confusion over line identifiers.” We agree with these reasons and believe they should apply to R1 Part 1.1.4 in COM-003-1. 2. Another issue we have with the requirement is that this draft standard is not applicable to TOs or GOs yet the requirement calls for the use of “the name specified by the owner(s) for that Transmission interface Element or Transmission interface Facility.” Are the auditors going to ask the TOs and GOs for their list of named Elements or Facilities when they audit the applicable entities in this standard?

No

1. The first Severe VSL listed for R1 says, “...did not correctly implement any of the parts...” What is the definition of the word “any” in this VSL? We’ve interpreted the VSL to mean that none of the parts of R1 were implemented. If this is the intent of the SDT, then we suggest removing this VSL since the next Severe VSL listed says, “...did not correctly implement three (3) or more of the four (4) parts...” Three or more would include all of the parts (4 of 4) not being implemented correctly. Not implementing 1 of the 4 parts is a Moderate VSL while not implementing 2 of the 4 parts is a High VSL. So, not implementing 3 or more of the parts would be a Severe VSL. 2. The second Moderate VSL for R1 says, “The responsible entity did not correctly implement Part 1.2 of the requirement.” Corresponding with our comments in Question 7 above, we don’t know how this requirement will be measured since the term “accurate” in the requirement is not defined. If an entity can make up their own clarifiers, who determines if they were “accurate” and whether they were correctly implemented? Measure M1 doesn’t specify a measurement for Part 1.2 of R1. 3. The High VSL for R3 should be clarified to align with our suggestion of adding the words, “before taking action” in Question 6 above.

1. It is not clear that COM-003-1 R1 applies to COM-002-3. The latest draft of COM-002-3 doesn’t reference the communications protocols listed in COM-003-1 R1 and the definition of Reliability

Directive does not state that it is a type of Operating Communication. The only place that describes the relationship between a Reliability Directive and Operating Communications is the text box under the definition of Operating Communication in COM-003-1. There should be a better connection between the two standards to emphasize this fact. We recommend the SDTs work together to bridge this gap. 2. Bullet 2 of the Implementation Plan Effective Dates is missing a word or words (section in question in parentheses): "If the version of COM-001-2 revised under Project 2006-06 is not approved before COM-003-1 is approved, then COM-001-1.1 shall expire midnight of the day (immediately the) version of COM-001-2 developed under Project 2007-02 ..." In addition, this bullet is simply too wordy and difficult to comprehend. We suggest re-wording or splitting into separate sentences for easier comprehension. 3. Because all three Measures include voice recordings as evidence, the Data Retention section inappropriately and without justification raises the bar on retention of voice recordings. The section requires 365 days of voice recordings for R1 and 180 days for R2 and R3. Many registered entities keep no more than 90 days of voice recordings. Keeping more than 90 days would require unnecessary additional storage. Furthermore, it is not consistent with any other NERC standard (including COM-002) that compels, at most, 90 days. Thus, many registered entities probably have evidence retention policies that actually require destruction of such recordings after 90 days. 4. While we do not agree with all parts of the Whitepaper, we believe one major point of clarification is needed. On page 3, in the first bullet regarding a general description of how three-part communications is conducted, the face-to-face communication needs to be clarified or removed. Including face-to-face communications is not necessary for two primary reasons. First, the major reason that three-part is necessary for telephonic communications is because you cannot see the receiver and really tell if they comprehend the message. Second, this could draw in communications between operators within the control center. Since these conversations are not easily recordable, how does a registered entity prove compliance?

Jean Nitz

Individual

Mace Hunter

Lakeland Electric

Yes

Would modify R1 as noted below to remove the implication that a Distribution would have to provide evidence that all Distribution Provider communications used the required protocols. R1. Each Reliability Coordinator, Transmission Operator, Balancing Authority[, and] Generator Operator, and Distribution Provider [receiving a Operating Communications,] shall use the following communications protocols:

Yes

Yes

Yes

Yes

No

I do not understand why Reliability Directives would be excluded! Reliability Directives are capitalized in the box on the Development Roadmap and in this question but I cannot find the term in the February 8, 2012 NERC Glossary. So where is Reliability Directives defined? I am concerned that the exclusion will cause problems especially if the clarifying box is omitted from the final standard. The split is OK.

Yes

Yes

Yes

Individual
John D. Brockhan
CenterPoint Energy Houston Electric, LLC.
No
Question 1 Comments: Instead of adding the proposed new definition of "Operating Communication" to the NERC Glossary, the definition should be used to define the industry known terminology "Directive", as "an instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System". Aligning this definition with Project 2006-006 Reliability Coordination and a new proposed definition of "Reliability Directive" to be "A communication initiated by a Reliability Coordinator, transmission operator or Balancing Authority to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System where action by the recipient is necessary to address an emergency or adverse Reliability Impact".
Yes
Question 3 Comments: CenterPoint Energy believes the SDT should only use existing defined alert levels, rather than implementing new alert levels or categories.
No
Question 6 Comments: The proposed language in this requirement can be omitted and incorporated in COM-002-2 R2, where language has already been written and is currently in force regarding 3-part communications. The industry is well aware and versed in the method of communicating using 3-part communications. The elaboration of performing a three part communication is a "how to" and not necessary and can be omitted altogether. The term "3-Part Communication" could be defined and added to the NERC Glossary to suffice the elaboration of the definition proposed in this requirement. The idea of requiring all communications (Operating Communications) to be made as 3-part communications is not practical and should be left up to the communicating entities. Requiring ongoing administration of "3-part" communications will impede rather than improve timely communications consequently affecting the reliability of the BES.
No
Question 7 Comments: The use of correct alpha numeric clarifiers represents a "how to" and although it may be an example of a good utility practice, it should not be a requirement to the extent of not only just having to use the alpha numeric clarifiers, but required to use them correctly or "accurate" as it is currently worded in the language of proposed COM-003-1 R 1.2 draft 2. The requirement is unclear as to whether the accurate use of alpha –numeric clarifiers is required only when the clarifiers are used, or whether accurate use of alpha-numeric clarifiers are required for all oral Operating Communications. The use of any alpha- numeric clarifiers should be left up to the discretion of the communicating entities during their exchange, acknowledgement, and agreement of information of any such communication.
No
Question 8 Comments: The language in requirement 1.1.4 will require the limitation to a single identifier for an interface element or facility between neighboring entities which will require the neighboring entities to agree upon a specified single identifier. This may possibly require entities to make changes to their EMS system and their model and incur a cost to complete such tasks. Similar language is currently enforced in TOP-002-2 R18, where Entities are required to use uniform line identifiers when referring to transmission facilities of an interconnected network, making this requirement language redundant.
No
Question 9 Comments: No. VRFs and VSLs for requirements R1, R2, and R3 should not be high or severe unless Adverse Reliability Impact has occurred.
Question 10 Comments: It appears that the SDT is using an undefined definition of Reliability Directive to propose the new definition of Operating Communication. Is the intent of the SDT to also

introduce this definition for Reliability Directive with this project? The purpose is not consistent with language in other currently enforced standards. The words "could" and "possibility" needs to be removed from the language. The purpose needs to be concrete. An alternative purpose would be "To specify clear, formal, and universally-applied communication protocols for the operation of BES facilities, that reduce miscommunication, which will have a negative influence on the reliability of the Bulk Electric System. The six month effective date following approval is too short and should be extended to 12 months to allow adequate time for training and implementation.

Individual

Michael Falvo

IESO

No

The IESO agrees with the removal of the 3 terms proposed in the previous draft. However, the IESO does not agree with the introduction of a new term Operating Communication. This term is not materially different than the originally proposed term Interoperability Communication. The text box in the draft standard indicates that Reliability Directives are a type of Operating Communications, to the extent they change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. We see insufficient difference between the two terms despite the SDT's assessment that Reliability Directives are a type (or a subset) of Operating Communication. If the intent is to use the proposed new term to require 3-part communication (as suggested in R2 and R3), the intent can be accomplished by using the term Reliability Directives as it covers not only emergency state but also instructions needed to address Adverse Reliability Impacts. Please also see our comments under Q6 on using the proposed term to support the requirements for 3-part communication.

Yes

We agree that Attachment 1 should not form part of COM-003-1 and support suppressing any requirements in this standard that stipulate the Alert Levels. We need more details on the specific proposal to re-locate Attachment 1 before we can comment on the merit of the transfer.

Yes

We have no preference one way or the other as long as the personnel understand each other. However, if the option to use daylight saving time or standard time is allowed (to be agreed by the personnel), it begs the question as to why the 24-hour clock hours must be followed, and why the 12-hour clock with am and pm specified is not allowed.

No

The IESO disagrees with using the term Operating Communications as it is not much different from the term Reliability Directives (see our comments under Q1). Using the term Reliability Directives to support the requirements for 3-part communication can avoid (a) any confusion with the requirement in COM-002-3, (b) potential double jeopardy of violating both COM-002 and COM-003, and (c) the need to exercise 3-part communication for routine operating instructions. However, if the SDT's intent is to require 3-part communication for any and all operating instructions (as the proposed term suggest), then this intent will result in unnecessary 3-part communication burdens for simple actions such as when requests for the removal of a line, or switching, or generation output changes are issued. We suggest the SDT to remove the term Operating Communications. With respect to Requirements R2 and R3, we question the need for having these requirements if Reliability Directives also cover non-emergency conditions (instructions/actions that are needed to address potential Adverse Reliability Impact). The requirement to exercise 3-part communication to handle Reliability Directives is thus duly addressed in COM-002-3. Other than emergency conditions and potential Adverse Reliability Impact conditions, we do not see a need to exercise 3-part communication for routine operating instructions.

Yes

While we agree with allowing appropriate alpha numeric qualifiers other than the NATO phonetic alphabet, we do not support the mandatory use of these qualifiers for each and every instruction. They should only be required when clarification by either party is requested.

Yes

No
We do not agree with Requirements R2 and R3 to begin with. We therefore do not agree with the VRFs and VSLs for these two requirements.
1. This standard is over-reaching into routine operations as it requires 3-part communication for all instructions that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. This type of instructions occurs every hour, if not every minute. Requiring operating personnel to apply a 3-part communication procedure for each and all of these instructions is absolutely unnecessary and overburdening, and can in fact adversely affect reliability. We strongly suggest that any requirement for 3-part communication for routine operating instructions be removed. 2. The proposed implementation plan conflicts with Ontario regulatory practice respecting the effective date of the standard. It is suggested that this conflict be removed by appending to the implementation plan wording, after "applicable regulatory approval" in the Effective Dates Section A5 on P. 4 of the draft standard COM-001, COM-002 and IRO-001, and on P. 2 of COM-001's Implementation Plan and P. 1 of COM-002's and IRO-001's Implementation Plans, to the following effect: ", or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities."
Individual
Thad Ness
American Electric Power
Our efforts in this regard should first be focused solely on Reliability Directives before expanding this work, and creating similar requirements for all other Operating Communications. Requiring three part communications for every scenario might be considered a best practice by some, but making it a mandatory practice for routine operations seems to emphasize the manner of communications rather than the operations themselves. In addition, requiring three part communications for Reliability Directives will likely result in more widespread usage for more routine operating communications, without making it a requirement. AEP believes that there should not be multiple project teams proposing concurrent changes to COM-001, COM-002, and COM-003. Unless there are overwhelming reasons for not doing so, these efforts should be consolidated and managed by a single project team. In addition, current efforts on COM-003 need to be co-located with the proposed changes to COM-002 within a single standard. Having multiple project teams proposing concurrent changes results in problems such as this, where a) changes are proposed to the same standard or b) similar changes are proposed to separate standards. AEP cannot support revisions on these matters until they are managed by a single project team.
Individual
Ronnie C. Hoeinghaus
City of Garland



Requirement 1.2 should be removed from the standard. The number of directives and switching orders that have been issued in North America over time probably number in the billions. If one could determine the percentage of issues caused by miscommunications out of that large number, it would be extremely small. The reason that miscommunication issues exist is because the communication is between two human beings and where people are involved, issues will happen. A requirement for three part communications is more than sufficient to address the issue of miscommunications. Adding a requirement to use alpha-numeric clarifiers such as the NATO Spelling Alphabet is not going to prevent miscommunications. The only thing that adding this requirement will accomplish is to require auditors to listen to recorded conversations trying to verify that operators used alpha-numeric clarifiers and then penalizing a company if an operator does not even though the directive or switching order was followed correctly.
Individual
Russ Schneider
Flathead Electric Cooperative, Inc.
No
Believe the additional definition is not necessary and it is not clear what value it would have to small Distribution Providers other then additional compliance complexity.
Yes
No
Don't understand this change, but wonder why seperate alert levels are necessary to incorporate in this set of standards.
Yes
No
Not sure this is necessary for small entities.
Yes
Yes
No
Think this requirement is duplicative of TOP-002a, R18
No
We believe there should be a distinction in the "Applicability" section of the standard between "Scheduling Distribution Provider" and "Non-scheduling Distribution Provider". Many small WECC entities re small rural cooperatives and PUDs are Full service customers. This means that the TO/TOP is the power supplier and scheduling agent and therefore handles all reliability directives, scheduling, tagging, dispatching of resources and curtailments of load from breakers on the BES system. According to a letter from the WECC Reliability Coordinator (VRCC and LRCC) none of the smaller entities in the Pacific Northwest will ever receive a "Reliability Directive" directly from teh RC. Such a Directive would be sent to either a Balancing Authority (BA), or a Transmission Operator (TOP). We estimate there are over 100 entities that are BPA Full Service customers that are in a similar position and making this standard applicable to them does nothing to enhance reliability. A simple declarative statement in the Applicability section of the standard could focus the intent of the SDT on those entities that need it while lessening the compliance risk and clerical burden for other entities that the standard should not apply to. We suggest: 4. Applicability: 4.1. Functional Entities 4.1.1 Reliability Coordinator 4.1.2 Transmission Operator 4.1.3 Balancing Authority 4.1.4 Generator Operator 4.1.5 Distribution Provider: With Real-time Operations and Scheduling desk We believe the above change will lessen the compliance burden on small, non-scheduling entities while still meeting the SDT's intent with regard to Operating Personnel Communications. We also note that FERC and NERC, on

multiple occasions and in multiple filings, have indicated their openness to lessening unnecessary compliance requirements for small entities.

Individual

Joe O'Brien

NIPSCO

Yes

Yes

Yes

Yes

Yes

Yes

There was a COM-002 NOP issued in January 2011, a COM-002 interpretation recently approved by NERC, and presently there is a draft of both a COM-002 and a COM-003 out for vote. These projects appear to address 3 part communication requirements in a non-consistent manner. Why not combine these efforts into a single project that the industry can review and understand? The VRF/VSL difference between routine and emergency does not warrant having two standards. A suggested plan of attack could be to withdraw the NERC approved COM-002 interpretation from FERC and combine the COM002-COM003 drafting efforts into one project resulting in a new version of COM-002; we already have enough standards. The content of the two new drafts is good, the webinar was informative, and the work of the SDTs is appreciated.

Individual

Joe Tarantino

SMUD

Yes

Yes

Yes

No

We believe the requirement to only speak English is detrimental to reliability. Entities who have predominantly speaking Spanish personnel would be inhibited with ineffective communications mandated by the English only requirement. Further, this particular requirement is in direct conflict with COM0-001 R4 which states "...Transmission Operators and Balancing Authorities may use an alternate language for internal operations."

Mandating use of a 24-hour clock reference provides no improvement to reliability. This is an auditing function only, there is no reliability benefit to differentiate 0800 and 8 am.

No

Requirements R2 and R3 are over prescriptive and included as a business practice in the entities' training program.

No

Communication should not be restricted to only use of the phonetic alphabet. Referencing a "103-C"

switch versus a "103-Charley" does not enhance reliability and has the potential of hindering reliable operation of the BPS by forcing the Operator Communications personnel to focus on being compliant with the correct phonetics rather than the actual instruction.

No

First, this requirement is redundant to Requirement R18 in the TOP-002 standard. It also put an administrative burden on the RC to know each "correct" name specified by the respective entity's line segment causing a hindering timely operation of BPS elements.

No

Individual

Daniel Duff

Liberty Electric Power LLC

No

Routine market communications between entities are not a valid area of regulation under the NERC Standards.

Yes

Yes

Yes

No

No. Communications which do not involve Directives are not the proper subject of NERC standards.

No

Three part communication is a best business practice. Three part communication should be required during a declared Emergency. But there is no reason to create a standard, and the massive monitoring requirements and records obligations which go along with a standard, to cover business communications.

No

Again, this is beyond the proper scope of reliability standards.

No

This requirement is already covered under TOP-002 R18, and opens double-jeopardy for entities by including it in a second standard.

No

Yes. The regulation of market communications between entities is not the proper subject for NERC standards. The STD proposes placing entities into the realm of zero tolerance for thousands of routine communications. This assures failure. Further, this will force entities to reallocate precious resources away from more critical reliability functions to assure compliance and allow for self-certification. As such, the proposed standard weakens the reliability of the BES. The proposed standard should be withdrawn and the SAR closed.

Individual

Jennifer Wright

San Diego Gas & Electric

No

San Diego Gas & Electric ("SDG&E") agrees with the proposed exemption from the requirement to use English language where the use of another language is mandated by law or regulation. However,

SDG&E recommends including the following language as an additional exemption: "or a formal agreement has been established between the functional entities to use an alternative language," so that R1.1.1. states: "Use the English language when communicating between functional entities, unless another language is mandated by law or regulation or a formal agreement has been established between the functional entities to use an alternative language."

No

SDG&E recommends removing the language, "When the communication is between entities in different time zones" in R1, Part 1.1.3, and replacing it with "Communication is to...", so that R1.1.3 states: "Communication is to include the time and time zone and indicate whether the time is daylight saving time or standard time." The proposed requirement for the communicator to determine if an entity is in a different time zone appears to be an unintended impact of the wording proposed in R1.1.3, and may prove to cause inefficiencies in complying with this requirement. Communicators SHOULD NOT NEED to determine whether or not an entity is in the same time zone as they are, but should simply state the time zone where they are calling from or the KNOWN element of their operations. Though a majority of communication will occur within the same time zones, System Operators and others affected by the requirement will be assured that the timing of ANY event will be KNOWN and never assumed.

No

The boxed note in the draft of COM-003-1 states that "Reliability Directives are a type of Operating Communications..." and the process described in R2 and R3 is 3 way communication. Why is the SDT segregating this as if it is a "separate process" that needs to be followed by operating personnel? The two do not appear to be separate communication processes. SDG&E recommends removing the word, "excluding," and replacing it with the word "including," so that R2 states: "Each Reliability Coordinator, Transmission Operator and Balancing Authority that issues an oral, two-party, person-to-person Operating Communication, including Reliability Directives shall:" SDG&E also recommends that the following language be added in a bullet to R2.2: • Request that the receiver repeat the Operating Communication if the receiver does not issue a response (not necessarily verbatim). R3 notes that the Registered Entity who receives the Operating Communication needs to repeat the Operating Communication provided. In order to promote compliance and proper communications, this bullet point should be added.

Individual

Stephen J. Berger

PPL Generation, LLC on behalf of its Supply NERC Registered Entities

No

PPL Generation, LLC on behalf of its Supply NERC Registered Entities does not agree with the addition of "Operating Communication" as a proposed definition because it imposes three part communication on the industry for routine communications of changes of output in generation. Also the language as written does not specify if these changes include communication of future planning to change the status of generation in instances of future planned outages. The standard should specify if communication of real time operations is what falls under the definition of "Operation Protocol." This ensures that communication which would be considered a compliance event and require the scrutiny of an audit.

Yes

Yes

Yes

Yes

No
Three part communication should not be required for routine operating communications.
No
PPL Generation, LLC on behalf of its Supply NERC Registered Entities does not believe that this sub requirement is appropriate when applied with the new definition "Operating Communication." Common operating communications should not be considered a compliance event that requires the use of correct alpha numeric clarifiers. Under the current language, it could be interpreted that according to "Operating Communication" that every change in generation output must be stated in alpha numeric clarifiers in every instance of communication. This requirement shifts operators focus from communicating proper information to a focus on communicating using the specified terms in all instances of communication, where in everyday normal business activities and operation should not require such scrutiny.
Yes
No
PPL Generation, LLC on behalf of its Supply NERC Registered Entities does believe that this sub requirement R1.2 should be considered a moderate violation when alpha numeric clarifiers are not used in general communication.
The statement, "Evidence may include, but is not limited to, voice recordings, transcripts of voice recordings, on-site observations, or other equivalent evidence," in the Measures section of COM-003 is impractical. Any comprehensive body of evidence would be unreasonably voluminous as well as requiring far more effort to compile than could be justified. The only evidence required for Generation Owners should be a procedure on the subject and a record showing that all applicable personnel have been trained.
Individual
Cristina Papuc
TransAlta Centralia Generation LLC
The current effective date only gives the registered entities 6 calendar months to be compliant with the requirements. We do not think this will be achievable. A longer implementation time is required, such as 12 months. In order to comply with standard requirements, the registered entities need to develop the internal controls, such as the procedures/operator training documents, and then provides the training to the operators. The 6 calendar months are not long enough to complete these tasks. In the white paper, Table 1-A shows only the three-part communication are currently used in the registered entities. However, for all other requirements, such as using alpha-numeric clarifiers, the white paper does not show that these are currently used in the registered entities. Thus, there is no base to justify that 6 months is reasonable to achieve the compliance.
Group
Imperial Irrigation District
Yes
Yes
Yes

Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Jesus Sammy Alcaraz
Group
Midwest Reliability Organization NERC Standards Review Forum
No
The MRO NSRF recommends the following comments for consideration by the SDT: 1. The sentence structure of this definition is incorrect. It is unclear whether the prepositional phrase "of the Bulk Electric System" applies to both Facility and Element or only to a Facility. Recommend this be rewritten to read "... Bulk Electric System Elements and Facilities". 2. The definition should be for only actionable commands (to accomplish an actionable item). Status of does necessitate 3 part communication. 3. The inclusion of a Reliability Directive as a subset of the Operating Communication definition adds confusion as to what is a Reliability Directive. This confusion is compounded by having Reliability Directives in a different standard with different descriptions for three part communication. 4. The 2003 Blackout Report recommended that industry, "Tighten communications protocols, especially for communications during alerts and emergencies." We strongly support using three-part communication for the execution of Reliability Directives as defined in the proposed COM-002-3 draft standard in Project 2006-06 but not for routine operating instructions. 5. Table 1-A of the White Paper lists 11 entities that currently use three-part communication during both emergencies and non-emergencies. We agree that this can be an utility 'best practice', however, there is a major difference between good utility practice and a no-fault, no exception Reliability Standard.
Yes
Yes
Yes
No
There are two time zones in the eastern interconnection and two time zones in the western interconnect with Arizona not utilizing daylight savings time. The Reliability Coordinator and entities can agree on what time zone to use. The NSRF does not understand if the "time zone" issue has caused any past performance issues? Please clarify with a basis of time zone inclusion.
No
The MRO NSRF recommends the following comments for consideration by the SDT: 1. The NSRF does not understand how three part communication is not applicable to Reliability Directives, when COM-002-3 states that three part communication shall be used when issuing a Reliability Directive. This adds confusion and is further evidence that there should only be one communication standard. 2. How are group calls going address three part communication? Many entities use blast calls to forward system wide information in a very short period of time. The intent of a blast call is to speed up the dispersing of information from one to many. Please clarify. 3. Currently there are 1681 entities (BA,

TOP, RC, GOP, and DP) registered with NERC. Assume that each entity has one phone call every 10 minutes in a 12 hour day shift and half during a night shift (being conservative). A single entity will have 72 per day on an average. Note that both parties (sender and receiver) will need to use COM-003 requirements. There will be about 120,000 calls per day within NERC where COM-003 will need to be applied. That equates to 44,176,680 calls per year that require COM-003 requirements to be used. While all these communications will not necessarily be an Operating Communication, but the NSRF believes that at least 75% will be Operating Communications. This alone will slow down the reliability of our system. Is this the intent of the SDT? Please consider all industry comments and upon development of "consideration of comments", run the number of instances where COM-003 will need to be applied. The question should be, does this hamper our system reliability or not.

No

The MRO NSRF recommends the following comments for consideration by the SDT: As written, if an operator simply states "open switch c138", they would be found non compliant. The SDT has not given any justification (reference to a FERC Directive) to why they are mandating the use of alpha-numeric clarifiers within this requirement. It is not needed to be written within this (or any other standard). It is agreed that it may be a good practice in some cases, but when written within a standard, it is driving for a zero tolerance. Entities will make a mistake and this non compliance issue will be forward via the CEA as an FFT. Section 81 of the Commission's March 15th, 2012 order questions if a violation is forwarded in an FFT format, is it really needed for reliability. This requirement needs to be deleted. If an entity wishes to use an alpha-numeric format, they can as part of their internal controls to reduce their risk of violating a different standard or for safety reasons. The requirement of using alpha-numeric as a standard will be administratively burdensome and punitive. For example: An operator states, "open switch fifteen twenty six" instead of "open switch one, five, two, six" is now subject to a potentially significant fine for no reliability benefit. Suggest dropping the Alpha Numeric clarifier requirement from the standard.

No

The MRO NSRF recommends the following comments for consideration by the SDT: 1. This requirement is too closely associated with TOP-002-2b, R18. As written, a BA, TOP, and GOP will be in double jeopardy of non compliance if either TOP-002-2b, R18 or COM-003, R1.1.4 is violated. 2. A similar requirement was removed from TOP-002-2 Project 2007-03. From the Project 2007-03 mapping document: "R18. Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network." Project 2007-03 SDT's reason for deletion of R18 from TOP-002-2: "This requirement adds no reliability benefit. Entities have existing processes that handle this issue. There has never been a documented case of the lack of uniform line identifiers contributing to a System reliability issue. The bottom line is that this situation is handled by the operators as part of their normal responsibilities, and no one is aware of a switching error caused by confusion over line identifiers." The standard is not applicable to TOs or GOs yet the requirement calls for the use of "the name specified by the owner(s) for that Transmission interface Element or Transmission interface Facility." Suggest deleting this requirement.

No

The MRO NSRF recommends the following comments for consideration by the SDT: System Operators receive and issue many Operating Communications a day. The VSL for one Operating Communication is Moderate. That is too high. While improving communications is a laudable goal, the zero tolerance VSL is unacceptable and will lead to a preponderance of self-reports and compliance and administrative overhead. Also overlooked is the added stress that every time a System Operator speaks they may be in violation.

The MRO NSRF recommends the following comments for consideration by the SDT: 1. Concerning the "Purpose": Recommend rewrite to state: "To specify universally-applied communication protocols that reduce the possibility of miscommunication which could impact the reliability of BES". This shorter and to the point purpose clearly defines the intent of the Standard. 2. R1.1.3, An entity will be found non compliant if it merely has a written BES switching order that does not contain a time, time zone or whether it is daylight savings time or standard time. The Requirement states nothing about implementing the written communication, just that it is written. The NSRF does not believe that this is the intent of the SDT. 3. This also applies to oral communications. If two operators are communicating between each other while in different time zones and executing a BES switching order, they would need to establish what time it is in both time zones. indicate whether it is daylight

saving time or standard time. So, since a Reliability Directive is a component of an Operating Communication, prior to receiving an oral Reliability Directive senders and receivers would need to establish what time it is in both time zones, indicate whether it is daylight saving time or standard time and then give and receive the Reliability Directive. The NSRF does not believe that this is the intent of the SDT. 4. The SAR for this standard incorrectly addresses the blackout recommendation number 26. Recommendation 26 states: "26. Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate". " NERC should work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations, and ensure that all key parties, including state and local officials, receive timely and accurate information." "NERC should task the regional councils to work together to develop communications protocols by December 31, 2004, and to assess and report on the adequacy of emergency communications systems within their regions against the protocols by that date." 5. Order No. 693 clearly says that the tightened protocols are primarily intended for actions during alerts and emergencies. This was partially addressed in the interpretation on COM-002 and is being addressed in Project 2006-06. Below is the summary determination in the Order on this issue. "535, Accordingly, we direct the ERO to either modify COM-002 or develop a new Reliability Standard that requires tightened communication protocols, especially for communications during alerts and emergencies." 6. It is not clear that COM-003-1 R1 applies to COM-002-3. The latest draft of COM-002-3 doesn't reference the communications protocols listed in COM-003-1 R1 and the definition of Reliability Directive does not state that it is a type of Operating Communication. Suggest combining the two standards into a single communication standard. 7. The white paper states "Significant events have occurred on the BES when unclear communication created or exacerbated misunderstandings that led to instability and separation." However, no specific examples were identified. During the June 7 webinar when this question was brought up, it was stated that three part communication was used during these events. This begs the question as to why this standard is needed for normal operations. 8. In order to assign the same level of responsibility as COM-002-2, R2, the RC, TOP, and BA should be the only applicable entities since a Reliability Directive is a sub component of Operating Communications. The RC, TOP, and BA clearly understand clear, concise and definitive communications. They are the only required entities to be NERC Certified and should be held to the highest standards. They can establish other controls to mitigate their risk by training and informing DPs and GOPs that are within their control. DPs and GOPs do not need to be included in R3.

William Smith

Individual

Si Truc PHAN

Hydro-Quebec TransEnergie

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes





No
Use a phonetic alphabet only when further clarification is needed.
No
For example, the (OUC)Indian River to (FPL)Cape Canaveral #1 230kv line is equivalent to the (FPL)Cape Canaveral to (OUC)Indian River #1 230kv line. Either description is accurate and acceptable.
Yes
Individual
Jack Stamper
Clark Public Utilities
Yes
Yes
Yes
Yes
Yes
Yes
No
This requirement is still overly prescriptive. Practically all switches, breakers, and transformers have alpha-numeric identifiers and the proposed Requirement R1.2 will require the use of some form of alpha-numeric clarifier (either NATO or some other accurate clarifier). However, many alpha-numeric identities need no clarifier to be accurately understood. Additionally, any such mis-understandings would become obvious during the three-way communication process. The SDT needs to modify this requirement to allow the judgment of the system operator to be used in the determination of whether an alpha-numeric clarifier is needed. This judgment would be based on (1) common sense in understanding that some letters or numbers may sound similar when broadcast over communications equipment, (2) past experience with certain letters or numbers requiring clarification, (3) an understanding by each individual system operator (as supplemented by managerial oversight) of that system operator's ability to correctly pronounce letters and numbers (in the English language, unless another language is mandated by law or regulation), and (4) confidence derived from the accurate and understandable repetition of the alpha-numeric identifiers in the three way communication process. Clark believes that Requirement R1.2 needs to rely on the determination by the system operator as to whether the use of an alpha-numeric clarifier is needed or not. These system operators are required to obtain certifications and ongoing training and the operating process needs to defer to the judgment of trained and certified system operators to resolve this potential communication issue.
Yes
No
Failure to implement R1.2 is not necessarily a reliability problem. As stated in our previous comments, not all alpha-numeric identifiers need clarification. However, the current proposed standard would deem a failure to use a clarifier in any Operating Communication that uses alpha-numeric identifiers as a violation.
Group
Detroit Edison

No
The definition of Operating Communication is overly broad, increasing the scope of the standard. It should be limited to actionable items. Suggested rewording of the definition: "Communication of instruction to perform an action relating to a physical change or a control system data change affecting an Element or Facility of the Bulk Electric System."
Yes
Yes
Yes
No
In 1.1.3 "When the communication is between entities in different time zones..." should read "When the communication is between entities in operating in different time zones...". Two entities may be physically located in the same time zone but one may operate in standard time and the other in daylight time. When communication is between entities operating in different time zones, clarify which time zone takes precedence.
Yes
No
"use accurate alpha-numeric clarifiers" is vague. Suggest re-wording and adding verbiage: "use defined (or standard or specified) alpha-numeric clarifiers as specified in Registered Entities communication protocols." Concern with requirement 1.2- alpha-numeric clarifiers. Would like clarification if any alpha clarifier can be used or must the phonetic alphabet listed in the white paper (military Communication protocol) be used. example: for "R", is it required to use "Romeo" or can "Robert" be used? Concern with VSL table for R1. Current format shows that an entity must be 100% compliant. The break down from medium to severe is based on how many elements of R1 was not followed. Suggest changing the format to how many times it was not followed rather than the number of elements.
Yes
No
VSL table for R1. Current format shows that an entity must be 100% compliant. The break down from medium to severe is based on how many elements of R1 was not followed. Suggest changing the format to how many times it was not followed rather than the number of elements.
There is a significant amount of redundancy between COM-002-3 and COM-003-1. These two standards should be combined and one of them eliminated. COM-002 purpose states "To ensure communications by operating personnel are effective." COM-003 could be sub-requirements under R2 of COM-002. The blue box on page 2 does not clarify Reliability Directives. Suggest using the same language as the proposed definition of Reliability Directive from COM-002-3.
Kent Kujala
Individual
Jonathan Appelbaum
The United illuminating Company
No
The intent of Recommendation 26 was to improve the communications around situational awareness. The SAR states the purpose is to "efficiently convey and mutually understood for all operating conditions." Paragraph 532 seeks to establish communication uniformity as much as practical on a continent-wide basis. This will eliminate possible ambiguities in communications during normal, alert and emergency conditions The new definition limits the communication to taking actions during non-emergencies, and ignores the finding that poor communication occurred in the events leading up to the 2003 Blackout.
Yes

Te CPOP was overly administrative.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
UI disagrees with the necessity for this Standard. The intent of Recommendation 26 was to improve the communications around situational awareness. The SAR states the purpose is to “efficiently convey and mutually understood for all operating conditions.” This Draft does not address the concern and a Reliability Standard will not resolve the problem. It will create a compliance burden. The White Paper does not provide justification for imposing a compliance burden of recording, reviewing and tagging every conversation in a control center for the applicability of COM-003. There is no correlation between non-emergency communication and BES reliability. There is no study to demonstrate that the cause of awkwardness when transitioning from non-emergency to emergency communication will be resolved by any of the requirements in this Standard. Awkwardness has been resolved by Com-002 Requirement to explicitly identify an action as a Directive.
Individual
Scott Berry
Indiana Municipal Power Agency
No
On page 2 of 10 (blue box), the SDT has a blue box that defines Reliability Directives as a “type” of Operating Communications. This gives the appearance that Reliability Directives are part of Operating Communications and this could be a double-jeopardy issue. If an entity is found with a potential non-compliance finding on the communication of a Reliability Directive (COM-002), then it is very likely that the entity could have a potential non-compliance finding on COM-003 (proper communication of an Operating Communication).
Yes
No
IMPA agrees with the splitting of a single requirement into two requirements. However, the blue box on page 2 of 10 makes the statement “Reliability Directives are a type of Operating Communications, to the extent they change or maintain the state, status output, or input of an Element or Facility of the Bulk Electric System” which seems to include Reliability Directives by simply referencing Operating Communications in each requirement (R2 and R3). By excluding Reliability Directives, the requirement is now very confusing and can be interpreted two different ways. Requirement 2 does not include the Generator Operator as a potential entity that could issue an Operating Communication. Within its organization or company, a Generator Operator could issue an Operating Communication, such as one location calling and telling another location to start its generating unit. IMPA believes the Generator Operator should be included in R2.
No

The question uses the word "correct" and the requirement uses the word "accurate". The use of either word adds ambiguity to the requirement, and an entity being found compliant or non-compliant depends on how the entity and the auditor interprets the meaning of "use of an accurate alpha-numeric clarifier". The SDT should allow the entity to pick the alpha-numeric clarifier that its company wants to use or the same clarifier that was used when the Operating Communication was given, and not give an auditor the chance to say it is not an "accurate" alpha-numeric clarifier.

No

The requirement that requires entities to use uniform line identifiers when referring to transmission facilities of an interconnected network is in the TOP-002-2b standard (R18). Requirement R1.1.4 of COM-003-1 draft is not needed and should be deleted.

IMPA believes that each organization should follow its internal communication protocol up to the point where a Reliability Directive is issued. IMPA does not see why NERC is stating the "how" in this standard (sub-requirements 1.1, 1.1.1 thru 1.1.4) when its common practice has been to stay away from telling the entities "how" to do a standard requirement. Therefore, IMPA believes that COM-003 should just state that an entity needs to have a communication protocol in place for issuing and receiving instructions. In addition, an entity should only have to do training on its communication protocol in order to prove compliance that it is following or using it. The record keeping or data retention of phone recordings will become very burdensome on entities, especially if they have to keep five or six years worth (back to its last audit date).

Individual

Michelle D'Antuono

Ingleside Cogeneration LP

No

Ingleside Cogeneration LP believes that the definition of "Operating Communication" widely expands the scope of COM-003-1 beyond entity-to-entity or multiple-entity communications. Instead, all conversations conducted by System Operators, field personnel, engineers, or vendors that may refer to the status of a BES component are applicable – even those discussed face-to-face. We believe the original intent to bound the communications to those which can be captured in control room recordings and/or logbooks is manageable; not so every side conversation or email that takes place during the natural course of the operating day. The original term, "Interoperability Communication", captured this concept. It seems like the Draft 1 definition could be easily modified to read as follows: Interoperability Communication: Communication of instruction <between two or more entities> to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. Ingleside Cogeneration LP is in full agreement with the removal of the definitions for "Communication Protocol," and "Three part Communications". Neither term helps address an ambiguity in the body of NERC Standards that we are aware of.

Yes

Ingleside Cogeneration LP agrees that a communication procedure is unnecessary for routine operations. In our view, the remaining requirements in COM-003-1 will drive entities to continually reinforce communications protocols without it.

Yes

There are already other project teams addressing the handling of incidents related to transmission, physical, and cyber security. It is appropriate in our view to separate emergency operations communications from normal ones – as done in the second draft of COM-003-1.

Yes

Yes

Yes

Ingleside Cogeneration LP agrees that Reliability Directives must be handled in a more prescriptive manner. Since Reliability Directives are also an important piece of Project 2006-06, it makes sense to move the developmental responsibility to them – and avoid unnecessary overlap between the two projects.

Yes
No
<p>Ingleside Cogeneration LP agrees with restricting the applicability of COM-003-1 R1.2 to Transmission interface Elements/Facilities. These are the most likely to carry more than one identifier, as each entity may use different numbering conventions. However, we see two separate types of identifiers which may need to be addressed separately. First, those provided on control room monitors often come from a centrally managed Regional database. It is not reasonable to expect System Operators to refer to a Facility owner's one-line diagram to reference these interconnections – and may reduce reliability. Conversely, field personnel and engineers may rely on the one-line for their identifiers. The use of the owner's documentation is more appropriate in these cases. We will further point out that COM-003-1 does not apply to Facility owners, so it seems as though they could decline to provide identifiers if they so choose.</p>
Yes
<p>With the transition of emergency communications to other projects, it is appropriate to downgrade COM-003-1's VRFs from "High" to "Medium".</p> <p>Ingleside Cogeneration LP agrees in principle with the need for Operators and Field Personnel to express and validate their intent before taking actions that may pose a risk to the BES. However, we have serious reservations with the use of the audit methodology to drive consistent behavior. Perhaps most significant is the assessment of violations for a single instance where an operator does not use alphanumeric identifiers or a 24 hour clock during the course of an Operating Communication. We believe that even in an extremely well managed organization that 100% adherence is statistically impossible. In our view, this flies in the face of fairness – and raises serious questions about the "public/private partnership" that is supposed to be the foundation of NERC standards. This points to the "bean counting" type of Standards that NERC is trying to get away from, rather than focusing on reliability of the BES. Furthermore, entities will be assessed violations if they cannot prove that every side conversation did not take place in accordance with COM-003-1. In order to comply, we estimate it will take two or three times the time to document a non-recorded communication than it will be to actually conduct one. This is not an appropriate use of our front-line resources available time – nor does the documentation serve a reliability purpose in our view. In addition, COM-003-1 is silent as to multiparty calls that are typical in some regions, where an entity at random is elected for the three part response for the group on conference calls, and not all parties are required to respond, but rather only participate on the call.</p>
Individual
Roger C. Zaklukiewicz
Roger Zaklukiewicz Consulting
No
<p>The proposed standard introduces a new term "Operating Communications" which in my opinion is unnecessary and which I believe will cause confusion with the term "Reliability Directives". The standard proposes to establish a three part communications for what I would describe as routing operating instructions. This aspect of the standard would require/mandate the use of an unnecessary and burdensome operating practice that in a number of cases may impede or jeopardize system reliability rather than improve the reliability of system operations.</p>
No
See previous comment(s) regarding the necessity for a Communications Protocol Operating Procedure.
No
Yes
Yes
No
See previous comment to Question 1.

Not certain as I do not know the specifics of the NATO phonetic alphabet.
No
We should always use the identifier adopted by the RTO, not one developed by the Element/Facility's owner.
No
The standard should not be mandating the "HOW".
Group
Duke Energy
No
The definition of Operating Communication is vague, general and overly broad. We don't believe the Blackout Report recommendations and Order 693 directives require 3-part communications for routine communications. Communications protocols can be tightened, and more effective communications can be achieved without this extreme approach. See our comments under question #2.
No
We believe that having a reliability standard requirement to develop a Communications Protocol Operating Procedure, to address items similar to those under R1.1 would be an appropriate method to address the Blackout Report recommendations and Order 693 directives to tighten communications protocols. An entity's CPOP could address the language to be used between functional entities, what clock format is to be used, how time zone/Daylight Savings Time will be addressed, and transmission equipment identifiers. The CPOP should have a required review frequency, and personnel should be trained on the CPOP. This approach, unlike the draft standard could be audited and certified. We see no way to reasonably audit or certify compliance with the draft standard in its current form. Duke suggests this approach to COM-003: Rather than specifying the solutions to achieving effective communication, COM-003 should instead focus on developing and training on an approach that is designed appropriately for each RE. For instance, another approach to COM-003 might be along the lines of: Requirement R1 could be written in a manner to require the appropriate registered entities to develop a communications protocol that is appropriate for each RE. This communications protocol should address how the RE is handling: Time Zone Designations – for both internal and external communications Language Alpha-numeric identifiers 3-part communications – when is it required, etc. Use of defined terminology Use of common transmission equipment identifiers Other items deemed important for the communications protocol to address – again, this would not define HOW these items are addressed. This approach would require the RE to specify how it is addressing these issues, without prescribing solutions. For instance, a RE could include a section in its protocol to deal with time zone designation. In this section the RE could explain that it, and its neighbors, all are in and use the same time zone. As a result, the RE has determined that requiring the identification of time zone reference in communication is not necessary. Requirement 2 could be written in a manner to require the training of operators on the communication protocol. Requirement 3 could be written in a manner to require the RE to define its internal controls it uses to review that its protocol is being followed. The compliance approach would be to: 1) assess whether the RE has developed a written protocol and whether the protocol addresses each item – this does not mean there is an assessment of HOW each item is assessed; 2) assess whether the RE has trained its operators on the communications protocol 3) assess whether the RE is following its internal controls
Yes
No
We think mandating English is over-reaching (As currently written, the Standard erroneously focuses on "how" an entity can be compliant, rather than describing "what" an entity needs to achieve to be compliant). Let the entity that develops the CPOP and its neighbors decide on language, clock format, etc.
No
We think mandating the 24 hour clock is over-reaching (As currently written, the Standard erroneously focuses on "how" an entity can be compliant, rather than describing "what" an entity

needs to achieve to be compliant). Let the entity that develops the CPOP and its neighbors decide on clock format, how time zone differences will be addressed, etc.

No

We don't believe that 3-part communications are needed for ALL routine communications, and that R2 and R3 should be deleted. Also, there should only be one standard for communications protocols. The communications efforts in Projects 2007-02, 2006-06 and 2007-03 should be combined.

No

We think that this is over-reaching (As currently written, the Standard erroneously focuses on "how" an entity can be compliant, rather than describing "what" an entity needs to achieve to be compliant), and creating a requirement that can't reasonably be audited or certified.

No

We don't believe that this requirement is consistent with the TOP requirement to use common line identifiers. This is more restrictive, in that it mandates the use of a name specified by the asset owner, while TOP simply requires the development of common identifiers without dictating what party defines the names. We understand the issue of identifying common terms for equipment, but believe the development and use of "common identifiers" is already covered in the TOP Standard and should be eliminated altogether from COM-003.

No

The VRF's should all be "Low". For example, there will be thousands of routine communications per year, and each instance of missing one alpha numeric identifier (ex. "balloon" versus "baker") would be a violation. As written, this standard would drive allocation of resources for little reliability benefit.

We believe that having effective communications is an important goal; and there are instances where the use of 3-part communication is appropriate. We also believe that the industry is maturing, and the use of 3-part communication as a tool to achieve effective communication has grown (as evidenced by Table 1-A in the May 2012 COM-003-1 Whitepaper. This maturity and expanded use of 3-part communication has occurred without a Standard in place; and that we do not believe a Standard is needed that focuses on one way of establishing effective communication.

Greg Rowland

Individual

Michael Moltane

ITC Holdings

Yes

Yes

COM-003-1 and COM-002-3 cannot be processed separately since they are inextricably inter-related. In fact, they are so inter-related that there is no compelling reason provided that suggests they should be separate standards. The comment form for COM-003-1 even indicates that Reliability Directives are a subset of Operational Communication which further indicates that all of the requirements surrounding how communication is performed regardless of the nature of the content should be addressed in one standard. Further, 3 part communication is being cited as ensuring reliable operation of the BES. It is not the act of 3 part communication that ensures reliable operation. Rather, it is the effective transfer of information that does. Requiring 3 part communication for all communication will reduce the effectiveness of the communication as the novelty factor wears off and individuals only go through the motions. Active listening and truly understanding the communication is what accomplishes the intent. Use of 3 part communication for situations that the



initiator determines it is warranted based on their knowledge and training is the most appropriate approach to ensure reliable operation of the BES.
Group
BC Hydro
No
BC Hydro does not support limiting operating communications to instructions. We believe this should account for notification or reporting and that in these cases three part communication should be used to ensure understanding. For example, if an element is out of service and that is being reported to an operating entity, the receiver of that communication should show confirmation of understanding by repeating their understanding and receiving confirmation. Example: 1) TOP Call to RC: Our transmission Line XX is currently out of service and is expected to remain out until field crews respond. 2) RC to TOP : OK, I understand that Line XX is out of service and will remain out until further notice. 3) TOP to RC: That's correct. I'll call you when I have some more information.
Yes
Yes
Yes
Yes
Yes
Yes
No
BC Hydro does not support the full time use of alpha numeric clarifiers for all Operating Communication. In some cases we believe it detracts from the instruction being delivered. In our system, devices are identified by a combination of alpha and numeric. For example, to call transmission line 5L98, '5-Line-98' or a circuit breaker 5CB11, '5-circuit breaker-11' does not add value. This may help in some areas depending on their naming conventions. BC Hydro does not think the use of the term 'accurate' effectively describes what is permissible to be used as an alpha numeric clarifier.
No
BC Hydro supports this in most cases, especially when dealing with the RC, but in many cases there may be lack of clarity around ownership. We believe this needs to be reworded to account for designation that is agreed to by the parties that are communicating.
Yes
Patricia Robertson
Individual
Joe Tarantino
Sacramento Municipal Utility District
No
See response in #10
No
See response in #10
No
See response in #10

No
See response in #10
No
See response in #10
No
We have a problem with the standard and therefore we inherently don't agree with VRFs and VSLs.
Recommendation: Not-Approve We feel that the direction for this communications standard is grossly in error. Focus should be on ensuring proper training programs are in place that emphasize and best prepare the System Operator for effective communication. The idea that effective communication can be scripted is entirely mis-guided and that a regulatory body might subject an entity to financial penalties for communication standards that attempt to script the language spoken, how time is referenced, naming conventions and alpha-numeric clarifiers has no precedence in industry that we are aware of. The United States' Air Traffic Control protocols for communications between controllers and commercial airline pilots are very tested, well trained and effective. Controllers and pilots are trained in effective communication and the situations and pronunciation types that may lead to confusion. But they are not fined for any instance of not following them. From the Air Traffic Controllers Handbook, <a href="http://avstop.com/ac/atc/2-4-1.html#2-4-1">http://avstop.com/ac/atc/2-4-1.html#2-4-1</a> 2-4-3 Pilot Acknowledgment / Readback a. When issuing clearances or instructions ensure acknowledgment by the pilot. NOTE - Pilots may acknowledge clearances, instructions, or other information by using "Wilco," "Roger," "Affirmative," or other words or remarks. REFERENCE - AIM, Contact Procedures, paragraph 4-2-3. b. If altitude, heading, or other items are read back by the pilot, ensure the readback is correct. If incorrect or incomplete, make corrections as appropriate. Mandating the use of the English language in all communications is not in the best interest of reliability. We are not aware of any issue that has been raised of significance with the current requirement contained within COM-001-1.1, R4
Individual
Ed Davis
Entergy Services
No
Due to these extensive comments and desire for these comments to be formatted for the SDT we have also sent these comments to Monica Benson in a Word document. While we agree with the definition, we do not agree with R1, R2 and R3. While we are not enamored of having a Requirement to have a procedure, in this instance, the exception seems to be necessary. Below is suggested language to replace all of the Requirements and sub-Requirements in COM-003: Proposed new text: "R1. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall develop a written communications procedure for Operating Communications among personnel responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System. The procedure shall address at minimum: [Violation Risk Factor: Low][Time Horizon: Long Term Planning] 1.1 When communicating between functional entities 1.1.1. Establish the language to be used. 1.1.2. Time format to be used. 1.1.3. Establish treatment for time zones when multiple time zones are crossed. 1.1.4. Identify naming convention for Transmission interface Element or a Transmission interface Facility. 1.1.5. For oral Operating Communications, establish the treatment for the circumstances in which alpha-numeric identifiers must be used." The SDT has not listened to the industry comments given in previous ballots. It also appears to be focused on imposing three part communications on the industry for routine communications despite the fact that neither the blackout report nor the SAR on which these standards are based emphasize that issue.
No
We believe that this version of COM-003 actually embeds a "CPOP" within the Requirements. This is inappropriate intrusion beyond identification of with "what" an entity must comply into "how" that entity must comply. Our suggested R1 provides replacement language that would require a communications procedure. We see no reliability value in having a defined term for "Communications Protocol Operating Procedure", as the term "communications procedure" is completely understandable using the normally accepted meanings of the words.
No
We disagree – this concept more properly belongs in the NERC Rules of Procedure and should be

designed to address Recommendation 26 of the NERC 2003 Blackout Report. This is an expectation of NERC itself, not of the industry (and NERC can't write Requirements for the ERO). Also, this team should take the time to become familiar with recent NERC Operating Reliability Subcommittee (ORS) discussions and recommendations regarding the elimination of the Transmission Alert Levels. Even the DHS has found that Alert Levels has diminished value.

No

We disagree with all of the Requirements and sub-Requirements in this standard, due to the fact that they embody a procedure into the Requirements. There is no reliability need being fulfilled by taking this approach. See our suggested replacement R1 in our response to Q1. This would replace R1, R2 and R3 and their associated sub-Requirements.

No

See our response to Q1, Q2 and Q4.

No

Three part communications should not be required for routine operating communications. See the definition of Reliability Directive in COM-002, which addresses the actual reliability issues associated with communications. This team once had coordinated with the RC SDT (Project 2006-06), and the RTO SDT (Project 2007-03), with a different approach for routine communications resulting from a meeting between the chairs of the three SDTs on November 17, 2009 in the SERC offices in Charlotte, NC. Quoting from the meeting setup email: "On the basis that the SC members are the key drivers of the joint effort to finalize "Directives and Three-Part Communications", [...] and [...] indicated a preference for Tuesday 1-3PM ET November 17. Some members of the RTOSDT and RCSDT will be attending the meeting in person...." At that meeting it was agreed that RC SDT (Project 2006-06) would develop the definition for "Reliability Directives", and require 3-way communication for Reliability Directives by the RC. Conversely, it was decided that OPCP (Project 2007-02) would handle ordinary communications, but would not require 3-way communications for routine communications. RTO SDT (Project 2007-03) only agreed to this course of action (in effect, backing out of writing ordinary communications standards as part of Project 2007-03) because OPCP SDT (Project 2007-02) had committed to this approach during that meeting. It should be noted that "COM-001-1 Telecommunications" and "COM-002-2 Communications and Coordination" are included in the SAR for RTO SDT (Project 2007-02) and its coordination with RC SDT and OPCP SDT was conditioned upon RC SDT and OPCP SDT following the course of action agreed-to in the November 17, 2009 Charlotte, NC meeting. OPCD SDT (Project 2007-02) should honor the intent of that meeting in Charlotte and remove R2 and R3 from this standard. We suggest that R2 and R3 should be eliminated, since neither one will result in increased reliability.

No

See our responses to Questions #1, 2 and 4.

No

See our responses to Questions #1, 2 and 4.

No

We disagree only in the sense that we disagree with the requirements, therefore, the VRFs and VSLs are not relevant. We suggest deletion of all three requirements, and the insertion of one new requirement. See Response to Questions 1, 2 and 4.

NERC standards are not procedures and this standard attempts to impose a single procedure on the industry. Tightening of communications protocols between entities does not equate to a procedural requirement to use 3-part communications between personnel at various registered entities. The actual impact to reliability of routine communications between entities is minimal and further diminished by the Reliability Directive construct espoused by RC SDT (Project 2006-06), which fully addresses the reliability implications of communications. While most of the industry practices three-way communications routinely, this is not necessary to assure reliable operations. Rather, in many cases, entities are viewing this as a "best practice", that helps to formalize communications so that Operators will develop good communications habits. The work by the RC SDT (Project 2006-06) on Reliability Directives is all that is necessary to assure BES reliability, and the approach currently espoused by OPCP SDT (Project 2007-02) in this COM-003 standard is massively redundant to that effort while not helping reliability. We agree with SERC in suggesting another approach to COM-003. Rather than to specify the solutions to achieving effective communication, COM-003 should instead

focus on developing and training on an approach that is designed appropriately for each RE. For instance, another approach to COM-003 might be along the lines of: Requirement 1 (See our suggested alternate language in our response to Question 1) could be written in a manner to require the appropriate registered entities to develop a communication protocol that is appropriate for each RE. This communications protocol should address how the RE is handling: Time Zone Designations – for both internal and external communications Language Alpha-numeric identifiers Three – part communications – circumstances in which is it required, etc Use of defined terminology This approach would require the RE to address how it is addressing these issues, without prescribing solutions. For instance, a RE could include in its protocol a section dealing with time zone designation. In this section the RE could explain that it, and its neighbors, all are in and use the same time zone. As a result, the RE has determined that requiring the identification of time zone reference in communication is not necessary Procedures should address the training of operators on the communication protocol Procedures should address the internal controls that the RE uses to review that its protocol is being followed. The compliance approach would be to: Assess whether the RE has developed a written protocol and whether the protocol addresses each item – this does not mean there is an assessment of HOW each item is assessed; assess whether the RE has trained its operators on the communications protocol and assess whether the RE is following its internal controls. Compliance with this requirement should not require 100% accuracy in compliance with the entities communication procedure by real-time operations staff. That would cause misdirection of resources and training time from issues more important to BES reliability. Any data retention requirements should be consistent with the COM-002 reliability standard. What is the role of the Operating Communications Protocols White paper? Is it a position of the STD? Was there a minority opinion? Why was it not vetted with a wide spectrum of industry stakeholders (we are unaware of any effort to circulate this white paper even as far as to the standing Technical Committees of NERC ). Does the industry agree that we need a standard on three part Communications for normal operations? We have seen no evidence to support this contention. This revision to COM-003 seems to have sprung into existence without any substantive industry comments indicating that the industry would benefit from having a procedure memorialized as a set of Requirements.

Individual

Anthony Jablonski

ReliabilityFirst


No

ReliabilityFirst votes in the Affirmative for this standard because the standard further enhances reliability by providing communication protocols when participating in Operating Communications (specifically three way communication). Clear, formal and universally-applied communication protocols will help reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Even though ReliabilityFirst votes in the Affirmative standard, ReliabilityFirs votes in the negative for the VSLs and offer the following comments for consideration: 1. VSL for Requirement R2 a. When referencing “Part” numbers within the VSL, a consistent format (e.g. Requirement R2, Part 2.2 first bullet) should be used. 2. VSL for Requirement R3 a. The VSLs should state “oral ... Operating Communication” rather than “verbal ... Operating Communication” to be consistent with the language in the requirement. b. For consistency with the first part of the first bullet in Requirement R3, RFC recommends the following language be considered for the “High” VSL: “The responsible entity received and repeated an oral two-party, person-to-person Operating Communication but did not wait for confirmation that the repetition was correct. (Requirement R3, first bullet)”



Dominion
No
Dominion agrees with the elimination of Communication Protocol, Interoperability Communication and Three part Communications proposed in the first draft. Each standard requirement (R1, R2 & R3) specifically excludes Reliability Directives, further adding confusion to the issue of what is a reliability directive. The Reliability Directive should stand on its own and if the SDT does not agree then the relationship between Reliability Directives and Operating Communications should be clarified in the Standard. When the standard is implemented, the text box (on page 2 of the clean standard) will be removed, therefore losing any tieback to a Reliability Directive as a type of operating communication.
Yes
Yes
Yes
No
Dominion currently views this requirement as being too prescriptive, the standard should be written to allow a 24 hour clock and time zone designation or 12 clock with an AM or PM and time zone designation.
No
The current version of this standard expands the use of three-part communication to all Operating Communications, not just Reliability Directives as specified in draft standard COM-002-3, Project 2006-06. Also, given the definition of Operating Communication (i.e., communication of instruction to change...an Element or Facility...) and the use of "two-party, person-to-person" in the Requirements, communications between two members of the same organization (e.g., two Generator Operators, two Transmission Operators) would be subject to this standard. This seems impractical, requiring organizations to document, as evidence, internal communications. Dominion suggests the language be clarified to eliminate this issue. The requirement as written could also be interpreted to mean that three-part communications are not necessary for communicating Reliability Directives. If the protocol for Reliability Directives must be covered by a different standard, then that standard should be referenced in this requirement in order to clarify the intent of the exclusion and remove the implication that three-part communications do not apply to Reliability Directives. COM-003-1 R2 could be rewritten to add clarification for Reliability Directives only as "Each Reliability Coordinator, Transmission Operator and Balancing Authority that issues an oral, two-party, person-to-person Operating Communication, excluding Reliability Directive (as referenced in COM-002-3 R2 and R3) shall: "
No
Dominion suggests that Requirement R1, Part 1.2 is ambiguous in that the use of alpha-numeric identifiers appears optional (but if they are used, they must be accurate). If the purpose of Part 1.2 is to USE alpha-numeric identifiers, then this statement needs to be modified to state that more directly and to give that clarity.
No
The requirement as written is superior to Requirement R18 of TOP-002b which requires the use of ". . . uniform line identifiers when referring to transmission facilities of an interconnected network." However, the industry can't have two different standards with different requirements for identifying transmission facilities.
Dominion acknowledges the term Reliability Directive is proposed for inclusion in the draft of COM-002-3, but we also prefer a notation be added, to clarify this is not an existing term in the current version of the NERC Glossary of Terms. As mentioned in response to Question #1; When the standard is implemented, the text box (on page 2 of the clean standard) will be removed, therefore losing any tieback to a Reliability Directive as a type of operating communication. The data retention period for this standard for normal operating communications is extensively longer than the COM-002-3 standard for emergency communications as discussed in Project 2006-06. Dominion suggests the

same data retention period as COM-002-3 for Requirements 1, 2 and 3 of this standard, which is for the most recent 3 months. Dominion also questions why the proposed standard is applicable to Distribution Providers since changing the state of BES elements is not what they do. Therefore, they would never receive an Operating Communication instructing them to do anything to a BES element, so it would not be practical or useful for a DP to include this standard in its compliance program. DP is included as an applicable Registered Entity in COM-002. Other than a load shed Reliability Directive (during emergencies), what other Operating Communication would a DP receive?

Connie Lowe

Individual

Andrew Gallo

City of Austin dba Autin Energy

No

To clarify that Operating Communications occur in real-time, AE offers the following change to the definition: "Real-time communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System."

Yes

No

AE believes the SDT should carefully review existing alert levels (e.g. EEA levels, threat levels). AE requests that the SDT use only the Alert Levels in Attachment 1 if they enhance existing levels or fill a gap. AE's preference is for the SDT to build upon existing alert levels instead of imposing a new category.

No

There is not enough evidence to support the need for these types of specifics. Recommendation 26 encourages NERC "to ensure that all key parties ... receive timely and accurate information." COM-003-1 seems to interpret the recommendation by telling entities "how" to ensure information is accurate (e.g., use English, 24-hour clock, time zones, alpha-numeric identifiers, etc.). This standard reaches too far into the "how" instead of focusing on the "what," which is "timely and accurate information." Registered entities should decide the best methods to ensure accurate information for themselves (through three-part communication, use of the 24-hour clock or otherwise).

No

It makes sense to separate R2 from R3; however, AE respectfully objects to mandating three-part communication for normal operating communications. The fact that most registered entities already use three-part communications for normal operating communications makes it a best practice; it does not mean a NERC Reliability Standard should require it.

No

There is not enough evidence to support the need for these types of specifics. Recommendation 26 encourages NERC "to ensure that all key parties ... receive timely and accurate information." COM-003-1 seems to interpret the recommendation by telling entities "how" to ensure information is accurate (e.g., use English, 24-hour clock, time zones, alpha-numeric identifiers, etc.). This standard reaches too far into the "how" instead of focusing on the "what," which is accurate information. Registered entities should decide the best methods to ensure accurate information for themselves (through three-part communication, use of the 24-hour clock or otherwise).

Yes

No

AE respectfully objects to the contents of COM-003-1 as described in these comments. If, however, AE were to assume agreement with the requirements, we offer the following comments regarding the VSLs: AE does not believe the R1 VSLs provide for a fair application in practice. Risk to the BES is not increased when fewer communication protocols apply to an entity. As proposed, missing 1 of 4 parts when 4 parts are required is a Moderate VSL. Missing 1 of 4 when 3 are required is a High VSL (and it never has an opportunity for a lower severity level because Moderate VSL applies only when 4 parts are required). Similarly, if an entity misses 1 of 4 when 2 are required, it should not be penalized with

a Severe VSL. AE suggests the solution to this issue is to assign Moderate VSL to missing 1 of 4, High VSL to missing 2 of 4 and Severe VSL to missing 3 or more of 4, in all instances regardless of how many parts are required. If the structure suggested above is not adopted, AE offers the following comments for consideration: Within the Severe VSL column for R1, the first paragraph (missing all of the parts when four are required) duplicates the second paragraph (missing three or more when four are required.) Within the Severe VSL column for R1, the third and final paragraphs should say "two (2) or more" and "one (1) or more," respectively, to account for all possible situations. Doing so aligns with the second paragraph which already says "three (3) or more." Finally, with respect to the VSLs for R2 and R3, all instances of "verbal" should be changed to "oral" to match the language of the requirement.

Austin Energy (AE) respectfully disagrees with COM-003-1 because it: (1) reaches beyond the SAR and (2) requires "how" communication should take place instead of "what" and "when." The scope of COM-003-1 reaches beyond the SAR by imposing protocols on normal communications when the focus of the 2003 Blackout Report, Recommendation 26 and Order 693, Paragraph 532 is on timely and accurate EMERGENCY communication. Recommendation 26 does not recommend tightened communication protocols under normal operating conditions. It recommends that NERC "work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations...." AE believes Project 2006-06 (COM-002-3) sufficiently addresses this recommendation by requiring three-part communication for Reliability Directives. If used correctly, the say-repeat-confirm method improves effectiveness of communications during alerts, emergencies and other critical time periods. The other source for COM-003-1 (Paragraph 532) references communications during normal conditions, but only in response to an EEI comment. The actual directive is in paragraph 535, where FERC states, "Accordingly, we direct the ERO to either modify COM-002-2 or develop a new Reliability Standard that requires tightened communications protocols, especially for communications during alerts and emergencies." AE notes that the directive focuses on communications during alerts and emergencies, similar to Recommendation 26. AE recognizes that the SDT reads Paragraph 532 to indicate a need for communication protocols even under normal operating conditions. However, AE believes that a NERC Reliability Standard is not the appropriate place to address the "how" of communication protocols under normal conditions. Industry stakeholders are justifiably concerned that deviations from the requirements during normal operating conditions will inevitably occur (human performance factor) without a risk to reliability. The potential number of self-reports industry-wide carries an overly burdensome cost without an associated benefit to the BES. AE believes that efforts at the regional level (e.g., training, guidelines, etc.) would be more effective and relevant. In summary, AE believes the focus of COM-003-1 should be on achieving accurate and timely information (the "what" and "when"), not prescribing exactly "how" registered entities achieve it. As written, COM-003-1 goes too far into the realm of mandating best practices and claiming it is necessary for reliability.

Individual
J. S. Stonecipher, PE
City of Jacksonville Beach dba/Beaches Energy Services
Yes
None
Yes
Yes, it would be administrative in nature and would not add value.
Yes
None.
Yes
None.
Yes
Yes
None.
Yes
None.



Yes
None.
Yes
None.
None.
Individual
Warren Rust
Colorado Springs Utilities
Yes
Yes
Yes
better option would be to retire the concept
Yes
"Use the English language when communicating between functional entities, unless another language is mandated by law or regulation." If two or more functional entities (say BA & TOP) reside within the same utility (perhaps even co-located in the same control center) and are communicating solely with each other, mayn't they speak their native language to each other - with or without the aid of law?
Yes
the use of "prevailing time" should be allowed, when appropriate, along with daylight and standard.
Yes
No
the term "correct alpha-numeric clarifier" is itself unclear. Searching on Google, I can find no other use of this term outside of this Standard. Therefore, this does not appear to be a standard term or concept. Did the SDT mean to require the use of a phonetic alphabet (NATO's or any other)? If so, please just state so. If the intent was to permit means other than phonetic alphabets to ensure clear communication of alpha-numeric identifiers, then I suggest clarifying the Standard's language. Perhaps, "When participating in oral Operating Communications and using alpha-numeric identifiers, use a phonetic alphabet or similar means to ensure clear understanding."
Yes
The possibility exists for an element/facility to be co-owned and for each owner to have a different name.
Yes
Individual
Patrick Brown
Essential Power, LLC
No
Defining the new term 'Operating Communication', and including the approved definition of 'Reliability Directive' under this newly defined term and then requiring the use of three part communications for all 'Operating Communications' is redundant and unnecessary. There is no reason to have two separate Standards governing the use of three-part communications.
No
The use of English should be mandated for communications between entities in separate regions where the common language in one of the regions may not be English. Allowing an entity to use a language other than English when communicating with regions where English is the required language

is counter to the purpose of the Standard and could in fact jeopardize reliability through miscommunication.
No
This provides minimal real-time benefits to the Operators, but only serves to make it easier to conduct an after the fact analysis. As such, this is an administrative requirement that should not be included in the Standard.
No
Although I agree with the requirement making the receiver responsible for repeating the message, this should be included in COM-002. Again, having two separate Standards on this topic is redundant and unnecessary.
No
If the purpose of this Standard is to improve and standardize communications, than all entities should use the same alpha numeric clarifiers.
Group
JEA
No
Yes
No
Yes
Yes
No
The two standards (COM002&COM003) should be merged into one standard. Three part communications should be considered a best practice and only required during emergency directives.
Yes
R1.2 is unclear. The term "alpha-numeric identifiers" is not defined. We believe examples would help. For example we assume that if we say the Northside 1, this would not be alpha-numeric but what if we used logical letters such as NS1 in internal communications. Is it all alpha-numeric communications or just illogical meaningless letters and numbers. We believe we should be able to use logical alpha numeric things like MS for motor-switch and not have to use alpha-numeric clarifiers. Also please specify if this is for both internal and external communications. Again we believe that this should be for external communications using illogical meaningless letters and numbers not for internal normal nomenclature.
Yes
R1.1.4 is unclear. Does this apply to both internal and external communications? JEA believes that this should only apply to external communications only. Many entities have internal numbering systems that have been in place without incident for decades and should be able to continue to use these internal systems when performing internal communications.
No
R2 & R3 should be removed from the standard. They are a best practice and do not substantially affect reliability when a simple command such as increase load by 100MW for a new purchase agreement.
Combine COM002 & COM003.
Thomas McElhinney

Group
Associated Electric Cooperative JRO00088
No
Although the intent appears to be only for oral communications of NERC Certified System Operators, and those directly aimed at affecting the altered or continued state of BES elements of Facilities, the wording is insufficiently bounded. For instance, it could include any communications between a unit or plant operator and internal plant personnel, were the net output of the plant to change, significantly or insignificantly, current or future (status), its injection to the BES. The same would be true of loads, and so communication of Distribution providers with any manufacturing plant managers would necessarily become subject to this standard (extractions from the BES – significant or insignificant). Taken to one extreme, purchasing personnel could also be responsible for whatever part their telephone conversations play in altering the future status of plant real or reactive power production or consumption. AECI agrees with the SERC OC STANDARDS REVIEW GROUP consensus comment, that COM-002 should be sufficient in addressing any industry deficiencies in this area and if not, the deficiencies addressed there.
No
AECI agrees with SERC OC STANDARDS REVIEW GROUP's comments pertaining to question 2.
No
AECI agrees with SERC OC STANDARDS REVIEW GROUP's comments pertaining to question 3.
No
Although this qualification appears to now be accommodating of regional government mandates, it fails to address decorum where a non-English bounded Entity is communicating externally with entities who are unbounded by the same mandates or vice-versa. Best to let the Regional Entities work this out among themselves and document the agreements, where applicable.
No
There are remaining issues where Entities deal with those few areas who swap time-zones dependent upon SDT, and they could be unfairly ensnared by non-compliance, in their not realizing that nuance. In addition, given the unbounded scope of this standard, it would seem best to allow operator discretion or this clause is a PV magnet.
No
AECI appreciates the SDT's desire to add flexibility and yet clarity for what is expected, but we absolutely disagree with a split into two requirements. Such a split unnecessarily increases the industry's risk, of a single three-part communication failure, being assessed in violation of two separate requirements, yet with no added value to BES reliability. Given today's environment, PVs will be written although the intended content was accurately conveyed and the system properly operated, should these requirements exist. So AECI agrees with SERC OC STANDARDS REVIEW GROUP's assessment that R2 and R3 should be entirely removed.
No
AECI appreciates the SDT's desire to afford flexibility to the industry, and yet we still view this level of prescription as unnecessarily burdensome, given the current broad scope of this particular standard.
No
AECI agrees with SERC OC STANDARDS REVIEW GROUP's response to Question 8.
No
AECI agrees with SERC OC STANDARDS REVIEW GROUP's response to question 9.
AECI remains unconvinced that COM-003-1 adds sufficient value to our industry reliability, for the degree of non-compliance risk it imposes. There are several issues with the supporting white paper: 1) this paper appears void of citations supporting its assertions, 2) it also fails to differentiate cited industry failures in communication, between; situations where somebody failed to communicate a field-change that significantly affected BES situational awareness, situations where the change was clearly understood and yet its situational impact was not, and situations where the affected objects were misunderstood. All of these failures are critical to our industry's assessing true value in introducing and enforcing broad-scope three-part communication, because COM-003-1 can only improve the last of those three miscommunications, 3) its citation, of 12 Entity's broadly adopting three-point communication, seems hardly a majority practice within our industry, 4) while Entities

may internally adopt similar policies, that does not mean we should risk being subject to Federal law in support of conceptual theories, 5) citations of similar adoptions by other industries or cultures, fail to provide useful differentiation between their critical and casual operational communications, except in the case of military, where COM-003's proposed broad scope of communication appears to be inconsistent, while COM-002's narrowed scope appears in alignment with the military's adopted practices as described.

David Dockery

Individual

Bob Steiger

Salt River Project

Yes

The definition of "Operating Communication" is vague and needs clarification.

Yes

Yes

No

In the real time environment we deal in current hour or next hour terms. Including the time zones in these conversations would further muddy the waters.

No

This combination for R2 and R3 would open some vertical entities to be being fined multiple times for the same communication.

Yes

No

The interface names that should be used are the names that are registered in the TSIN.

No

Individual

Robert L Dintelman

Utility System Efficiencies, InC.

Yes

No

Even though this is administrative, due to the vital importance of proper operating communications a Communications Operating Procedure is necessary to ensure that the Registered Entity has established its own communications procedures in compliance with the standard to use in training its operations personnel in proper communications protocols.

Yes

Yes

Yes

Yes

Yes





definition of Reliability Directive in COM-002, which addresses reliability issues. We suggest that R2 and R3 be eliminated, since neither one will increase reliability.
No
This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW" of communication as opposed to the "WHAT".
No
This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW" of communication as opposed to the "WHAT". Requirement 1.1.4 does not need to be in this standard as the requirement for unique line identifiers is stipulated in TOP-002-2 R18.
No
LG&E and KU Services suggest deletion of all three requirements
Does the industry agree that we need a standard on three part communications for normal operations? Has a lack of a standard on three part communications for normal operations created any reliability issues? If so, what are they? LG&E and KU Services believes that the concerns expressed by the Blackout Report and cited as the reason for creating this NERC Project are already addressed through EOP and TOP Standards that specify what information is to be communicated, instead of how information is to be communicated. "Lack of situational awareness" (2003 Blackout Report, Recommendation 26) cannot be overcome by dictating "how" communication takes place, but instead, can be overcome by responsible individuals (NERC certified operators) ensuring that proper information is communicated. LG&E and KU Services believes that the concerns expressed by the Blackout Report and FERC Order 693, Paragraph 532 are not (and need not be) addressed by this or any other NERC RS Project. First, the recommendation for "tightened communication protocols" (FERC Order 693, Paragraph 531) is within the context of "alerts and emergencies." Second, FERC's Order 693, Paragraph 532 calls for "communication uniformity as much as practical on a continent-wide basis." This is calling for uniformity in emergency communications, which was the context within which FERC was speaking, as evidenced by the previous sentence ("during emergencies"). By establishing emergency communication uniformity, "ambiguities in communications during normal, alert and emergency conditions" will be eliminated. Nothing in the Commission's Determination was calling for establishing communication uniformity for all communications. LG&E and KU Services suggest removing requirements R2 and R3. These requirements do not improve reliability, but instead shift Operator focus from communicating proper information ("what") to communicating in a compliant manner ("how"). System Operator need to be wholly concerned with the information they are communicating, not making sure they "say things the right way" so they will not be non-compliant. Every communication should not be a compliance event. While LG&E and KU Services supports the addition of using the 24-hour clock format, subpart 1.1.4 is already addressed in TOP-002-2b R18. Including such a similar requirement here simply provides entities with a double jeopardy opportunity to be non-compliant. We suggest subpart 1.1.4 be removed, along with subpart 1.2, which again goes too far in dictating "how" and simply creates another compliance event. We suggest subpart 1.1.3 be rewritten to explicitly allow for entities to agree upon using a particular format for communicating time. With these suggestions in mind, it would be more appropriate to put the remaining requirements into COM-001. We also suggest removing the definition for Operating Communication since this also unnecessarily creates opportunities for non-compliance. LG&E and KU Services have concerns about the white paper posted on the project page. Some assertions made in the white paper are not defensible, and some are not technically sound. This should not be used as support for the existing draft of COM-003.
Brent Ingebrigtsen
Group
Pepco Holdings Inc & Affiliates
No
The distinction between Operating Communication definition and the Reliability Directive being a type of Operating Communication is confusing.
Yes
Yes

Yes
Yes
No
This modification for use of 3 part communications for Operating Communications is confusing and should not be required for Normal conditions, non reliability communications.
Yes
However not sure if it is applicable to Reliability Directives.
Yes
COM-002 and COM-003 must be combined into one standard. COM-002 dealing with emergency, reliability situations requires 3 part communication as specified. COM-003 dealing with normal conditions, non reliability issues should not require 3 part communications.
David Thorne
Group
PNGC Small Entity Comment Group
Modified PNGC Small Entity Group Comments: The PNGC comment group believes there should be a distinction in the "Applicability" section of the standard between "Scheduling Distribution Provider" and "Non-scheduling Distribution Provider". PNGC members are small rural cooperatives that are "Full service BPA customers." This means that BPA is our power supplier and scheduling agent and therefore handles all reliability directives, scheduling, tagging, dispatching of resources and curtailments of load from breakers on BPA's system for PNGC members. According to a letter from the WECC Reliability Coordinator (VRCC and LRCC) none of PNGC's members will ever receive a "Reliability Directive". Such a Directive would be sent to either a Balancing Authority (BA), or a Transmission Operator (TOP). We estimate there are over 100 entities that are BPA Full Service customers that are in a similar position and making this standard applicable to them does nothing to enhance reliability. A simple declarative statement in the Applicability section of the standard could focus the intent of the SDT on those entities that need it while lessening the compliance risk and clerical burden for other entities that the standard should not apply to. We suggest: 4. Applicability: 4.1. Functional Entities 4.1.1 Reliability Coordinator 4.1.2 Transmission Operator 4.1.3 Balancing Authority 4.1.4 Generator Operator 4.1.5 Distribution Provider: With Real-time Operations and Scheduling desk The PNGC comment group believes the above change will lessen the compliance burden on small, non-scheduling entities while still meeting the SDT's intent with regard to Operating Personnel Communications. We also note that FERC and NERC, on multiple occasions and in multiple filings, have indicated their openness to lessening unnecessary compliance requirements for small entities.
Ron Sporseen
Individual
Howard Rulf
Wisconsin Electric dba We Energies



Yes
Yes
No
This is too similar to but different than what is required for a directive. Since 99.9% or more communications will not be directives, we will be conditioning operators to use this for directives also. If I reissue an Operating communication because the other party does not respond soon enough for me for whatever reason, the other party has violated R3 of this standard. R3 in general would not apply to a DP except for loads connected at transmission voltages.
No
Use of "accurate" accurate alpha-numeric clarifiers is subjective. What are they? Who decides what is "accurate"? An auditor? The NATO phonetic alphabet is really still being mandated. What if I use the NATO version and another entity uses a different one. Can we talk to each other? We will now also have to specify what phonetic alphabet we are using before any communication.
No
See the Mapping Document for Project 2007-03 Real-time Operations, TOP-002 R18: "This requirement adds no reliability benefit. Entities have existing processes that handle this issue. There has never been a documented case of the lack of uniform line identifiers contributing to a System reliability issue. This is an administrative item, as seen in the measure, which simply requires a list of line identifiers. The true reliability issue is not the name of a line but what is happening to it, pointing out the difficulty in assigning compliance responsibility for such a requirement, as well as the near impossibility of coming up with truly unique identifiers on a nation-wide basis. The bottom line is that this situation is handled by the operators as part of their normal responsibilities, and no one is aware of a switching error caused by confusion over line identifiers."
We agree that accurate communication is necessary and we must strive to eliminate mistakes due to miscommunications. In the White Paper, other industries are cited that use three-part communication. Which of these industries also imposes sanctions and penalties on a company if an operator says "for" instead of "fow-er"? In order to verify compliance with this standard, there will be entities that will need to listen to thousands of hours of voice recordings (8760 hours in a year, and multiple operators). Listening to 10% of the voice recordings will be a full time job for one or more persons. What is the reliability benefit of this cost? Unless it is tempered with some reasonableness, this standard as written will be detrimental to reliability because it will slow down communications considerably with innumerable repeats because of fear of violating the standard.
Individual
Eric Scott
City of Palo Alto
Palo Alto supports the comments submitted by PNGC Power regarding limiting the applicability of the standard to a certain subset of Distribution Providers. Palo Alto is similiarly situated as PNGC.

Group
MEAG Power, Danny Dees, Steven Grego, Steve Jackson
No
Operating communication is not necessarily three part communication. If three part communication is being required, then it should be defined as three part communication.
Yes
It is best for NERC to evaluate risk and performance and prescribe methods.
No
The language, intent and purpose is not sufficiently defined. Needs better documentation and explanation.
No
Too prescriptive. NERC should be addressing risk and performance.
No
Overly prescriptive. NERC should deal with risk and performance. This level of prescriptive standard language is not appropriate.
No
Overly prescriptive. NERC should deal with risk and performance.
No
Too prescriptive. The industry has performed for many decades, successfully. NERC should focus on risk and performance.
No
Too prescriptive.
No
VRFs and VSLs should be eliminated across the board.
Scott Miller
Group
ISO/RTO Standards Review Committee
No
The SRC agrees with the elimination of the three terms but not with the addition of "Operating Communication". The SRC does not believe that the proposed term (Operating Communication) is sufficiently different from the originally proposed term (Interoperability Communication) to warrant adoption. The SDT's proposal continues to expand the scope of the SAR from the concept of tightening the protocols associated with Emergencies or Adverse Reliability Impact to now applying to all communications. The text box in the draft standard indicates that Reliability Directives are a type of Operating Communications, to the extent they change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. We see little difference between the two terms despite the SDT's assessment that Reliability Directives is a type (or a subset) of Operating Communication. If the SDT intent is to use the proposed new term to require 3-part communication (as suggested in R2 and R3), then that intent can be accomplished by using the term Reliability Directives as it covers not only emergency state but also instructions needed to address Adverse Reliability Impacts. Please also see our comments under Q6 regarding the use of the proposed term to support the requirements for 3-part communication. The SRC would note that both the Blackout Report and the FERC directive deal with tightening protocols for Emergencies, whereas the proposed SDT requirements completely fail to address emergencies and focuses solely on developing non-emergency protocols. SRC Note: there is no mention in the Blackout Report of "operational communications breakdowns re: changing states of equipment; most of the documentation points to: (1) emergencies/alerts; and (2) notification OUTSIDE of the entity experiencing the problem. The SRC requests that in the next posting the SDT provide real examples (without naming the registered entities) where reliability was jeopardized by the failure of 3-part communications under routine operational situations. Effectiveness of Communications "Under normal conditions, parties with reliability responsibility need to communicate important and prioritized information to each other in a timely way, TO HELP PRESERVE THE INTEGRITY OF THE GRID. THIS IS ESPECIALLY IMPORTANT IN

EMERGENCIES. DURING EMERGENCIES, OPERATORS SHOULD BE RELIEVED OF DUTIES UNRELATED TO PRESERVING THE GRID. A COMMON FACTOR IN SEVERAL OF THE EVENTS DESCRIBED ABOVE WAS THAT INFORMATION ABOUT OUTAGES OCCURRING IN ONE SYSTEM WAS NOT PROVIDED TO NEIGHBORING SYSTEMS." (2003 Blackout Report, page 108) 26. "Tighten communications protocols, ESPECIALLY FOR COMMUNICATIONS DURING ALERTS AND EMERGENCIES. UPGRADE COMMUNICATION SYSTEM HARDWARE WHERE APPROPRIATE. NERC should work with reliability coordinators and control area operators to improve the EFFECTIVENESS OF INTERNAL AND EXTERNAL COMMUNICATIONS DURING ALERTS, EMERGENCIES, OR OTHER CRITICAL SITUATIONS, AND ENSURE THAT ALL KEY PARTIES, INCLUDING STATE AND LOCAL OFFICIALS, RECEIVE TIMELY AND ACCURATE INFORMATION." (2003 Blackout Report, page 108) SRC note – Nowhere in the above quoted Recommendation 26 is there a reference to person-to-person communications of required actions; rather it references communication of the state of the operating system itself. SRC Note: there is no mention in FERC Order 693 of "operational communications breakdowns re: changing states of equipment; the Order does state: 532. "While we agree with EEI that EOP-001-0, Requirement R4.1 requires communications protocols to be used during emergencies, we believe, and the ERO agrees, that the communications protocols need to be tightened to ensure Reliable Operation of the Bulk-Power System. We also believe an integral component in tightening the protocols is to establish communication uniformity as much as practical on a continent-wide basis. This will eliminate possible ambiguities in communications during normal, alert and emergency conditions. This is important because the Bulk-Power System is so tightly interconnected that system impacts often cross several operating entities' areas." SRC note – The above section concerns "ineffective communications" not "incorrect communications". The key to the above is "communication uniformity" not 3 part communications. The SRC believes the both the FERC Order's directives and the Blackout Report Recommendation 26 are clear in their respective requests to address general protocols; and that neither request suggests a need for mandating a specific procedure let alone 3 part communications for all operational communications.

No

The question is structured as an "either" "or" question about one requirement and does not include a "neither" option relating to the other requirements. The SDT has replaced one procedure with another set of procedures. Neither is an appropriate requirement. The SRC believes that this and other detailed procedural requirements on personnel are not valid applications for NERC reliability standards. The SRC believes that standards must mandate outcomes and that standards such as this one on 3 part communication procedures are better left to the registered entities. If the Industry were to support the SDT's proposed requirement, the SRC would urge the SDT to turn away from the "zero defect" standard that it is proposing and to replace it with a requirement that allows for reasonable number of deviations. The proposed requirement will be prohibitively expensive to implement with little improvement in reliability (also see "whitepaper" included in response to Question 10). The requirement will require all communications channels to not just be recorded (which is done today) but will require each recording to be reviewed by a compliance person for self-reporting purposes. The proposed requirement would actually reduce reliability by taking the above required compliance personnel away from reliability related standards and placing them on these procedural requirements ; and (2) distracting operators from their core responsibility of reliability due to concerns with meeting compliance obligations. A more acceptable alternative approach would be to introduce communications protocols as a mandatory non-standard (e.g. as a requirement for certification) that would center on a corporate communications manual that encourages three-part communications; and that includes how monitoring would be audited internally. Such an alternative would change the requirement from monitoring personnel mistakes to a requirement for monitoring corporate culture. Moreover, the use of a non-standard alternative would encourage the creation of innovative Best Practices; as opposed to a mandatory fixed procedure which would limit innovation.

No

FERC has made it clear that it would be amenable to eliminating requirements that are not reliability problems. A requirement regarding language comes under that category. There are no reports indicating that language is causing reliability problems. The SRC does not believe this issue rises to the level of a mandatory standard. The SRC would ask if the SDT has any evidence that language is a problem causing reliability impacts. In the absence of such evidence that it is a reliability problem, the SDT should eliminate this requirement.

No

This requirement is outside the scope of the approved SAR which proposes responding to the Blackout Recommendation to tighten communications protocols especially during emergencies. This proposed requirement is both procedural and does not address tightening communications of situational awareness. The SRC would suggest that as an alternative a standard could require the Functional Entities to have a communications protocol that could indeed include this suggestion, but it should not be a standard on personnel. By adopting an alternative category (i.e. not making this a standard) a Reliability Entity could adopt a progressive best practice approach without concern for violating the strictest features of the "proposed" best practice.

No

The SRC agrees that if there is a requirement for 3 part communications as proposed, then the proposed exception is needed to avoid double jeopardy, and the differentiation between issuer and receiver is needed. The SRC however does not agree with the need for the requirement itself. By introducing the proposed exception (i.e. of Reliability Directives used during emergencies) the SDT has invalidated the very reason that its SAR was proposed (i.e. to improve protocols DURING emergencies). The SRC disagrees with using the term Operating Communications because the term is not significantly different from the term Reliability Directives (see our comments under Q1). Using the term Reliability Directives to support the requirements for 3-part communication can avoid (a) any confusion with the requirement in COM-002-3, (b) potential double jeopardy of violating both COM-002 and COM-003, and (c) the need to exercise 3-part communication for routine operating instructions. If the SDT's intent is to require 3-part communication for any and all operating instructions (as the proposed term suggests), then this intent will result in unnecessary 3-part communication burdens for simple actions such as requesting the removal of a line, or switching, or raising generation, or even to "maintain" its current state. We suggest the SDT remove the term Operating Communications. With respect to Requirements R2 and R3, we question the need for having these requirements if Reliability Directives already cover non-emergency conditions (instructions/actions that are needed to address potential Adverse Reliability Impact). The requirement to exercise 3-part communication to handle Reliability Directives is thus duly addressed in COM-002-3. Other than emergency conditions and potential Adverse Reliability Impact conditions, we do not see, nor has the SDT proven a need to exercise 3-part communication for routine operating instructions.

No

This requirement is a procedural issue and is outside the scope of the approved SAR which proposes responding to the Blackout Recommendation to tighten communications protocols especially during emergencies. This proposed requirement is both procedural and does not address tightening communications of situational awareness. The SRC would suggest that the standard should require the Functional Entities to have a communications protocol that could indeed include this suggestion, but it should not be a standard on personnel.

No

This requirement is a procedural issue and is outside the scope of the approved SAR which proposes responding to the Blackout Recommendation to tighten communications protocols especially during emergencies. This proposed requirement is both procedural and does not address tightening communications of situational awareness.

The SDT's proposals do not conform to the Standards Process because those proposals do not reflect the public comments that were submitted. The Process requires the SDT to use the Industry's comments to drive the requirements and as such the requirements should not be mandating three part communications procedures for all "changes in status" much less the maintaining of such status. Such a request was not made by any of the commenters let alone a majority of the commenters. It would be more appropriate if the SDT asked who favored the approach being used, as opposed to asking if an "adjustment" to the requirement were acceptable. Many of the adjustments are better than if they were not there, but that ignores the fact that the requirement itself is not supported by the majority of commenters. The SDT's proposals expand the scope of the SAR by totally ignoring communications protocols used during emergencies and simply focusing on procedures imposed on personnel during normal situations. This standard over-reaches into routine operations by requiring 3-part communication for all instructions that change or maintain the state, status, output, or input of

an Element or Facility of the Bulk Electric System. This type of instructions occurs every hour, if not minute. Requiring operating personnel to apply a 3-part communication procedure for these instructions is absolutely unnecessary and overburdening, and can in fact adversely affect reliability. We strongly suggest that any requirement for 3-part communication for routine operating instructions be removed. \*\*\*\* FERC Order 693 510. "The Commission proposed... (4) requires tightened communications protocols, especially for communications during alerts and emergencies. " SRC Note – The above language while allowing for a requirement to go beyond emergencies, it states that the primary intent is "during alerts and emergencies". The SDT has no requirement for "alerts and emergencies" and focuses solely on normal operations. 532. While we agree with EEI that EOP-001-0, Requirement R4.1 requires communications protocols to be used during emergencies, we believe, and the ERO agrees, that the communications protocols need to be tightened to ensure Reliable Operation of the Bulk-Power System. We also believe an integral component in tightening the protocols is to establish communication uniformity as much as practical on a continent-wide basis. This will eliminate possible ambiguities in communications during normal, alert and emergency conditions. This is important because the Bulk-Power System is so tightly interconnected that system impacts often cross several operating entities' areas. 230 EOP-001-0, Requirement R4 provides, in relevant part, that: "[e]ach Transmission Operator and Balancing Authority shall have emergency plans that will enable it to mitigate operating emergencies. At a minimum, Transmission Operator and Balancing Authority emergency plan shall include [c]ommunication protocols to be used during emergencies." SRC Note – the communications ambiguities noted above do not refer to issues with interpersonal communications but rather refer to situational ambiguities. 540. "While the Commission identified concerns regarding COM-002-2, the proposed Reliability Standard serves an important purpose by requiring users, owners and operators to implement the necessary communications and coordination among ENTITIES. SRC Note – the above does not say "among OPERATING PERSONNEL" it says "among ENTITIES". 540. (continued) ALTERNATIVELY, with respect to this final issue, the ERO may develop a new Reliability Standard that responds to Blackout Report Recommendation No. 26 in the manner described above. " SRC note – The above is a key directive. It states tightened communications protocols [it does not say three part communications for normal actions]' Also note that the Blackout report recommendation is "an alternative" solution and not necessarily a part of the FERC proposed solution. The SDT is also asked to identify the role of the posted White Paper. Is the White paper to be retained as part of the support documentation? If so, then the paper must be vetted by the Industry. The SDT did not afford the opportunity to respond to the paper. There was no indication if the paper was a unanimous SDT position or if there were any minority opinions. The SRC would offer the following "whitepaper" to help in deciding whether or not a requirement for 3 part communications for all operational communications rises to the level of requiring a mandatory standard. The "whitepaper" frames the communications issues generically providing an alternative to a zero defects standard. \*\*\*\*\* The strides NERC is making in the areas of Events Analysis and Human Factors will likely lead to useful practices and value-added standards. A fact-based approach to standards will lead to improved reliability. This paper attempts to quantify the problem that COM-003 is trying to address. While human error is often the first theory to explain major accidents, the follow-on investigation typically finds many factors beyond the front-line operator's control. There is an axiom in the field of quality control that attributes 80% of manufacturing defects are controllable by management rather than the cause of the front-line workers . Many people make errors that contribute to outages. Manufacturers have equipment defects, planners make incorrect design decisions, technicians draw maps incorrectly, managers cut budgets (plant maintenance, vegetation management), etc. A study of errors at nuclear power plants sheds light on the causes behind the scenes. Although 92% of all root causes were man-made, only a small number of these were initiated by front-line operators. Most originated in either maintenance-related activities or in bad decisions within the organization. In another study, a review of summaries of three major industrial events (Three Mile Island, Bhopal, and Chernobyl) identified operators as committing less than 10% of the missteps that led to the disasters. Table 1 Contributors to Major Accidents To be conservative, this paper assumes that 30% of all major human errors that impact the BPS are attributed to front-line workers (dispatchers, field operators, technicians and maintenance personnel). With regard to which front-line workers commit errors, a study of electrical system incidents at nuclear plants were generally evenly distributed between operators, maintenance personnel and technicians. As to communications problems causing trouble, an EPRI study reviewed nearly 400 switching mishaps by electric utilities and found that roughly 19% of errors (generally classified as loss of load, breach of safety, or equipment damage) were due to communication failures. This was nearly identical to

another study of dispatchers from 18 utilities representing nearly 2000 years of operating experience that found that 18% of the operators' errors were due to communication problems. Figure 1 EPRI Study Results on Operating Errors Bringing the pieces of this discussion together, the following assumptions are used to estimate the percent of human errors on the BPS caused by operator communication breakdowns: • 30% of human failures impacting the BPS are due to front line workers. • Front line errors were generally evenly split into 3 groups o Dispatchers o Field Personnel o Maintenance and Relaying Technicians • 18% of dispatcher errors are due to communication problems. The net result is that using estimates of existing research shows that dispatcher communications represent roughly 2% of the human failure on the BPS. Figure 2 Summary Human Failure Estimate While it has been stated that communication problems are found during the review of all system events, this is similar to saying that gravity is involved in all trips and falls. The statements are true, but the solutions to the problems are multidimensional. During a system event, there are hundreds, if not thousands of communications among different operators, often on situations never seen by the participants. Many of the communications are troubleshooting and information sharing that requires give and take and must be done quickly. If every communication during a disturbance needed to be 3-way, system restoration times for those disturbances would increase. NERC has built a solid foundation to make informed decisions in the future. The Events Analysis process, GADS and TADS should yield data on the impacts and contributors to BPS failures. NERC's Human Factors efforts can be used to develop good practices for all front line personnel. NERC should build on the research similar to that outlined in this paper via industry-wide surveys of operators to collect additional data, lessons-learned and tips for improvement. \*\*\*\*\* A quick estimate of the workload associated with COM-003, for the number of registered entities under the standard's applicability list. If we assume 1 call each 10 minutes for a BA, TOP and RC and ¼ this amount for GOP and DP, you get the totals below. Each of these are an auditable and sanctionable event. The review and self report on all of these is incompatible with the reliability impacts realized? BA TOP RC GOP DP Total 132 181 22 795 551 # of Entities 19008 26064 3168 28620 19836 96,696 Calls per Day 35,294,040 Calls per year \*\*\*\*\* Lastly, the SRC requests that in the next posting that the SDT include the question: Does the Industry: • Support continued development of a standard on personnel discussions during non-emergency conditions? • Support withdrawal of the standard? • Support the creation of an alternative non-standard (e.g. certification) that addresses the corporate protocols on communications?

Albert DiCaprio

Group

City Water Light and Power

No

Definition is overly broad and should at least be tailored to indicate the operating time frame is the relevant concern.

Yes

No

This requirement should certainly not be a part of this standard, but should be eliminated entirely. It specifies a process, not a result - the requirement should be based on resultant functionality, not the process by which the entity achieves it.

Yes

No

Entities who have an agreed upon protocol which includes the time zone to be used for system operations should not be required to repeat the time zone for every communication. For instance, if Entity A and Entity B are in different time zones but both have an operating policy that states all communication between the two is in Eastern Standard Time and all operating personnel are trained on this policy, this should be sufficient. This achieves the same functional goal. The requirement to restate the time zone in this case only serves to set up a situation where a simple single-instance omission would have no effect on reliability but still be noncompliant.

No

Three part communications should not be required for routine operating communications. See the

definition of Reliability Directive in COM-002, which addresses reliability issues.
No
Again, this requirement attempts to dictate process as opposed to being a standard. The standard should only dictate the result, not how it is achieved.
No
This is already addressed in TOP-002 R18. Even if moved, the requirement should be focused on agreed upon identifiers and the process for coordination should be left to the entities.
No
These requirements should be eliminated entirely
CWLP generally echoes the SERC Operating Committee comments. Additional comments have been provided to suggest better functionality if the standard moves forward in its current form.
Shaun Anders
Individual
Joe Petaski
Manitoba Hydro
No
Manitoba Hydro disagrees with the term "Operating Communication" as we do not feel there should be a distinction between Reliability Directive and "Operating Communications". We suggest that the term "Operating Communication" be replaced with the term Reliability Directive as any instruction to change the status or function of the BES must be clear and concise and confirmed with three way communication to ensure system reliability and personnel safety.
Yes
Yes
Yes
No
Manitoba Hydro agrees with R1.1.2 but disagrees with R1.1.3. R1.1.3 is unnecessary and should be modified to "1.1.3 - When communication is between entities in different time zones, clarify the difference in time to ensure mutual understanding". Making R1.1.3 more generic gives operators the opportunity to determine the best method for them to ensure mutual understanding and clarify the time difference.
Yes
Manitoba Hydro agrees with splitting the single requirement into (R2) issuer and (R3) receiver, but as stated in our response to Question 1, we do not agree with the term "Operating Communications".
No
Manitoba Hydro agrees with the use 'accurate alpha-numeric identifiers' and feels that they should also be required when referring to a Transmission interface Element or a Transmission interface Facility in R1.1.4
Yes
See question 7 comments
Yes
Manitoba Hydro is voting negative on COM-003-1 based on our comments in the previous questions in addition to the following: (M1/M2/M3)– it is unclear what specifically is meant by 'on site observations' or how 'on site observations' can be an effective measure of compliance with the standard's requirements.
Individual
John Seelke
Public Service Enterprise Group

See #10.
See #10.
Yes
See #10.
See #10.
See #10.
See #10.
See #10.
See #10.
See #10.
This standard (COM-003-1) should be combined with COM-002-3 and issued as one standard to require ONE 3-part communications protocol for both Reliability Directives and non-Reliability Directives. Both require 3-part communications; however, COM-003-1 sets ADDITIONAL communications protocols and introduces a new definition (Operating Communication) that is not contained in COM-002-3. In addition, the text box on page 2 appears to redefine "Reliability Directive" inappropriately. While the sentence confusion is the text box may be unintended, its needs to be clarified.
Individual
John T. Walker
Portland General Electric - Transmission & Reliability Services
Yes
Yes
Yes
Yes
No
Requirement 1.2 requiring the use of alpha-numeric clarifiers would unnecessarily complicate operator communications, especially inter-company communications where transmission facilities have historically and are commonly identified by alpha-numeric characters. The use of three-way communications ensures accurate communications without the complications of alpha-numeric clarifiers.
Group
Hydro One Networks Inc.
No
The proposed Operating Communication term is not sufficiently different from the originally proposed term (Interoperability Communication). The proposal continues to expand the scope of the SAR from the concept of tightening the protocols associated with Emergencies to now applying to all communications. The text box in the draft standard indicates that Reliability Directives are a type of Operating Communications, to the extent they change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. There is little difference between the two terms despite the SDT's assessment that Reliability Directive is a type (or a subset) of Operating Communication. If the intent is to use the proposed new term to require 3-part communication (as suggested in R2 and R3), then that intent can be accomplished by using the term Reliability Directive



as it covers not only the emergency state but also instructions needed to address Adverse Reliability Impacts. Both the Blackout Report and the FERC directive deal with tightening protocols for Emergencies. The proposed requirements completely fail to address emergencies and focus solely on developing non-emergency protocols.

Yes

No

In the past there was a lot of confusion regarding the use and applicability of three-part communication. We believe that all communication protocol related requirements and information should be contained within one standard. This should include Alert Levels and their definitions.

No

We believe that this requirement should be eliminated. As a general rule, standards' requirements that do not address reliability problems should be eliminated. No available information indicates that language is causing reliability problems and there. In addition to this, there are some jurisdictions where this requirement might cause decrease in reliability (i.e. Quebec)

Yes

No

The term Operating Communications is not significantly different from the term Reliability Directives. Using the term Reliability Directives to support the requirements for 3-part communication can avoid (a) any confusion with the requirement in COM-002-3, (b) potential double jeopardy of violating both COM-002 and COM-003, and (c) the need to exercise 3-part communication for routine operating instructions. Realistically, the definition of Operating Communications covers all communications. We believe that only Reliability Directives should require 3-part communications, and should be enforceable if a miscommunication results in an error on the BES.

No

This requirement adds added complexity to communications, not improvement. There are equipment designations that are commonly used and understood, and to force the use of clarifiers will disrupt operating communications.

Yes

No

The white paper discusses many non-utility industries use of the three-part communication. However, they are not out of compliance if they fail to use three-point communications. Only the Reliability Directives should require three-part communications (and dictate compliance). This should be enforceable only if the miscommunication results in an error on the BES. We support the use of three-part communications. There is concern over the potential for being out of compliance when there is no BES impact. Failure to meet Requirement R2, part 2.2 bullets 1 or 3 is either a Moderate or High. Failure to meet bullet 2 is a Severe VSL. It is not clear why this differentiation was adopted. The White Paper reflects on Human Performance, and how miscommunications can cause a BES error resulting in an outage, or possible cascading effects. Then the Standard (and the associated out of compliance) should apply when, and to the extent that communications lapse (e.g., when there is an impactful violation of bullets 1, 2 and/or 3) results in an impactful error on the BES. Otherwise, an out of compliance is inappropriate. Non-impactful violations should be rated "Lower VSL."

- Hydro One strongly believes that three-part communication should be limited to Reliability Directives only. It application to virtually all communications will prove to be an additional burden for operators, burden that is not justified and would not increase the reliability of the BES. - While we don't agree with inclusion of the three part communication for Operating Communication (as stated above), we believe that the communication protocol related requirements from both existing COM standards should be merged into COM-003 to improve clarity. In the current draft, COM-003 does this only partially by including COM-001 R4. In addition to already mentioned Alert Levels and their definitions (already mentioned in our reply to Q3), we believe that COM-002 R2 should be moved into this standard as well for clarity purposes.

Sasa Maljukan

Individual
Denise Lietz
Puget Sound Energy
Yes
Yes
Yes
Yes
Yes
Yes
No
No. The current language addressing alpha-numeric clarifiers is a significant improvement over the formulation addressing the same issue in the previous draft. However, this requirement remains overly-prescriptive, especially with respect to numeric clarifiers. Even with the NATO clarifiers, not all numbers have clarifiers. As a result, it not clear when a numeric clarifier would be required and when it is acceptable not to use such a clarifier. The requirement to use alpha-numeric clarifiers should be removed from the proposed standard entirely. If the requirement is not removed in its entirety, the requirement should be modified to exclude numeric clarification.
Yes
Group
SPP Standards Review Group
No
The definition is fine but it may not be necessary based on the comments provided to the remaining questions below. It's not so much what's contained in the definition, it's more about what the standard requires the industry to do with that definition. We believe eliminating the other three definitions was a positive move by the SDT.
Yes
Eliminating the requirement to have the procedure (documentation) was a move in the right direction. We are glad it was eliminated because that's one less piece of paper we have to keep track of.
Yes
We agree with the Alert Levels being removed from COM-003-1 and question the need to move them somewhere else. During its May, 2012 meeting, the Operating Reliability Subcommittee (ORS) approved a motion to '...terminate the pilot program using Alert Levels and to discontinue any efforts to include the guidelines in reliability standards projects.' This was based on the inability of the ORS to demonstrate any reliability improvements during the six years that the Alert Level pilot program had been in existence. That being the case, there is no need to create a SAR and transfer this to another SDT.
Yes
While we concur with the inclusion of the exemption, we question how the industry can ensure effective communications in a situation where the exemption comes into play.
No
Requiring time zone notifications at times other than those around the time of the transition from standard to daylight savings and back again is excessive. For a brief period of time around this

transition, ensuring the correct times are communicated would probably require including standard or daylight savings designations. Some consideration for this issue needs to be incorporated into the requirement. That said, trying to be overly prescriptive with the requirement creates an unnecessary burden on operating personnel without significantly improving BES reliability. A one-size fits all requirement may not be appropriate. Entities whose geographical area is located in multiple time zones probably have internal procedures detailing how they handle time differences within their area. Most often this entails selecting one time zone as the entity's reference. As written, the requirement overrides any internal procedures which may unnecessarily complicate internal communications. Allowances should be made for internal procedures which cover this situation. Requirement 1.1.3 requires that time and time zone, including standard or daylight savings time designations, must be communicated at all times. Yet Requirement 1.1.2 includes a provision that requires use to the 24-hour clock only when clock times are referenced. This needs to be included in Requirement 1.1.3 as shown below: When the communication is between entities in different time zones and refers to clock times, include the time and time zone and indicate whether the time is daylight saving time or standard time.

No

The format of the requirement is an improvement. However, we have concerns about the standard being overly prescriptive. All actions '...to change or maintain the state, status, output or input of an Element or Facility...' of the BES do not have a significant impact on the reliability of the BES. The draft standard mandates that they do. Applying 3-part communications to all Operating Communications places an overly burdensome task on the industry in monitoring and tracking compliance. Additionally, a zero-tolerance interpretation of this requirement places an unjustified risk on the industry without making an appreciable improvement in BES reliability.

Yes

We concur with the elimination of the NATO phonetic alphabet and thank the SDT for making this change. This is an excellent example of backing away from being overly prescriptive by requiring the NATO alphabet and allowing the industry to use any of several other options to ensure effective communications. We do have concerns with the use of 'correct' or 'accurate', depending on which document you refer to. What is correct? What is accurate? How does one measure compliance with these terms? We would propose to delete the word 'accurate' altogether. The requirement would then read: When participating in oral Operating Communications and using alpha-numeric identifiers, use alpha-numeric clarifiers.<sup>1</sup>

Yes

While the industry probably understands what is meant by 'Transmission interface Element or Facility', the terms are somewhat cumbersome. Additionally, for situations where there may be an agreement between owners designating multiple names for an Element or Facility, we propose adding an '(s)' to 'name'. For example, if one owner calls a line A-B and the other owner calls the line B-A and they agree to use both names interchangeably, then either would be correct. Requirement 1.1.4 would then read: When referring to an Element or Facility that is part of an interconnection between entities, use the name(s) specified by the owner(s) for that Element or Facility.

No

With the additional burden of monitoring and tracking compliance and the increased risk of the zero-tolerance VSLs without a subsequent improvement in reliability of the BES, the VRFs should be changed to Low. The VSLs should be reduced to Lower. We suggest modifying the second part of the existing Moderate VSL for Requirement 1 to include specific reference to Requirement 1 as is done in the first part of that VSL. The VSL would then read: The responsible entity did not correctly implement Requirement R1, Part 1.2. Likewise, we also suggest modifying the second part of the existing High VSL for Requirement 1 to include specific reference to Requirement 1. The VSL would then read: The responsible entity did not correctly implement one (1) of the four (4) parts of Requirement R1 when it was appropriate to use three of the four parts.

We believe the standard is too prescriptive as written. The purpose of the standard is to ensure effective communications. The standard has given us a very specific listing of items that must be done in a specific manner in order to accomplish this goal. What the industry needs is flexibility in how it achieves the goal of effective communications. The standard does not recognize that flexibility. The Measures for Requirements 1, 2 and 3 do not contain specific references to the requirements they are associated with. There is a parenthetical following the measure that does include that reference but

including the reference specifically in the measure is a stronger statement and eliminates any possibility for confusion. The section of M1 to be modified would then read: '...that the communication protocols specified by Requirement 1 were implemented...' The section of M2 to be modified would then read: '...that the communication protocol specified by Requirement 2 was implemented.' The section of M3 to be modified would then read: '...that the communication protocol specified by Requirement 3 was implemented.'

Robert Rhodes

Group

Avista

No

Yes

This standard as drafted is very prescriptive and will not ensure improved reliability. A better approach would be to require applicable entities to; develop and implement an internal communication plan that takes into consideration recommendations discussed in the proposed NERC OC System Operator Verbal Communications Guideline, implement internal controls and monitoring to ensure adherence to the communication plan, and implement an adequate communication training program.

Scott Kinney

Individual

Brenda Truhe

PPL Electric Utilities

No

Suggest the definition be clarified to scope to 'real-time' operating instructions to eliminate discussion of future outages.

Yes

Yes

Yes

No

Since Reliability Directives are a subset of Operating Communications, if this was done to lower the VRF for Operating Communications that are not Reliability Directives, this modification makes sense. However, having two stds/rqmts address 3-part communication (even if not in same words) is not as clear as it could be. One standard requiring 3-part comm for Real-time operating communications which includes Reliability Directives would be more straight-forward, with a higher VRF for Reliability Directives.

Yes

No

This requirement seems duplicative of TOP-002-2 R18.

Regarding R1.1.3: I request the SDT consider allowing for the Applicable Functional Entity to develop an Operating Procedure such that if all parties in the communication are in the same time zone that the time zone does NOT need to be used in the Operating Instruction. Regarding the VSL/VRF: I request the SDT consider adjusting the std or VSLs to allow for compliance with a 95% confidence. Such that 1 incomplete 3-part Operating Communication could be considered low or not a PV. If sampling of voice recordings provides a 95% confidence, this should be sufficient. E.g. If one sample of 30 voice recordings results in 1 incomplete 3 part and a second sample of 30 finds no issues, the audit result should be no PV. This is a standard sampling techniques. We thank the SDT for their efforts. PPL EU supports the value added by using 3-part communications and a phonetic alphabet as both are included in our current communications operating instructions. Even with the many Human Performance tools we use, our concern with the standard is being found non-compliant if one of hundreds/thousands of operating communications in a year is not perfect 3-part comm.
Individual
Bob Thomas
Illinois Municipal Electric Agency
No
IMEA agrees with comments submitted by the SERC OC Standards Review Group.
No
IMEA agrees with comments submitted by the SERC OC Standards Review Group.
No
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No
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No
IMEA agrees with comments submitted by the SERC OC Standards Review Group.
No
IMEA agrees with comments submitted by the SERC OC Standards Review Group.
Group
Arizona Public Service Company
Yes
Yes
Intentionally left blank
Yes
Yes
Yes
Yes

Yes
Yes
Equipment identifiers at individual locations (generating stations as an example) have the same alpha preceding the unique device numeric. It is unnecessary, redundant and confusing to the operator to repeat the station location with an alpha clarifier.
Janet Smith, Regulatory Affairs Supervisor
Individual
Alice Ireland
Xcel Energy
No
We do not agree that this definition should include "or maintain", and recommend that be struck. The scope should only include instructions that would require an action by the recipient.
Yes
Yes
Yes
No
Is there any evidence of an actual event where there was confusion in the time zone, which led or contributed to an event? We are not aware of any. If the drafting team has no basis for mandating the use of a time zone and daylight/standard time reference, then we suggest this requirement be struck because we do not believe it would increase reliability. In fact, we think it may have the opposite effect of reducing reliability. If the SDT decides to retain the sub-requirement, please clarify which entity's time zone should be used. As written, this sub-requirement may create confusion for field personnel if they are to repeat the order back in their own time zone. We are concerned this will actually increase the likelihood of human error, and therefore potentially reduce reliability. As a company that has field personnel in different time zones, company procedures dictate that CPT be used as that is the time zone the control center is in. Adding additional oral verification for time zones will promote human error.
Yes
No
1) "Accurate alpha-numeric identifier" needs to be clarified. Could each entity (or even each operator) create their own alpha-numeric identifiers? Further would it be a violation if an operator used "Charlie" in one conversation and "chalk" in another? Or, is it an expectation that the entity/operator adopts an existing list of alpha-numeric identifiers, which is published publicly? 2) We recommend that device names be excluded from the requirement to use alpha-numeric identifiers when both parties are working off of written instructions. We do not feel requiring this would improve reliability. Instead, it could actually slow down the recovery of the system. For example, we have devices in the field that may be labeled 12B34-W gang switches and it makes no sense to say, "Open and tag the one, two, B as in Bravo, three, four W as in Whiskey gang switch, when both parties have "12B34-W" written in the instructions they are both working from. Three-way communications are occurring and if there is any question as to the device name, it can be caught and clarified during that process.
Yes
No
The Moderate VSL for missing one part of the sub-requirements in R1.1.1 thru R1.1.4 is too harsh with a six month effective date. We suggest a phased in VSL or a twelve month effective date, as further explained under question 10.

(1) Requirement R1.1 refers to both written and oral Operating Communications. It was our understanding that COM-003-1 was to be focused solely on oral communications. If that was the SDT's intent, then we suggest striking the word "written" from this sub-requirement. (2) Six month Effective Date is not likely to be enough time to develop, implement, and test a new communication program. We need enough time to train the field personnel, plant control room operators and system operators to use alpha-numeric identifiers, 24-hr clock, time zone, etc. before the standard becomes effective. A twelve month implementation period would be more appropriate.

Individual

John D. Martinsen

Public Utility District No. 1 of Snohomish County

No

Yes

Yes

No

SNPD takes issue with the specification of "English" only communications and the Alpha-Numeric identifiers. There is no precedence established for the use of English, Alpha-Numeric or the use of a 24-hour clock format that warrant a sever VSL and the associated penalties that could be imposed by the Compliance Enforcement Agency

No

SNPD takes issue with the specification of "English" only communications and the Alpha-Numeric identifiers. There is no precedence established for the use of English, Alpha-Numeric or the use of a 24-hour clock format that warrant a sever VSL and the associated penalties that could be imposed by the Compliance Enforcement Agency

Individual

Kirit Shah

Ameren

No

We recommend that the SDT eliminate the words "...or maintain..." in the definition. We believe that inclusion of these words would drastically reduce side conversations that continuously occur between different entities. These side conversations provide additional information and perspectives to real-time operators that ensure they understand the real-time status of the BES. In other words, due to fear of possible non-compliance consequences for failure to properly converse in a three-part protocol at all times, entities will drastically curtail side discussions and deprive all BES operators of this pertinent and useful real-time information.

Yes

No

We recommend the Alert Levels be used by the SDT to define a workable time period when three-part communications is mandatory.

Yes

Yes

No
From our perspective, use of such a split for all Operating Communications (not directives) would add to the confusion.
No
We recommend to the SDT that one industry-wide alpha-numeric clarifying system should be used. Multiple systems may add confusion by use of clarifying words that some Operators may not be familiar with. We agree with use of the NATO Spelling Alphabet.
No
We suggest the SDT to provide clarification and guidance on precisely what Elements and Facilities are included in these terms. Since the word "interface" is not capitalized or defined in the NERC Glossary or this Standard, it will be difficult for TO, TOP, GO, GOP and DP entities to precisely identify the equipment associated with these terms. We also recommend that the SDT consider use of the term "Interconnected Facilities" as defined by Project 2007-06 System Protection Coordination for use in the new Standard PRC-027-1. Multiple definitions in multiple Standards for the same BES Elements and Facilities create unnecessary risk and uncertainty for both Auditors and Functional Entities.
No
We believe that the VSLs in this draft Standard create the potential for a violation or self-report for almost every single individual conversation about the BES by real-time operators. In this regard, we are concerned that the Functional Entities will greatly decrease their oral communications to minimize the risk of a self-report or violation which ultimately would undermine necessary discussions between operating entities.
We believe that multiple communication standards (COM-002, COM-003) are not necessary and suggest that SDT work with the NERC Operating Committee members to appropriately address what requirements are necessary from operating/reliability perspective as well as any related FERC directives.
Individual
Greg Travis
Idaho Power Company
Yes
Yes
Yes
Threat Alert Levels does not seem to fit this Standard.
Yes
Yes
No
I'm not sure I understand the separation of Directives and these Operating Instructions. They seem very similar and could be incorporated into the same standard. The split between Issuer and Receiver seems to add some clarity.
No
They should specify the alphabet to use for consistency.
Yes
Yes
At least I don't have a good reason not to agree.
I believe the requirements for Directive should be included in this standard and removed from COM-002.
Individual



Andrew Z. Pusztai
American Transmission Company, LLC
Yes
Yes
Yes
Yes
Yes
Yes
No
The prescriptive requirements currently in R2, and R3, tell how, not what, an entity is obligated to do. To address the fact that most Operating entities engage in "Operating Communications", one requirement (combining R2 and R3) is all that is needed, and ATC recommends that Requirement 2 be restated as follows: R2 Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider that issues, or receives an Operating Communication, excluding Reliability Directives, shall use Three-part Communications. Furthermore, ATC recommends that the SDT reconsider adding the "three-part communication" as a defined term properly vetted through the appropriate process, and added to the NERC Glossary of Terms. The definition as previously noted in Draft #1 is below. Three-part Communication — A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct by the party who initiated the communication.
Yes
No
Entities will face double jeopardy with existing Reliability Standard TOP-002-2b R18. Requirement 18 of TOP-002-2b is proposed to be removed from NERC Standards by the respective SDT because it adds no reliability benefit.
No
System Operators receive and issue many Operating Communications each day. The VSL for "one" Operating Communication is Moderate, which is considered too high. While improving communications is a laudable goal, the zero tolerance VSL is unacceptable and will lead to a preponderance of self-reports and compliance and administrative overhead. Also overlooked is the added stress that every time a System Operator speaks, they may be in violation.
When a situation necessitating alpha-numeric clarifiers in an Operational Communication arises, per the standard requirement, it becomes mandatory. There are many instances when marginally defined elements such as a carrier grounding switch, may need to be operated or changed state. If these devices can't be clearly defined as an element or facility, yet have alpha-numeric identifiers, the use of clarifiers should be discretionary. FERC Orders and recommendations point to "Tightening communications protocols, especially for communications during alerts and emergencies." The NERC standards addressing this issue are not approved yet. When they are approved by FERC, subsequently implemented, and allowed to mature, the concept of tighter protocols for normal operations may be developed.
Individual
Marie Knox
MISO
No
We do not agree with the proposed definition of Operating communication and agree with the elimination of the other three definitions. The SDT does not appear to respond positively to the

majority of industry comments submitted along with ballots. It also appears to be focused on imposing three part communications on the industry for routine communications despite the fact that neither the blackout report nor the SAR on which these standards are based emphasize that issue. The blue text box that mentions Reliability Directives seems to be a back door attempt to change COM-002 and should be clarified or eliminated. Splitting communications requirements across different standards creates unnecessary confusion.

No

The SDT did not eliminate a communications procedure requirement! It turned the former requirement into R1 and its sub-parts, forcing a single communication procedure on the industry. This goes far too deeply into the "HOW" of communication as opposed to the "WHAT".

No

We disagree – this concept more properly belongs in the NERC Rules of Procedure and should be designed to address Recommendation 26 of the NERC 2003 Blackout Report. This is an expectation of NERC and not of the industry. Also, see recent NERC Operating Reliability Subcommittee (ORS) discussions and recommendations regarding the elimination of the Transmission Alert Levels.

No

This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW" of communication as opposed to the "WHAT".

No

This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW" of communication as opposed to the "WHAT".

No

Three part communications should not be required for routine operating communications. See the definition of Reliability Directive in COM-002, which addresses reliability issues. We suggest that R2 and R3 should be eliminated, since neither one will increase reliability.

No

This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW" of communication as opposed to the "WHAT".

No

This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW" of communication as opposed to the "WHAT". Requirement 1.1.4 does not need to be in this standard as the requirement for unique line identifiers is stipulated in TOP-002-2 R18.

No

We suggest deletion of all three requirements.

We support the need to strive for good communications among users, owners and operators of the grid, but believe the standard as drafted is misdirected. Review of research done by EPRI and others shows that dispatcher communications cause on the order of 1-2% of human failure impacting the BPS. It is well less than 1% of all failures of the BPS. We also estimate there are millions of conversations annually that self-inspecting entities would need to review. Recommendation 26 of the Blackout Report, on which the SAR for this standard is based, was not focused on operator communications. Rather it suggested a mechanism by the Regions to keep regulators and government officials informed during emergencies. We would not be opposed to a requirement for entities to have a procedure for communication expectations of operators and that the entities have a process for periodic (no less than quarterly) sampling of operator communication for use in training and counseling. The requirement would need to be framed such that it does not become a "fill in the blank" standard, such that an investigator can ask for tapes of hundreds of conversations looking to find any kinks in communications. As drafted, this standard can actually impede reliability as there are at times better ways to communication when group action is needed and there are times when speed or "give and take" are needed. The standard also fails to acknowledge that SCADA forms part of the feedback process in communications. For example, ACE recovery and generation movement during a DCS event are better confirmation that the message was received and understood than just parroting back a phone call.

Individual

Eric Salsbury
Consumers Energy
No
As there is no definition of what alpha – numeric clarifiers must be used, this leaves too much room for interpretation for audit staff.
We believe this standard attempts to redefine “Reliability Directive” and should not do so. Specifics of communication for this standard should be centered on emergency operations and not a blanket protocol for almost all operations communications.
Individual
Karen Webb
City of Tallahassee
Yes
The City of Tallahassee Electric Utility (TAL) agrees with the addition of this proposed new definition; however, TAL is not clear on the scope of the phrase "input of an Element or Facility of the Bulk Electric System".
Yes
Yes
Yes
No
TAL is concerned with any unnecessary complication of communications. If more than one Time Zone is entailed in a communication, it is reasonable to require clarification of such. However, if both the sender and receiver observe the same prevailing time (e.g. Eastern Standard Time versus Eastern Daylight Time), it does not facilitate communication to require this clarification.
Yes
TAL agrees with this split into two requirements for the protection of each party in the event of non-compliance by the opposing party. TAL seeks clarification on the application of this requirement in an instance where a receiver never acknowledges the issuer.
Yes
Yes
TAL is concerned that the proposed standard focuses too heavily on the communications method without consideration of a successful result. While the administrative approach/focus of this proposed language appears to be crafted with the intent of standardizing communications and thereby improving communications, it does not appear to place sufficient value on results-based performance. Should an entity take proper action on a communication that is not delivered precisely in accordance with this language, consideration of such at the Enforcement level would be warranted.
Group
Florida Municipal Power Agency



implement the same three-part communication language contained in COM-002-3. Specifically, COM-003-1 R1, R2 and R3 would be replaced with the following language that mirrors COM-002-3: "R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as an Operating Communication, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as an Operating Communication to the recipient. R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of an Operating Communication shall repeat, restate, rephrase or recapitulate the Reliability Directive. R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues an Operating Communication shall either: • Confirm that the response from the recipient of the Operating Communication (in accordance with Requirement R2) was accurate, or • Reissue the Operating Communication to resolve any misunderstandings." Although NextEra prefers that the SDT use the above language, in the event the SDT chooses not to mirror COM-002-3, NextEra requests the SDT implement the proposed modifications to R1 and R2 as set forth in response to questions 5, 7 and 10.

No

Similar to the 24 clock, it appears that R1.2 does not fully consider how communications and naming conventions are used in the industry. Specifically, alpha-numeric identifiers are used when there is an uncommon naming convention. Examples of common naming conventions include AM/PM, breaker names such as (8W15), etc. As written, the requirement could be interpreted to require alpha-numeric identifiers for all alpha applications even though the industry has never had a need to use such identifiers. This will likely lead to unnecessary confusion, and, therefore, will likely not promote reliability. Moreover, the R1.2 and COM-003-1 technical paper suggest there is only one set of alpha-numeric clarifiers that are "accurate." NextEra does not agree with this perspective, and believes it is counterproductive to narrowing a System Operator's discretion on which alpha-numeric clarifiers he or she may use. To address these matters, NextEra recommends that R1.2 be revised to read: "When an oral Operating Communication does not use a common naming convention, alpha-numeric identifiers shall be used."

No

See comments in response to question 7.

NextEra has the following additional recommended changes to increase the clarity of COM-003-1: 1. A new provision on written Operating Communications that requires that the sender to receive a notification that the recipient has received and read the communication. As currently written, there is no read receipt requirement for written Operating Communications. This appears to create a possible reliability gap, given that the sender will not know that its instructions were received and read, which leaves the system in a state of limbo as to what actions will or will not be taken. Accordingly, NextEra recommends that a requirement be added that reads as follows: "When a Reliability Coordinator, Transmission Operator and Balancing Authority sends a written Operating Communication it shall include a "read receipt" requirement or similar mechanism to ensure the sender has received and read the Operating Communication. If a "read receipt" is not received by the sender, the sender shall call the intended recipient or rescind the Operating Communication." 2. R2.1 is confusing because it attempts to mix what occurs when a response is received and when no response is received during a oral communication. To ensure no confusion occurs, as well as providing for additional practical discretion when a response is not received, NextEra recommends that R2.1 be separated into two distinct sections and be rewritten to read as follows: R2.2. After the response is received, do the following: • Confirm the receiver's response is correct (not necessarily verbatim). • Reissue the Operating Communication if the repeated information is incorrect or if the receiver does not issue a response. • Reissue the Operating Communication, if requested by the receiver. R2.3 If no response is received, do one of the following: • Ask the receiver if the Operating Communication was received. If receiver confirms receipt of the Operating Communication, then proceed through R2.2. If the receiver, however, does not confirm receipt or no response is received, the sender of the Operating Communication shall either reissue or rescind the Operating Communication. 3. Unlike language on Reliability Directives in IRO-001-3 – "unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements" – there is no similar qualifier for Operating Communications. To provide the recipient of an Operating Communication the same rights as a Reliability Directive, NextEra requests that a new section be added: "The recipient of an Operating Communication is required to implement the

instruction, unless compliance with the instruction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. In the event the recipient is unable to carry out the instruction, it shall communicate this situation to the sender of the Operating Communication." This last recommended addition should be added in both cases: (a) if NextEra's response to question 6 is adopted, or (b) if NextEra's response to question 6 is not adopted. 4. To provide clarity to COM-003-1, NextEra recommends that the purpose stated in the white paper be transferred to the purpose statement of COM-003-1. The white paper states that "[t]he purpose of the proposed standard is to: 'Require that real time System Operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.'" NextEra recommends that this purpose statement replace the draft purpose statement in COM-003-1, so COM-003-1 is not misinterpreted to require three way communications outside of real-time system operations.

Individual

Randall McCamish

City of Vero Beach

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

NONE

Individual

Don Jones

Texas Reliability Entity

Yes

We agree, in view of the additional comments we provide below.

Yes

Yes

Yes

Yes

Yes

Yes

Consider removing the word "accurate" from part 1.2. We do not believe it adds anything to the

requirement, and it may cause confusion.
No
The name specified by the operators of the equipment should be used, rather than the name given by the owner, and it should be jointly agreed to as the identifier for the equipment. For example, an owner name could be the "Lyndon Baines Johnson East Johnson City Substation Line 3" but the Transmission Operator refers to it as "East Johnson City 3" or "EJC3" or "Johnson 3". The Planning Authority/Coordinator may dictate a naming convention to be used in Operations systems that are used by the System Operators (i.e. RTCA, outage scheduler, etc.). The name to be used should be clearly identifiable, concise, and easily understood by all parties involved in the Operating Communication. We suggest re-wording R1.1.4 to "When referring to a Transmission interface Element or a Transmission interface Facility, each responsible entity shall use a pre-determined, uniform identifier for each Element or Facility."
1. The use of exploder or hotline calls, where a single oral communication is used to alert a multitude of entities simultaneously to issues and directions affecting the BES, should be addressed by this Standard. The use of these types of calls is economic, efficient, and should be recognized for the purpose of providing Operating Communications, including Reliability Directives. Not addressing this issue will have a serious impact on System Operators during times, normal or emergency, when clear, concise, and effective communications are needed. The 2003 Blackout Recommendation #26 includes the following text: "Standing hotline networks, or a functional equivalent, should be established for use in alerts and emergencies (as opposed to one-on-one phone calls) to ensure that all key parties are able to give and receive timely and accurate information." This proposed Standard should address the issue of what communication protocols should be applied to exploder or hotline calls. 2. There is a disconnect between COM-003-1 and COM-002-3 that will create confusion within the industry regarding communications. COM-002-3 has limited applicability, restricted to use of Reliability Directives ONLY in an Emergency or Adverse Reliability Impact. COM-003-1 is limited to oral two party communications, but it applies outside of Emergency situations. With proposed IRO-001-3 contained in Project 2006-06, a Reliability Coordinator or other entity may not be certain of whether to give a directive, a Reliability Directive, or an Operating Communication, and a recipient may dispute whether the correct communication type was used. What is the intended compliance impact of using the wrong type of communication, for both the initiating entity and the receiving entity? 3. COM-003-1 and COM-002-3 will cause substantial confusion as drafted because they both require three-part communication, but they use different language to describe it. That suggests that the communication protocols that are required must be different, and as an entity moves from non-Emergency into Emergency operations, its communication protocol will be expected to change. We strongly suggest that a single three-part-communication protocol be set forth in one place only, and that any differences between Emergency and non-Emergency communication requirements be clearly identified.
Group
FirstEnergy
No
The requirement for line identifiers should not be included and is unnecessary. This type of requirement was also removed from standard TOP-002 in recently board approved project 2007-03. The drafting team position for the removal was the following: "This requirement adds no reliability benefit. Entities have existing processes that handle this issue. There has never been a documented case of the lack of uniform line identifiers contributing to a System reliability issue. This is an administrative item, as seen in the measure, which simply requires a list of line identifiers. The true reliability issue is not the name of a line but what is happening to it, pointing out the difficulty in

assigning compliance responsibility for such a requirement, as well as the near impossibility of coming up with truly unique identifiers on a nation-wide basis. The bottom line is that this situation is handled by the operators as part of their normal responsibilities, and no one is aware of a switching error caused by confusion over line identifiers." Therefore we suggest the removal of R1.1.4 for the same reason.

Although we believe the team made significant improvements to the standard, and would support a 3-part communication standard, we believe the introduction of both COM-002-2 which utilizes Reliability Directives and COM-003-1 which utilizes Operating Communications cause confusion for system operators and may in fact be detrimental to reliability. We do not support two standards on three-part communication. We suggest, as we have in the past, that the subject of three-part communication be addressed in a single standard, and that the requirements be developed for simplicity. The industry is, and has been, using three-part communication for decades and although we agree it should be more consistently practiced and standardized, the required communications protocols should be simple while meeting the goal of BES reliability. Introducing complicated requirements and standards that have different definitions such as Reliability Directive and Operating Communication may cause the operator to hesitate when issuing directives in real-time and every second counts when a potential system emergency must be mitigated. Therefore, FE does not support the creation of both COM-003-1 nor COM-002-2 (see project 2006-06 vote and comments) and ask NERC to reevaluate the need to have two separate standards for three-part communication.

Sam Ciccone

Individual

Kenneth A Goldsmith

Alliant Energy

Yes

Yes

Yes

No

We believe that adding the mandate to use a 24 hr clock and list the time zone and Daylisght Savings Time or not is going too far. We agree that it could be considered a best practice, but to require it and have a violation every time it is not used will result in multiple frivolous violations and clog the system with violations that have no impact on the reliability of the BES. With a zero-defect philosophy, which currently exists in the regulatory model, this is unworkable.

No

We do not believe there is a need for COM-003 at all and recommend it be deleted. COM-002 covers Reliability Directives very well. For three-part communications in a non-Reliability Directive situation we beleive it should be considered an industry best-practice. By requiring three-part communications as dictated in this standard, there will be requests for interpretations, CAN's produced for the CEA, and numerous violations written for what the industry considers a non-problem. In our opinion this standards goes against the concept of risk-based standard making and reinforces a zero-defect operation, which opposite of how the industry works.

Individual

Kathleen Goodman

ISO New England Inc

No



We agree with, support and have signed onto the ISO/RTO Standards Review Committee comments.
No
We agree with, support and have signed onto the ISO/RTO Standards Review Committee comments.
No
These Alert Levels have been and should continue to remain a product of the NERC OC and not a Standards issue.
No
We agree with, support and have signed onto the ISO/RTO Standards Review Committee comments.
No
We agree with, support and have signed onto the ISO/RTO Standards Review Committee comments.
No
We agree with, support and have signed onto the ISO/RTO Standards Review Committee comments.
No
We agree with, support and have signed onto the ISO/RTO Standards Review Committee comments.
No
We agree with, support and have signed onto the ISO/RTO Standards Review Committee comments. Lastly, we do not believe this rises to the level of a Standard.
Group
SERC OC Standards Review Group
No
GENERAL COMMENT: While SERC does not agree that the mandatory procedure for three part communications will improve reliability of the BES, SERC offers the following comments: We do not agree with the proposed definition of Operating communication and agree with the elimination of the other three definitions. The SDT has not listened to the industry comments given in the previous commenting periods. It also appears to be focused on imposing three part communications on the industry for routine communications despite the fact that neither the blackout report nor the SAR on which these standards are based emphasize that issue. The blue text box that mentions Reliability Directives seems to be a back door attempt to change COM-002 and should be clarified or eliminated. Splitting communications requirements across different standards creates unnecessary confusion.
No
The SDT did not eliminate a communications procedure requirement! It turned the former requirement into R1 and its sub-parts, forcing a single communication procedure on the industry. This goes far too deeply into the "HOW" of communication as opposed to the "WHAT".
No
We disagree – this concept more properly belongs in the NERC Rules of Procedure and should be designed to address Recommendation 26 of the NERC 2003 Blackout Report. This is an expectation of NERC and not of the industry. Also, see recent NERC Operating Reliability Subcommittee (ORS) discussions and recommendations regarding the elimination of the Transmission Alert Levels.
No
This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW" of communication as opposed to the "WHAT".
No
This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW" of communication as opposed to the "WHAT".
No
Three part communications should not be required for routine operating communications. See the definition of Reliability Directive in COM-002, which addresses reliability issues. We suggest that R2 and R3 should be eliminated, since neither one will increase reliability.
No

This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW" of communication as opposed to the "WHAT".

No

This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW" of communication as opposed to the "WHAT". Requirement 1.1.4 does not need to be in this standard as the requirement for unique line identifiers is stipulated in TOP-002-2 R18.

No

We suggest deletion of all three requirements.

Where is the demonstrated need for such a Standard? Has communications, especially during periods of normal operations, been shown to be the root cause of many, if any, events? While there is easy agreement for the need of clear and concise communication between entities, we must avoid creating a system that is unmanageable and quite possibly results in less reliability. FERC Order 693 directs the ERO to "and (3) requires tightened communications protocols, especially for communications during alerts and emergencies.", in paragraph 532. The proposed standard goes too far, especially for communications outside of alerts and emergencies. NERC standards are not procedures and this standard attempts to impose a single procedure on the industry. SERC suggests another approach to COM-003. Rather than to specify the solutions to achieving effective communication, COM-003 should instead focus on developing and training on an approach that is designed appropriately for each RE. For instance, another approach to COM-003 might be along the lines of: Requirement 1 could be written in a manner to require the appropriate registered entities to develop a communication protocol that is appropriate for each RE. This communications protocol should address how the RE is handling the following: Time Zone Designations – for both internal and external communications language comm Alpha-numeric identifiers Three – part communications – when is it required, etc. Use of defined terminology Other items deemed important for the communications protocol to address – again, this would not define HOW these items are addressed This approach would require the RE to address how it is addressing these issues, without prescribing solutions. For instance, a RE could include in its protocol a section dealing with time zone designation. In this section the RE could explain that it, and its neighbors, all are in and use the same time zone. As a result, the RE has determined that requiring the identification of time zone reference in communication is not necessary Procedures should address the training of operators on the communication protocol Procedures should address the internal controls that the RE uses to review that its protocol is being followed. The compliance approach would be to: Assess whether the RE has developed a written protocol and whether the protocol addresses each item – this does not mean there is an assessment of HOW each item is assessed; assess whether the RE has trained its operators on the communications protocol and assess whether the RE is following its internal controls. Any data retention requirements should be consistent with the COM-002 reliability standard. What is the role of the Operating Communications Protocols White paper? Is it a position of the STD? If not, was there a minority opinion? Will it be part of the standard? Does the industry agree that we need a standard on three part communications for normal operations? Yes or No? Has a lack of a standard on three part communications for normal operations created any reliability issues? If so, what are they? "The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."

Gerald Beckerle

Individual

Steven Wallace

Seminole Electric Cooperative

Yes

No

While ee absolutely support the promotion and use of 3-part oral communication protocol, the failure of individual persons to use "proper" and "correct" oral operational communications should NOT constitute a Standard violation. It is reasonable to require the responsible entities to have written procedures requiring such use; to have evidence of applicable personnel training on such; and to have

a program for internal monitoring and enforcement of such. As written, a subjective review of many oral operational communications will arguably be identified by Compliance Auditors as medium, high or even severe levels.

Yes

Yes

No

Splitting the requirement is okay but the exclusion of reliability directives and the structure of R2 and R3 to take one of the following actions based on the other party's action is ambiguous.

Yes

Yes

No

See previous comments

While we absolutely support the promotion and use of 3-part oral communication protocol and the other features identified, the failure of individual persons to use "proper" and "correct" oral operational communications should NOT constitute a Standard violation. It is reasonable to require the responsible entity to have written procedures requiring such use; to have evidence of applicable personnel training on such; and to have a program for internal monitoring and enforcement of such. As written, a subjective review of many oral operational communications will arguably be identified by Compliance Auditors as medium, high or even severe levels.

Group

Western Electricity Coordinating Council

How are facilities that might affect the operation of the BES treated? Would the changing of an LTC or the low voltage taps on a 230/92 kV transformer be subject to this standard?

Yes

Yes

Yes

Any thoughts given to including a provision for agreement between specific entities to use a language other than English for areas that another language may be common, but not mandated by law or regulation?

Yes

Is the exclusion of Reliability Directives because they are covered under COM-002? Since all COM-002 covers is Reliability Directives, why not include it in this standard? Operators should use the same protocol for all Operating Communications. We agree with the split for the issuer and the receiver.

From an enforcement perspective, this could be problematic. As drafted this will allow virtually any alpha numeric clarifier. Who is to determine if the identifies is "correct?" This will put the auditor in the position of determining whether or not a clarifier was correct or accurate. For auditing purposes there should be clear direction on what is acceptable.

No

We question the need for this part of the requirement based on the fact that it appears to be redundant with TOP-002-2b, R18.

As noted in our response to question 6, there is still a concern about having two standards for communications on changes to elements of the BES. Bifurcations may lead to the issues of one protocol in place of another for the two standards.

Steve Rueckert
Individual
Martin Bauer
U.S. Bureau of Reclamation
Yes
Yes
Yes
Yes
Yes
Yes
No
By using the term "correct" alpha numeric clarifier, it implies that an incorrect alpha numeric clarifier can exist. In reality as long as an alpha numeric clarifier is used to verify the letters or numbers are conveyed the intent is made. The standard language should be revised to state that "When participating in oral Operating Communications and using alpha-numeric identifiers, use alpha-numeric clarifiers for the letters and numbers to convey the correct numbers and letters in the Operating Communication."
Yes
Yes
The standard should clarify what is evidence is considered acceptable to demonstrate compliance with R 1.2. The requirement 3 appears to require the use of voice recording to demonstrate compliance with repeating the operating communication requirement. Not all facilities in which operating instruction may be received have voice recording capability. The requirement/measure should clarify an alternative evidence when such a means is not present.
Group
Southern Company
No
Southern agrees with the elimination of "Communication Protocol," "Interoperability Communication" and "Three part Communications" proposed in the first draft of COM-003-1; however, Southern does not agree with the proposed new definition for "Operating Communication". The definition of Operating Communications is too broad. The SDT appears to be focused on imposing 3-part communication on the industry for routine communications even though the August 2003 Blackout Report and the direction in FERC Order 693 Paragraph do not require such. The word "maintain" should be removed. Three part communication is not needed to keep things as they are in real time unless the communication is meant to be a Directive issued by the RC or TOP and identified as such. From a real time operations standpoint, only communications that are meant to initiate a change (e.g., open, close, enable, disable, increase, decrease) should require 3 part communications. In addition, any instruction to change or maintain the state, status, output, or input of an Element or Facility of the BES should not be considered a Reliability Directive. A more appropriate definition of Reliability Directive has been included in Project 2006-06 (Reliability Coordination) for COM-002-3. As such, the definition of Reliability Directive developed in Project 2006-06 should be used here as part of this Project 2007-02. Further, this capitalized term should have one definition and should not be defined differently in different standards. Otherwise, there will be ambiguity and unnecessary confusion.

No
It appears as though the SDT did remove the term Communications Protocol Operating Procedure, but replaced it with very prescriptive requirements and subrequirements in R1 of this revised standard. This newly revised standard focuses on the "HOW" of communication when it should be more focused on the "WHAT".
No
Southern suggests that this concept more properly belongs in the NERC Rules of Procedure and should be designed to address Recommendation 26 of the NERC 2003 Blackout Report. This suggestion of placing Alert Levels in the reliability standards is an expectation of NERC, but it is not an expectation of the industry. Also, see recent NERC Operating Reliability Subcommittee (ORS) discussions and recommendations regarding the elimination of the Transmission Alert Levels.
No
While Southern agrees with the concept of allowing the use of another language when mandated by law or regulation, Southern does not agree with R1 and its subrequirements as they are focused on the "HOW" of communication when they should be more focused on the "WHAT".
No
Southern suggests that this requirement of a common time zone is overly prescriptive. The requirement should be that entities operating in different time zones agree on how to best eliminate any confusion regarding the time difference. Entities who have an agreed upon protocol which includes the time zone to be used for system operations should not be required to repeat the time zone for every communication. For instance, if Entity A and Entity B are in different time zones but both have an operating policy that states all communication between the two is in Eastern Standard Time and all operating personnel are trained on this policy, this should be sufficient. This achieves the same functional goal. The requirement to restate the time zone in this case only serves to set up a situation where a simple single-instance omission would have no effect on reliability but still be noncompliant.
No
Southern disagrees that three part communications should be required for routine operating communications. A more appropriate definition of Reliability Directive has been included in Project 2006-06 (Reliability Coordination) for COM-002-3. As such, the definition of Reliability Directive developed in Project 2006-06 should be used here as part of this Project 2007-02. Further, this capitalized term should have one definition and should not be defined differently in different standards. Otherwise, there will be ambiguity and unnecessary confusion. Southern suggests that R2 and R3 should be eliminated, since neither one will increase reliability.
No
Southern does not agree with R1 and its sub-requirements as they appear to force a single communications procedure on the industry and are focused on the "HOW" of communication when they should be more focused on the "WHAT". Also, the word "accurate" should be removed from R1.2, as it is not needed.
No
Southern does not agree with R1 and its subrequirements as they appear to force a single communications procedure on the industry and are focused on the "HOW" of communication when they should be more focused on the "WHAT". Furthermore, requirement 1.1.4 does not need to be in this standard as the requirement for unique line identifiers is stipulated in TOP-002-2 R18. Also, is it certain that both parties in the communication will know the name for the element/facility that is specified by the element/facility's owner(s)?
No
As mentioned in the previous comments, Southern does not agree with R1 as it is imposing a single communications procedure on the industry and is focused on the "HOW" as opposed to the "WHAT", and does not agree with R2 and R3 as they imply that that 3-part communications are needed for all communications, not just during Reliability Directives, emergencies, or alerts. As such, Southern disagrees with the VRFs and VSLs.
NERC standards are not procedures and this standard attempts to impose a single procedure on the industry. Where is the demonstrated need for such a standard? Have communications, especially during periods of normal operations, been shown to be the root cause of many, if any, events?

Registered Entities agree that there is a need of clear and concise communication between entities; however, we must avoid creating a system that is unmanageable and quite possibly results in less reliability. FERC Order 693 directs the ERO to "and (3) requires tightened communications protocols, especially for communications during alerts and emergencies", in paragraph 532. The proposed standard goes too far, especially for communications outside of alerts and emergencies.

Antonio Grayson

Individual

Rich Salgo

NV Energy

Yes

Yes

This was a much warranted improvement.

Yes

Yes

No

We believe that the requirement to specify "daylight" versus "standard" is unwarranted and may lead to confusion among the parties. All time is understood to be "prevailing time" without this clarification. Requiring such will only serve to confuse rather than clarify.

No

I have not seen the parallel requirement that pertains to Reliability Directives, but I can imagine no reason why the communication protocols for Operating Communications would ever differ from those for Reliability Directives. Making the distinction here in this requirement adds unnecessary confusion.

Yes

Agree that it ought not to be restricted to NATO only, but we are confused about what "correct" means. Perhaps it means any spoken word that begins with the subject alpha character?

Yes

Agree, however, we suggest that there be more clarity provided about what constitutes a Transmission interface Element/Facility. Is it a connection between BA's or between TOP's within a BA?

Individual

Maggy Powell

Exelon Corporation and its affiliates

No

Exelon believes it is not necessary to create a new defined term "Operating Communication." Please see response to Q10 with alternate standard language that avoids the need for a new term.

No

Exelon agrees with the elimination of the requirement to have a Communications Protocol Operating Procedure and we also believe the basic approach as proposed is wrong. The burden for demonstrating compliance for non-emergency, non-directive communications, including retention and review of 180-365 days worth of evidence to be able to demonstrate 100% compliance presents significant burden potentially detracting from the work of reliability. Auditing, whether by a NERC CEA or by entities conducting internal self assessments for self-certifications, would potentially involve listening to thousands of hours of tapes to review. This is an overly prescriptive, burdensome approach. We believe that a more effective approach would be for the standard to mandate reliability based outcomes and require entities to design practices to achieve the desired outcome. See response to Q10.

No

While Exelon agrees with deleting the Alert Levels in Attachment 1 from COM-003-1, Exelon does not agree with transferring the requirement to use Alert Levels to any other standard or the creation of a separate new standard. As stated by many of the commenters to the previous draft, the addition of "Alert Levels" with defined colors have been used by DHS and may be misinterpreted. In response to these comments the SDT removed the requirement to Attachment 1 as falling outside the scope of a "communication protocol." Exelon reiterates that the concept of adding colored "Alert Levels" not only be deleted from COM-003-1, but also not be transferred to another SAR in the future.

No

Exelon finds it unnecessary for the standard to include a requirement that discusses specifics concerning language requirements. If discussion of language is important to clarify within a Registered Entity's protocol, then the standard could suggest it as an attribute to be included in an entity developed protocol. See alternate standard language proposal in response to Q10.

No

It's not clear that this addresses a reliability problem. We are not aware of instances where failure to specify the time zone and daylight saving time resulted in communication failures between entities leading to a condition that threatened an outage or a cascading outage. Further, specifically creating a requirement is overly prescriptive. If it is justified as important to reliability, then the standard could suggest it as an attribute to be included in an entity developed protocol. See alternate standard language proposal in response to Q10.

No

Please see response to Q10.

No

While Exelon agrees with the modification to allow the use of another alpha numeric clarifier, Exelon does not agree with the designation of "correct" related to alpha numeric communication. Requiring "accurate" alpha-numeric clarifiers is overly prescriptive and unclear. An entity should not be held accountable for 100% adherence to a set phonetic alphabet. For example, if a communicator and receiver use the phonetic nomenclature "motor operated disconnect one foxtrot" but in a later communication the equipment is referenced as "motor operated disconnect one fox" by the Standard as written this could be considered a violation. It should be an expectation but not a requirement as long as the transmitter and receiver use three way communications effectively. Again, the standard should emphasis entity practice for effective communication not impose an overly prescriptive set of requirements that pose compliance challenges.

No

Exelon is concerned with the requirement to use "the name" for the Element/Facility specified by the Element/Facility's owner(s). By dictating "the name" this requirement may become overly prescriptive. An entity should not be held accountable for 100% adherence to a set "specified name" for an Element/Facility. It is reasonable for entities to fully understand what Element/Facility is communicated; however, verbatim use of a "specified name" should not in itself be a requirement. For instance, if the formal name of a generating unit is "ABC Fossil Generating Station Unit 1" and an entity communicates "ABC Station Unit 1" or "ABC Generating Station 1" by the Standard as written this could be considered a violation even though it can effectively communicate the needed information. As in other sub-requirements to R1, the use of "specified name" should be an expectation but not a requirement as long as the transmitter and receiver use three way communications effectively. Further, this appears as an internal inconsistency in the standard between R1 and R2. For example, an entity owner specifies a unique name for an interface element. R1.1.4 requires the use of that unique identifier but R2 does not require verbatim response. It is not clear which part of the repeated information three part response in R2 is allowed to be non-verbatim.

No

Exelon does not agree with the VRFs and VSLs for Requirements R1, R2 and R3. Requirement R1 - The Violation Severity Levels imply that if the responsible entity did not correctly implement any one (1) of the four (4) parts of R1 at any time that that entity would be non-compliant. It is not reasonable to hold an entity responsible to verify that every communication be in accordance with R1 at all times. It should be an expectation, but not a requirement. Requirements R2 and R3 – Similar to R1 it is not reasonable to hold an entity responsible to verify that every communication meet the requirement of R2 or R3 in all instances. Exelon suggests that this requirement be revised to address those instances where an actual event occurred due to improper communication or be limited to

communication of a stated Reliability Directive. In general, the current VSLs for the current draft of COM-003-1 do not seem commensurate to the risk to the BES. See the response to Q10 for a reasonable approach to implementation of the intent of this requirement.

Exelon believes that the proposed COM-003-1 exceeds what is necessary for reliability and creates other problems such that the proposed standard may in fact result in a decrease in reliability. In particular the language is overly prescriptive and presents significant compliance questions both in terms of creating a credible compliance measure and a reasonable way for entities to demonstrate compliance or conduct internal self-assessment. Exelon believes that an alternative approach to COM-003 is needed. The standard should set desired outcomes and leave the specific implementation of communication protocols to registered entities. Standards should not impede use of best practices and should encourage effective innovation. An alternate approach is worth consideration:

Requirements: 1. Entities must have a protocol addressing communications for operating personnel.

1.1. The protocol should address; three part communication, English language usage (include footnote for requirement to use legislatively prescribed language), time zone, entity unique identifiers, 24 hour clock and alpha numeric identifiers. 1.2. All control center operating personnel

should be trained on the use of the protocol. Measure: In an audit, a company would be expected to demonstrate that they had such a protocol and that they trained their operators on its use. This proposal would satisfy the Directives and Blackout Recommendation #26 which were to "tighten communication protocols, especially for... emergencies". Stakeholders and the NERC BOT approved COM-002-2 which addressed communications capabilities being staffed and available for addressing a real-time emergency condition. An associated interpretation of COM-002 clarified whether routine operating instructions are "directives" or whether "directives" are limited to actual and anticipated emergency operating conditions. Our proposed changes to COM-003 are responsive to the FERC recommendation to tighten operating protocols. Other possible responses to this recommendation would be to conduct an assessment of NERC certification requirements and if found lacking in this area, strengthen them. For the reasons stated above, we urge NERC to change the focus of COM-003 from a prescriptive what to do approach and allow entities to develop and implement protocols in keeping with NERC and ISO/RTO operator certification requirements and best practices within the industry. Thank you for the opportunity to comment.

Individual

Tony Kroskey

Brazos Electric Power Cooperative

No

Please see formal comments provided by APM.

Yes

Yes

Yes

No

Please see formal comments provided by APM.

No

Please see formal comments provided by APM.

No

Please see formal comments provided by APM.

No

Please see formal comments provided by APM.

No

Please see formal comments provided by APM.

Please see formal comments provided by APM.

Individual

Darryl Curtis



Oncor Electric Delivery Company LLC
No
Oncor is in general agreement with the elimination of the three terms. Furthermore, Oncor takes the position that the proposed new definition for the NERC Glossary, "Operating Communication" is not needed because "person to person" communication is not cited or listed as a contributor to the events summarized in the 2003 Blackout Report. Oncor takes the position that improvements should emphasize communicating the state of the operating system as a whole during an emergency.
No
Oncor takes the position that elimination of the Communications Protocol Operating Procedure does not constitute the introduction of another set of procedures (i.e. 3 - Part Communication, or alpha-numeric clarifiers). Furthermore Oncor takes the position that a more productive approach would be to encourage the creation of innovative Best Practices; as opposed to a mandatory fixed procedure which would limit innovation.
No
Oncor takes the position that the introduction of new alert levels or categories simply introduces more complexity to what could be better addressed through a closer examination of existing alert levels. This includes EEA levels and threat levels.
No
Oncor takes the position that this requirement is unnecessary in that it is not aware of any evidence supporting the notion that failure to use the English language has been a significant contributor to reduction in reliability. Furthermore, FERC has made it known that it is in favor of eliminating requirements that do not contribute to reliability. Oncor recommends that this requirement be eliminated.
No
Oncor takes the position that more productive approach would be to encourage the creation of innovative Best Practices; as opposed to a mandatory fixed procedure which would limit innovation. Oncor believes that requiring registered entities to have its own internal communication protocols would encourage the adaption of best practices that could be shared, modified and implemented as a "best fit" and could potentially enhance reliability as opposed to a mandated "procedural specific" requirement
No
Oncor believes that the application of three part communication as prescribed in the proposed reliability standard COM-002-3 is appropriate as prescribed for emergencies. Any additional requirements, including those for routine operations goes well beyond what is called for in the 2003 Blackout Report which focused on emergencies. As such, Oncor also takes the position that the term Operating Communications should also be removed.
No
Oncor take the position that this requirement is far too much detail and goes well beyond the 2003 Blackout recommendations. Furthermore, Oncor take the position that a more appropriate approach would be to require internal procedures that address internal communication protocols.
No
Again, Oncor take the position that this requirement contains far too much detail and goes well beyond the 2003 Blackout recommendations. Furthermore, Oncor take the position that a more appropriate approach would be to require internal procedures that address internal communication protocols.
Group
Bonneville Power Administration
Yes
Yes

Yes
No
BPA believes that the existing language format should remain solely English and recognizes that this is the case with International & US air traffic controllers.
Yes
Yes
No
BPA disagrees with both clarifiers (NATO phonetic alphabet and alpha numeric) and believes the communication should be left to the discretion of each utility. This modification causes an undue burden when relaying communication; especially in a time of an emergency and dramatically increases the risk of human error. BPA recommends that the drafting team remove any and all language of NATO phonetic and alpha numeric identification of any device, (Alpha and especially numeric phonetic requirements). R2 and R3 clearly ensure that all parties are already properly communicating clearly and concisely. Should the drafting team remove the NATO phonetic and alpha numeric language, BPA would change its negative position to affirmative.
No
BPA believes that the uniform line identifiers between utilities should be identified by mutual consent and suggests the drafting team use the language from COM-003-1 R7, "Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall use pre-determined, mutually agreed upon line and equipment identifiers for verbal and written Interoperability Communications". BPA also recognizes that uniform line identifiers are already addressed in TOP-002-2b.
No
BPA believes the VSLs for R3 are too extreme as written. The SDT needs to add emphasis and clarity to the second *AND*. The requirement only asks for one of the two bullets; the VSL could be incorrectly interpreted by and auditor that both bullets are needed. Compliance is met if: (a) the receiver repeats back the Operating Communication and waits for confirmation, or (b) requests it to be repeated because it may not have been heard correctly. Compliance is not met if neither is done. So if the entity received a communication but did not repeat it AND did not request it to be repeated, that violation would be severe. For severity levels add impact to the Bulk Electric System as a qualifier. IF Cascading outage or 1000 MW of load is lost due to failure to repeat information back *AND* wait for confirmation ( equals SEVERE). If equipment is damaged as a result (equals Moderate). If fails to repeat *AND* fails to wait for confirmation (equals LOW). BPA would change its position if categorizing a level of impact to the BES beginning with an equivalent to the severity of the violation.
Chris Higgins
Individual
Steve Alexanderson P.E.
Central Lincoln
No
The change from "Interoperability Communications" to "Operating Communication" greatly expands the standard to include all internal communications regarding > 100 kV equipment. Central Lincoln does not consider the extra burden to be worth the negligible benefit.
Yes
Yes
Yes
but please see Q 10.

No
We appreciate the change from requiring Central Time, but believe that 12 hour designations with AM or PM qualifiers to be just as clear as 24 hour clock time. In addition, we suggest that the DT or ST designation should only be required when deviating from the prevailing time in effect.
Yes
but please see Q 10.
Yes
but please see Q 10.
Yes
but please see Q 10.
1) Central Lincoln supports the comments provided by PNGC. We have a similar situation, and believe the redirection of resources needed for compliance can only have a negative effect on our local level of service. 2) Central Lincoln is greatly concerned regarding how this standard will be audited. We expect the Compliance Enforcement Authority, in order to avoid a data dump in the form of a six year audit period's worth of radio recordings consisting of mainly distribution related instructions, will request searchable transcripts with pointers to the relevant >100 kV parts. This will represent a huge amount of time to transcribe the recordings and provide the pointers. This administrative burden in proving compliance after the fact will not result in any improvement in reliability.
Group
GP Strategies
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
We disagree that all DP's should be subject to this Standard. For many small entities, it is the TOP who will control the equipment to shed load. These DP's do not operate a 24x7 control center for receiving such instructions. During non-business hours calls are forwarded to an answering service or an on-call technician. We recommend the drafting team modify the applicability as follows: Applicability: 4.1. Functional Entities 4.1.1 Reliability Coordinator 4.1.2 Transmission Operator 4.1.3 Balancing Authority 4.1.4 Generator Operator 4.1.5 Distribution Provider who is the 24 x 7 entity that operates their load shedding equipment when instructed by the RC, TOP, or BA. The TOP should be the responsible entity unless the Distribution Provider has agreed on the responsibility for taking the action.
Mary Jo Cooper
Individual
Richard Vine

California Independent System Operator
Yes
No
<p>While the objective of minimizing ambiguities in communications between functional entities is commendable, the standard as currently written goes too far by requiring "...English when communicating between functional entities, unless another language is mandated by law or regulation." (R1.1.1) To begin, requirement 1.1.1 is completely silent on who's law or regulation would satisfy this requirement if a functional entity wanted/needed to speak a different language. For example, it's unclear which of the following would satisfy this requirement: 1. A Canadian or Mexican law or regulation provided as evidence to WECC auditors? 2. An American law or regulation? 3. Perhaps both an American and a neighboring country's law/regulation would be required? Since the proposed standard is silent on what constitutes satisfactory evidence, both numbers 1 and 2 seem like potentially harmful unilateral moves that could be detrimental to reliability but may be allowable in COM-003-1 as currently proposed. So if functional entities would like/need to speak a different language, the requirement looks like it's attempting to set a high bar without specifying how high that bar is. I also think the requirement pre-supposes a level of English fluency by all North American citizens that simply does not exist and mandates a very high and very vague threshold for compliance while not allowing for exceptions. So ultimately, R1.1.1. is a vague, unnecessary and inflexible requirement that would be detrimental to real-time operators in a contingent status. It would deny operators that are fluent in other languages the ability to assist non-native English speakers experiencing difficulties in communications by using a language they are fluent in to mitigate a potentially serious issue. The requirement could also potentially require U.S. states, Canadian provinces and/or Mexican states to write laws and/or regulations to satisfy a requirement in a standard which seems like an unrealistic threshold. The bottom line is if an entity enters a contingent state and there is no legislation or regulation in place at the time of a contingency event, system operators may be forced to decide between two very difficult positions. Either adhere to COM-003 and run the risk of putting the grid at risk or violating COM-003 to ensure grid integrity is not compromised.</p>
Yes
Yes
Individual
Jennifer Flandermeyer
Kansas City Power & Light
No
<p>The requirements in this standard specifically state "how" to meet the goal of this standard. This standard needs to be written such that it allows for entity flexibility. Many entities already have COM protocols that are used. The proposed standard is too prescriptive and is more effort than necessary to ensure reliability and security of the BES. Overall – this standard is going to cost the registered entities much more than the realized benefits.</p>
Yes
No
<p>Create one standard for all operating conditions and retire the balance of those places where levels are referenced. We support a new or separate requirement speaking to all alert levels for operating</p>

conditions but not combination with another unique standard losing the efficiencies of a combined set of operating condition alert levels.

Yes

Yes

No

Do we lose the "speciality" of only using 3-part communication during times of issuing directives/emergencies?

Yes

Yes

No

VRFs and VSLs should be low.

This standard needs to be written such that it allows for entity flexibility. Many entities already have COM protocols that are used. To prove compliance in an audit, entities will we need to provide 3 years worth of voice recordings to the auditors. It would take a full-time position to review the daily voice recordings for submission and what value does this add to the reliability or security of the BES. This standard is "overkill" from what is existing standard already dictates. Overall – this standard is going to cost the registered entities way more than the realized benefits.

Group

NERC Operating Committee

No

See Response 10

No

See Response 10

See Response 10

See Response 10

No

Overly prescriptive

No

See Response 10 - the OC sees these differing concepts for communications as overly prescriptive and complex.

See Response 10

No

See Response 10

No

See Response 10

NERC Operating Committee (OC) comments on COM-003 (Operating Personnel Communications Protocols) The current draft of COM-003 is proscriptive and is in fact a procedure or rather a set of discrete tasks / actions that are not focused to support the reliability intent. The NERC OC recommends that the SDT develop a purpose that speaks to operators and their responsibility to maintain reliability not a process or set of protocols that cannot account for every nuance and variable in the realm of communications and human interaction. Restated Purpose: To provide system operators a holistic communications program that reduces the possibility of miscommunication that could lead to action or inaction harmful to the reliability of BES. The OC just approved a guideline for System Operator Verbal Communications. The OC feels this could be used as a basis for a new approach for COM-003-1. The OC proposes that the SDT changes the draft of COM-003 to the following three requirements: R1: Each RC, TOP, GOP, BA, DP shall develop a written communications procedure to address the following: • Protocols • Training and education • Internal controls (Preventive, Detective and Corrective) that demonstrates a process that will find, fix, track, trend.

analyze and continuously improve R2: Each RC, TOP, GOP, BA, DP shall train applicable personnel on the communication procedure developed for R1 R3: Each RC, TOP, GOP, BA, DP shall take appropriate actions to address deficiencies revealed by internal controls. Data retention must be rethought to focus less on significant data and evidence archiving (backwards looking) and more on the internal program to continuously improve (forward looking). Individual instances of not following the company's procedure should not be the basis of violation but instead – a demonstration of internal assessment and refinement. The VRF/VSL should be based on an entity either not having a program, not demonstrating their assessment and corrective action process or egregious / systemic problems with the implementation of their program.

Tom Bowe - OC Chair

# Consideration of Comments

## Operating Personnel Communications Protocols: Project 2007-02

The Operating Personnel Communications Protocols Drafting Team thanks all commenters who submitted comments on the proposed draft COM-003-1 Operating Personnel Communications Protocols standard. These standards were posted for a 45-day public comment period from May 7, 2012 through June 20, 2012. Stakeholders were asked to provide feedback on the standards and associated documents through a special electronic comment form. There were 94 sets of comments, including comments from approximately 292 people from approximately 166 companies representing all 10 Industry Segments as shown in the table on the following pages.

All comments submitted may be reviewed in their original format on the standard's project page:

[http://www.nerc.com/filez/standards/Op\\_Comm\\_Protocol\\_Project\\_2007-02.html](http://www.nerc.com/filez/standards/Op_Comm_Protocol_Project_2007-02.html)

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President of Standards and Training, Herb Schrayshuen, at 404-446-2560 or at [herb.schrayshuen@nerc.net](mailto:herb.schrayshuen@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

### Summary Consideration:

A common theme among many entities is that the approach to COM-003-1 should be changed. Most agreed with the comments submitted by the NERC Operating Committee that applicable entities should be required to

- a) develop written communication protocols that address the elements in draft 2 of COM-003-1,
- b) train on those protocols, and
- c) develop internal controls to find and correct deviances from those protocols.

*After discussion, the SDT agreed with the commenters and modified its approach to closely align with the proposal. In addition, the SDT felt that it would be beneficial to develop the RSAW for this standard in conjunction with NERC Compliance staff, and has posted the draft RSAW for comment along with draft 3 of COM-003-1.*

<sup>1</sup> The appeals process is in the Standard Processes Manual:  
[http://www.nerc.com/files/Appendix\\_3A\\_Standard\\_Processes\\_Manual\\_Rev%201\\_20110825.pdf](http://www.nerc.com/files/Appendix_3A_Standard_Processes_Manual_Rev%201_20110825.pdf)

Another prevalent theme was questioning the necessity of the standard, specifically one that requires three part communication for routine operations.

*During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT's concern.*

Another theme was the concern that the work of the SDT was overreaching the scope of the SAR.

*The purpose of the SAR for this project is "Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time." Additionally, the SAR is very specific in that it also includes the term "normal" operating conditions under Applicability: "Clear and mutually established communications protocols used during real time operations under normal and emergency conditions ensure universal understanding of terms and reduce errors."*

Another theme was that the use of three part communications should be limited to Reliability Directives only.

*A Reliability Directive, by definition, is limited to instances where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact. The SDT believes that it is necessary to specify 3 part communication as a necessary communications protocol for all Operating Instructions, not just emergency situations. The OPCPSDT believes that the potential for risk to the reliability of the BES exists for all Operating Instructions.*

Other commenters expressed a desire to combine COM-002-3 and COM-003-1 into a single standard.

*The purpose of the SAR for this project is "Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time." This is a broader scope for communications than that for Project 2006-06.*

Another concern was that this standard addressed "how" to communicate instead of "what" to communicate.

*When defining common communication protocols to be used for communication between entities, it is necessary to be specific on what must be communicated and how it must be communicated.*

Many commenters also questioned the purpose of the whitepaper that was posted by the SDT during draft 2.

*The whitepaper was intended to assist industry stakeholders understand the rationale behind the content in the standard. For further information on communication guidelines, please refer to the paper developed by the NERC Operating Committee titled "Reliability Guideline: System Operator Verbal Communication – Current Industry Practices" located at <http://www.nerc.com/filez/oc.html>.*



**Definitions:** (Question 1)

Most commenters agreed with removing all three definitions (Communications Protocol, Three-part Communication, and Interoperability Communication) in draft 1 of COM-003-1. However, most commenters also disagreed with the new proposed term Operating Communications, introduced in Draft 2 and defined as: “Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.” Commenters stated:

- The proposed term Operating Communication is still confusing and the large extent of operations it applies to would create an overwhelming compliance exposure due to the large number of communications described in the definition.
- The term, Operating Communication, and its relation to the proposed term “Reliability Directive” from COM-002-3 is unclear.
- The meaning of the word “maintain” in the definition is unclear. *The OPCP SDT changed “maintain” to “preserve” to differentiate this term from maintenance activities.*

*To eliminate the confusion expressed by commenters; and to clarify the scope and intent of an Operating Instruction, the SDT has revised the definition to read:*

*Operating ~~Communication-Instruction~~ — ~~Communication of instruction~~ Command from a System Operator to change or ~~maintain~~ preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.*

**Requirements:**

**Requirement R1** *(required entities to use the English Language (Question 4), 24 Hour Clock and Time Zone reference (Question 5), Common interface identifiers (Question 7), and alpha-numeric clarifiers (Question 8) during oral and written Operating Communication):*

- The majority of the commenters agreed with the SDT’s decision to remove a Communications Protocol Operating Procedure (CPOP) because it would be administrative in nature and would not satisfy the criterion of enhancing the reliable operation of the BES.

Many commenters supported the development of internal communication protocols and internal controls to correct deficiencies in lieu of a zero defect standard. (Question 2)

- The majority of commenters agreed with the SDT’s decision to remove the Alert Level Guide from the standard but did not want it in another standard because it added no value to reliability. (Question 3)
- In response to Questions 4, 5, 7 and 8 dealing with the English language, 24 hour clock and time zone reference, common interface identifiers, and alpha-numeric clarifiers, a large majority of the commenters believe that all of subparts are too prescriptive and focus on the “how to” instead of the “what.” *The SDT acknowledges this and has defended it as necessary for this*

*standard in drafts 1 and 2. When defining common communication protocols to be used for communication between entities, it is necessary to be specific on what must be communicated and how it must be communicated.*

- There was a lack of agreement on requiring the use of the English language as part of a communication protocol. Some commenters support requiring the use of English, and indicated that communicating in a language other than English would cause confusion, while others contested requiring English exclusively, stating in some areas the use of other languages in a localized environment may be effective. *The SDT believes that English should prevail in almost all cases and those situations where another language would be required by law would be a rare exception. Furthermore, this requirement only applies to communication initiated by a System Operator at one functional entity to another functional entity. The SDT added "Transmission Operators and Balancing Authorities may use an alternate language for internal operations." to provide some flexibility in areas where another language is commonly used.*
- Commenters were also divided on the use the 24 hour clock and time zone references as part of a communication protocol. Those who indicated support stated they felt it added clarity to communications. Other commenters stated that the 24 hour clock and time zone references are too prescriptive and should be eliminated. *The SDT believes use of the 24 hour clock and time zone references clarifies the time element of communications, which will enhance reliability by avoiding time mistakes that could affect the reliability of the BES.*
- Commenters were confused over the meaning of the word "accurate" to modify the phrase "alpha-numeric clarifier." Other commenters felt the NATO requirement was too restrictive, but indicated that the phrase "alpha-numeric clarifiers" was too vague. *The SDT has chosen to retain the inclusion of alpha-numeric clarifiers as an alternative to a strict requirement to include the use of the NATO alphabet, but has removed the word "accurate."*
- Many commenters stated that Requirement R1 is not necessary, stating that it is covered by standard TOP-002 R18. *The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. Project 2007-03 chose to eliminate TOP-002-2a Requirement R18 on the basis that "This requirement adds no reliability benefit. Entities have existing processes that handle this issue. There has never been a documented case of the lack of uniform line identifiers contributing to a System reliability issue. This is an administrative item, as seen in the measure, which simply requires a list of line identifiers. The true reliability issue is not the name of a line but what is happening to it, pointing out the difficulty in assigning compliance responsibility for such a requirement, as well as the near impossibility of coming up with truly unique identifiers on a nation-wide basis. The bottom line is that this situation is handled by the operators as part of their normal responsibilities, and no one is aware of a switching error caused by confusion over line identifiers." COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface*

*Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.*

***Requirement R2 (required entities that send Operating Communications to use three part communication)***

***and***

***Requirement R3 (required entities that receive Operating Communications to use three part communication)***

- Many commenters indicated that the scope of Operating Communications and the requirement was too broad and that the sheer numbers of Operating Communications would overwhelm the entities in terms of monitoring and evidence retention. They also are concerned that under these Requirements, operators would be distracted to focus more on complying with the specifications for three part communication rather than effectively responding to incidents, thereby reducing reliability. *The SDT believes universal communication protocols are critical to avoid mistakes that would result in reduced reliability on the BES, which is within the scope of the SDT's SAR. After consideration of comments in these questions, as well as question 10, the SDT has modified its approach in COM-003-1, draft 3 to address the concerns expressed by commenters.*
- Several stakeholders continue to identify potential conflicts between COM-003-1 and work underway on COM-002-3 by the Project 2006-06 – Reliability Coordination SDT (RCSDT), which also addresses the use of three-part communications. Some stated that the applicability of the two standards was confusing and called for one communication standard to reduce the confusion. A few commenters stress this should be limited to COM-002-3 (which has been approved by its ballot pool and is pending NERC Board approval). In COM-002-3 the proposed requirements focus on the use of three part communication when issuing and receiving “Reliability Directives.” As proposed in COM-002-3, a Reliability Directive is a directive issued to address an Emergency or an Adverse Reliability Impact. *The OPCP SDT believes the scope of their SAR extends beyond communications during emergency situations, thereby necessitating a new standard such as the proposed COM-003-1. The OPCP SDT proposes use of three-part communication for all Operating Instructions, under normal and emergency conditions, and has worked with the RCSDT to ensure that COM-002-3 and COM-003-1 are complementary to achieve this objective.*
- In addition, a number of commenters pointed out that R2 and R3 of each standard dictate three part communication but the language in each standard is different, which may create confusion. *The SDT has changed the language referring to three part communication in COM-003-1 to match that of COM-002-3, R2 and R3.*

### VRFs and VSLs

The SDT acknowledges there were many comments on draft 2 regarding VSLs and VRFs and we appreciate the contributions. The SDT has dramatically changed draft 3 and all of the VRFs and VSLs have been changed to reflect those changes.

### Additional Issues addressed by the SDT:

Small numbers of commenters raised issues around:

- The standard's 6 calendar month implementation time frame. *The SDT has extended the implementation period to 12 calendar months to provide an adequate amount of time for training and implementation.*
- Whether the standard should address "all call" types of communications. *The SDT has added language to Requirements R1 and R2 to clarify how these Requirements apply when all calls are used to communicate,*
- Re writing the Purpose Statement, – *The SDT modified the purpose statement in response to comments,*
- Adding language to identify Transmission Interface "....., unless otherwise mutually agreed,"- *The SDT added the commenters' recommended language.*
- Clarifying the time horizon of draft 2; real time applicability; - *The SDT confirmed that draft 2 was in the real time horizon.*

### Outstanding Unresolved Issues:

- Whether read receipts for written Operating Communications should be addressed in the Measures. - *This is in reference to R2 and R3 which is applicable only to oral Operating Communication, so the SDT made no change,*
- Exclusion of R2 and R3 for Face to Face Operating Communication in a control room, - *The SDT clarified that COM-003-1 only applies to communication between functional entities. For example, if a TOP System Operator is issuing an Operating Instruction to an individual that is internal to that TOP, three part communication is not required by this standard. If a TOP System Operator is issuing an Operating Instruction to an individual in another TOP or another functional entity (e.g. Distribution Provider, Generator Operator), then three part communication is required by this standard. If a TOP System Operator is issuing an Operating Instruction to an individual that is not in a functional entity, then three part communication is not required by this standard.*

**Index to Questions, Comments, and Responses**

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1. Do you agree with the addition of “Operating Communication” as a proposed new definition for the NERC Glossary and the elimination of “Communication Protocol,” “Interoperability Communication” and “Three part Communications” proposed in the first draft of COM-003-1? Operating Communication: Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. If not, please explain in the comment area. ....22
2. The SDT eliminated the requirement to have a Communications Protocol Operating Procedure from the proposed standard because it is administrative in nature. Do you agree with this modification? If not, please explain in the comment area. ....63
3. The SDT has proposed to transfer the requirement to use Alert Levels in Attachment 1 to another more closely aligned standard or to a separate new standard. Do you agree with this transfer? If not, please explain in the comment area. ....76
4. The SDT modified the standard to allow an exemption from the requirement to use English language where the use of another language is mandated by law or regulation. (See Requirement R1, Part 1.1.1) Do you agree with this modification? If not, please explain in the comment area. ....87
5. The SDT modified the standard to mandate utilization of a 24 hour clock for all times and to mandate the use of a time zone and indicate whether the time is daylight saving time or standard time reference when Operating Communications occur between different time zones. (See Requirement R1, Part 1.1.3) Do you agree with this modification? If not, please explain in the comment area. ....103
6. The SDT modified the requirement for use of three-part communications for Operating Communications to clarify that this is not applicable for Reliability Directives and split the single requirement into two requirements: one for the issuer (R2) and another for the receiver (R3). Do you agree with this modification? .....121
7. The SDT modified the requirement for use of the NATO phonetic alphabet to allow use of another correct alpha numeric clarifier. (See Requirement R1, Part 1.2.) Do you agree with this modification?.....154
8. The SDT modified the requirement for use of identifiers to limit the applicability to operating communications involving Transmission interface Elements/Facilities and to require use of the name for that Element/Facilities specified by the Element/Facility’s owner(s). Do you agree with this modification? .....175
9. Do you agree with the VRFs and VSLs for Requirements R1, R2 and R3?.....194
10. If you have any other comments or suggestions to improve the draft standard that you have not already provided in response to the previous questions please provide them here. ....210



**The Industry Segments are:**

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Guy Zito	Northeast Power Coordinating Council										X
Additional Member		Additional Organization	Region	Segment Selection									
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10									
2.	Greg Campoli	New York Independent System Operator	NPCC	2									
3.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1									
4.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1									
5.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10									
6.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5									
7.	Kathleen Goodman	ISO - New England	NPCC	2									
8.	Michael Jones	National Grid	NPCC	1									
9.	David Kiguel	Hydro One Networks Inc.	NPCC	1									
10.	Michael Lombardi	Northeast Utilities	NPCC	1									

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
			1	2	3	4	5	6	7	8	9	10								
11. Randy MacDonald	New Brunswick	NPCC	9																	
12. Silvia Parada Mitchell	NextEra Energy, LLC	NPCC	5																	
13. Bruce Metruck	New York Power Authority	NPCC	6																	
14. Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10																	
15. Robert Pellegrini	The United Illuminating Company	NPCC	1																	
16. Si Truc Phan	Hydro-Quebec TransEnergie	NPCC	1																	
17. David Ramkalawan	Ontario Power Generation, Inc.	NPCC	5																	
18. Brian Robinson	Utility Services	NPCC	8																	
19. Michael Schiavone	National Grid	NPCC	1																	
20. Wayne Sipperly	New York Power Authority	NPCC	5																	
21. Tina Teng	Independent Electricity System Operator	NPCC	2																	
22. Donald Weaver	New Brunswick System Operator	NPCC	2																	
23. Ben Wu	Orange and Rockland Utilities	NPCC	1																	
24. Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3																	
2.	Group	Jean Nitz	ACES Power Marketing Standards Collaborators	X		X	X	X	X											
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Shari Heino	Brazos Electric Power Cooperative, Inc.	ERCOT	1																
2.	Robert Thomasson	Big Rivers Electric Corporation	SERC	1																
3.	Scott Brame	North Carolina Electric Membership Corporation	RFC	3, 4, 5, 1																
4.	Clem Cassmeyer	Western Farmers Electric Cooperative	SPP	1, 5																
5.	Mike Brytowski	Great River Energy	MRO	1, 3, 5, 6																
6.	John Shaver	Arizona Electric Power Cooperative	WECC	4, 5																
7.	John Shaver	Southwest Transmission Cooperative, Inc.	WECC	1																
8.	Chad Wasinger	Sunflower Electric Power Corporation	SPP	1																
3.	Group	Jesus Sammy Alcaraz	Imperial Irrigation District	X		X	X	X	X											
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Alfonso Juarez	IID	WECC	1, 3, 4, 5, 6																
2.	Joel Fugett	IID	WECC	1, 3, 4, 5, 6																
3.	Marc Printy	IID	WECC	4, 5, 6, 1, 3																
4.	Christopher Reyes	IID	WECC	1, 3, 4, 5, 6																



Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
4.	Group	William Smith	Midwest Reliability Organization NERC Standards Review Forum	X		X	X	X	X				
<b>Additional Member Additional Organization Region Segment Selection</b>													
1.	Mahmood Safi	OPPD	MRO	1, 3, 5, 6									
2.	Chuck Lawrence	ATC	MRO	1									
3.	Tom Webb	WPS	MRO	3, 4, 5, 6									
4.	Jodi Jenson	WAPA	MRO	1, 6									
5.	Ken Goldsmith	ALTW	MRO	4									
6.	Alice Ireland	XCEL (NSP)	MRO	1, 3, 5, 6									
7.	Dave Rudolph	BEPC	MRO	1, 3, 5, 6									
8.	Eric Ruskamp	LES	MRO	1, 3, 5, 6									
9.	Joseph DePoorter	MGE	MRO	3, 4, 5, 6									
10.	Scott Nickels	RPU	MRO	4									
11.	Terry Harbour	MEC	MRO	6, 1, 3, 5									
12.	Marie Knox	MISO	MRO	2									
13.	Lee Kittelson	OTP	MRO	1, 3, 5, 6									
14.	Scott Bos	MPW	MRO	1, 3, 5, 6									
15.	Tony Eddleman	NPPD	MRO	1, 3, 5									
16.	Mike Brytowski	GRE	MRO	1, 3, 5, 6									
17.	Dan Inman	MPC	MRO	1, 3, 5, 6									
5.	Group	Kent Kujala	Detroit Edison			X	X	X					
<b>Additional Member Additional Organization Region Segment Selection</b>													
1.	Barbara Holland	DECo	RFC	3, 4, 5									
2.	Jeffrey DePriest	DECo	RFC	3, 4, 5									
3.	Alexander Eizans	DECo	RFC	3, 4, 5									
6.	Group	Greg Rowland	Duke Energy	X		X		X	X				
<b>Additional Member Additional Organization Region Segment Selection</b>													
1.	Doug Hils	Duke Energy	RFC	1									
2.	Ed Ernst	Duke Energy	SERC	3									
3.	Dale Goodwine	Duke Energy	SERC	5									

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
			1	2	3	4	5	6	7	8	9	10								
4. Greg Cecil	Duke Energy	RFC 6																		
7. Group	Patricia Robertson	BC Hydro	X																	
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1. Venkataramakrishnan Vinnakota	BC Hydro	WECC	2																	
2. Pat G. Harrington	BC Hydro	WECC	3																	
3. Clement Ma	BC Hydro	WECC	5																	
8. Group	Connie Lowe	Dominion	X		X		X	X												
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1. Michael Crowley		SERC	1, 3, 5, 6																	
2. Louis Slade		RFC	5, 6																	
3. Mike Garton		NPCC	5, 6																	
4. Lou Oberski		MRO	5, 6																	
9. Group	Thomas McElhinney	JEA	X		X		X													
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1. Ted Hobson	JEA	FRCC	1																	
2. Garry Baker	JEA	FRCC	3																	
3. John Babik	JEA	FRCC	5																	
10. Group	David Dockery	Associated Electric Cooperative JRO00088	X		X		X	X												
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1. Central Electric Power Cooperative		SERC	1, 3																	
2. KAMO Electric Cooperative		SERC	1, 3																	
3. M & A Electric Power Cooperative		SERC	1, 3																	
4. Northeast Missouri Electric Power Cooperative		SERC	1, 3																	
5. N.W. Electric Power Cooperative, Inc.		SERC	1, 3																	
6. Sho-Me Power Electric Cooperative		SERC	1, 3																	
7. Associated Electric Cooperative, Inc.		SERC	1, 3, 5, 6																	
11. Group	Ron Sporseen	PNGC Small Entity Comment Group	X		X	X												X		
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1. Joe Jarvis	Blachly-Lane Electric Cooperative	WECC	3																	

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
			1	2	3	4	5	6	7	8	9	10								
2.	Dave Markham	Central Electric Cooperative	WECC	3																
3.	Dave Hagen	Clearwater Power Company	WECC	3																
4.	Roman Gillen	Consumers Power Inc.	WECC	1, 3																
5.	Roger Meader	Coos-Curry Electric Cooperative	WECC	3																
6.	Bryan Case	Fall River Electric Cooperative	WECC	3																
7.	Rick Crinklaw	Lane Electric Cooperative	WECC	3																
8.	Annie Terracciano	Northern Lights Inc.	WECC	3																
9.	Aleka Scott	PNGC Power	WECC	4																
10.	Heber Carpenter	Raft River Electric Cooperative	WECC	3																
11.	Steve Eldrige	Umatilla Electric Cooperative	WECC	1, 3																
12.	Marc Farmer	West Oregon Electric Cooperative	WECC	4																
13.	Margaret Ryan	PNGC Power	WECC	8																
14.	Rick Paschall	PNGC Power	WECC	3																
12.	Group	Brent Ingebrigtsen	LG&E and KU Services		X		X		X	X										
No additional members listed.																				
13.	Group	David Thorne	Pepco Holdings Inc & Affiliates		X		X													
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Mark Jones	Pepco	RFC	3																
2.	Mike Mayer	DPL	RFC	3																
3.	Nicole Buckman	ACE	RFC	3																
4.	David Thorne	Pepco	RFC	1																
14.	Group	Ron Sporseen	PNGC Small Entity Comment Group		X		X	X									X			
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Joe Jarvis	Blachly-Lane Electric Cooperative	WECC	3																
2.	Dave Markham	Central Electric Cooperative	WECC	3																
3.	Dave Hagen	Clearwater Power Company	WECC	3																
4.	Roman Gillen	Consumers Power Inc.	WECC	1, 3																
5.	Roger Meader	Coos-Curry Electric Cooperative	WECC	3																
6.	Bryan Case	Fall River Electric Cooperative	WECC	3																
7.	Rick Crinklaw	Lane Electric Cooperative	WECC	3																

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
			1	2	3	4	5	6	7	8	9	10								
8.	Annie Terracciano	Northern Lights Inc.	WECC	3																
9.	Aleka Scott	PNGC Power	WECC	4																
10.	Heber Carpenter	Raft River Electric Cooperative	WECC	3																
11.	Steve Eldrige	Umatilla Electric Cooperative	WECC	1, 3																
12.	Marc Farmer	West Oregon Electric Cooperative	WECC	4																
13.	Margaret Ryan	PNGC Power	WECC	8																
14.	Rick Paschall	PNGC Power	WECC	3																
15.	Group	Scott Miller	MEAG Power, Danny Dees, Steven Grego, Steve Jackson		X		X		X											
No additional members listed.																				
16.	Group	Albert DiCaprio	ISO/RTO Standards Review Committee			X														
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Greg Campoli	NYISO	NPCC	2																
2.	Gary DeShazo	CAISO	WECC	2																
3.	Matt Goldberg	ISONE	NPCC	2																
4.	Ben Li	IESO	NPCC	2																
5.	Stephanie Monzon	PJM	RFC	2																
6.	Steve Myers	ERCOT	ERCOT	2																
7.	Bill Phillips	MISO	RFC	2																
8.	Mark Thompson	AESO	WECC	2																
9.	Don Weaver	NBSO	NPCC	2																
10.	Charles Yeung	SPP	SPP	2																
11.	Kathleen Goodman	ISONE	NPCC	2																
12.	Terry Bilke	MISO	RFC	2																
17.	Group	Shaun Anders	City Water Light and Power		X		X		X											
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Roger Powers	CWLP	SERC																	
2.	Steve Rose	CWLP	SERC																	
18.	Group	Sasa Maljukan	Hydro One Networks Inc.		X															
<b>Additional Member Additional Organization Region Segment Selection</b>																				

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
			1	2	3	4	5	6	7	8	9	10								
1. David Kiguel	Hydro One Networks Inc.	NPCC	1																	
19. Group	Robert Rhodes	SPP Standards Review Group		X																
<b>Additional Member</b>		<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>																
1.	John Allen	City Utilities of Springfield	SPP	1, 4																
2.	Michelle Corley	CLECO	SPP	1, 3, 5																
3.	Gary Cox	Southwestern Power Administration	SPP	1, 5																
4.	John Geil	Sunflower Electric Power Corporation	SPP	1																
5.	Allan George	Sunflower Electric Power Corporation	SPP	1																
6.	Ron Gunderson	Nebraska Public Power District	MRO	1, 3, 5																
7.	Ed Hammons	Grand River Dam Authority	SPP	1, 3, 5																
8.	Jonathan Hayes	Southwest Power Pool	SPP	2																
9.	Bo Jones	Westar Energy	SPP	1, 3, 5, 6																
10.	Allen Klassen	Westar Energy	SPP	1, 3, 5, 6																
11.	Tiffany Lake	Westar Energy	SPP	1, 3, 5, 6																
12.	Paul Lampe	City of Independence, Power & Light Department	SPP	3																
13.	Tara Lightner	Sunflower Electric Power Corporation	SPP	1																
14.	Julie Lux	Westar Energy	SPP	1, 3, 5, 6																
15.	Greg McAuley	Oklahoma Gas & Electric	SPP	1, 3, 5																
16.	Stephen McGie	City of Coffeyville	SPP																	
17.	Jerry McVey	Sunflower Electric Power Corporation	SPP	1																
18.	Terri Pyle	Oklahoma Gas & Electric	SPP	1, 3, 5																
19.	Randy Root	Grand River Dam Authority	SPP	1, 3, 5																
20.	Sean Simpson	Board of Public Utilities of Kansas City, KS	SPP																	
21.	Ashley Stringer	Oklahoma Municipal Power Authority	SPP	4																
22.	Jim Useldinger	Kansas City Power & Light	SPP	1, 3, 5, 4																
23.	Chad Wasinger	Sunflower Electric Power Corporation	SPP	1																
20. Group	Scott Kinney	Avista		X		X		X												
<b>Additional Member</b>		<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>																
1.	Scott Kinney	Avista	WECC	1																
2.	Ed Groce	Avista	WECC	5																
3.	Bob Lafferty	Avista	WECC	3																

Group/Individual		Commenter	Organization	Registered Ballot Body Segment										
				1	2	3	4	5	6	7	8	9	10	
21.	Group	Frank Gaffney	Florida Municipal Power Agency	X		X		X	X					
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	Tim Beyrle	City of New Smyrna Beach	FRCC	4										
2.	Jim Howard	Lakeland Electric	FRCC	3										
3.	Greg Woessner	Kissimmee Utility Authority	FRCC	3										
4.	Lynne Mila	City of Clewiston	FRCC	3										
5.	Joe Stonecipher	Beaches Energy Services	FRCC	1										
6.	Cairo Vanegas	Fort Pierce Utility Authority	FRCC	4										
7.	Randy Hahn	Ocala Utility Services	FRCC	3										
22.	Group	Sam Ciccone	FirstEnergy	X		X	X	X	X					
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	J. Reed	FE	RFC											
2.	M. Klohanatz	FE	RFC											
3.	L. Raczkowski	FE	RFC											
4.	B. Orians	FE	RFC											
5.	J. Anderson	FE	RFC											
6.	R. Loy	FE	RFC											
7.	B. Duge	FE	RFC											
23.	Group	Gerald Beckerle	SERC OC Standards Review Group	X		X								
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	Stuart Goza	TVA	SERC											
2.	Mike Hirst	Cogentrix	SERC											
3.	Phil Whitmer	Southern	SERC											
4.	Eugene Warnecke	Ameren	SERC											
5.	Jeff Harrison	AECI	SERC											
6.	Terry Bilke	MISO	SERC											
7.	Mike Hardy	Southern	SERC											
8.	Chris McNeil	Santee Cooper	SERC											
9.	Jake Miller	Dynegy	SERC											
10.	Jim Case	Entergy	SERC											

Group/Individual	Commenter	Organization	Registered Ballot Body Segment											
			1	2	3	4	5	6	7	8	9	10		
11. Albert DiCaprio	PJM	SERC												
12. William Berry	OMU	SERC												
13. Joel Wise	TVA	SERC												
14. Greg Stone	Duke	SERC												
15. John Rembold	SIPC	SERC												
16. Scott Brame	NCEMC	SERC												
17. Merrit Castello	Southern	SERC												
18. Chris Bolick	AECI	SERC												
19. Tom Hanzlik	SCE&G	SERC												
20. Brad Young	LGE-KU	SERC												
21. Greg Matejka	CWLP	SERC												
22. Timmy Lejeune	NRG Energy	SERC												
23. Wayne Van Liere	LGE-KU	SERC												
24. Dale Walters	CWLP	SERC												
25. Ed Davis	Entergy	SERC												
24. Group	Steve Rueckert	Western Electricity Coordinating Council												X
<b>Additional Member Additional Organization Region Segment Selection</b>														
1. John McGhee	WECC	WECC	10											
2. Phil O'Donnell	WECC	WECC	10											
25. Group	Chris Higgins	Bonneville Power Administration	X		X		X	X						
<b>Additional Member Additional Organization Region Segment Selection</b>														
1. Jim	Burns	WECC	1											
2. Tim	Loepker	WECC	1											
3. Dick	Winters	WECC	1											
4. Rodney	Krause	WECC	1											
5. Erika	Doot	WECC	3, 5, 6											
6. Tedd	Snodgrass	WECC	1											
26. Group	Mary Jo Cooper	GP Strategies	X		X									
<b>Additional Member Additional Organization Region Segment Selection</b>														
1. City of Lodi		WECC	3											

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
2.	City of Ukiah		WECC 3										
3.	Alameda Municipal Power		WECC 3										
4.	Pasadena Water and Power		WECC 1, 3										
5.	Salmon River Electric Co-op		WECC 1, 3										
6.	California Pacific Electric Company		WECC 3										
27.	Group	Tom Bowe - OC Chair	NERC Operating Committee	X	X	X	X	X	X	X	X		X
NERC Operating Committee Members													
28.	Individual	Jim Eckelkamp	Progress Energy	X		X		X	X				
29.	Individual	Janet Smith, Regulatory Affairs Supervisor	Arizona Public Service Company	X		X		X	X				
30.	Individual	Antonio Grayson	Southern Company	X		X		X	X				
31.	Individual	Hertzel Shamash	The Dayton Power and Light Company	X		X		X					
32.	Individual	D Mason	HHWP	X				X					
33.	Individual	Mace Hunter	Lakeland Electric	X		X		X					
34.	Individual	John D. Brockhan	CenterPoint Energy Houston Electric, LLC.	X									
35.	Individual	Michael Falvo	IESO		X								
36.	Individual	Thad Ness	American Electric Power	X		X		X	X				
37.	Individual	Ronnie C. Hoeinghaus	City of Garland			X							
38.	Individual	Russ Schneider	Flathead Electric Cooperative, Inc.			X	X						
39.	Individual	Joe O'Brien	NIPSCO	X		X		X	X				
40.	Individual	Joe Tarantino	SMUD	X		X	X	X	X				
41.	Individual	Daniel Duff	Liberty Electric Power LLC					X					
42.	Individual	Jennifer Wright	San Diego Gas & Electric	X		X		X					
43.	Individual	Stephen J. Berger	PPL Generation, LLC on behalf of its Supply NERC Registered Entities					X					
44.	Individual	Cristina Papuc	TransAlta Centralia Generation LLC					X					
45.	Individual	Si Truc PHAN	Hydro-Quebec TransEnergie	X									



Group/Individual		Commenter	Organization	Registered Ballot Body Segment										
				1	2	3	4	5	6	7	8	9	10	
46.	Individual	Brad Chase	Orlando Utilities Commission	X		X			X					
47.	Individual	Jack Stamper	Clark Public Utilities	X										
48.	Individual	Jonathan Appelbaum	The United illuminating Company	X										
49.	Individual	Scott Berry	Indiana Municipal Power Agency				X							
50.	Individual	Michelle D'Antuono	Ingleside Cogeneration LP					X						
51.	Individual	Roger C. Zaklukiewicz	Roger Zaklukiewicz Consulting								X			
52.	Individual	Michael Moltane	ITC Holdings	X										
53.	Individual	Joe Tarantino	Sacramento Municipal Utility District	X		X	X	X	X					
54.	Individual	Ed Davis	Entergy Services	X		X		X	X					
55.	Individual	Anthony Jablonski	ReliabilityFirst											X
56.	Individual	Brian Evans-Mongeon	Utility Services, Inc.								X			
57.	Individual	Wayne Sipperly	New York Power Authority	X		X		X	X					
58.	Individual	Andrew Gallo	City of Austin dba Autin Energy	X		X	X	X	X					
59.	Individual	J. S. Stonecipher, PE	City of Jacksonville Beach dba/Beaches Energy Services	X									X	
60.	Individual	Warren Rust	Colorado Springs Utilities	X		X		X						
61.	Individual	Patrick Brown	Essential Power, LLC					X						
62.	Individual	Bob Steiger	Salt River Project	X		X		X	X					
63.	Individual	Robert L Dintelman	Utility System Efficiencies, InC.											
64.	Individual	RoLynda Shumpert	South Carolina Electric and Gas	X		X		X	X					
65.	Individual	Howard Rulf	Wisconsin Electric dba We Energies			X	X	X						
66.	Individual	Eric Scott	City of Palo Alto			X								
67.	Individual	Joe Petaski	Manitoba Hydro	X		X		X	X					
68.	Individual	John Seelke	Public Service Enterprise Group	X		X		X	X					
69.	Individual	John T. Walker	Portland General Electric - Transmission & Reliability Services	X										

Group/Individual		Commenter	Organization	Registered Ballot Body Segment										
				1	2	3	4	5	6	7	8	9	10	
70.	Individual	Denise Lietz	Puget Sound Energy	X		X		X						
71.	Individual	Brenda Truhe	PPL Electric Utilities	X										
72.	Individual	Bob Thomas	Illinois Municipal Electric Agency				X							
73.	Individual	Alice Ireland	Xcel Energy	X		X		X	X					
74.	Individual	John D. Martinsen	Public Utility District No. 1 of Snohomish County	X		X	X	X	X					
75.	Individual	Kirit Shah	Ameren	X		X		X	X					
76.	Individual	Greg Travis	Idaho Power Company	X		X								
77.	Individual	Andrew Z. Pusztai	American Transmission Company, LLC	X										
78.	Individual	Marie Knox	MISO		X									
79.	Individual	Eric Salsbury	Consumers Energy			X	X	X						
80.	Individual	Karen Webb	City of Tallahassee					X						
81.	Individual	Brian Murphy	NextEra Energy, Inc	X		X		X	X					
82.	Individual	Randall McCamish	City of Vero Beach	X		X								
83.	Individual	Don Jones	Texas Reliability Entity											X
84.	Individual	Kenneth A Goldsmith	Alliant Energy				X							
85.	Individual	Kathleen Goodman	ISO New England Inc		X									
86.	Individual	Steven Wallace	Seminole Electric Cooperative	X			X	X	X					
87.	Individual	Martin Bauer	U.S. Bureau of Reclamation					X						
88.	Individual	Rich Salgo	NV Energy	X		X		X						
89.	Individual	Maggy Powell	Exelon Corporation and its affiliates	X		X		X	X					
90.	Individual	Tony Kroskey	Brazos Electric Power Cooperative	X										
91.	Individual	Darryl Curtis	Oncor Electric Delivery Company LLC	X										
92.	Individual	Steve Alexanderson P.E.	Central Lincoln			X	X						X	
93.	Individual	Richard Vine	California Independent System Operator		X									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment										
				1	2	3	4	5	6	7	8	9	10	
94.	Individual	Jennifer Flandermeyer	Kansas City Power & Light	X		X		X	X					

1. **Do you agree with the addition of “Operating Communication” as a proposed new definition for the NERC Glossary and the elimination of “Communication Protocol,” “Interoperability Communication” and “Three part Communications” proposed in the first draft of COM-003-1? Operating Communication: Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. If not, please explain in the comment area.**

#### Summary Consideration: Major Issues

The majority of commenters agreed with eliminating the three original definitions in draft 1; however the same majority had concerns about the proposed definition of Operating Communications. The concern is that the definition and the manner in which it was used in the requirements in COM-003-1 were potentially over reaching. Most commenters indicated that the evidence requirements would also strain an entity’s resources and would not improve reliability. The SDT believes that the use of the protocols, many of which are now in use by industry stakeholders, should be a required part of BES operations and communication. The SDT also believes that use of these protocols enhance reliability by providing a structure for communication that clarifies intent and meaning. This in turn provides a layer of defense in the reliable operation of the BES.

Many commenters indicated that they do not agree that the term Operating Communication is needed and believe that Reliability Directive, as defined in COM-002-3 is the only term needed to clarify the type of communications that should require three part communications. Some comments indicate that the scope of communications that would be considered Operating Communications was not sufficiently clear, and could include casual control room conversations and discussion over potential alternatives. The SDT believes the scope of the SAR extends beyond communications during emergency situations, thereby necessitating a term that involves communications during all situations, both normal and emergency. To clarify the intent and scope of the term, the SDT renamed the term Operating Communications to Operating Instruction, and modified the definition to “Command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”

Commenters also stated the SDT has exceeded the scope of the SAR, the 2003 Blackout Report recommendations, and FERC Order 693. The SDT is confident that the concepts in COM-003-1 appropriately address the Blackout Report recommendations, FERC Order 693 and the SAR. The SDT also believes that the concepts in COM-003-1 address a reliability gap that exists because the vast numbers of Operating Communications that affect the state of BES Elements or BES Facilities are not currently subject to consistent protocols that clarify content and intent. This increases the risk of mistakes that could degrade the reliability of the BES.

A few commenters questioned the purpose and the standing of the White Paper the SDT drafted. The SDT responded that the Standards Committee requested that the team develop the White Paper to provide its justification for the application of Communication protocols. The White Paper was posted for information, not for industry approval.

A number of stakeholders agreed with the changes to replace the previous three defined terms with a single defined term, Operating Communication.

Organization	Yes or No	Question 1 Comment
Northeast Power Coordinating Council	No	<p>The proposed Operating Communication term is not markedly different from the originally proposed term (Interoperability Communication).</p> <p><b>Response: The SDT believes the term Operating Communication focuses on very specific actions that affect the reliability of the BES, making it more specific than Interoperability Communication. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</b></p> <p>The proposal continues to expand the scope of the SAR from the concept of tightening the protocols associated with Emergencies by now applying to all communications. The text box in the draft standard indicates that Reliability Directives are a type of Operating Communications, to the extent they change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. There is little difference between the two terms despite the SDT’s assessment that Reliability Directive is a type (or a subset) of Operating Communication. If the intent is to use the proposed new term to require three-part communication (as suggested in R2 and R3), then that intent can be accomplished by using the term Reliability Directive as it covers not only the emergency state but also</p>

Organization	Yes or No	Question 1 Comment
		<p>instructions needed to address Adverse Reliability Impacts.</p> <p><b>Response:</b> The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” The SDT does not believe that it has expanded the scope of this SAR. Reliability Directive, as defined in COM-002-3, is specifically focused on Emergencies or Adverse Reliability Impacts. The scope of COM-003-1 is to require the use of common communication protocols for all BES operations that affect the state of the BES.</p> <p>Both the Blackout Report and the FERC directive deal with tightening protocols for Emergencies. The proposed requirements completely fail to address emergencies and focus solely on developing non-emergency protocols.</p> <p><b>Response:</b> The OPCSDT disagrees that both the Blackout Report (and FERC Order 693 and the SAR) only addresses the need to tighten protocols for Emergencies. The Blackout Report uses the phrase “<i>especially for emergencies</i>” which the SDT interprets to mean the authors were recommending applicability of communication protocols for the total population of operating situations and used this language to amplify the importance of such protocols during emergency conditions. FERC Order 693 paragraph 532 (“<i>This will eliminate possible ambiguities in communications during <u>normal</u>, alert and emergency conditions</i>”) and the SAR are very specific in that both include the term “normal” operating conditions.</p>
<p><b>Response:</b> Thank you for your comments. Please see the responses above.</p>		
ACES Power Marketing Standards	No	<p>1. We do not agree with the need to use three-part communication for all operations on the BES. Requiring entities to employ three-part</p>

Organization	Yes or No	Question 1 Comment
Collaborators		<p>communication for routine operating instructions is excessive and burdensome. The 2003 Blackout Report recommended that industry, “Tighten communications protocols, especially for communications during alerts and emergencies.” We strongly support using three-part communication for the execution of Reliability Directives as defined in the proposed COM-002-3 draft standard in Project 2006-06 but not for routine operating instructions.</p> <p><b>Response: The OPCPSDT disagrees that the Blackout Report (and FERC Order 693 and the SAR) only addresses the need to tighten protocols for Emergencies. The Blackout Report uses the phrase “especially for emergencies” which the SDT interprets to mean the authors were recommending applicability of communication protocols for the total population of operating communication and used this language to amplify the importance of such protocols during emergency conditions. FERC Order 693 paragraph 532 (“This will eliminate possible ambiguities in communications during <u>normal</u>, alert and emergency conditions”) and the SAR are very specific in that both include the term “normal” operating conditions.</b></p> <p>2. The COM-003-1 Operating Communications Protocols White Paper states three reliability benefits of using three-part communication as follows:</p> <p>a. “The removal of any doubt that communication protocols will be used and when they will be used. This will reduce the opportunity for confusion and misunderstanding among entities that may have different doctrine.” We don’t agree with the premise that implementing three-part communications for all operating instructions will reduce confusion. If there is a standard such as draft COM-002-3 that requires the use of three-part communication for Reliability Directives and the issuer is required to state that a Reliability Directive is being issued, then there should be no</p>

Organization	Yes or No	Question 1 Comment
		<p>confusion.</p> <p><b>Response: The Blackout study cites a scenario where communication was unprofessional and confused. Communication protocols should used before, during, and after emergency conditions.</b></p> <p>The example provided in this bullet where “one entity uses three-part for emergencies, and the other uses it for all operating conditions” is used to support the premise. However, Table 1-A of the White Paper only lists 11 entities that currently use three-part communication during both emergencies and non-emergencies. Eleven out of how many entities? The paragraph immediately following Table 1-A states, “The fact that the majority of BES entities already employs three-part (or repeat back) communications for routine...operations...” Eleven entities do not make a majority. We don’t believe the actions of a few should dictate the actions of all. Much stronger evidence to support this “fact” is needed.</p> <p><b>Response: The SDT sampled major entities that manage significant amounts of load and serve large numbers of customers to capture the magnitude of impact of the sample on the BES. The SDT is confident that it would have achieved the same results if it sampled 100 additional entities based on the overwhelming consistency in the results provided in Table 1-A.</b></p> <p>b. “There will be no mental “transition” when operating conditions shift from normal to Emergency.” Once again, if there is a standard such as COM-002-3 that requires three-part communication for Reliability Directives and the issuer is required to state that a Reliability Directive is being issued, then there should be no confusion. System Operators are trained to make mental transitions every day. It is an inherent characteristic of the job. Operators should be able to mentally “transition” when a Reliability Directive is issued.</p> <p><b>Response: The SDT agrees that most System Operators are highly trained</b></p>



Organization	Yes or No	Question 1 Comment
		<p>and experienced, but it is risky to discount the human factor in communications. Low frequency, high impact events such as the 2003 Blackout are of such speed and magnitude that it is only natural to anticipate a potential inaccurate mental “transition.”</p> <p>c. “The formal requirement for three-part communication will create a heightened sense of awareness in operators that the task they are about to execute is critical...” Not all operating instructions are “critical” so this premise is flawed. This bullet makes perfect sense for Reliability Directives because the actions taken to address those would be considered critical based on the proposed definition of Reliability Directive in COM-002-3. It does not make sense for routine operating instructions.</p> <p><b>Response: The SDT believes that every instruction for a change to the BES carries some risk. If unclear communication causes an operator to open the wrong switch on an already compromised system the results could lead to an undesirable event.</b></p> <p>3. Based on the above, we do not agree with the definition of Operating Communication as proposed in this draft standard since we do not support the use of three-part communication for all operations on the BES.</p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
<p>Midwest Reliability Organization NERC Standards Review Forum</p>	<p>No</p>	<p>The MRO NSRF recommends the following comments for consideration by the SDT:</p> <p>1. The sentence structure of this definition is incorrect. It is unclear whether the prepositional phrase “of the Bulk Electric System” applies to both Facility and Element or only to a Facility. Recommend this be rewritten to read “... Bulk Electric System Elements and Facilities”.</p> <p><b>Response: The SDT has reworded the definition in response to your</b></p>

Organization	Yes or No	Question 1 Comment
		<p>comment.</p> <p>2. The definition should be for only actionable commands (to accomplish an actionable item). Status of does necessitate 3 part communication.</p> <p><b>Response: The context was “maintain the status” which is an actionable command. The intent was related to commands to preserve the stability of a normally operating system. The SDT has proposed “preserve” as an alternative to “maintain” in draft 3.</b></p> <p>3. The inclusion of a Reliability Directive as a subset of the Operating Communication definition adds confusion as to what is a Reliability Directive. This confusion is compounded by having Reliability Directives in a different standard with different descriptions for three part communication.</p> <p><b>Response: The SDT has adopted the language in COM-002-3, R2 and R3 for three part communication. This change to make the two standards consistent is intended to reduce any potential for confusion.</b></p> <p>4. The 2003 Blackout Report recommended that industry, “Tighten communications protocols, especially for communications during alerts and emergencies.” We strongly support using three-part communication for the execution of Reliability Directives as defined in the proposed COM-002-3 draft standard in Project 2006-06 but not for routine operating instructions.</p> <p><b>Response: The OPCPSDT disagrees that the Blackout Report (and FERC Order 693 and the SAR) only addresses the need to tighten protocols for Emergencies. The Blackout Report uses the phrase “especially for emergencies” which the SDT interprets to mean the authors were recommending applicability of communication protocols for the total population of operating communication and used this language to amplify the importance of such protocols during emergency conditions. FERC Order 693 paragraph 532 (“This will eliminate possible ambiguities in</b></p>

Organization	Yes or No	Question 1 Comment
		<p><i>communications during <u>normal</u>, alert and emergency conditions”) and the SAR are very specific in that both include the term “normal” operating conditions.</i></p> <p>5. Table 1-A of the White Paper lists 11 entities that currently use three-part communication during both emergencies and non-emergencies. We agree that this can be an utility ‘best practice’, however, there is a major difference between good utility practice and a no-fault, no exception Reliability Standard.</p> <p><b>Response: The SDT acknowledges your position and has developed an alternative form of the standard that addresses your comment.</b></p>
<p><b>Response: The OPCPSDT appreciates your comments.</b></p>		
Detroit Edison	No	<p>The definition of Operating Communication is overly broad, increasing the scope of the standard. It should be limited to actionable items. Suggested rewording of the definition: "Communication of instruction to perform an action relating to a physical change or a control system data change affecting an Element or Facility of the Bulk Electric System."</p>
<p><b>Response: The OPCPSDT appreciates your comments. It was not the intent to include control system data change in the scope of Operating Communication. In response to your comment and other similar comments, the definition has been modified to “Command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</b></p>		
Duke Energy	No	<p>The definition of Operating Communication is vague, general and overly broad.</p> <p><b>Response: The definition has been modified to “Command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</b></p>

Organization	Yes or No	Question 1 Comment
		<p>We don't believe the Blackout Report recommendations and Order 693 directives require 3-part communications for routine communications. Communications protocols can be tightened, and more effective communications can be achieved without this extreme approach. See our comments under question #2.</p> <p><b>Response: The OPCSDT disagrees that the Blackout Report (and FERC Order 693 and the SAR) only addresses the need to tighten protocols for Emergencies. The Blackout Report uses the phrase "especially for emergencies" which the SDT interprets to mean the authors were recommending applicability of communication protocols for the total population of operating communication and used this language to amplify the importance of such protocols during emergency conditions. FERC Order 693 paragraph 532 ("This will eliminate possible ambiguities in communications during <u>normal</u>, alert and emergency conditions") and the SAR are very specific in that both include the term "normal" operating conditions.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
BC Hydro	No	<p>BC Hydro does not support limiting operating communications to instructions. We believe this should account for notification or reporting and that in these cases three part communication should be used to ensure understanding. For example, if an element is out of service and that is being reported to an operating entity, the receiver of that communication should show confirmation of understanding by repeating their understanding and receiving confirmation.</p> <p>Example:</p> <p>1) TOP Call to RC: Our transmission Line XX is currently out of service and is</p>

Organization	Yes or No	Question 1 Comment
		<p>expected to remain out until field crews respond.</p> <p>2) RC to TOP: OK, I understand that Line XX is out of service and will remain out until further notice.</p> <p>3) TOP to RC: That’s correct. I’ll call you when I have some more information.</p>
<p><b>Response: Thank you for your comments. The SDT applauds your use of three part communication beyond our proposal and believes it adds clarity and enhances reliability. The SDT is not inclined at this point to broaden the scope of communications that would require the use of three part communications, but does not discourage entities who wish to employ three-part communication more broadly.</b></p>		
<p>Dominion</p>	<p>No</p>	<p>Dominion agrees with the elimination of Communication Protocol, Interoperability Communication and Three part Communications proposed in the first draft.</p> <p>Each standard requirement (R1, R2 &amp; R3) specifically excludes Reliability Directives; further adding confusion to the issue of what is a reliability directive.</p> <p><b>Response: COM-003-1, draft 2, R1 does apply to Reliability Directives. R2 and R3 had exclusion language to preclude potential double jeopardy with the requirements of COM-002-3, R2 and R3. The SDT has modified its approach in the latest draft, which should eliminate the confusion.</b></p> <p>The Reliability Directive should stand on its own and if the SDT does not agree then the relationship between Reliability Directives and Operating Communications should be clarified in the Standard. When the standard is implemented, the text box (on page 2 of the clean standard) will be removed, therefore losing any tieback to a Reliability Directive as a type of operating communication.</p> <p><b>Response: The SDT acknowledges this confusion and has been working</b></p>

Organization	Yes or No	Question 1 Comment
		<p>with RCSDT to address it. The June 7<sup>th</sup> Webinar (Posted under Project 2007-02) addressed this issue and may provide additional clarification. <a href="http://www.nerc.com/docs/standards/dt/Webinar_Slides_Project_2007-02_June_7_2012_final.pdf">http://www.nerc.com/docs/standards/dt/Webinar_Slides_Project_2007-02_June_7_2012_final.pdf</a></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
<p>Associated Electric Cooperative JRO00088</p>	<p>No</p>	<p>Although the intent appears to be only for oral communications of NERC Certified System Operators, and those directly aimed at affecting the altered or continued state of BES elements of Facilities, the wording is insufficiently bounded. For instance, it could include any communications between a unit or plant operator and internal plant personnel, were the net output of the plant to change, significantly or insignificantly, current or future (status), its injection to the BES. The same would be true of loads, and so communication of Distribution providers with any manufacturing plant managers would necessarily become subject to this standard (extractions from the BES - significant or insignificant). Taken to one extreme, purchasing personnel could also be responsible for whatever part their telephone conversations play in altering the future status of plant real or reactive power production or consumption. AECI agrees with the SERC OC STANDARDS REVIEW GROUP consensus comment, that COM-002 should be sufficient in addressing any industry deficiencies in this area and if not, the deficiencies addressed there.</p>
<p><b>Response: Thank you for your comments. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</b></p>		

Organization	Yes or No	Question 1 Comment
<p>LG&amp;E and KU Services</p>	<p>No</p>	<p>LG&amp;E and KU Services do not agree with the proposed definition of Operating Communication and agree with eliminating the other three definitions. The standard appears to be focused on imposing three part communications on the industry for routine communications despite the fact that neither the blackout report nor the SAR on which these standards are based emphasize that issue.</p> <p><b>Response: The OPCSDT disagrees that the Blackout Report (and FERC Order 693 and the SAR) only addresses the need to tighten protocols for Emergencies. The Blackout Report uses the phrase “especially for emergencies” which the SDT interprets to mean the authors were recommending applicability of communication protocols for the total population of operating communication and used this language to amplify the importance of such protocols during emergency conditions. FERC Order 693 paragraph 532 (“This will eliminate possible ambiguities in communications during <u>normal</u>, alert and emergency conditions”) and the SAR are very specific in that both include the term “normal” operating conditions.</b></p> <p>The blue text box that mentions Reliability Directives seems to be a back door attempt to change COM-002 and should be clarified or eliminated. Splitting communications requirements across different standards creates unnecessary confusion</p> <p><b>Response: The blue text box and the exclusionary language regarding Reliability Directives in COM-003-1, R2 and R3 were added to address concerns over potential double jeopardy. The SDT has modified its approach in the latest draft.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		

Organization	Yes or No	Question 1 Comment
Pepco Holdings Inc & Affiliates	No	The distinction between Operating Communication definition and the Reliability Directive being a type of Operating Communication is confusing.
<p><b>Response:</b> Thank you for your comments. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</p>		
MEAG Power, Danny Dees, Steven Grego, Steve Jackson	No	Operating communication is not necessarily three part communication. If three part communication is being required, then it should be defined as three part communication.
<p><b>Response:</b> Thank you for your comments. Operating Communication is a definition to categorize any instruction that directly orders reconfiguration of the BES. The SDT developed requirements to utilize three part communication when issuing or receiving an Operating Communication to reduce the potential for a miscommunication that could reduce BES reliability.</p>		
ISO/RTO Standards Review Committee	No	<p>The SRC agrees with the elimination of the three terms but not with the addition of “Operating Communication”.</p> <p><b>Thank you for your comments.</b></p> <p>The SRC does not believe that the proposed term (Operating Communication) is sufficiently different from the originally proposed term (Interoperability Communication) to warrant adoption.</p> <p><b>Response:</b> The SDT believes the term Operating Communication is more distinct than Interoperability Communication because it focuses on very specific actions that affect reliability on the BES. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System</p>



Organization	Yes or No	Question 1 Comment
		<p><b>or Facility of the Bulk Electric System.”</b></p> <p>The SDT’s proposal continues to expand the scope of the SAR from the concept of tightening the protocols associated with Emergencies or Adverse Reliability Impact to now applying to all communications. The text box in the draft standard indicates that Reliability Directives are a type of Operating Communications, to the extent they change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. We see little difference between the two terms despite the SDT’s assessment that Reliability Directives is a type (or a subset) of Operating Communication. If the SDT intent is to use the proposed new term to require 3-part communication (as suggested in R2 and R3), then that intent can be accomplished by using the term Reliability Directives as it covers not only emergency state but also instructions needed to address Adverse Reliability Impacts.</p> <p><b>Response: The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” The SDT does not believe that it has expanded the scope of this SAR. Reliability Directive, as defined in COM-002-3, is specifically focused on Emergencies or Adverse Reliability Impacts. The scope of COM-003-1 is to require the use of common communication protocols for all BES operations that affect the state of the BES.</b></p> <p>Please also see our comments under Q6 regarding the use of the proposed term to support the requirements for 3-part communication. The SRC would note that both the Blackout Report and the FERC directive deal with tightening protocols for Emergencies, whereas the proposed SDT requirements completely fail to address emergencies and focuses solely on developing non-emergency protocols.</p>

Organization	Yes or No	Question 1 Comment
		<p><i>SRC Note: there is no mention in the Blackout Report of “operational communications breakdowns re: changing states of equipment; most of the documentation points to:</i></p> <p><i>(1) emergencies/alerts; and</i></p> <p><i>(2) notification OUTSIDE of the entity experiencing the problem. The SRC requests that in the next posting the SDT provide real examples (without naming the registered entities) where reliability was jeopardized by the failure of 3-part communications under routine operational situations.</i></p> <p>Effectiveness of Communications “Under normal conditions, parties with reliability responsibility need to communicate important and prioritized information to each other in a timely way, TO HELP PRESERVE THE INTEGRITY OF THE GRID. THIS IS ESPECIALLY IMPORTANT IN EMERGENCIES. DURING EMERGENCIES, OPERATORS SHOULD BE RELIEVED OF DUTIES UNRELATED TO PRESERVING THE GRID. A COMMON FACTOR IN SEVERAL OF THE EVENTS DESCRIBED ABOVE WAS THAT INFORMATION ABOUT OUTAGES OCCURRING IN ONE SYSTEM WAS NOT PROVIDED TO NEIGHBORING SYSTEMS.” (2003 Blackout Report, page 108)26. “Tighten communications protocols, ESPECIALLY FOR COMMUNICATIONS DURING ALERTS AND EMERGENCIES. UPGRADE COMMUNICATION SYSTEM HARDWARE WHERE APPROPRIATE. NERC should work with reliability coordinators and control area operators to improve the EFFECTIVENESS OF INTERNAL AND EXTERNAL COMMUNICATIONS DURING ALERTS, EMERGENCIES, OR OTHER CRITICAL SITUATIONS, AND ENSURE THAT ALL KEY PARTIES, INCLUDING STATE AND LOCAL OFFICIALS, and RECEIVE TIMELY AND ACCURATE INFORMATION.” (2003 Blackout Report, page 108)SRC note - Nowhere in the above quoted Recommendation 26 is there a reference to person-to-person communications of required actions; rather it references communication of the state of the operating system itself.</p>

Organization	Yes or No	Question 1 Comment
		<p><i>SRC Note: there is no mention in FERC Order 693 of “operational communications breakdowns re: changing states of equipment; the Order does state:</i></p> <p>532. “While we agree with EEI that EOP-001-0, Requirement R4.1 requires communications protocols to be used during emergencies, we believe, and the ERO agrees, that the communications protocols need to be tightened to ensure Reliable Operation of the Bulk-Power System. We also believe an integral component in tightening the protocols is to establish communication uniformity as much as practical on a continent-wide basis. This will eliminate possible ambiguities in communications during normal, alert and emergency conditions. This is important because the Bulk-Power System is so tightly interconnected that system impacts often cross several operating entities’ areas.”SRC note - The above section concerns “ineffective communications” not “incorrect communications”. The key to the above is “communication uniformity” not 3 part communications. The SRC believes the both the FERC Order’s directives and the Blackout Report Recommendation 26 are clear in their respective requests to address general protocols; and that neither request suggests a need for mandating a specific procedure let alone 3 part communications for all operational communications.</p> <p><b>Response: The OPCSDT disagrees that the Blackout Report (and FERC Order 693 and the SAR) only addresses the need to tighten protocols for Emergencies. The Blackout Report uses the phrase “especially for emergencies” which the SDT interprets to mean the authors were recommending applicability of communication protocols for the total population of operating communication and used this language to amplify the importance of such protocols during emergency conditions.</b></p> <p><b>FERC Order 693 paragraph 532 (“This will eliminate possible ambiguities in communications during <u>normal</u>, alert and emergency conditions”)</b> and the</p>

Organization	Yes or No	Question 1 Comment
		SAR are very specific in that both include the term “normal” operating conditions.
Response: Thank you for your comments. Please see the responses above.		
City Water Light and Power	No	Definition is overly broad and should at least be tailored to indicate the operating time frame is the relevant concern.
Response: Thank you for your comments. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”		
Hydro One Networks Inc.	No	<p>The proposed Operating Communication term is not sufficiently different from the originally proposed term (Interoperability Communication). The proposal continues to expand the scope of the SAR from the concept of tightening the protocols associated with Emergencies to now applying to all communications. The text box in the draft standard indicates that Reliability Directives are a type of Operating Communications, to the extent they change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. There is little difference between the two terms despite the SDT’s assessment that Reliability Directive is a type (or a subset) of Operating Communication. If the intent is to use the proposed new term to require 3-part communication (as suggested in R2 and R3), then that intent can be accomplished by using the term Reliability Directive as it covers not only the emergency state but also instructions needed to address Adverse Reliability Impacts.</p> <p>Response: The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and</p>

Organization	Yes or No	Question 1 Comment
		<p>shorten response time.” The SDT does not believe that it has expanded the scope of this SAR. Reliability Directive, as defined in COM-002-3, is specifically focused on Emergencies or Adverse Reliability Impacts. The scope of COM-003-1 is to require the use of common communication protocols for all BES operations that affect the state of the BES.</p> <p>Both the Blackout Report and the FERC directive deal with tightening protocols for Emergencies. The proposed requirements completely fail to address emergencies and focus solely on developing non-emergency protocols.</p> <p>Response: The OPCPSDT disagrees that the Blackout Report and FERC Order 693 only address the need to tighten protocols for Emergencies. The Blackout Report uses the phrase “<i>especially for emergencies</i>” which the SDT interprets to mean the authors were recommending applicability of communication protocols for the total population of operating communication and used this language to amplify the importance of such protocols during emergency conditions. FERC Order 693 paragraph 532 (“<i>This will eliminate possible ambiguities in communications during normal, alert and emergency conditions</i>”) and the SAR are very specific in that both include the term “normal” operating conditions.</p> <p>COM-003-1 applies to communications in both emergency and non-emergency situations. R2 and R3 had exclusion language to preclude potential double jeopardy with the requirements of COM-002-3, R2 and R3.</p>
<p>Response: Thank you for your comments. Please see the responses above.</p>		
SPP Standards Review Group	No	<p>The definition is fine but it may not be necessary based on the comments provided to the remaining questions below. It’s not so much what’s contained in the definition; it’s more about what the standard requires the</p>

Organization	Yes or No	Question 1 Comment
		industry to do with that definition. We believe eliminating the other three definitions was a positive move by the SDT.
<p><b>Response: Thank you for your comments. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</b></p>		
SERC OC Standards Review Group	No	<p>GENERAL COMMENT: While SERC does not agree that the mandatory procedure for three part communications will improve reliability of the BES, SERC offers the following comments: We do not agree with the proposed definition of Operating communication and agree with the elimination of the other three definitions.</p> <p><b>Response: Thank you for your comments. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</b></p> <p>The SDT has not listened to the industry comments given in the previous commenting periods. It also appears to be focused on imposing three part communications on the industry for routine communications despite the fact that neither the blackout report nor the SAR on which these standards are based emphasize that issue.</p> <p><b>Response: The OPCSDT firmly believes it has listened to industry comment based on the sweeping changes to draft 2 compared to draft 1 (the original posting) and the new approach provided in draft 3.</b></p> <p><b>The SDT is focused on requiring three-part communication for Operating</b></p>

Organization	Yes or No	Question 1 Comment
		<p>Instructions (Communication) because it provides a proven means of clarifying communication which prevents mistakes that impact the reliability of the BES. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</p> <p>The blue text box that mentions Reliability Directives seems to be a back door attempt to change COM-002 and should be clarified or eliminated. Splitting communications requirements across different standards creates unnecessary confusion.</p> <p>Response: The blue text box and the exclusionary language regarding Reliability Directives in COM-003-1, R2 and R3 were added to address concerns over potential double jeopardy. The SDT has modified it approach in the latest draft.</p>
<p>Response: Thank you for your comments. Please see the responses above.</p>		
NERC Operating Committee	No	See Response 10
<p>Response: Thank you for your comments. Please see the responses for Question 10.</p>		
Southern Company	No	<p>Southern agrees with the elimination of “Communication Protocol,” “Interoperability Communication” and “Three part Communications” proposed in the first draft of COM-003-1; however, Southern does not agree with the proposed new definition for “Operating Communication”. The</p>

Organization	Yes or No	Question 1 Comment
		<p>definition of Operating Communications is too broad.</p> <p><b>Response:</b> Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</p> <p>The SDT appears to be focused on imposing 3-part communication on the industry for routine communications even though the August 2003 Blackout Report and the direction in FERC Order 693 Paragraph do not require such.</p> <p><b>Response:</b> The OPCPSDT disagrees that the Blackout Report (and FERC Order 693 and the SAR) only addresses the need to tighten protocols for Emergencies. The Blackout Report uses the phrase “<i>especially for emergencies</i>” which the SDT interprets to mean the authors were recommending applicability of communication protocols for the total population of operating communication and used this language to amplify the importance of such protocols during emergency conditions. FERC Order 693 paragraph 532 (“<i>This will eliminate possible ambiguities in communications during normal, alert and emergency conditions</i>”) and the SAR are very specific in that both include the term “normal” operating conditions.</p> <p>The word “maintain” should be removed. Three part communication is not needed to keep things as they are in real time unless the communication is meant to be a Directive issued by the RC or TOP and identified as such. From a real time operations standpoint, only communications that are meant to initiate a change (e.g., open, close, enable, disable, increase, decrease) should require 3 part communications.</p> <p><b>Response:</b> The context was “maintain the status” which is an actionable command. The SDT has proposed “preserve” as an alternative to</p>



Organization	Yes or No	Question 1 Comment
		<p><b>“maintain” in draft 3.</b></p> <p>In addition, any instruction to change or maintain the state, status, output, or input of an Element or Facility of the BES should not be considered a Reliability Directive. A more appropriate definition of Reliability Directive has been included in Project 2006-06 (Reliability Coordination) for COM-002-3. As such, the definition of Reliability Directive developed in Project 2006-06 should be used here as part of this Project 2007-02. Further, this capitalized term should have one definition and should not be defined differently in different standards. Otherwise, there will be ambiguity and unnecessary confusion.</p> <p><b>Response: The OPCSDT is aware of the definition of Reliability Directive and has collaborated with the RCSDT. The protocols of COM-003-1 cover all operating conditions and are in force during normal or routine operations.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
<p>The Dayton Power and Light Company</p>	<p>No</p>	<p>We have concerns with the true scope and depth of this standard. How far does this standard reach? A tie line utility wants us to utilize three part communication for tie line check outs, which we assume is not part of ‘operating communications’. Not sure this is the intent of the standard, but seems to be a coverall by them. One could argue the tie line data (which is up to 23 hours old by the time we check out, is an output from the BES) How do resolve this? Operating Communications is a very broad term that could be interpreted differently by the many individuals we interact with leading to ‘overuse’ of three part communication when in doubt. This may counteract the importance of its use for the conditions we truly need to utilize this protocol.</p>
<p><b>Response: Thank you for your comments. The SDT agrees that the tie line check out as specified is not an Operating</b></p>		

Organization	Yes or No	Question 1 Comment
<p><b>Communication.</b> Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</p>		
<p>Center Point Energy Houston Electric, LLC.</p>	<p>No</p>	<p>Question 1 Comments: Instead of adding the proposed new definition of “Operating Communication” to the NERC Glossary, the definition should be used to define the industry known terminology “Directive”, as “an instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System”. Aligning this definition with Project 2006-006 Reliability Coordination and a new proposed definition of “Reliability Directive” to be “A communication initiated by a Reliability Coordinator, transmission operator or Balancing Authority to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System where action by the recipient is necessary to address an emergency or adverse Reliability Impact”.</p>
<p><b>Response:</b> Thank you for your comments. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.” The SDT has specifically chosen to not define “directive,” as it is used in other standards and the implications of the definitions would be far reaching.</p>		
<p>IESO</p>	<p>No</p>	<p>The IESO agrees with the removal of the 3 terms proposed in the previous draft. However, the IESO does not agree with the introduction of a new term Operating Communication. This term is not materially different than the originally proposed term Interoperability Communication.</p> <p><b>Response:</b> Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an</p>

Organization	Yes or No	Question 1 Comment
		<p><b>Element of the Bulk Electric System or Facility of the Bulk Electric System.”</b></p> <p>The text box in the draft standard indicates that Reliability Directives are a type of Operating Communications, to the extent they change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. We see insufficient difference between the two terms despite the SDT’s assessment that Reliability Directives are a type (or a subset) of Operating Communication. If the intent is to use the proposed new term to require 3-part communication (as suggested in R2 and R3), the intent can be accomplished by using the term Reliability Directives as it covers not only emergency state but also instructions needed to address Adverse Reliability Impacts.</p> <p><b>Response: Reliability Directive, in the context of COM-002-3, is specifically for Emergency operating conditions. The intent of the OPCPSDT is to require the use of 3 part communication in COM-003-1 for all BES operations that are specified in the definition of Operating Instruction.</b></p> <p>Please also see our comments under Q6 on using the proposed term to support the requirements for 3-part communication.</p> <p><b>Response: Please refer to the response to your comments in Question 6.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
Flathead Electric Cooperative, Inc.	No	<p>Believe the additional definition is not necessary and it is not clear what value it would have to small Distribution Providers other than additional compliance complexity.</p>
<p><b>Response: Thank you for your comments. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.” DPs that operate BES Facilities or BES Elements and receive Operating Instructions are subject to the</b></p>		

Organization	Yes or No	Question 1 Comment
<p>need for clear communication to avoid misunderstandings that could impact the BES.</p>		
<p>Liberty Electric Power LLC</p>	<p>No</p>	<p>Routine market communications between entities are not a valid area of regulation under the NERC Standards.</p>
<p><b>Response: Thank you for your comments. The standard does not address market communication. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</b></p>		
<p>PPL Generation, LLC on behalf of its Supply NERC Registered Entities</p>	<p>No</p>	<p>PPL Generation, LLC on behalf of its Supply NERC Registered Entities does not agree with the addition of “Operating Communication” as a proposed definition because it imposes three part communication on the industry for routine communications of changes of output in generation.</p> <p><b>Response: Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”The SDT believes that routine operations pose a risk of a communication error. Three-part communication is a proven method of reducing operating errors.</b></p> <p>Also the language as written does not specify if these changes include communication of future planning to change the status of generation in instances of future planned outages. The standard should specify if communication of real time operations is what falls under the definition of “Operation Protocol.” This ensures that communication which would be considered a compliance event and require the scrutiny of an audit.</p> <p><b>Response: The SDT is not proposing a new term “Operation Protocol.”</b></p>

Organization	Yes or No	Question 1 Comment
<p>Response: Thank you for your comments. Please see the responses above.</p>		
<p>The United illuminating Company</p>	<p>No</p>	<p>The intent of Recommendation 26 was to improve the communications around situational awareness.</p> <p><b>Response: The Blackout Report, Recommendation 26, states <i>Tighten communications protocols, especially for communications during alerts and emergencies.</i></b> The SDT interprets that to mean the authors were recommending applicability of communication protocols for the total population of operating conditions and wanted to amplify the added importance of using protocols during emergency conditions.</p> <p>The SAR states the purpose is to “efficiently convey and mutually understood for all operating conditions.”</p> <p><b>Response: The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.”</b></p> <p>Paragraph 532 seeks to establish communication uniformity as much as practical on a continent-wide basis. This will eliminate possible ambiguities in communications during normal, alert and emergency conditions.</p> <p><b>Response: FERC Order 693 paragraph 532 (<i>This will eliminate possible ambiguities in communications during normal, alert and emergency conditions</i>) is very specific. Please reference the term “normal” operating conditions.</b></p> <p>The new definition limits the communication to taking actions during non-Emergencies, and ignores the finding that poor communication occurred in the events leading up to the 2003 Blackout.</p> <p><b>Response: Based on comments received about the scope and intent of an</b></p>

Organization	Yes or No	Question 1 Comment
		<p>Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</p> <p>COM-003-1 deals specifically with “tightening communications” as recommended in the 2003 Blackout Report, Recommendation 26. Please read the following excerpt from Recommendation 26:</p> <p><i>“On August 14, 2003, reliability coordinator and control area communications regarding conditions in northeastern Ohio were in some cases ineffective, unprofessional, and confusing. Ineffective communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade. <u>Consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability.</u>”</i></p> <p>COM-003-1 is focused on developing effective communications protocols that are consistently applied.</p>
<p>Response: Thank you for your comments. Please see the responses above.</p>		
Indiana Municipal Power Agency	No	<p>On page 2 of 10 (blue box), the SDT has a blue box that defines Reliability Directives as a “type” of Operating Communications. This gives the appearance that Reliability Directives are part of Operating Communications and this could be a double-jeopardy issue. If an entity is found with a potential non-compliance finding on the communication of a Reliability Directive (COM-002), then it is very likely that the entity could have a potential non-compliance finding on COM-003 (proper communication of an Operating Communication).</p>
<p>Response: Thank you for your comments. COM-003-1, draft 2, R2 and R3 contain exclusionary language exempting Reliability</p>		

Organization	Yes or No	Question 1 Comment
<p>Directives to preclude potential double jeopardy with the requirements of COM-002-3, R2 and R3. The SDT has modified its approach in the latest draft.</p>		
<p>Ingleside Cogeneration LP</p>	<p>No</p>	<p>Ingleside Cogeneration LP believes that the definition of “Operating Communication” widely expands the scope of COM-003-1 beyond entity-to-entity or multiple-entity communications. Instead, all conversations conducted by System Operators, field personnel, engineers, or vendors that may refer to the status of a BES component are applicable - even those discussed face-to-face. We believe the original intent to bound the communications to those which can be captured in control room recordings and/or logbooks is manageable; not so every side conversation or email that takes place during the natural course of the operating day. The original term, “Interoperability Communication”, captured this concept.</p> <p><b>Response: The SDT never intended to include every side conversation or email that takes place during the natural course of the operating day as an Operating Communication. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</b></p> <p>It seems like the Draft 1 definition could be easily modified to read as follows:</p> <p>Interoperability Communication: Communication of instruction &lt;between two or more entities&gt; to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.</p> <p><b>Response: Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating</b></p>

Organization	Yes or No	Question 1 Comment
		<p><b>Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</b></p> <p>Ingleside Cogeneration LP is in full agreement with the removal of the definitions for “Communication Protocol,” and “Three part Communications”. Neither term helps address an ambiguity in the body of NERC Standards that we are aware of.</p> <p><b>Response: Thank you for your comments.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
Roger Zaklukiewicz Consulting	No	<p>The proposed standard introduces a new term "Operating Communications" which in my opinion is unnecessary and which I believe will cause confusion with the term "Reliability Directives". The standard proposes to establish a three part communications for what I would describe as routing operating instructions. This aspect of the standard would require/mandate the use of an unnecessary and burdensome operating practice that in a number of cases may impede or jeopardize system reliability rather than improve the reliability of system operations.</p>
<p><b>Response: Thank you for your comments. Even routine operations pose a risk of a communication error that could impact the stability of the BES. Three-part communication is a proven method of clarifying the content of an order or directive, and is already required for Emergencies and Adverse Reliability Impacts in COM-002-3. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</b></p>		
Entergy Services	No	<p>Due to these extensive comments and desire for these comments to be formatted for the SDT we have also sent these comments to Monica Benson</p>



Organization	Yes or No	Question 1 Comment
		<p>in a Word document. While we agree with the definition, we do not agree with R1, R2 and R3. While we are not enamored of having a Requirement to have a procedure, in this instance, the exception seems to be necessary. Below is suggested language to replace all of the Requirements and sub-Requirements in COM-003:Proposed new text:"</p> <p>R1. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall develop a written communications procedure for Operating Communications among personnel responsible for Real-time generation control and Real-time operation of the interconnected Bulk Electric System. The procedure shall address at minimum: [Violation Risk Factor: Low][Time Horizon: Long Term Planning]</p> <p>1.1 When communicating between functional entities</p> <p>1.1.1. Establish the language to be used.</p> <p>1.1.2. Time format to be used.</p> <p>1.1.3. Establish treatment for time zones when multiple time zones are crossed.</p> <p>1.1.4. Identify naming convention for Transmission interface Element or a Transmission interface Facility.</p> <p>1.1.5. For oral Operating Communications, establish the treatment for the circumstances in which alpha-numeric identifiers must be used."</p> <p><b>Response: The SDT agrees and is using a similar approach for draft 3.</b></p> <p>The SDT has not listened to the industry comments given in previous ballots. It also appears to be focused on imposing three part communications on the industry for routine communications despite the fact that neither the blackout report nor the SAR on which these standards are based emphasize</p>

Organization	Yes or No	Question 1 Comment
		<p>that issue.</p> <p>Response: The OPCPSDT believes it has listened to industry comment based on the sweeping changes to draft 2 compared to draft 1 (the original posting).</p> <p>The SDT is focused on requiring three-part communication for Operating Communication because it provides a proven means of clarifying communication which prevents mistakes that have the potential to impact the reliability of the BES.</p> <p>The SDT believes the 2003 Blackout Report and the SAR do focus on protocols being applied to all operating conditions.</p> <p>Please note the following excerpt from recommendation 26:</p> <p><i>On August 14, 2003, reliability coordinator and control area communications regarding conditions in northeastern Ohio were in some cases ineffective, unprofessional, and confusing. Ineffective communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade. <u>Consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability.</u></i></p> <p>Additionally, the SAR is very specific in that it also includes the term “normal” operating conditions under Applicability: <i>“Clear and mutually established communications protocols used during real time operations <u>under normal and emergency conditions</u> ensure universal understanding of terms and reduce errors.”</i></p>
<p>Response: Thank you for your comments. Please see the responses above.</p>		

Organization	Yes or No	Question 1 Comment
Utility Services, Inc.	No	Though we agree with the addition of “Operating Communication” definition and the elimination of “Communication Protocol”, “Interoperability Communication” and “Three part Communications” definitions, the use of a “blue box” around the example of a Reliability Directive (Reliability Directive are a type of Operating Communications, to the extent they change or maintain the state, status, output, or input of an Element of Facility of the Bulk Electric System.) implies this is also a definition. We suggest removing this “blue box” from COM-003-1 and leave the definition of Reliability Directive to Project 2006-06 which has been charged with developing this definition. An alternative would be a footnote to the other Project and/or the NERC Glossary of Terms if the other standard is approved prior to COM-003-1.
<p><b>Response: Thank you for your comment. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.” This and the new approach to the standard in draft 3 eliminate the need for the textbox.</b></p>		
City of Austin dba Austin Energy	No	To clarify that Operating Communications occur in real-time, AE offers the following change to the definition: “Real-time communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.”
<p><b>Response: Thank you for your comment. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</b></p>		
Essential Power, LLC	No	Defining the new term ‘Operating Communication’, and including the approved definition of ‘Reliability Directive’ under this newly defined term

Organization	Yes or No	Question 1 Comment
		and then requiring the use of three part communications for all 'Operating Communications' is redundant and unnecessary. There is no reason to have two separate Standards governing the use of three-part communications.
<p><b>Response: Thank you for your comments. The SDT has modified its approach in the latest draft.</b></p>		
South Carolina Electric and Gas	No	SCE&G supports the comments submitted by the SERC OC standards Review Group.
<p><b>Response: Thank you for your comments. Please see the responses to the SERC OC Standards Review Group.</b></p>		
Manitoba Hydro	No	Manitoba Hydro disagrees with the term "Operating Communication" as we do not feel there should be a distinction between Reliability Directive and "Operating Communications". We suggest that the term "Operating Communication" be replaced with the term Reliability Directive as any instruction to change the status or function of the BES must be clear and concise and confirmed with three way communication to ensure system reliability and personnel safety.
<p><b>Response: Thank you for your comment. The purpose of the SAR for this project is "Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time." The definition of Reliability Directive is "A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact." The SDT does not believe that Reliability Directive captures communication during normal operations. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be "command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System."</b></p>		
PPL Electric Utilities	No	Suggest the definition be clarified to scope to 'real-time' operating instructions to eliminate discussion of future outages.

Organization	Yes or No	Question 1 Comment
<p>Response: Thank you for your comment. It was never the SDT’s intention to include side-bar conversations that might be a discussion of potential operating options in the scope of COM-003-1. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</p>		
Illinois Municipal Electric Agency	No	IMEA agrees with comments submitted by the SERC OC Standards Review Group.
<p>Response: Thank you for your comments. Please see the responses to the SERC OC Standards Review Group.</p>		
Xcel Energy	No	We do not agree that this definition should include “or maintain”, and recommend that be struck. The scope should only include instructions that would require an action by the recipient.
<p>Response: Thank you for your comments. The context was “maintain the status” which is an actionable command. The intent was related to commands to preserve the integrity of a normally operating system. The SDT has proposed “preserve” as an alternative to “maintain” in draft 3.</p>		
Ameren	No	We recommend that the SDT eliminate the words “...or maintain...” in the definition. We believe that inclusion of these words would drastically reduce side conversations that continuously occur between different entities. These side conversations provide additional information and perspectives to real-time operators that ensure they understand the real-time status of the BES. In other words, due to fear of possible non-compliance consequences for failure to properly converse in a three-part protocol at all times, entities will drastically curtail side discussions and deprive all BES operators of this pertinent and useful real-time information.
<p>Response: Thank you for your comment. It was never the SDT’s intention to include side bar conversations that might be a</p>		

Organization	Yes or No	Question 1 Comment
<p>discussion of potential operating options in the scope of COM-003-1. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</p>		
<p>MISO</p>	<p>No</p>	<p>Although the definition of “Operating Communication” is, in itself, clear, the relationship between an Operating Communication and a “directive,” as used in COM-002-2, Requirement R2 is ambiguous.</p> <p><b>Response: The SDT notes that directive is a non glossary term that would be supplanted in the COM family of standards when COM-002-3 and COM-003-1 are implemented.</b></p> <p>In particular, although an explanatory graphic placed beneath the proposed definition for “Operating Communication” in the draft Standard states that “Reliability Directives are a type of Operating Communications, to the extent they change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System,” “Reliability Directive” does not appear to be defined and is not in the <i>Glossary of Terms Used in NERC Reliability Standards</i>. As a result, the definition of Operating Communication and splitting communications requirements across different standards could result in confusion due to the unclear relationship between COM-002-2, Requirement R2 and COM-003-1, Requirements R2 and R3.</p> <p><b>Response: The SDT notes that Reliability Directive is not yet a NERC glossary term, but the SDT believes it is important to clarify the relationship between the proposed terms (Reliability Directives and Operating Communications) before they become effective.</b></p> <p>MISO is aware that “Reliability Directive” has been defined in COM-002-3, which is part of Project 2006-06, but there is no reference to Project 2006-06 or to the pending definition of “Reliability Directive” in draft COM-003-1.</p>

Organization	Yes or No	Question 1 Comment
		<p>Response: The SDT has been collaborating with project 2006-06 and is also aware of its status in the process. The OPCPSDT supports the development of COM-002-3 and the proposed definition of Reliability Directive. COM-003-1 does refer to Reliability Directive in a text box where it states that a Reliability Directive is a type of Operating Communication; and in R2 and R3 where it excludes Reliability Directives to prevent double jeopardy. This interface between these standards is the primary subject of a Webinar presented on June 7, 2012. It is posted and may address your comments.</p> <p>MISO cannot, at this time, support the current version of COM-003-1.</p>
<p>Response: Thank you for your comments. Please see the responses above.</p>		
ISO New England Inc	No	We agree with, support and have signed onto the ISO/RTO Standards Review Committee comments.
<p>Response: Thank you for your comments. Please see the responses to those comments.</p>		
Exelon Corporation and its affiliates	No	Exelon believes it is not necessary to create a new defined term “Operating Communication.” Please see response to Q10 with alternate standard language that avoids the need for a new term.
<p>Response: Thank you for your comments. Please see the responses to Question 10.</p>		
Brazos Electric Power Cooperative	No	Please see formal comments provided by APM.
<p>Response: Thank you for your comments. Please see the responses to the comments of APM.</p>		
Oncor Electric Delivery Company LLC	No	<p>Oncor is in general agreement with the elimination of the three terms.</p> <p>Furthermore, Oncor takes the position that the proposed new definition for</p>

Organization	Yes or No	Question 1 Comment
		<p>the NERC Glossary, “Operating Communication” is not needed because “person to person” communication is not cited or listed as a contributor to the events summarized in the 2003 Blackout Report.</p> <p>Oncor takes the position that improvements should emphasize communicating the state of the operating system as a whole during an emergency.</p>
<p><b>Response:</b> Thank you for your comments. The SDT believes the Blackout Report, FERC Order 693 and the SAR deal with tightening protocols. The Blackout Report uses the word “especially for emergencies” which the SDT interprets to mean the authors were recommending applicability of communication protocols for the total population of operating levels and wanted to amplify the importance during emergency conditions. FERC Order 693 paragraph 532 (“<i>This will eliminate possible ambiguities in communications during normal, alert and emergency conditions</i>”) and the SAR are very specific in that both include the term “normal” operating conditions.</p>		
Central Lincoln	No	<p>The change from “Interoperability Communications” to “Operating Communication” greatly expands the standard to include all internal communications regarding &gt; 100 kV equipment. Central Lincoln does not consider the extra burden to be worth the negligible benefit.</p>
<p><b>Response:</b> Thank you for your comments. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</p>		
Kansas City Power & Light	No	<p>The requirements in this standard specifically state “how” to meet the goal of this standard. This standard needs to be written such that it allows for entity flexibility. Many entities already have COM protocols that are used. The proposed standard is too prescriptive and is more effort than necessary to ensure reliability and security of the BES. Overall - this standard is going to cost the registered entities much more than the realized benefits.</p>



Organization	Yes or No	Question 1 Comment
<p><b>Response: Thank you for your comments. The SDT acknowledges your concerns and has developed an approach to COM-003-1 to address those very issues.</b></p>		
JEA	No	
Public Utility District No. 1 of Snohomish County	No	
Lakeland Electric	Yes	<p>Would modify R1 as noted below to remove the implication that a Distribution would have to provide evidence that all Distribution Provider communications used the required protocols.R1. Each Reliability Coordinator, Transmission Operator, Balancing Authority[, and] Generator Operator, and Distribution Provider [receiving a Operating Communications,] shall use the following communications protocols:</p>
<p><b>Response: Thank you for your comments. The SDT acknowledges your concerns and has developed an approach to COM-003-1 to address those very issues.</b></p>		
Salt River Project	Yes	<p>The definition of "Operating Communication" is vague and needs clarification.</p>
<p><b>Response: Thank you for your comments. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</b></p>		
City of Tallahassee	Yes	<p>The City of Tallahassee Electric Utility (TAL) agrees with the addition of this proposed new definition; however, TAL is not clear on the scope of the phrase "input of an Element or Facility of the Bulk Electric System".</p>

Organization	Yes or No	Question 1 Comment
<p><b>Response: Thank you for your comments. Based on comments received about the scope and intent of an Operating Communication, the SDT has revised the term to be Operating Instruction and changed the definition to be “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</b></p>		
Texas Reliability Entity	Yes	We agree, in view of the additional comments we provide below.
<p><b>Response: Thank you for your comments.</b></p>		
Western Electricity Coordinating Council		How are facilities that might affect the operation of the BES treated? Would the changing of an LTC or the low voltage taps on a 230/92 kV transformer be subject to this standard?
<p><b>Response: Thank you for your comments. If it was an oral or written command the response is yes.</b></p>		
New York Power Authority		NYPA supports the comments submitted by the NPCC Regional Standards Committee (RSC).
<p><b>Response: Thank you for your comments. Please see the responses to the NPCC Regional Standards Committee (RSC) comments.</b></p>		
Public Service Enterprise Group		See #10.
<p><b>Response: Thank you for your comments. Please see the responses to the comments in Question 10.</b></p>		
City of Jacksonville Beach dba/Beaches Energy Services	Yes	None
Imperial Irrigation District	Yes	

Organization	Yes or No	Question 1 Comment
Florida Municipal Power Agency	Yes	
Bonneville Power Administration	Yes	
GP Strategies	Yes	
Progress Energy	Yes	
Arizona Public Service Company	Yes	
HHWP	Yes	
SMUD	Yes	
Hydro-Quebec TransEnergie	Yes	
Orlando Utilities Commission	Yes	
Clark Public Utilities	Yes	
Colorado Springs Utilities	Yes	
Utility System Efficiencies, InC.	Yes	
Puget Sound Energy	Yes	
Idaho Power Company	Yes	
American Transmission Company, LLC	Yes	

Organization	Yes or No	Question 1 Comment
NextEra Energy, Inc	Yes	
City of Vero Beach	Yes	
Seminole Electric Cooperative	Yes	
U.S. Bureau of Reclamation	Yes	
NV Energy	Yes	
California Independent System Operator	Yes	

2. The SDT eliminated the requirement to have a Communications Protocol Operating Procedure from the proposed standard because it is administrative in nature. Do you agree with this modification? If not, please explain in the comment area.

**Summary Consideration:**

**Major Issues**

The majority of commenters approved of the elimination of the Communication Protocol Operating Procedure (CPOP) in draft 1, indicating that it was too prescriptive and administrative in nature. *The SDT agreed the requirement was administrative and chose to remove it.*

Many commenters suggested retaining the CPOP and use it to develop the protocols internal to the entity. *The SDT has developed an alternate standard for the next posting. The SDT notes there is a significant amount of support for the core elements of the standard the SDT has developed for draft 3, which is a different approach than that defined in the Communication Protocol Operating Procedure.*

Stakeholders that agreed with the change did not offer substantive comment.

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	An alternative approach would be to introduce communications protocols as a mandatory non-standard (e.g. as a requirement for certification) that would center on a corporate communications manual that encourages three-part communications; and that includes how monitoring would be audited internally. Such an alternative would change the requirement from monitoring personnel mistakes to a requirement monitoring corporate culture.
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
Duke Energy	No	We believe that having a reliability standard requirement to develop a Communications Protocol Operating Procedure, to address items similar to those under R1.1 would be an appropriate method to address the Blackout Report recommendations and Order 693 directives to tighten communications protocols. An

Organization	Yes or No	Question 2 Comment
		<p>entity's CPOP could address the language to be used between functional entities, what clock format is to be used, how time zone/Daylight Savings Time will be addressed, and transmission equipment identifiers. The CPOP should have a required review frequency, and personnel should be trained on the CPOP. This approach, unlike the draft standard could be audited and certified. We see no way to reasonably audit or certify compliance with the draft standard in its current form. Duke suggests this approach to COM-003: Rather than specifying the solutions to achieving effective communication, COM-003 should instead focus on developing and training on an approach that is designed appropriately for each RE. For instance, another approach to COM-003 might be along the lines of:</p> <p>Requirement</p> <p>R1 could be written in a manner to require the appropriate registered entities to develop a communications protocol that is appropriate for each RE. This communications protocol should address how the RE is handling:</p> <p>Time Zone Designations - for both internal and external communications</p> <p>Language</p> <p>Alpha-numeric identifiers</p> <p>3-part communications - when is it required, etc.</p> <p>Use of defined terminology</p> <p>Use of common transmission equipment identifiers</p> <p>Other items deemed important for the communications protocol to address - again, this would not define HOW these items are addressed.</p> <p>This approach would require the RE to specify how it is addressing these issues, without prescribing solutions. For instance, a RE could include a section in its protocol to deal with time zone designation. In this section the RE could explain that it, and its neighbors, all are in and use the same time zone. As a result, the RE has</p>

Organization	Yes or No	Question 2 Comment
		<p>determined that requiring the identification of time zone reference in communication is not necessary.</p> <p>Requirement 2 could be written in a manner to require the training of operators on the communication protocol.</p> <p>Requirement 3 could be written in a manner to require the RE to define its internal controls it uses to review that its protocol is being followed.</p> <p>The compliance approach would be to:</p> <ol style="list-style-type: none"> <li>1) assess whether the RE has developed a written protocol and whether the protocol addresses each item - this does not mean there is an assessment of HOW each item is assessed;</li> <li>2) assess whether the RE has trained its operators on the communications protocol</li> <li>3) assess whether the RE is following its internal controls</li> </ol>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Associated Electric Cooperative JRO00088	No	AECI agrees with SERC OC STANDARDS REVIEW GROUP’s comments pertaining to question 2.
<p><b>Response: Thank you for your comments. Please see the response to the SERC OC Standards Review Group’s comments.</b></p>		
LG&E and KU Services	No	The SDT did not eliminate a communications procedure requirement. It turned the former requirement into R1 and its sub-parts, forcing a single communication procedure on the industry. This goes far too deeply into the “HOW” of communication as opposed to the “WHAT”.
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
ISO/RTO Standards Review	No	The question is structured as an “either” “or” question about one requirement and

Organization	Yes or No	Question 2 Comment
Committee		<p>does not include a “neither” option relating to the other requirements. The SDT has replaced one procedure with another set of procedures. Neither is an appropriate requirement. The SRC believes that this and other detailed procedural requirements on personnel are not valid applications for NERC reliability standards. The SRC believes that standards must mandate outcomes and those standards such as this one on 3 part communication procedures are better left to the registered entities.</p> <p><b>Response: The question is focused only on the elimination of the CPOP, which does not feature an option or a choice.</b></p> <p>If the Industry were to support the SDT’s proposed requirement, the SRC would urge the SDT to turn away from the “zero defects” standard that it is proposing and to replace it with a requirement that allows for reasonable number of deviations.</p> <p>The proposed requirement will be prohibitively expensive to implement with little improvement in reliability (also see “whitepaper” included in response to Question 10). The requirement will require all communications channels to not just be recorded (which is done today) but will require each recording to be reviewed by a compliance person for self-reporting purposes.</p> <p>The proposed requirement would actually reduce reliability by taking the above required compliance personnel away from reliability related standards and placing them on these procedural requirements ; and</p> <p>(2) distracting operators from their core responsibility of reliability due to concerns with meeting compliance obligations.</p> <p>A more acceptable alternative approach would be to introduce communications protocols as a mandatory non-standard (e.g. as a requirement for certification) that would center on a corporate communications manual that encourages three-part communications; and that includes how monitoring would be audited internally. Such an alternative would change the requirement from monitoring personnel mistakes to a requirement for monitoring corporate culture. Moreover, the use of a non-standard</p>



Organization	Yes or No	Question 2 Comment
		<p>alternative would encourage the creation of innovative Best Practices; as opposed to a mandatory fixed procedure which would limit innovation.</p> <p><b>Response: The SDT has developed a new approach to the standard that addresses your concern.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
SERC OC Standards Review Group	No	<p>The SDT did not eliminate a communications procedure requirement! It turned the former requirement into R1 and its sub-parts, forcing a single communication procedure on the industry. This goes far too deeply into the “HOW” of communication as opposed to the “WHAT”.</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern. When defining common communication protocols to be used for communication between entities, it is necessary to be specific on what must be communicated and how it must be communicated.</b></p>		
NERC Operating Committee	No	See Response 10
Southern Company	No	<p>It appears as though the SDT did remove the term Communications Protocol Operating Procedure, but replaced it with very prescriptive requirements and sub requirements in R1 of this revised standard. This newly revised standard focuses on the “HOW” of communication when it should be more focused on the “WHAT”.</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern. When defining common communication protocols to be used for communication between entities, it is necessary to be specific on what must be communicated and how it must be communicated.</b></p>		
Roger Zaklukiewicz Consulting	No	See previous comment(s) regarding the necessity for a Communications Protocol Operating Procedure.

Organization	Yes or No	Question 2 Comment
<b>Response: Thank you for your comments.</b>		
Entergy Services	No	We believe that this version of COM-003 actually embeds a “CPOP” within the Requirements. This is inappropriate intrusion beyond identification of with “what” an entity must comply into “how” that entity must comply. Our suggested R1 provides replacement language that would require a communications procedure. We see no reliability value in having a defined term for “Communications Protocol Operating Procedure”, as the term “communications procedure” is completely understandable using the normally accepted meanings of the words.
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
Utility System Efficiencies, InC.	No	Even though this is administrative, due to the vital importance of proper operating communications a Communications Operating Procedure is necessary to ensure that the Registered Entity has established its own communications procedures in compliance with the standard to use in training its operations personnel in proper communications protocols.
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
Illinois Municipal Electric Agency	No	IMEA agrees with comments submitted by the SERC OC Standards Review Group.
<b>Response: Thank you for your comments. Please see the responses to the comments by the SERC OC Standards Review Group.</b>		
MISO	Yes	
ISO New England Inc	No	We agree with, support and have signed onto the ISO/RTO Standards Review Committee comments.
<b>Response: Thank you for your comments. Please see the responses to the comments by the ISO/RTO Standards Review</b>		

Organization	Yes or No	Question 2 Comment
<b>Committee.</b>		
Seminole Electric Cooperative	No	While we absolutely support the promotion and use of 3-part oral communication protocol, the failure of individual persons to use "proper" and "correct" oral operational communications should NOT constitute a Standard violation. It is reasonable to require the responsible entities to have written procedures requiring such use; to have evidence of applicable personnel training on such; and to have a program for internal monitoring and enforcement of such. As written, a subjective review of many oral operational communications will arguably be identified by Compliance Auditors as medium, high or even severe levels.
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
Exelon Corporation and its affiliates	No	Exelon agrees with the elimination of the requirement to have a Communications Protocol Operating Procedure and we also believe the basic approach as proposed is wrong. The burden for demonstrating compliance for non-emergency, non-directive communications, including retention and review of 180-365 days worth of evidence to be able to demonstrate 100% compliance presents significant burden potentially detracting from the work of reliability. Auditing, whether by a NERC CEA or by entities conducting internal self assessments for self-certifications, would potentially involve listening to thousands of hours of tapes to review. This is an overly prescriptive, burdensome approach. We believe that a more effective approach would be for the standard to mandate reliability based outcomes and require entities to design practices to achieve the desired outcome. See response to Q10.
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
Oncor Electric Delivery Company LLC	No	Oncor takes the position that elimination of the Communications Protocol Operating Procedure does not constitute the introduction of another set of procedures (i.e. 3 - Part Communication, or alpha-numeric clarifiers). Furthermore Oncor takes the

Organization	Yes or No	Question 2 Comment
		position that a more productive approach would be to encourage the creation of innovative Best Practices; as opposed to a mandatory fixed procedure which would limit innovation.
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
Avista	No	
South Carolina Electric and Gas	No	
MEAG Power, Danny Dees, Steven Grego, Steve Jackson	Yes	It is best for NERC to evaluate risk and performance and prescribe methods.
<b>Response: Thank you for your comments.</b>		
SPP Standards Review Group	Yes	Eliminating the requirement to have the procedure (documentation) was a move in the right direction. We are glad it was eliminated because that's one less piece of paper we have to keep track of.
<b>Response: Thank you for your comments.</b>		
The United Illuminating Company	Yes	The CPOP was overly administrative.
<b>Response: Thank you for your comments.</b>		
Ingleside Cogeneration LP	Yes	Ingleside Cogeneration LP agrees that a communication procedure is unnecessary for routine operations. In our view, the remaining requirements in COM-003-1 will drive entities to continually reinforce communications protocols without it.

Organization	Yes or No	Question 2 Comment
<b>Response: Thank you for your comments.</b>		
City of Jacksonville Beach dba/Beaches Energy Services	Yes	Yes, it would be administrative in nature and would not add value.
<b>Response: Thank you for your comments.</b>		
NV Energy	Yes	This was a much warranted improvement.
<b>Response: Thank you for your comments.</b>		
New York Power Authority		NYPA supports the comments submitted by the NPCC Regional Standards Committee (RSC).
<b>Response: Response: Thank you for your comments. Please see the responses to the comments by the NPCC Regional Standards Committee (RSC).</b>		
Public Service Enterprise Group		See #10.
ACES Power Marketing Standards Collaborators	Yes	
Imperial Irrigation District	Yes	
Midwest Reliability Organization NERC Standards Review Forum	Yes	
Detroit Edison	Yes	

Organization	Yes or No	Question 2 Comment
BC Hydro	Yes	
Dominion	Yes	
JEA	Yes	
Pepco Holdings Inc & Affiliates	Yes	
City Water Light and Power	Yes	
Hydro One Networks Inc.	Yes	
Florida Municipal Power Agency	Yes	
Western Electricity Coordinating Council	Yes	
Bonneville Power Administration	Yes	
GP Strategies	Yes	
Progress Energy	Yes	
Arizona Public Service Company	Yes	
HHWP	Yes	

Organization	Yes or No	Question 2 Comment
Lakeland Electric	Yes	
CenterPoint Energy Houston Electric, LLC.	Yes	
IESO	Yes	
Flathead Electric Cooperative, Inc.	Yes	
NIPSCO	Yes	
SMUD	Yes	
Liberty Electric Power LLC	Yes	
PPL Generation, LLC on behalf of its Supply NERC Registered Entities	Yes	
Hydro-Quebec TransEnergie	Yes	
Orlando Utilities Commission	Yes	
Clark Public Utilities	Yes	
Utility Services, Inc.	Yes	
City of Austin dba Autin Energy	Yes	

Organization	Yes or No	Question 2 Comment
Colorado Springs Utilities	Yes	
Salt River Project	Yes	
Wisconsin Electric dba We Energies	Yes	
Manitoba Hydro	Yes	
Portland General Electric - Transmission & Reliability Services	Yes	
Puget Sound Energy	Yes	
PPL Electric Utilities	Yes	
Xcel Energy	Yes	
Public Utility District No. 1 of Snohomish County	Yes	
Ameren	Yes	
Idaho Power Company	Yes	
American Transmission Company, LLC	Yes	
City of Tallahassee	Yes	



Organization	Yes or No	Question 2 Comment
NextEra Energy, Inc	Yes	
City of Vero Beach	Yes	
Texas Relibility Entity	Yes	
Alliant Energy	Yes	
U.S. Bureau of Reclamation	Yes	
Brazos Electric Power Cooperative	Yes	
Central Lincoln	Yes	
Kansas City Power & Light	Yes	

3. The SDT has proposed to transfer the requirement to use Alert Levels in Attachment 1 to another more closely aligned standard or to a separate new standard. Do you agree with this transfer? If not, please explain in the comment area.

**Summary Consideration:**

The majority of commenters approved of moving the Alert Level guide out of COM-003-1, draft 1; however the many commenters still addressed the question as if the ALG was still retained. Many commenters wanted the guide eliminated completely, stating it was too prescriptive and scripted. *The SDT believes the ALG did have value for creating situational awareness and believes it belongs in another standard and will recommend that the Standards Committee assign it accordingly. The OPCPSDT stated that it does not have the authority to determine the ultimate disposition of the ALG. The SDT has addressed each misunderstanding to clarify the matter where appropriate.*

Stakeholders that agreed with the change did not offer substantive comment.

Organization	Yes or No	Question 3 Comment
Associated Electric Cooperative JRO00088	No	AECI agrees with SERC OC STANDARDS REVIEW GROUP's comments pertaining to question 3.
<b>Response: Response: Thank you for your comments. Please see the responses to the comments by the SERC OC Standards Review Group.</b>		
LG&E and KU Services	No	LG&E and KU Services disagree. This concept more properly belongs in the NERC Rules of Procedure and should be designed to address Recommendation 26 of the NERC 2003 Blackout Report. This is an expectation of NERC and not of the industry. Also, see recent NERC Operating Reliability Subcommittee (ORS) discussions and recommendations regarding the elimination of the Transmission Alert Levels.
<b>Response: Thank you for your comments. The SDT has removed the Alert Levels in Attachment 1 from COM-003-1 because it is a notification requirement, not a communication protocol. The Standards Committee has approved the removal and will determine its disposition.</b>		

Organization	Yes or No	Question 3 Comment
MEAG Power, Danny Dees, Steven Grego, Steve Jackson	No	The language, intent and purpose is not sufficiently defined. Needs better documentation and explanation.
<p><b>Response: Thank you for your comments. The SDT has removed the Alert Levels in Attachment 1 from COM-003-1 because it is a notification requirement, not a communication protocol. The Standards Committee has approved the removal and will determine its disposition.</b></p>		
City Water Light and Power	No	This requirement should certainly not be a part of this standard, but should be eliminated entirely. It specifies a process, not a result - the requirement should be based on resultant functionality, not the process by which the entity achieves it.
<p><b>Response: Thank you for your comments. The SDT has removed the Alert Levels in Attachment 1 from COM-003-1 because it is a notification requirement, not a communication protocol. The Standards Committee has approved the removal and will determine its disposition.</b></p>		
Hydro One Networks Inc.	No	In the past there was a lot of confusion regarding the use and applicability of three-part communication. We believe that all communication protocol related requirements and information should be contained within one standard. This should include Alert Levels and their definitions.
<p><b>Response: Thank you for your comments. The SDT has removed the Alert Levels in Attachment 1 from COM-003-1 because it is a notification requirement, not a communication protocol. The Standards Committee has approved the removal and will determine its disposition.</b></p>		
SERC OC Standards Review Group	No	We disagree - this concept more properly belongs in the NERC Rules of Procedure and should be designed to address Recommendation 26 of the NERC 2003 Blackout Report. This is an expectation of NERC and not of the industry. Also, see recent NERC Operating Reliability Subcommittee (ORS) discussions and recommendations regarding the elimination of the Transmission Alert Levels.

Organization	Yes or No	Question 3 Comment
<p><b>Response: Thank you for your comments. The SDT has removed the Alert Levels in Attachment 1 from COM-003-1 because it is a notification requirement, not a communication protocol. The Standards Committee has approved the removal and will determine its disposition.</b></p>		
Southern Company	No	<p>Southern suggests that this concept more properly belongs in the NERC Rules of Procedure and should be designed to address Recommendation 26 of the NERC 2003 Blackout Report. This suggestion of placing Alert Levels in the reliability standards is an expectation of NERC, but it is not an expectation of the industry. Also, see recent NERC Operating Reliability Subcommittee (ORS) discussions and recommendations regarding the elimination of the Transmission Alert Levels.</p>
<p><b>Response: Thank you for your comments. The SDT has removed the Alert Levels in Attachment 1 from COM-003-1 because it is a notification requirement, not a communication protocol. The Standards Committee has approved the removal and will determine its disposition.</b></p>		
Flathead Electric Cooperative, Inc.	No	<p>Don't understand this change, but wonder why separate alert levels are necessary to incorporate in this set of standards.</p>
<p><b>Response: Thank you for your comments. The SDT has removed the Alert Levels in Attachment 1 from COM-003-1 because it is a notification requirement, not a communication protocol. The Standards Committee has approved the removal and will determine its disposition.</b></p>		
Entergy Services	No	<p>We disagree - this concept more properly belongs in the NERC Rules of Procedure and should be designed to address Recommendation 26 of the NERC 2003 Blackout Report. This is an expectation of NERC itself, not of the industry (and NERC can't write Requirements for the ERO). Also, this team should take the time to become familiar with recent NERC Operating Reliability Subcommittee (ORS) discussions and recommendations regarding the elimination of the Transmission Alert Levels. Even the DHS has found that Alert Levels has diminished value.</p>

Organization	Yes or No	Question 3 Comment
<p><b>Response: Thank you for your comments. The SDT has removed the Alert Levels in Attachment 1 from COM-003-1 because it is a notification requirement, not a communication protocol. The Standards Committee has approved the removal and will determine its disposition.</b></p>		
<p>City of Austin dba Austin Energy</p>	<p>No</p>	<p>AE believes the SDT should carefully review existing alert levels (e.g. EEA levels, threat levels). AE requests that the SDT use only the Alert Levels in Attachment 1 if they enhance existing levels or fill a gap. AE’s preference is for the SDT to build upon existing alert levels instead of imposing a new category.</p>
<p><b>Response: Thank you for your comments. The SDT has removed the Alert Levels in Attachment 1 from COM-003-1 because it is a notification requirement, not a communication protocol. The Standards Committee has approved the removal and will determine its disposition.</b></p>		
<p>Illinois Municipal Electric Agency</p>	<p>No</p>	<p>IMEA agrees with comments submitted by the SERC OC Standards Review Group.</p>
<p><b>Response: Thank you for your comments. Please see the responses to the comments by the SERC OC Standards Review Group.</b></p>		
<p>Ameren</p>	<p>No</p>	<p>We recommend the Alert Levels be used by the SDT to define a workable time period when three-part communications is mandatory.</p>
<p><b>Response: Thank you for your comments. The SDT has removed the Alert Levels in Attachment 1 from COM-003-1 because it is a notification requirement, not a communication protocol. The Standards Committee has approved the removal and will determine its disposition.</b></p>		
<p>MISO</p>	<p>No</p>	<p>This concept more properly belongs in the NERC Rules of Procedure and should be designed to address Recommendation 26 of the NERC 2003 Blackout Report. See recent NERC Operating Reliability Subcommittee (ORS) discussions and recommendations regarding the elimination of the Transmission Alert Levels.</p>
<p><b>Response: Thank you for your comments. The SDT has removed the Alert Levels in Attachment 1 from COM-003-1 because it is a</b></p>		

Organization	Yes or No	Question 3 Comment
<p>notification requirement, not a communication protocol. The Standards Committee has approved the removal and will determine its disposition.</p>		
ISO New England Inc	No	<p>These Alert Levels have been and should continue to remain a product of the NERC OC and not a Standards issue.</p>
<p>Response: Thank you for your comments. The SDT has removed the Alert Levels in Attachment 1 from COM-003-1 because it is a notification requirement, not a communication protocol. The Standards Committee has approved the removal and will determine its disposition.</p>		
Exelon Corporation and its affiliates	No	<p>While Exelon agrees with deleting the Alert Levels in Attachment 1 from COM-003-1, Exelon does not agree with transferring the requirement to use Alert Levels to any other standard or the creation of a separate new standard. As stated by many of the commenters to the previous draft, the addition of "Alert Levels" with defined colors have been used by DHS and may be misinterpreted. In response to these comments the SDT removed the requirement to Attachment 1 as falling outside the scope of a "communication protocol." Exelon reiterates that the concept of adding colored "Alert Levels" not only be deleted from COM-003-1, but also not be transferred to another SAR in the future.</p>
<p>Response: Thank you for your comments. The SDT has removed the Alert Levels in Attachment 1 from COM-003-1 because it is a notification requirement, not a communication protocol. The Standards Committee has approved the removal and will determine its disposition.</p>		
Oncor Electric Delivery Company LLC	No	<p>Oncor takes the position that the introduction of new alert levels or categories simply introduces more complexity to what could be better addressed through a closer examination of existing alert levels. This includes EEA levels and threat levels.</p>
<p>Response: Thank you for your comments. The SDT has removed the Alert Levels in Attachment 1 from COM-003-1 because it is a notification requirement, not a communication protocol. The Standards Committee has approved the removal and will determine</p>		

Organization	Yes or No	Question 3 Comment
<b>its disposition.</b>		
Kansas City Power & Light	No	Create one standard for all operating conditions and retire the balance of those places where levels are referenced. We support a new or separate requirement speaking to all alert levels for operating conditions but not combination with another unique standard losing the efficiencies of a combined set of operating condition alert levels.
<b>Response: Thank you for your comments. The SDT has removed the Alert Levels in Attachment 1 from COM-003-1 because it is a notification requirement, not a communication protocol. The Standards Committee has approved the removal and will determine its disposition.</b>		
JEA	No	
Roger Zaklukiewicz Consulting	No	
South Carolina Electric and Gas	No	
SPP Standards Review Group	Yes	We agree with the Alert Levels being removed from COM-003-1 and question the need to move them somewhere else. During its May, 2012 meeting, the Operating Reliability Subcommittee (ORS) approved a motion to ‘...terminate the pilot program using Alert Levels and to discontinue any efforts to include the guidelines in reliability standards projects.’ This was based on the inability of the ORS to demonstrate any reliability improvements during the six years that the Alert Level pilot program had been in existence. That being the case, there is no need to create a SAR and transfer this to another SDT.
<b>Response: Thank you for your comments. The Standards Committee has approved the removal and will determine its disposition.</b>		

Organization	Yes or No	Question 3 Comment
Ingleside Cogeneration LP	Yes	There are already other project teams addressing the handling of incidents related to transmission, physical, and cyber security. It is appropriate in our view to separate emergency operations communications from normal ones - as done in the second draft of COM-003-1.
<b>Response: Thank you for your comments.</b>		
City of Jacksonville Beach dba/Beaches Energy Services	Yes	None.
Colorado Springs Utilities	Yes	better option would be to retire the concept
<b>Response: Thank you for your comments. The Standards Committee has approved the removal and will determine its disposition.</b>		
Idaho Power Company	Yes	Threat Alert Levels does not seem to fit this Standard.
<b>Response: Thank you for your comments.</b>		
ACES Power Marketing Standards Collaborators	Yes	
Imperial Irrigation District	Yes	
Midwest Reliability Organization NERC Standards Review Forum	Yes	
Detroit Edison	Yes	
Duke Energy	Yes	



Organization	Yes or No	Question 3 Comment
BC Hydro	Yes	
Dominion	Yes	
Pepco Holdings Inc & Affiliates	Yes	
Florida Municipal Power Agency	Yes	
Western Electricity Coordinating Council	Yes	
Bonneville Power Administration	Yes	
GP Strategies	Yes	
Progress Energy	Yes	
HHWP	Yes	
Lakeland Electric	Yes	
NIPSCO	Yes	
SMUD	Yes	
Liberty Electric Power LLC	Yes	
PPL Generation, LLC on behalf of its Supply NERC Registered	Yes	

Organization	Yes or No	Question 3 Comment
Entities		
Hydro-Quebec TransEnergie	Yes	
Orlando Utilities Commission	Yes	
Clark Public Utilities	Yes	
The United illuminating Company	Yes	
Indiana Municipal Power Agency	Yes	
Utility Services, Inc.	Yes	
Utility System Efficiencies, InC.	Yes	
Manitoba Hydro	Yes	
Public Service Enterprise Group	Yes	
Puget Sound Energy	Yes	
Xcel Energy	Yes	
Public Utility District No. 1 of Snohomish County	Yes	
American Transmission	Yes	

Organization	Yes or No	Question 3 Comment
Company, LLC		
City of Tallahassee	Yes	
NextEra Energy, Inc	Yes	
City of Vero Beach	Yes	
Texas Reliability Entity	Yes	
Alliant Energy	Yes	
U.S. Bureau of Reclamation	Yes	
NV Energy	Yes	
Brazos Electric Power Cooperative	Yes	
Central Lincoln	Yes	
NERC Operating Committee		See Response 10
Arizona Public Service Company		Intentionally left blank
CenterPoint Energy Houston Electric, LLC.		Question 3 Comments: CenterPoint Energy believes the SDT should only use existing defined alert levels, rather than implementing new alert levels or categories.
<p><b>Response: Thank you for your comments. The SDT has removed the Alert Levels in Attachment 1 from COM-003-1 because it is a notification requirement, not a communication protocol. The Standards Committee has approved the removal and will determine</b></p>		

Organization	Yes or No	Question 3 Comment
<b>its disposition.</b>		
IESO		We agree that Attachment 1 should not form part of COM-003-1 and support suppressing any requirements in this standard that stipulate the Alert Levels. We need more details on the specific proposal to re-locate Attachment 1 before we can comment on the merit of the transfer.
<b>Response: Thank you for your comments. The Standards Committee has approved the removal and will determine its disposition.</b>		
New York Power Authority		NYPA supports the comments submitted by the NPCC Regional Standards Committee (RSC).
<b>Response: Thank you for your comments. Please see the responses to the comments by the NPCC Regional Standards Committee (RSC).</b>		

4. The SDT modified the standard to allow an exemption from the requirement to use English language where the use of another language is mandated by law or regulation. (See Requirement R1, Part 1.1.1) Do you agree with this modification? If not, please explain in the comment area.

**Summary Consideration: Major Issues**

The majority of commenters approved of the use of the English language with the exemption from the requirement to use English language where the use of another language is mandated by law or regulation.

Stakeholders that agreed with the change did not offer comment.

The commenters who disagreed cited the requirement was too prescriptive and too much of a “how to” requirement. *The SDT believes using a common language eliminates confusion and misunderstandings, and expedites response. These all contribute to clarifying communication which reduces the possibility of an event that could compromise the reliability of the BES. The SDT also believes standards should adhere to law and regulation where government jurisdiction exists.*

Other commenters believe a very small number functional entities have local agreements to speak a language other than English. These instances appear to be rare and isolated. The SDT added mutual agreement language similar to that found in COM-001-1.1, R4 to the standard.

Organization	Yes or No	Question 4 Comment
Northeast Power Coordinating Council	No	A general suggestion for all reliability standards that has been made is that standards' requirements be eliminated that do not address reliability problems. No available information indicates that language is causing reliability problems. In the absence of such evidence that this is a reliability problem, consideration should be given to eliminating this requirement.
<p><b>Response:</b> Thank you for your comments. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT believes the use of a common language eliminates confusion and misunderstandings, and expedites response. These all contribute to clarifying communication</p>		

Organization	Yes or No	Question 4 Comment
<p>which reduces the possibility of an event that could compromise the reliability of the BES.</p>		
<p>Duke Energy</p>	<p>No</p>	<p>We think mandating English is over-reaching (As currently written, the Standard erroneously focuses on “how” an entity can be compliant, rather than describing “what” an entity needs to achieve to be compliant). Let the entity that develops the CPOP and its neighbors decide on language, clock format, etc.</p>
<p>Response: Thank you for your comments. The SDT believes the use of a common language eliminates confusion and misunderstandings, and expedites response. These all contribute to clarifying communication which reduces the possibility of an event that could compromise the reliability of the BES.</p>		
<p>Associated Electric Cooperative JRO00088</p>	<p>No</p>	<p>Although this qualification appears to now be accommodating of regional government mandates, it fails to address decorum where a non-English bounded Entity is communicating externally with entities who are unbounded by the same mandates or vice-versa. Best to let the Regional Entities work this out among themselves and document the agreements, where applicable.</p>
<p>Response: Thank you for your comments. The SDT believes the use of a common language eliminates confusion and misunderstandings, and expedites response. These all contribute to clarifying communication which reduces the possibility of an event that could compromise the reliability of the BES.</p>		
<p>LG&amp;E and KU Services</p>	<p>No</p>	<p>This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW” of communication as opposed to the “WHAT”.</p>
<p>Response: Thank you for your comments. The SDT believes the use of a common language eliminates confusion and misunderstandings, and expedites response. These all contribute to clarifying communication which reduces the possibility of an event that could compromise the reliability of the BES. When defining common communication protocols to be used for communication between entities, it is necessary to be specific on what must be communicated and how it must be communicated.</p>		

Organization	Yes or No	Question 4 Comment
MEAG Power, Danny Dees, Steven Grego, Steve Jackson	No	Too prescriptive. NERC should be addressing risk and performance.
<p><b>Response: Thank you for your comments. The SDT believes the use of a common language eliminates confusion and misunderstandings, and expedites response. These all contribute to clarifying communication which reduces the possibility of an event that could compromise the reliability of the BES.</b></p>		
ISO/RTO Standards Review Committee	No	<p>FERC has made it clear that it would be amenable to eliminating requirements that are not reliability problems. A requirement regarding language comes under that category. There are no reports indicating that language is causing reliability problems. The SRC does not believe this issue rises to the level of a mandatory standard. The SRC would ask if the SDT has any evidence that language is a problem causing reliability impacts. In the absence of such evidence that it is a reliability problem, the SDT should eliminate this requirement.</p>
<p><b>Response: Thank you for your comments. The SDT believes the use of a common language eliminates confusion and misunderstandings, and expedites response. These all contribute to clarifying communication which reduces the possibility of an event that could compromise the reliability of the BES. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System.</b></p>		
Hydro One Networks Inc.	No	<p>We believe that this requirement should be eliminated. As a general rule, standards' requirements that do not address reliability problems should be eliminated. No available information indicates that language is causing reliability problems and there. In addition to this, there are some jurisdictions where this requirement might cause decrease in reliability (i.e. Quebec)</p>
<p><b>Response: Thank you for your comments. The SDT believes the use of a common language eliminates confusion and misunderstandings, and expedites response. These all contribute to clarifying communication which reduces the possibility of an event that could compromise the reliability of the BES. The SDT added the use of an alternate language for internal operations.</b></p>		

Organization	Yes or No	Question 4 Comment
<p>During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System.</p>		
<p>SERC OC Standards Review Group</p>	<p>No</p>	<p>This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW” of communication as opposed to the “WHAT”.</p>
<p><b>Response: The SDT appreciates your comments. The SDT believes the use of a common language eliminates confusion and misunderstandings, and expedites response. These all contribute to clarifying communication which reduces the possibility of an event that could compromise the reliability of the BES. When defining common communication protocols to be used for communication between entities, it is necessary to be specific on what must be communicated and how it must be communicated.</b></p>		
<p>Bonneville Power Administration</p>	<p>No</p>	<p>BPA believes that the existing language format should remain solely English and recognizes that this is the case with International &amp; US air traffic controllers.</p>
<p><b>Response: Thank you for your comments.</b></p>		
<p>Southern Company</p>	<p>No</p>	<p>While Southern agrees with the concept of allowing the use of another language when mandated by law or regulation, Southern does not agree with R1 and its sub requirements as they are focused on the “HOW” of communication when they should be more focused on the “WHAT”.</p>
<p><b>Response: Thank you for your comments. The SDT believes the use of a common language eliminates confusion and misunderstandings, and expedites response. When defining common communication protocols to be used for communication between entities, it is necessary to be specific on what must be communicated and how it must be communicated.</b></p>		
<p>SMUD</p>	<p>No</p>	<p>We believe the requirement to only speak English is detrimental to reliability. Entities that have predominantly speaking Spanish personnel would be inhibited with ineffective communications mandated by the English only requirement. Further, this</p>



Organization	Yes or No	Question 4 Comment
		particular requirement is in direct conflict with COM0-001 R4 which states "...Transmission Operators and Balancing Authorities may use an alternate language for internal operations."
<p><b>Response: Thank you for your comments. The SDT believes the use of a common language eliminates confusion and misunderstandings, and expedites response. These all contribute to clarifying communication which reduces the possibility of an event that could compromise the reliability of the BES. The SDT added use of an alternate language for internal operations.</b></p>		
San Diego Gas & Electric	No	San Diego Gas & Electric ("SDG&E") agrees with the proposed exemption from the requirement to use English language where the use of another language is mandated by law or regulation. However, SDG&E recommends including the following language as an additional exemption: "or a formal agreement has been established between the functional entities to use an alternative language," so that R1.1.1. states: "Use the English language when communicating between functional entities, unless another language is mandated by law or regulation or a formal agreement has been established between the functional entities to use an alternative language."
<p><b>Response: Thank you for your comments. The SDT believes the use of a common language eliminates confusion and misunderstandings, and expedites response. These all contribute to clarifying communication which reduces the possibility of an event that could compromise the reliability of the BES. The SDT added use of an alternate language for internal operations. Comments on prior postings of COM-003-1 rejected allowances for entities to agree upon particular protocols, feeling that the documentation of those agreements would be overly burdensome and is contrary to the purpose of the SAR, which is "Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time."</b></p>		
Sacramento Municipal Utility District	No	See response in #10
Entergy Services	No	We disagree with all of the Requirements and sub-Requirements in this standard, due to the fact that they embody a procedure into the Requirements. There is no

Organization	Yes or No	Question 4 Comment
		reliability need being fulfilled by taking this approach. See our suggested replacement R1 in our response to Q1. This would replace R1, R2 and R3 and their associated sub-Requirements.
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Essential Power, LLC	No	The use of English should be mandated for communications between entities in separate regions where the common language in one of the regions may not be English. Allowing an entity to use a language other than English when communicating with regions where English is the required language is counter to the purpose of the Standard and could in fact jeopardize reliability through miscommunication.
<p><b>Response: Thank you for your comments. The SDT agrees with your comments and clarifies that is the intent of the requirement.</b></p>		
Illinois Municipal Electric Agency	No	IMEA agrees with comments submitted by the SERC OC Standards Review Group.
<p><b>Response: Thank you for your comments. Please see the responses to the comments by the SERC OC Standards Review Group.</b></p>		
Public Utility District No. 1 of Snohomish County	No	SNPD takes issue with the specification of “English” only communications and the Alpha-Numeric identifiers. There is no precedence established for the use of English, Alpha-Numeric or the use of a 24-hour clock format that warrant a severe VSL and the associated penalties that could be imposed by the Compliance Enforcement Agency
<p><b>Response: Thank you for your comments. The SDT believes the use of a common language eliminates confusion and misunderstandings, and expedites response. These all contribute to clarifying communication which reduces the possibility of an event that could compromise the reliability of the BES. The SDT has developed a new approach to the standard that addresses your compliance concern.</b></p>		

Organization	Yes or No	Question 4 Comment
MISO	No	<p>Fluent comprehension of and speaking ability in the English language must be uniform among all Reliability Coordinators, Transmission Operators, Balancing Authorities, Generator Operators, and Distribution Providers in order to ensure the safe and reliable operation of the Bulk Electric System. NERC must ensure that all such entities employ operators that can speak and understand English fluently, regardless of their primary or preferred language. The proposed exception, while well-intended, could lead to situations where effective communication between operators is compromised or entirely prevented due to language barriers.</p> <p>MISO notes that the use of English, unless otherwise agreed, is currently required for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System under COM-001-1.1, Requirement R4, but that requirement does not apply to Generator Operators or Distribution Providers. Further, COM-001-2, which is part of Project 2006-06 (see above), would no longer require English to be used in such instances.</p> <p>Thus, COM-003-1, Requirement 1, Part 1.1.1 should be modified to require that Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider operators can speak and understand English fluently, even if it is not the required primary language pursuant to law or regulation for oral or written Operating Communications.</p>
<p><b>Response: Thank you for your comments. The SDT believes the use of a common language eliminates confusion and misunderstandings, and expedites response. These all contribute to clarifying communication which reduces the possibility of an event that could compromise the reliability of the BES. The SDT added use of an alternate language for internal operations. The exception provides for adherence to existing law.</b></p>		
ISO New England Inc	No	We agree with, support and have signed onto the ISO/RTO Standards Review

Organization	Yes or No	Question 4 Comment
		Committee comments.
<p><b>Response: Thank you for your comments. Please see the responses to the comments of the ISO/RTO Standards Review Committee.</b></p>		
Exelon Corporation and its affiliates	No	Exelon finds it unnecessary for the standard to include a requirement that discusses specifics concerning language requirements. If discussion of language is important to clarify within a Registered Entity’s protocol, then the standard could suggest it as an attribute to be included in an entity developed protocol. See alternate standard language proposal in response to Q10.
<p><b>Response: Thank you for your comments. Please see the responses to the comments in Question10.</b></p>		
Oncor Electric Delivery Company LLC	No	Oncor takes the position that this requirement is unnecessary in that it is not aware of any evidence supporting the notion that failure to use the English language has been a significant contributor to reduction in reliability. Furthermore, FERC has made it known that it is in favor of eliminating requirements that do not contribute to reliability. Oncor recommends that this requirement be eliminated.
<p><b>Response: Thank you for your comments. The SDT believes that the use of a common language eliminates confusion and misunderstandings, and expedites response. These all contribute to clarifying communication which reduces the possibility of an event that could compromise the reliability of the BES.</b></p>		
California Independent System Operator	No	While the objective of minimizing ambiguities in communications between functional entities is commendable, the standard as currently written goes too far by requiring “...English when communicating between functional entities, unless another language is mandated by law or regulation.” (R1.1.1) To begin, requirement 1.1.1 is completely silent on who’s law or regulation would satisfy this requirement if a functional entity wanted/needed to speak a different language. For example, it’s unclear which of the following would satisfy this requirement:

Organization	Yes or No	Question 4 Comment
		<p><b>Response: The SDT means any law or regulation within a jurisdiction that would mandate it.</b></p> <p>1. A Canadian or Mexican law or regulation provided as evidence to WECC auditors?  <b>Response: Yes</b></p> <p>2. An American law or regulation?  <b>Response: Yes</b></p> <p>3. Perhaps both an American and a neighboring country’s law/regulation would be required?  <b>Response: Yes, if both are mandatory and enforceable.</b></p> <p>Since the proposed standard is silent on what constitutes satisfactory evidence, both numbers 1 and 2 seem like potentially harmful unilateral moves that could be detrimental to reliability but may be allowable in COM-003-1 as currently proposed.</p> <p>So if functional entities would like/need to speak a different language, the requirement looks like it’s attempting to set a high bar without specifying how high that bar is.</p> <p><b>Response: The SDT believes the use of a common language contributes to clarifying communication which reduces the possibility of an event that could compromise the reliability of the BES.</b></p> <p>I also think the requirement pre-supposes a level of English fluency by all North American citizens that simply does not exist and mandates a very high and very vague threshold for compliance while not allowing for exceptions. So ultimately, R1.1.1. Is a vague, unnecessary and inflexible requirement that would be detrimental to real-time operators in a contingent status. It would deny operators that are fluent in other languages the ability to assist non-native English speakers experiencing difficulties in communications by using a language they are fluent in to mitigate a potentially</p>

Organization	Yes or No	Question 4 Comment
		<p>serious issue.</p> <p><b>Response: The SDT points out that existing Standard COM-001-1.1, Requirement R4, which is mandatory and enforceable, and stipulates use of the English language, has been in effect for years. The fluency issue and the characterization of the proposed Requirement R1.1.1 as described has not surfaced or does not appear to be at issue.</b></p> <p>The requirement could also potentially require U.S. states, Canadian provinces and/or Mexican states to write laws and/or regulations to satisfy a requirement in a standard which seems like an unrealistic threshold. The bottom line is if an entity enters a contingent state and there is no legislation or regulation in place at the time of a contingency event, system operators may be forced to decide between two very difficult positions. Either adheres to COM-003 and run the risk of putting the grid at risk or violating COM-003 to ensure grid integrity is not compromised.</p> <p><b>Response: The SDT notes that existing Standard COM-001-1.1, Requirement R4, has been in force and there has been no requirement for any governments to develop additional legislation or regulation for the use of a specific language. COM-003-1, R1.1.1 also does not require or warrant additional laws or regulation.</b></p> <p>The SDT has developed a new approach to the standard that may address your concern.</p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
South Carolina Electric and Gas	No	
SPP Standards Review Group	Yes	While we concur with the inclusion of the exemption, we question how the industry can ensure effective communications in a situation where the exemption comes into play.

Organization	Yes or No	Question 4 Comment
<p>Response: Thank you for your comments. The SDT notes that existing Standard COM-001-1.1, Requirement R4, has been in effect for years without major issues. Non English speaking entities will speak English when communicating externally and will follow their applicable laws or regulations internally.</p>		
Western Electricity Coordinating Council	Yes	Any thoughts given to including a provision for agreement between specific entities to use a language other than English for areas that another language may be common, but not mandated by law or regulation?
<p>Response: Thank you for your comments. The SDT believes that the use of a common language eliminates confusion and misunderstandings, and expedites response. These all contribute to clarifying communication which reduces the possibility of an event that could compromise the reliability of the BES. The SDT added the use of an alternate language for internal operations. Comments on prior postings of COM-003-1 rejected allowances for entities to agree upon particular protocols, feeling that the documentation of those agreements would be overly burdensome and is contrary to the purpose of the SAR, which is "Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time."</p>		
Colorado Springs Utilities	Yes	"Use the English language when communicating between functional entities, unless another language is mandated by law or regulation." If two or more functional entities (say BA & TOP) reside within the same utility (perhaps even co-located in the same control center) and are communicating solely with each other, mayn't they speak their native language to each other - with or without the aid of law?
<p>Response: Thank you for your comments. The SDT believes that use of a common language eliminates confusion and misunderstandings, and expedites response. These all contribute to clarifying communication which reduces the possibility of an event that could compromise the reliability of the BES. While the SDT added use of an alternate language for internal operations, the exception does not apply to communications between functional entities.</p>		
Central Lincoln	Yes	but please see Q 10.
City of Jacksonville Beach	Yes	None.

Organization	Yes or No	Question 4 Comment
dba/Beaches Energy Services		
ACES Power Marketing Standards Collaborators	Yes	
Imperial Irrigation District	Yes	
Midwest Reliability Organization NERC Standards Review Forum	Yes	
Detroit Edison	Yes	
BC Hydro	Yes	
Dominion	Yes	
JEA	Yes	
Pepco Holdings Inc & Affiliates	Yes	
City Water Light and Power	Yes	
Avista	Yes	
Florida Municipal Power Agency	Yes	
GP Strategies	Yes	
Progress Energy	Yes	



Organization	Yes or No	Question 4 Comment
Arizona Public Service Company	Yes	
HHWP	Yes	
Lakeland Electric	Yes	
IESO	Yes	
Flathead Electric Cooperative, Inc.	Yes	
NIPSCO	Yes	
Liberty Electric Power LLC	Yes	
PPL Generation, LLC on behalf of its Supply NERC Registered Entities	Yes	
Hydro-Quebec TransEnergie	Yes	
Orlando Utilities Commission	Yes	
Clark Public Utilities	Yes	
The United illuminating Company	Yes	
Ingleside Cogeneration LP	Yes	

Organization	Yes or No	Question 4 Comment
Roger Zaklukiewicz Consulting	Yes	
ITC Holdings	Yes	
Utility Services, Inc.	Yes	
Salt River Project	Yes	
Utility System Efficiencies, InC.	Yes	
Wisconsin Electric dba We Energies	Yes	
Manitoba Hydro	Yes	
Portland General Electric - Transmission & Reliability Services	Yes	
Puget Sound Energy	Yes	
PPL Electric Utilities	Yes	
Xcel Energy	Yes	
Ameren	Yes	
Idaho Power Company	Yes	
American Transmission	Yes	

Organization	Yes or No	Question 4 Comment
Company, LLC		
City of Tallahassee	Yes	
NextEra Energy, Inc	Yes	
City of Vero Beach	Yes	
Texas Relibility Entity	Yes	
Alliant Energy	Yes	
Seminole Electric Cooperative	Yes	
U.S. Bureau of Reclamation	Yes	
NV Energy	Yes	
Brazos Electric Power Cooperative	Yes	
Kansas City Power & Light	Yes	
NERC Operating Committee		See Response 10
<b>Response: Thank you for your comments. Please see the responses to the comments in Question 10.</b>		
New York Power Authority		NYPA supports the comments submitted by the NPCC Regional Standards Committee (RSC).
<b>Response: Thank you for your comments. Please see the responses to those comments made by the NPCC Regional Standards</b>		

Organization	Yes or No	Question 4 Comment
<b>Committee (RSC).</b>		
Public Service Enterprise Group		See #10.
<b>Response: Thank you for your comments. Please see the responses to the comments in Question 10.</b>		

5. The SDT modified the standard to mandate utilization of a 24 hour clock for all times and to mandate the use of a time zone and indicate whether the time is daylight saving time or standard time reference when Operating Communications occur between different time zones. (See Requirement R1, Part 1.1.3) Do you agree with this modification? If not, please explain in the comment area.

**Summary Consideration:**

Commenters who approved of the use the 24 hour clock and time zone references did not offer much comment except to state they felt it added clarity to communication. Those commenters who argued against the 24 hour clock and time zone references believe the requirement is too prescriptive, reaches too far and should be eliminated. *The SDT believes use of the 24 hour clock and time zone references clarifies the time element of communications and by doing so enhances reliability by avoiding time mistakes that could compromise the stability of the BES.*

Organization	Yes or No	Question 5 Comment
Northeast Power Coordinating Council	No	This requirement is outside the scope of the approved SAR which proposes responding to the Blackout Recommendation to tighten communications protocols especially during emergencies. This proposed requirement is both procedural and does not address tightening communications of situational awareness. As an alternative a standard could require the Functional Entities to have a communications protocol that could indeed include this, but it should not be a requirement on personnel. By adopting an alternative category (i.e. not making this a standard) a Reliability Entity could adopt a progressive best practice approach without concern for violating the strictest features of the proposed best practice.
<p><b>Response:</b> Thank you for your comments. The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” Additionally, the SAR is very specific in that it also includes the term “normal” operating conditions under <b>Applicability:</b> “Clear and mutually established communications protocols used during real time operations under normal and emergency conditions ensure universal understanding of terms and reduce errors.” The SDT believes use of the 24 hour clock and</p>		

Organization	Yes or No	Question 5 Comment
<p>time zone references clarifies the time element of communications and by doing so enhances reliability by avoiding time mistakes that could compromise the stability of the BES. The SDT has developed a new approach to the standard that addresses your concern.</p>		
<p>ACES Power Marketing Standards Collaborators</p>	<p>No</p>	<p>1. The SDT should consider clarifying that use of relative times will not be subject to this requirement. For example, if a System Operator communicates that they will begin switching in 10 minutes, no 24 hour clock requirement is necessary.</p>
<p><b>Response: Thank you for your comments. The requirement only applies to references to clock times, not relative time.</b></p>		
<p>Midwest Reliability Organization NERC Standards Review Forum</p>	<p>No</p>	<p>There are two time zones in the eastern interconnection and two time zones in the western interconnect with Arizona not utilizing daylight savings time. The Reliability Coordinator and entities can agree on what time zone to use. The NSRF does not understand if the ‘time zone’ issue has caused any past performance issues? Please clarify with a basis of time zone inclusion.</p>
<p><b>Response: Thank you for your comments. The SDT believes use of the 24 hour clock and time zone references clarifies the time element of communications and by doing so enhances reliability by avoiding time mistakes that could compromise the reliability of the BES.</b></p>		
<p>Detroit Edison</p>	<p>No</p>	<p>In 1.1.3 "When the communication is between entities in different time zones..." should read "When the communication is between entities in operating in different time zones...". Two entities may be physically located in the same time zone but one may operate in standard time and the other in daylight time. When communication is between entities operating in different time zones, clarify which time zone takes precedence.</p>
<p><b>Response: Thank you for your comments. The SDT believes that two entities physically located in the same geographic time zone but one operating in standard time and the other in daylight time would constitute communication “between functional entities in different time zones.”</b></p>		

Organization	Yes or No	Question 5 Comment
Duke Energy	No	We think mandating the 24 hour clock is over-reaching (As currently written, the Standard erroneously focuses on “how” an entity can be compliant, rather than describing “what” an entity needs to achieve to be compliant). Let the entity that develops the CPOP and its neighbors decide on clock format, how time zone differences will be addressed, etc.
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
Dominion	No	Dominion currently views this requirement as being too prescriptive, the standard should be written to allow a 24 hour clock and time zone designation or 12 clock with an AM or PM and time zone designation.
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
Associated Electric Cooperative JRO00088	No	There are remaining issues where Entities deal with those few areas who swap time-zones dependent upon SDT, and they could be unfairly ensnared by non-compliance, in their not realizing that nuance. In addition, given the unbounded scope of this standard, it would seem best to allow operator discretion or this clause is a PV magnet.
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
LG&E and KU Services	No	This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW” of communication as opposed to the “WHAT”.
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
MEAG Power, Danny Dees, Steven Grego, Steve Jackson	No	Overly prescriptive. NERC should deal with risk and performance. This level of prescriptive standard language is not appropriate.

Organization	Yes or No	Question 5 Comment
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
<p>ISO/RTO Standards Review Committee</p>	<p>No</p>	<p>This requirement is outside the scope of the approved SAR which proposes responding to the Blackout Recommendation to tighten communications protocols especially during emergencies. This proposed requirement is both procedural and does not address tightening communications of situational awareness.</p> <p><b>Response: The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” The SDT believes use of the 24 hour clock and time zone references does in fact tighten communication because it clarifies the time element of communications and by doing so enhances reliability by avoiding time mistakes that could compromise the reliability of the BES.</b></p> <p>The SRC would suggest that as an alternative a standard could require the Functional Entities to have a communications protocol that could indeed include this suggestion, but it should not be a standard on personnel. By adopting an alternative category (i.e. not making this a standard) a Reliability Entity could adopt a progressive best practice approach without concern for violating the strictest features of the “proposed” best practice.</p> <p><b>Response: The SDT has developed a new approach to the standard that addresses your concern.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
<p>City Water Light and Power</p>	<p>No</p>	<p>Entities who have an agreed upon protocol which includes the time zone to be used for system operations should not be required to repeat the time zone for every communication. For instance, if Entity A and Entity B are in different time zones but both have an operating policy that states all communication between the two is in Eastern Standard Time and all operating personnel are trained on this policy, this</p>



Organization	Yes or No	Question 5 Comment
		<p>should be sufficient. This achieves the same functional goal. The requirement to restate the time zone in this case only serves to set up a situation where a simple single-instance omission would have no effect on reliability but still be noncompliant.</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
<p>SPP Standards Review Group</p>	<p>No</p>	<p>Requiring time zone notifications at times other than those around the time of the transition from standard to daylight savings and back again is excessive. For a brief period of time around this transition, ensuring the correct times are communicated would probably require including standard or daylight savings designations. Some consideration for this issue needs to be incorporated into the requirement. That said, trying to be overly prescriptive with the requirement creates an unnecessary burden on operating personnel without significantly improving BES reliability. A one-size fits all requirement may not be appropriate. Entities whose geographical area is located in multiple time zones probably have internal procedures detailing how they handle time differences within their area. Most often this entails selecting one time zone as the entity’s reference. As written, the requirement overrides any internal procedures which may unnecessarily complicate internal communications. Allowances should be made for internal procedures which cover this situation.</p> <p><b>The SDT has developed a new approach to the standard that addresses your concern. In addition, this stipulation only applies to communication “between functional entities in different time zones.” If the communication is not between functional entities in different time zones, it does not apply.</b></p> <p>Requirement 1.1.3 requires that time and time zone, including standard or daylight savings time designations, must be communicated at all times. Yet Requirement 1.1.2 includes a provision that requires use to the 24-hour clock only when clock times are referenced. This needs to be included in Requirement 1.1.3 as shown below:</p> <p>When the communication is between entities in different time zones and refers to clock times, include the time and time zone and indicate whether the time is daylight</p>

Organization	Yes or No	Question 5 Comment
		<p>saving time or standard time.</p> <p><b>Response: The SDT intentionally structured the parts of the requirement this way to mandate the use of the 24 hour clock (Requirement 1.1.2) for all time references and to use time zone references (Requirement 1.1.3) and indicate whether the time is daylight saving time or standard time only for those communications among entities operating in different time zones. The SDT has developed a new approach to the standard that addresses your concern.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
SERC OC Standards Review Group	No	<p>This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW” of communication as opposed to the “WHAT”.</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
NERC Operating Committee	No	<p>Overly prescriptive</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Progress Energy	No	<p>To prevent unintended use of “standard time” or “daylight time” Progress Energy is requesting using “prevailing time.” Instructions issued at or near the time change could have individuals inadvertently use the wrong time reference further confusing the issue.</p>
<p><b>Response: Thank you for your comments. This stipulation only applies to communication “between functional entities in different time zones.” If the communication is not between functional entities in different time zones, it does not apply.</b></p>		
Southern Company	No	<p>Southern suggests that this requirement of a common time zone is overly</p>

Organization	Yes or No	Question 5 Comment
		<p>prescriptive. The requirement should be that entities operating in different time zones agree on how to best eliminate any confusion regarding the time difference. Entities who have an agreed upon protocol which includes the time zone to be used for system operations should not be required to repeat the time zone for every communication. For instance, if Entity A and Entity B are in different time zones but both have an operating policy that states all communication between the two is in Eastern Standard Time and all operating personnel are trained on this policy, this should be sufficient. This achieves the same functional goal. The requirement to restate the time zone in this case only serves to set up a situation where a simple single-instance omission would have no effect on reliability but still be noncompliant.</p>
<p><b>Response:</b> Thank you for your comments. This stipulation only applies to communication “between functional entities in different time zones.” If the communication is not between functional entities in different time zones, it does not apply. Comments on prior postings of COM-003-1 rejected allowances for entities to agree upon particular protocols, feeling that the documentation of those agreements would be overly burdensome and is contrary to the purpose of the SAR, which is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.”</p>		
Flathead Electric Cooperative, Inc.	No	Not sure this is necessary for small entities.
<p><b>Response:</b> Thank you for your comments. The SDT believes that all BES entities that send and receive operating instructions should utilize protocols to ensure orders are not miscommunicated. A Distribution Provider or Generator Operator that only receives Operating Instructions is only held accountable for receiver’s requirements in the standard.</p>		
Liberty Electric Power LLC	No	No. Communications which do not involve Directives are not the proper subject of NERC standards.
<p><b>Response:</b> Thank you for your comments. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address</p>		

Organization	Yes or No	Question 5 Comment
<p>necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</p>		
San Diego Gas & Electric	No	<p>SDG&amp;E recommends removing the language, “When the communication is between entities in different time zones” in R1, Part 1.1.3, and replacing it with “Communication is to...”, so that R1.1.3 states: “Communication is to include the time and time zone and indicate whether the time is daylight saving time or standard time.” The proposed requirement for the communicator to determine if an entity is in a different time zone appears to be an unintended impact of the wording proposed in R1.1.3, and may prove to cause inefficiencies in complying with this requirement. Communicators SHOULD NOT NEED to determine whether or not an entity is in the same time zone as they are, but should simply state the time zone where they are calling from or the KNOWN element of their operations. Though a majority of communication will occur within the same time zones, System Operators and others affected by the requirement will be assured that the timing of ANY event will be KNOWN and never assumed.</p>
<p><b>Response:</b> Thank you for your comments. If an entity does not know the time zone of the other entity it is communicating with, it is all the more imperative that both entities understand the time at which a certain action is to occur.</p>		
Sacramento Municipal Utility District	No	See response in #10
<p><b>Response:</b> Thank you for your comments. Please see the response to Question 10</p>		
Entergy Services	No	See our response to Questions 1, 2 and 4.
<p><b>Response:</b> Thank you for your comments. Please see the responses to Questions 1, 2 and 4.</p>		

Organization	Yes or No	Question 5 Comment
City of Austin dba Austin Energy	No	There is not enough evidence to support the need for these types of specifics. Recommendation 26 encourages NERC “to ensure that all key parties ... receive timely and accurate information.” COM-003-1 seems to interpret the recommendation by telling entities “how” to ensure information is accurate (e.g., use English, 24-hour clock, time zones, alpha-numeric identifiers, etc.). This standard reaches too far into the “how” instead of focusing on the “what,” which is “timely and accurate information.” Registered entities should decide the best methods to ensure accurate information for themselves (through three-part communication, use of the 24-hour clock or otherwise).
<p><b>Response: Thank you for your comments. The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” When defining common communication protocols to be used for communication between entities, it is necessary to be specific on what must be communicated and how it must be communicated.</b></p>		
Essential Power, LLC	No	This provides minimal real-time benefits to the Operators, but only serves to make it easier to conduct an after the fact analysis. As such, this is an administrative requirement that should not be included in the Standard.
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Salt River Project	No	In the real time environment we deal in current hour or next hour terms. Including the time zones in these conversations would further muddy the waters.
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern. This would provide the latitude to utilize relative time. In addition, this stipulation only applies to communication “between functional entities in different time zones.” If the communication is not between functional entities in different time zones, it does not apply.</b></p>		
Manitoba Hydro	No	Manitoba Hydro agrees with R1.1.2 but disagrees with R1.1.3. R1.1.3 is unnecessary

Organization	Yes or No	Question 5 Comment
		<p>and should be modified to “1.1.3 - When communication is between entities in different time zones, clarify the difference in time to ensure mutual understanding”. Making R1.1.3 more generic gives operators the opportunity to determine the best method for them to ensure mutual understanding and clarify the time difference.</p>
<p><b>Response: Thank you for your comments. The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” If the protocols are not standardized, it eliminates the whole purpose behind the SAR.</b></p>		
Illinois Municipal Electric Agency	No	IMEA agrees with comments submitted by the SERC OC Standards Review Group.
<p><b>Response: Thank you for your comments. Please see the response to comments submitted by the SERC OC Standards Review Group.</b></p>		
Xcel Energy	No	<p>Is there any evidence of an actual event where there was confusion in the time zone, which led or contributed to an event? We are not aware of any. If the drafting team has no basis for mandating the use of a time zone and daylight/standard time reference, then we suggest this requirement be struck because we do not believe it would increase reliability. In fact, we think it may have the opposite effect of reducing reliability.</p> <p><b>Response: The SDT believes use of the 24 hour clock and time zone references clarifies the time element of communications and by doing so enhances reliability by avoiding time mistakes that could compromise the reliability of the BES. While the SDT cannot immediately cite evidence of a time zone event we believe that time zone confusion can negatively impact BES operations.</b></p> <p>If the SDT decides to retain the sub-requirement, please clarify which entity’s time zone should be used. As written, this sub-requirement may create confusion for field personnel if they are to repeat the order back in their own time zone. We are concerned this will actually increase the likelihood of human error, and therefore</p>

Organization	Yes or No	Question 5 Comment
		<p>potentially reduce reliability. As a company that has field personnel in different time zones, company procedures dictate that CPT be used as that is the time zone the control center is in. Adding additional oral verification for time zones will promote human error.</p> <p><b>Response: This stipulation only applies to communication “between functional entities in different time zones.” If the communication is not between functional entities in different time zones (e.g. the field personnel and System Operator are in the same functional entity, or the field personnel is not in a NERC functional entity), it does not apply.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
<p>Public Utility District No. 1 of Snohomish County</p>	<p>No</p>	<p>SNPD takes issue with the specification of “English” only communications and the Alpha-Numeric identifiers. There is no precedence established for the use of English, Alpha-Numeric or the use of a 24-hour clock format that warrant a sever VSL and the associated penalties that could be imposed by the Compliance Enforcement Agency</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
<p>MISO</p>	<p>No</p>	<p>The requirement to use a 24-hour clock for all times and to indicate time zone and Standard or Daylight Saving Time would result in the expenditure of significant time, resources and attention by System Operators for a minimal benefit to reliability. To date, the use of the 12-hour clock time has not been demonstrated as problematic or as having an adverse impact on reliability. The system time characteristics should inform the communication protocols regarding time. Finally, MISO notes that the use of the 24-hour clock time in communication is inconsistent with the 12-hour clock time currently utilized by most systems. Accordingly, this modification appears to place upon operators a requirement that is not justified and onerous. MISO respectfully requests that the SDT reconsider this requirement.</p>

Organization	Yes or No	Question 5 Comment
<p>Response: Thank you for your comments. The SDT believes use of the 24 hour clock and time zone references clarifies the time element of communications and by doing so enhances reliability by avoiding time mistakes that could compromise the stability of the BES. The SDT believes the 12 hour clock adds an element of confusion if am or pm is missing or misapplied. The SDT has developed a new approach to the standard that addresses your concern.</p>		
City of Tallahassee	No	<p>TAL is concerned with any unnecessary complication of communications. If more than one Time Zone is entailed in a communication, it is reasonable to require clarification of such. However, if both the sender and receiver observe the same prevailing time (e.g. Eastern Standard Time versus Eastern Daylight Time), it does not facilitate communication to require this clarification.</p>
<p>Response: Thank you for your comments. This stipulation only applies to communication “between functional entities in different time zones.” If the communication is not between functional entities in different time zones, it does not apply.</p>		
NextEra Energy, Inc	No	<p>NextEra believes the current language in R 1.1.2 unnecessarily limits two other forms of clear communications on the implementation of an Operating Communication. Specifically, NextEra also believes it is appropriate to use “AM” or “PM,” or “effective immediately” for the timing of implementing an Operating Communication, instead of the 24 hour clock. To add these items, NextEra requests that R 1.1.2 be revised to read as follows:</p> <p>Use one of the following:</p> <ul style="list-style-type: none"> <li>(a) the 24-hour clock;</li> <li>(b) “AM/PM” or</li> <li>(c) “effective immediately,” when referring to the time an Operating Communication shall be implemented.</li> </ul>
<p>Response: Thank you for your comments. The SDT believes use of the 24 hour clock and time zone references clarifies the time element of communications and by doing so enhances reliability by avoiding time mistakes that could compromise the stability of</p>		



Organization	Yes or No	Question 5 Comment
<p>the BES. The SDT believes the 12 hour clock adds an element of confusion if am or pm is missing or misapplied. The SDT has developed a new approach to the standard that addresses your concern.</p>		
Alliant Energy	No	<p>We believe that adding the mandate to use a 24 hr clock and list the time zone and Daylight Savings Time or not is going too far. We agree that it could be considered a best practice, but to require it and have a violation every time it is not used will result in multiple frivolous violations and clog the system with violations that have no impact on the reliability of the BES. With a zero-defect philosophy, which currently exists in the regulatory model, this is unworkable.</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
ISO New England Inc	No	<p>We agree with, support and have signed onto the ISO/RTO Standards Review Committee comments.</p>
<p><b>Response: Thank you for your comments. Please see the response to the ISO/RTO Standards Review Committee comments.</b></p>		
NV Energy	No	<p>We believe that the requirement to specify "daylight" versus "standard" is unwarranted and may lead to confusion among the parties. All time is understood to be "prevailing time" without this clarification. Requiring such will only serve to confuse rather than clarify.</p>
<p><b>Response: Thank you for your comments. The SDT believes use of the 24 hour clock and time zone references clarifies the time element of communications and by doing so enhances reliability by avoiding time mistakes that could compromise the stability of the BES. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Exelon Corporation and its affiliates	No	<p>It's not clear that this addresses a reliability problem. We are not aware of instances where failure to specify the time zone and daylight saving time resulted in communication failures between entities leading to a condition that threatened an outage or a cascading outage. Further, specifically creating a requirement is overly prescriptive. If it is justified as important to reliability, then the standard could</p>

Organization	Yes or No	Question 5 Comment
		suggest it as an attribute to be included in an entity developed protocol. See alternate standard language proposal in response to Q10.
<p><b>Response: Thank you for your comments. The SDT believes the use of the 24 hour clock and time zone references clarifies the time element of communications and by doing so enhances reliability by avoiding time mistakes that could compromise the reliability of the BES. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Brazos Electric Power Cooperative	No	Please see formal comments provided by APM.
<p><b>Response: Thank you for your comments. Please see the response to the APM comments.</b></p>		
Oncor Electric Delivery Company LLC	No	Oncor takes the position that more productive approach would be to encourage the creation of innovative Best Practices; as opposed to a mandatory fixed procedure which would limit innovation. Oncor believes that requiring registered entities to have its own internal communication protocols would encourage the adaption of best practices that could be shared, modified and implemented as a “best fit” and could potentially enhance reliability as opposed to a mandated “procedural specific” requirement
<p><b>Response: Thank you for your comments. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System.</b></p>		
Central Lincoln	No	We appreciate the change from requiring Central Time, but believe that 12 hour designations with AM or PM qualifiers to be just as clear as 24 hour clock time. In addition, we suggest that the DT or ST designation should only be required when deviating from the prevailing time in effect.
<p><b>Response: Thank you for your comments. The SDT believes use of the 24 hour clock and time zone references clarifies the time element of communications and by doing so enhances reliability by avoiding time mistakes that could compromise the reliability</b></p>		

Organization	Yes or No	Question 5 Comment
<p>of the BES. The SDT believes the 12 hour clock adds an element of confusion if am or pm is missing or misapplied. The SDT has developed a new approach to the standard that addresses your concern..</p>		
South Carolina Electric and Gas	No	
Colorado Springs Utilities	Yes	The use of "prevailing time" should be allowed, when appropriate, along with daylight and standard.
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Imperial Irrigation District	Yes	
BC Hydro	Yes	
JEA	Yes	
Pepco Holdings Inc & Affiliates	Yes	
Hydro One Networks Inc.	Yes	
Florida Municipal Power Agency	Yes	
Western Electricity Coordinating Council	Yes	
Bonneville Power Administration	Yes	
GP Strategies	Yes	

Organization	Yes or No	Question 5 Comment
Arizona Public Service Company	Yes	
HHWP	Yes	
Lakeland Electric	Yes	
NIPSCO	Yes	
PPL Generation, LLC on behalf of its Supply NERC Registered Entities	Yes	
Hydro-Quebec TransEnergie	Yes	
Orlando Utilities Commission	Yes	
Clark Public Utilities	Yes	
The United illuminating Company	Yes	
Ingleside Cogeneration LP	Yes	
Roger Zaklukiewicz Consulting	Yes	
ITC Holdings	Yes	
Utility Services, Inc.	Yes	

Organization	Yes or No	Question 5 Comment
City of Jacksonville Beach dba/Beaches Energy Services	Yes	
Utility System Efficiencies, InC.	Yes	
Portland General Electric - Transmission & Reliability Services	Yes	
Puget Sound Energy	Yes	
PPL Electric Utilities	Yes	
Ameren	Yes	
Idaho Power Company	Yes	
American Transmission Company, LLC	Yes	
Texas Reliability Entity	Yes	
Seminole Electric Cooperative	Yes	
U.S. Bureau of Reclamation	Yes	
California Independent System Operator	Yes	
Kansas City Power & Light	Yes	

Organization	Yes or No	Question 5 Comment
IESO		We have no preference one way or the other as long as the personnel understand each other. However, if the option to use daylight saving time or standard time is allowed (to be agreed by the personnel), it begs the question as to why the 24-hour clock hours must be followed, and why the 12-hour clock with am and pm specified is not allowed.
<p><b>Response:</b> Thank you for your comments. The SDT believes use of the 24 hour clock and time zone references clarifies the time element of communications and by doing so enhances reliability by avoiding time mistakes that could compromise the reliability of the BES. The SDT believes the 12 hour clock adds an element of confusion if am or pm is missing or misapplied. The SDT has developed a new approach to the standard that addresses your concern.</p>		
SMUD		Mandating use of a 24-hour clock reference provides no improvement to reliability. This is an auditing function only, there is no reliability benefit to differentiate 0800 and 8 am.
<p><b>Response:</b> Thank you for your comments. The SDT believes use of the 24 hour clock and time zone references clarifies the time element of communications and by doing so enhances reliability by avoiding time mistakes that could compromise the reliability of the BES. The SDT believes the 12 hour clock adds an element of confusion if am or pm is missing or misapplied. The SDT has developed a new approach to the standard that addresses your concern.</p>		
New York Power Authority		NYPA supports the comments submitted by the NPCC Regional Standards Committee (RSC).
<p><b>Response:</b> Thank you for your comments. Please see the response to the comments submitted by the NPCC Regional Standards Committee (RSC).</p>		
Public Service Enterprise Group		See #10.
<p><b>Response:</b> Thank you for your comments. Please see the response to Question #10.</p>		

6. The SDT modified the requirement for use of three-part communications for Operating Communications to clarify that this is not applicable for Reliability Directives and split the single requirement into two requirements: one for the issuer (R2) and another for the receiver (R3). Do you agree with this modification?

**Summary Consideration:**

Many of the commenters who disagreed with the changes to Requirements R2 and R3 believed, while it was appropriate to separate sender from receiver in the standard, that there should only be one standard requiring 3 part communication. Many believed COM-002-3 should be the standard that requires three part communication and only during emergencies. Many also believe that COM-003-1 is too prescriptive. *The SDT believes three part communication should be used for all communications that are direct instructions to change the BES. The SDT believes three part communication is a proven protocol that improves clarity and reduces the risks to BES reliability by reducing miscommunication. Due to the change in approach, the SDT has removed the draft 2 clarification that this is not applicable for Reliability Directives.*

Organization	Yes or No	Question 6 Comment
Northeast Power Coordinating Council	No	There are a number of references appearing that state “excluding Reliability Directives”. If Reliability Directive is going to be defined in a separate project (Project

Organization	Yes or No	Question 6 Comment
		<p>2006-06), how will stakeholders understand what is really being excluded for the purposes of this Standard’s scope?</p> <p><b>Response: The SDT has developed a new approach to the standard that addresses your concern.</b></p> <p>It also needs to be made clear when an action is a Reliability Directive. Will each entity be required to define what is to be included as a Reliability Directive?</p> <p><b>Response: Yes, COM-002-3, R1 requires that the entity “shall identify the action as a Reliability Directive to the recipient. “</b></p> <p>With the definition of Operating Communication, three-part communications is expanded to include communications beyond directives, communications that might not warrant governance by this Standard.</p> <p><b>Response: As defined in draft 3 of COM-003-1, an Operating Instruction is a “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</b></p> <p>The proposed exception (specifically Reliability Directives used during emergencies) does not support the reason the SAR was proposed--to improve protocols during emergencies.</p> <p><b>Response: The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” The SAR is clear that normal operating state communications as well as emergency state communications are to be addressed in the standard.</b></p> <p>The term Operating Communications is not significantly different from the term Reliability Directives (see comments to Q1). Using the term Reliability Directives to support the requirements for 3-part communication can avoid</p>



Organization	Yes or No	Question 6 Comment
		<p>(a) any confusion with the requirement in COM-002-3,  <b>Response: This was a concern of the SDT also. A webinar was conducted on June 7, 2012 and was posted to NERC.com to clarify the relationship between the two standards.</b>  <a href="http://www.nerc.com/docs/standards/dt/Webinar_Slides_Project_2007-02_June_7_2012_final.pdf">http://www.nerc.com/docs/standards/dt/Webinar_Slides_Project_2007-02_June_7_2012_final.pdf</a></p> <p>(b) potential double jeopardy of violating both COM-002 and COM-003, and            (c) the need to exercise 3-part communication for routine operating instructions.  <b>Response: See our remarks below.</b></p> <p>Suggest consider removing the term Operating Communications. Are Requirements R2 and R3 needed if Reliability Directives already cover non-emergency conditions (instructions/actions that are needed to address potential Adverse Reliability Impact)?</p> <p>The requirement to exercise three-part communication to handle Reliability Directives is thus duly addressed in COM-002-3. It hasn't been shown that three-part communication is necessary for routine operating instructions. Realistically the definition of Operating Communications covers all communications. Only Reliability Directives should require three-part communications, and should be enforceable if a miscommunication results in an error on the BES.</p> <p><b>Response: The OPCSDT respectfully disagrees. The term "Reliability Directive" in the current draft of COM-002-3 covers a very narrow band of low frequency, high impact events. Communication protocols must be applicable to all BES communications to clarify content in order to prevent mistakes that could negatively impact the BES.</b></p>

Organization	Yes or No	Question 6 Comment
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
<p>ACES Power Marketing Standards Collaborators</p>	<p>No</p>	<p>1. We do not agree that excluding Reliability Directives is a good idea. We would prefer to see COM-003-1 and COM-002-3 combined and have the requirements only apply to Reliability Directives. If these protocols should be used for any type of communication, we believe they should be used for Reliability Directives as we've stated in our comments in Question 1. The definition of a Reliability Directive as proposed in COM-002-3 is "where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact." There is no type of communication more important than a Reliability Directive, therefore, the protocols outlined in R2 and R3 of COM-003-1 should be applicable to them. During the webinar on June 7, 2012, it was said that the only distinctions between COM-002-3 and COM-003-1 are the VRF/VSL levels and that a Reliability Directive must be stated as such when issued. There is no reason both standards can't be combined into a single standard and simply split out the VRF/VSL levels for Reliability Directives while keeping the requirement where the RC, TOP and BA shall identify the action as a Reliability Directive when one is issued. We suggest that the SDTs consider combining their efforts in this manner.</p> <p><b>Response: The SDT has developed a new approach to the standard that may address your concern.</b></p> <p>2. However, if both projects are to continue along separate paths, we'd like to see the requirements in both mirror one another so entities aren't wondering what the distinction is between the two descriptions of three-part communication. COM-003-1 is more detailed in outlining the steps that should be taken when using three-part communication than COM-002-3. COM-002-3 R2 states that the recipient "shall repeat, restate, rephrase or recapitulate..." COM-003-1 doesn't use these words. It simply states that the receiver shall "repeat" or "request the issuer reissue..."</p> <p><b>Response: The SDT has changed the relevant language in COM-003-1, draft 3 to the</b></p>

Organization	Yes or No	Question 6 Comment
		<p>same language as COM-002-3, R2 and R3.</p> <p>3. We do agree with splitting the single requirement into two requirements: one for the issuer and one for the receiver. However, we suggest the SDT develop a flow chart that demonstrates the communication paths and the loop flow of the steps to further clarify what needs to be done and when. For example, in R2 Part 2.2, after an Operating Communication is reissued at the request of the receiver (bullet 3), the receiver should repeat the information to make sure they received it correctly (R3 bullet 1) and the issuer should confirm the receiver’s response (Part 2.2 bullet 1). As the parts are written currently, the loop flow of the steps isn’t clear. It may seem intuitive but a literal reading doesn’t capture the loop flow as intended. R3 even has a gap in that the recipient can choose to repeat the Operating Communication or they can request it be reissued. Thus, if they request it is reissued, they don’t have to repeat it back.</p> <p><b>Response: The SDT has changed the relevant language in COM-003-1, draft 3 to the same language as COM-002-3, R2 and R3 to avoid confusion.</b></p> <p>4. In R3, we suggest adding the words, “before taking action” to the end of the first bullet to further emphasize the importance of receiving confirmation from the issuer. If action is taken prior to confirmation, a critical mistake could be made if the instruction was heard and repeated back incorrectly.</p> <p><b>Response: The SDT believes this suggestion has merit, but has changed language in COM-003-1, draft 3 to the same language as COM-002-3, R2 and R3.</b></p>
<p><b>Response: Thank you for your comments. Please see the remarks above.</b></p>		
<p>Midwest Reliability Organization NERC Standards Review Forum</p>	<p>No</p>	<p>The MRO NSRF recommends the following comments for consideration by the SDT:</p> <p>1. The NSRF does not understand how three part communication is not applicable to Reliability Directives, when COM-002-3 states that three part communication shall be used when issuing a Reliability Directive. This adds confusion and is further evidence</p>

Organization	Yes or No	Question 6 Comment
		<p>that there should only be one communication standard.</p> <p><b>Response: Three part communication is applicable to Reliability Directives. If you are referring to the exclusion of Reliability Directives from COM-003-1, R2 and R3, that was incorporated to address double jeopardy issues. When an entity declares a Reliability Directive under COM-002-3, R1; requirements COM-002-3, R2 and R3 apply. The SDT has developed a new approach to the standard that addresses your concern.</b></p> <p>2. How are group calls going address three part communication? Many entities use blast calls to forward system wide information in a very short period of time. The intent of a blast call is to speed up the dispersing of information from one to many. Please clarify.</p> <p><b>Response: Both Standard drafts did not address “blast calls.” The SDT has addressed “blast” or “all” calls into COM-003-1, draft 3.</b></p> <p>3. Currently there are 1681 entities (BA, TOP, RC, GOP, and DP) registered with NERC. Assume that each entity has one phone call every 10 minutes in a 12 hour day shift and half during a night shift (being conservative). A single entity will have 72 per day on an average. Note that both parties (sender and receiver) will need to use COM-003 requirements. There will be about 120,000 calls per day within NERC where COM-003 will need to be applied. That equates to 44,176,680 calls per year that require COM-003 requirements to be used. While all these communications will not necessarily be an Operating Communication, but the NSRF believes that at least 75% will be Operating Communications. This alone will slow down the reliability of our system. Is this the intent of the SDT?</p> <p><b>Response: The SDT has developed a new approach to the standard that addresses your concern.</b></p> <p>Please consider all industry comments and upon development of “consideration of comments”, run the number of instances where COM-003 will need to be applied.</p>

Organization	Yes or No	Question 6 Comment
		<p>The question should be, does this hamper our system reliability or not.</p> <p>Response: During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT's concern.</p>
<p><b>Response: Thank you for your comments. Please see the remarks above.</b></p>		
Duke Energy	No	<p>We don't believe that 3-part communications are needed for ALL routine communications, and that R2 and R3 should be deleted. Also, there should only be one standard for communications protocols. The communications efforts in Projects 2007-02, 2006-06 and 2007-03 should be combined.</p>
<p><b>Response: Thank you for your comments. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT's concern.</b></p>		
Dominion	No	<p>The current version of this standard expands the use of three-part communication to all Operating Communications, not just Reliability Directives as specified in draft standard COM-002-3, Project 2006-06. Also, given the definition of Operating Communication (i.e., communication of instruction to change...an Element or Facility...) and the use of "two-party, person-to-person" in the Requirements, communications between two members of the same organization (e.g., two Generator Operators, two Transmission Operators) would be subject to this standard.</p>

Organization	Yes or No	Question 6 Comment
		<p>This seems impractical, requiring organizations to document, as evidence, internal communications. Dominion suggests the language be clarified to eliminate this issue.</p> <p><b>Response: Requirement R1 in draft 3 of COM-003-1 only applies to Operating Instructions between functional entities, not within a functional entity.</b></p> <p>The requirement as written could also be interpreted to mean that three-part communications is not necessary for communicating Reliability Directives. If the protocol for Reliability Directives must be covered by a different standard, then that standard should be referenced in this requirement in order to clarify the intent of the exclusion and remove the implication that three-part communications do not apply to Reliability Directives. COM-003-1 R2 could be rewritten to add clarification for Reliability Directives only as “Each Reliability Coordinator, Transmission Operator and Balancing Authority that issues an oral, two-party, person-to-person Operating Communication, excluding Reliability Directive (as referenced in COM-002-3 R2 and R3) shall:”</p> <p><b>Response: Reliability Directive from COM-002-3 was excluded from that draft of COM-003-1 to avoid double jeopardy. If we specifically referenced COM-002-3, R2 and R3 in the text of COM-003-1 and COM-002-3 was altered or eliminated in the future COM-003-1 would have an erroneous or missing reference. The SDT has developed a new approach to the standard that addresses your concern.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
JEA	No	<p>The two standards (COM002&amp;COM003) should be merged into one standard. Three part communications should be considered a best practice and only required during emergency directives.</p>
<p><b>Response: Thank you for your comments. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols</b></p>		

Organization	Yes or No	Question 6 Comment
<p>concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT's concern.</p>		
<p>Associated Electric Cooperative JRO00088</p>	<p>No</p>	<p>AECI appreciates the SDT's desire to add flexibility and yet clarity for what is expected, but we absolutely disagree with a split into two requirements. Such a split unnecessarily increases the industry's risk, of a single three-part communication failure, being assessed in violation of two separate requirements, yet with no added value to BES reliability. Given today's environment, PVs will be written although the intended content was accurately conveyed and the system properly operated, should these requirements exist. So AECI agrees with SERC OC STANDARDS REVIEW GROUP's assessment that R2 and R3 should be entirely removed.</p>
<p>Response: The SDT appreciates your comments. The SDT believes that having the COM-003-1 three-part communication requirements separate: one for the sender and one for the receiver, more appropriately separates the unique actions and accountabilities for each. This is consistent with the three-part structure and language in COM-002-3. This separation also prevents double jeopardy and prevents the sender and receiver from being cited based on the other's action or inaction. The SDT has developed a new approach to the standard that addresses your concern.</p>		
<p>LG&amp;E and KU Services</p>	<p>No</p>	<p>Three part communications should not be required for routine operating communications. See the definition of Reliability Directive in COM-002, which addresses reliability issues. We suggest that R2 and R3 be eliminated, since neither one will increase reliability.</p>
<p>Response: Thank you for your comments. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT's concern.</p>		
<p>Pepco Holdings Inc &amp; Affiliates</p>	<p>No</p>	<p>This modification for use of 3 part communications for Operating Communications is</p>

Organization	Yes or No	Question 6 Comment
		confusing and should not be required for Normal conditions, non reliability communications.
<p><b>Response:</b> Thank you for your comments. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</p>		
MEAG Power, Danny Dees, Steven Grego, Steve Jackson	No	Overly prescriptive. NERC should deal with risk and performance.
<p><b>Response:</b> Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</p>		
ISO/RTO Standards Review Committee	No	<p>The SRC agrees that if there is a requirement for 3 part communications as proposed, then the proposed exception is needed to avoid double jeopardy, and the differentiation between issuer and receiver is needed. The SRC however does not agree with the need for the requirement itself. By introducing the proposed exception (i.e. of Reliability Directives used during emergencies) the SDT has invalidated the very reason that its SAR was proposed (i.e. to improve protocols DURING emergencies).</p> <p><b>Response:</b> Reliability Directive from COM-002-3 was excluded from that draft of COM-003-1 to avoid double jeopardy. The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” The SDT believes that reliability risk exists when routine changes to the configuration of the BES are ordered. Three part communication provides additional clarity to communicating parties that helps</p>



Organization	Yes or No	Question 6 Comment
		<p><b>prevent misunderstandings that could negatively impact the BES.</b></p> <p>The SRC disagrees with using the term Operating Communications because the term is not significantly different from the term Reliability Directives (see our comments under Q1). Using the term Reliability Directives to support the requirements for 3-part communication can avoid</p> <p>(a) any confusion with the requirement in COM-002-3,</p> <p><b>Response: This was a concern of the SDT also. A webinar was conducted on June 7, 2012 and was posted to NERC.com to clarify the relationship between the two standards.</b></p> <p><a href="http://www.nerc.com/docs/standards/dt/Webinar_Slides_Project_2007-02_June_7_2012_final.pdf">http://www.nerc.com/docs/standards/dt/Webinar_Slides_Project_2007-02_June_7_2012_final.pdf</a></p> <p>(b) potential double jeopardy of violating both COM-002 and COM-003, and</p> <p><b>Response: See the remarks above</b></p> <p>(c) the need to exercise 3-part communication for routine operating instructions.</p> <p><b>Response: See the remarks below.</b></p> <p>If the SDT’s intent is to require 3-part communication for any and all operating instructions (as the proposed term suggests), then this intent will result in unnecessary 3-part communication burdens for simple actions such as requesting the removal of a line, or switching, or raising generation, or even to “maintain” its current state. We suggest the SDT remove the term Operating Communications. With respect to Requirements R2 and R3, we question the need for having these requirements if Reliability Directives already cover non-emergency conditions (instructions/actions that are needed to address potential Adverse Reliability Impact). The requirement to exercise 3-part communication to handle Reliability Directives is thus duly addressed in COM-002-3. Other than emergency conditions and potential Adverse Reliability Impact conditions, we do not see, nor has the SDT proven a need to exercise 3-part</p>

Organization	Yes or No	Question 6 Comment
		<p>communication for routine operating instructions.</p> <p><b>Response:</b> The OPCPSDT respectfully disagrees. The term “Reliability Directive” in the current draft of COM-002-3 covers a very narrow band of low frequency, high impact events. The SDT believes that reliability risk exists when routine changes to the configuration of the BES are ordered. The Communication protocols must be applicable to all BES communications to clarify content in order to avoid mistakes that could negatively impact the BES. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</p>
<p><b>Response:</b> Thank you for your comments. Please see the responses above.</p>		
City Water Light and Power	No	<p>Three part communications should not be required for routine operating communications. See the definition of Reliability Directive in COM-002, which addresses reliability issues.</p>
<p><b>Response:</b> Thank you for your comments. The OPCPSDT respectfully disagrees. The term “Reliability Directive” in the current draft of COM-002-3 covers a very narrow band of low frequency, high impact events. Communication protocols must be applicable to all BES Operating Communications to clarify content in order to avoid mistakes that could negatively impact the BES.</p> <p>During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</p>		
Hydro One Networks Inc.	No	<p>The term Operating Communications is not significantly different from the term Reliability Directives. Using the term Reliability Directives to support the</p>

Organization	Yes or No	Question 6 Comment
		<p>requirements for 3-part communication can avoid</p> <p>(a) any confusion with the requirement in COM-002-3,</p> <p><b>Response:</b> This was a concern of the SDT also. A webinar was conducted on June 7, 2012 and was posted to NERC.com to clarify the relationship between the two standards.  <a href="http://www.nerc.com/docs/standards/dt/Webinar_Slides_Project_2007-02_June_7_2012_final.pdf">http://www.nerc.com/docs/standards/dt/Webinar_Slides_Project_2007-02_June_7_2012_final.pdf</a></p> <p>(b) potential double jeopardy of violating both COM-002 and COM-003, and</p> <p><b>Response:</b> See the remarks above</p> <p>(c) the need to exercise 3-part communication for routine operating instructions.</p> <p><b>Response:</b> See the remarks below.</p> <p>Realistically, the definition of Operating Communications covers all communications. We believe that only Reliability Directives should require 3-part communications, and should be enforceable if a miscommunication results in an error on the BES.</p> <p><b>Response:</b> The OPCPSDT respectfully disagrees. The term “Reliability Directive” in the current draft of COM-002-3 covers a very narrow band of low frequency, high impact events. Communication protocols must be applicable to all BES Operating Communications to clarify content in order to avoid mistakes that could negatively impact the BES. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</p>
<p><b>Response:</b> Thank you for your comments. Please see the response above.</p>		

Organization	Yes or No	Question 6 Comment
SPP Standards Review Group	No	<p>The format of the requirement is an improvement. However, we have concerns about the standard being overly prescriptive. All actions ‘...to change or maintain the state, status, output or input of an Element or Facility...’ of the BES do not have a significant impact on the reliability of the BES. The draft standard mandates that they do. Applying 3-part communications to all Operating Communications places an overly burdensome task on the industry in monitoring and tracking compliance. Additionally, a zero-tolerance interpretation of this requirement places an unjustified risk on the industry without making an appreciable improvement in BES reliability.</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
SERC OC Standards Review Group	No	<p>Three part communications should not be required for routine operating communications. See the definition of Reliability Directive in COM-002, which addresses reliability issues. We suggest that R2 and R3 should be eliminated, since neither one will increase reliability.</p>
<p><b>Response: Thank you for your comments. The OPCSDT respectfully disagrees. The term “Reliability Directive” in the current draft of COM-002-3 covers a very narrow band of low frequency, high impact events. Communication protocols must be applicable to all BES Operating Communications to clarify content in order to avoid mistakes that could negatively impact the BES. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</b></p>		
NERC Operating Committee	No	<p>See Response 10 - the OC sees these differing concepts for communications as overly prescriptive and complex.</p>
<p><b>Response: Thank you for your comments. Please refer to the response to your comments in Question 10.</b></p>		

Organization	Yes or No	Question 6 Comment
Southern Company	No	Southern disagrees that three part communications should be required for routine operating communications. A more appropriate definition of Reliability Directive has been included in Project 2006-06 (Reliability Coordination) for COM-002-3. As such, the definition of Reliability Directive developed in Project 2006-06 should be used here as part of this Project 2007-02. Further, this capitalized term should have one definition and should not be defined differently in different standards. Otherwise, there will be ambiguity and unnecessary confusion. Southern suggests that R2 and R3 should be eliminated, since neither one will increase reliability.
<p><b>Response: Thank you for your comments. The OPCPSDT respectfully disagrees. The term “Reliability Directive” in the current draft of COM-002-3 covers a very narrow band of low frequency, high impact events. Communication protocols must be applicable to all BES Operating Communications to clarify content in order to avoid mistakes that could negatively impact the BES. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</b></p>		
The Dayton Power and Light Company	No	This standard specifically excludes “Reliability Directives” which is a term that does not currently exist in the list of definitions, rather it is proposed in a separate standard (COM-002-3) which is currently in the approval process. Not sure how you can reference a term from a pending standard.
<p><b>Response: Thank you for your comments. We wanted to acknowledge the term because it has an impact on the content and intent of COM-003-1. The two SDTs have been coordinating because of the linkages between the two standards’ requirements.</b></p>		
Lakeland Electric	No	I do not understand why Reliability Directives would be excluded! Reliability Directives are capitalized in the box on the Development Roadmap and in this question but I cannot find the term in the February 8, 2012 NERC Glossary. So where is Reliability Directives defined? I am concerned that the exclusion will cause problems especially if the clarifying box is omitted from the final standard. The split is

Organization	Yes or No	Question 6 Comment
		OK.
<p><b>Response:</b> Thank you for your comments. Both standards, COM-003-1 and COM-002-3 are still under development so the terms in each are not yet effective. The reason Reliability Directives are excluded from COM-003-1, R2 and R3 is to prevent double jeopardy with requirements COM-002-3, R2 and R3 during Emergencies or Adverse Reliability Impacts. Both standards are going through ballot and industry should be afforded clarification of the relationship between two closely related concepts.</p>		
CenterPoint Energy Houston Electric, LLC.	No	<p>Question 6 Comments: The proposed language in this requirement can be omitted and incorporated in COM-002-2 R2, where language has already been written and is currently in force regarding 3-part communications. The industry is well aware and versed in the method of communicating using 3-part communications. The elaboration of performing a three part communication is a “how to” and not necessary and can be omitted altogether. The term “3-Part Communication” could be defined and added to the NERC Glossary to suffice the elaboration of the definition proposed in this requirement. The idea of requiring all communications (Operating Communications) to be made as 3-part communications is not practical and should be left up to the communicating entities. Requiring ongoing administration of “3-part” communications will impede rather than improve timely communications consequently affecting the reliability of the BES.</p>
<p><b>Response:</b> Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</p>		
IESO	No	<p>The IESO disagrees with using the term Operating Communications as it is not much different from the term Reliability Directives (see our comments under Q1). Using the term Reliability Directives to support the requirements for 3-part communication can avoid</p>

Organization	Yes or No	Question 6 Comment
		<p>(a) any confusion with the requirement in COM-002-3,  <b>Response: This was a concern of the SDT also. A webinar was conducted on June 7, 2012 and was posted to NERC.com to clarify the relationship between the two standards.</b>  <a href="http://www.nerc.com/docs/standards/dt/Webinar_Slides_Project_2007-02_June_7_2012_final.pdf">http://www.nerc.com/docs/standards/dt/Webinar_Slides_Project_2007-02_June_7_2012_final.pdf</a></p> <p>(b) potential double jeopardy of violating both COM-002 and COM-003, and  <b>Response: See the remarks above</b></p> <p>(c) The need to exercise 3-part communication for routine operating instructions.  <b>Response: See the remarks below.</b></p> <p>However, if the SDT’s intent is to require 3-part communication for any and all operating instructions (as the proposed term suggest), then this intent will result in unnecessary 3-part communication burdens for simple actions such as when requests for the removal of a line, or switching, or generation output changes are issued. We suggest the SDT to remove the term Operating Communications. With respect to Requirements R2 and R3, we question the need for having these requirements if Reliability Directives also cover non-emergency conditions (instructions/actions that are needed to address potential Adverse Reliability Impact). The requirement to exercise 3-part communication to handle Reliability Directives is thus duly addressed in COM-002-3. Other than emergency conditions and potential Adverse Reliability Impact conditions, we do not see a need to exercise 3-part communication for routine operating instructions.</p> <p><b>Response: The OPCSDT respectfully disagrees. The term “Reliability Directive” in the current draft of COM-002-3 covers a very narrow band of low frequency, high impact events. Communication protocols must be applicable to all BES Operating Communications to clarify content in order to avoid mistakes that could negatively impact the BES. During its discussion of the approval of the Interpretation of COM-</b></p>

Organization	Yes or No	Question 6 Comment
		<p>002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</p>
<p><b>Response: Thank you for your comments. Please see the response to your comments above.</b></p>		
SMUD	No	<p>Requirements R2 and R3 are over prescriptive and included as a business practice in the entities’ training program.</p>
<p><b>Response: Thank you for your comments. Communication protocols must be applicable to all Operating Instructions to clarify content in order to avoid mistakes that could negatively impact the BES. The SDT does not see three part communication as a business practice.</b></p>		
Liberty Electric Power LLC	No	<p>Three part communication is a best business practice. Three part communication should be required during a declared Emergency. But there is no reason to create a standard, and the massive monitoring requirements and records obligations which go along with a standard, to cover business communications.</p>
<p><b>Response: Thank you for your comments. Communication protocols must be applicable to all Operating Instructions to clarify content in order to avoid mistakes that could negatively impact the BES. The SDT does not see three part communication as a business practice. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
San Diego Gas & Electric	No	<p>The boxed note in the draft of COM-003-1 states that “Reliability Directives are a type of Operating Communications...” and the process described in R2 and R3 is 3 way communications. Why is the SDT segregating this as if it is a “separate process” that needs to be followed by operating personnel? The two do not appear to be separate communication processes. SDG&amp;E recommends removing the word, “excluding,” and</p>



Organization	Yes or No	Question 6 Comment
		<p>replacing it with the word “including,” so that R2 states:                      ”Each Reliability Coordinator, Transmission Operator and Balancing Authority that issues an oral, two-party, person-to-person Operating Communication, including Reliability Directives shall:</p> <p><b>Response: The exclusion was an effort to prevent double jeopardy from the applicability of two standards (COM-003-1 and COM-002-3).</b></p> <p><i>”SDG&amp;E also recommends that the following language be added in a bullet to R2.2:</i></p> <ul style="list-style-type: none"> <li>o Request that the receiver repeat the Operating Communication if the receiver does not issue a response (not necessarily verbatim).</li> </ul> <p>R3 notes that the Registered Entity who receives the Operating Communication needs to repeat the Operating Communication provided.</p> <p>In order to promote compliance and proper communications, this bullet point should be added.</p> <p><b>Response: The OPCPSDT has changed language in COM-003-1, draft 3 to the same language as COM-002-3, R2 and R3 to address industry comments regarding the dissimilar language in draft 2.</b></p>
<p><b>Response: Thank you for your comments. Please see the response to your comments above.</b></p>		
<p>PPL Generation, LLC on behalf of its Supply NERC Registered Entities</p>	<p>No</p>	<p>Three part communication should not be required for routine operating communications.</p>
<p><b>Response: Thank you for your comments. The OPCPSDT respectfully disagrees. Communication protocols must be applicable to all BES Operating Communications to clarify content in order to avoid mistakes that could negatively impact the BES. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited</b></p>		

Organization	Yes or No	Question 6 Comment
<p>development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT's concern.</p>		
<p>Indiana Municipal Power Agency</p>	<p>No</p>	<p>IMPA agrees with the splitting of a single requirement into two requirements. However, the blue box on page 2 of 10 makes the statement "Reliability Directives are a type of Operating Communications, to the extent they change or maintain the state, status output, or input of an Element or Facility of the Bulk Electric System" which seems to include Reliability Directives by simply referencing Operating Communications in each requirement (R2 and R3). By excluding Reliability Directives, the requirement is now very confusing and can be interpreted two different ways. Requirement 2 does not include the Generator Operator as a potential entity that could issue an Operating Communication. Within its organization or company, a Generator Operator could issue an Operating Communication, such as one location calling and telling another location to start its generating unit. IMPA believes the Generator Operator should be included in R2.</p>
<p>Response: The SDT appreciates your comments. This was a concern of the SDT also. A webinar was conducted on June 7, 2012 and was posted to NERC.com to clarify the relationship between the two standards.  <a href="http://www.nerc.com/docs/standards/dt/Webinar_Slides_Project_2007-02_June_7_2012_final.pdf">http://www.nerc.com/docs/standards/dt/Webinar_Slides_Project_2007-02_June_7_2012_final.pdf</a>                      Based on the revised definition of Operating Instruction, a GOP can only be a receiver of an Operating Instruction.</p>		
<p>Roger Zaklukiewicz Consulting</p>	<p>No</p>	<p>See previous comment to Question 1.</p>
<p>Response: Thank you for your comments.</p>		
<p>Sacramento Municipal Utility District</p>	<p>No</p>	<p>See response in #10</p>
<p>Response: Thank you for your comments.</p>		

Organization	Yes or No	Question 6 Comment
Entergy Services	No	<p>Three part communications should not be required for routine operating communications. See the definition of Reliability Directive in COM-002, which addresses the actual reliability issues associated with communications. This team once had coordinated with the RC SDT (Project 2006-06), and the RTO SDT (Project 2007-03), with a different approach for routine communications resulting from a meeting between the chairs of the three SDTs on November 17, 2009 in the SERC offices in Charlotte, NC. Quoting from the meeting setup email: “On the basis that the SC members are the key drivers of the joint effort to finalize “Directives and Three-Part Communications”, [...] and [...] indicated a preference for Tuesday 1-3PM ET November 17. Some members of the RTOSDT and RCSDT will be attending the meeting in person....” At that meeting it was agreed that RC SDT (Project 2006-06) would develop the definition for “Reliability Directives”, and require 3-way communication for Reliability Directives by the RC. Conversely, it was decided that OPCP (Project 2007-02) would handle ordinary communications, but would not require 3-way communications for routine communications. RTO SDT (Project 2007-03) only agreed to this course of action (in effect, backing out of writing ordinary communications standards as part of Project 2007-03) because OPCP SDT (Project 2007-02) had committed to this approach during that meeting. It should be noted that “COM-001-1 Telecommunications” and “COM-002-2 Communications and Coordination” are included in the SAR for RTO SDT (Project 2007-02) and its coordination with RC SDT and OPCP SDT was conditioned upon RC SDT and OPCP SDT following the course of action agreed-to in the November 17, 2009 Charlotte, NC meeting. OPCD SDT (Project 2007-02) should honor the intent of that meeting in Charlotte and remove R2 and R3 from this standard. We suggest that R2 and R3 should be eliminated, since neither one will result in increased reliability.</p>
<p><b>Response:</b> Thank you for your comments. The OPCPSDT is aware of the meeting in Charlotte in 2009. The OPCPSDT respectfully disagrees with your summarization of the meeting. The members of the OPCP SDT that were in attendance at the Charlotte meeting referenced above, while agreeing that the RCSDT was going to define “Reliability Directive,” have no record that there was an agreement to eliminate three part communication from the development of COM-003-1. During its discussion of the</p>		

Organization	Yes or No	Question 6 Comment
<p>approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</p>		
<p>City of Austin dba Austin Energy</p>	<p>No</p>	<p>It makes sense to separate R2 from R3; however, AE respectfully objects to mandating three-part communication for normal operating communications. The fact that most registered entities already use three-part communications for normal operating communications makes it a best practice; it does not mean a NERC Reliability Standard should require it.</p>
<p>Response: Thank you for your comments. The OPCSDT respectfully disagrees. The term “Reliability Directive” in the current draft of COM-002-3 covers a very narrow band of low frequency, high impact events. Communication protocols must be applicable to all BES Operating Communications to clarify content in order to avoid mistakes that could negatively impact the BES. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</p>		
<p>Essential Power, LLC</p>	<p>No</p>	<p>Although I agree with the requirement making the receiver responsible for repeating the message, this should be included in COM-002. Again, having two separate Standards on this topic is redundant and unnecessary.</p>
<p>Response: Thank you for your comments. The SDT respectfully disagrees that COM-002 and COM-003-1 are redundant.</p>		
<p>Salt River Project</p>	<p>No</p>	<p>This combination for R2 and R3 would open some vertical entities to be being fined multiple times for the same communication.</p>
<p>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</p>		

Organization	Yes or No	Question 6 Comment
Wisconsin Electric dba We Energies	No	<p>This is too similar to but different than what is required for a directive. Since 99.9% or more communications will not be directives, we will be conditioning operators to use this for directives also.</p> <p><b>Response: The applicability of COM-003-1 is for instructions that change the configuration of the BES, not for casual conversation or for discussions of potential options among entities.</b></p> <p>If I reissue an Operating communication because the other party does not respond soon enough for me for whatever reason, the other party has violated R3 of this standard. R3 in general would not apply to a DP except for loads connected at transmission voltages.</p> <p><b>Response: The SDT has developed a new approach to the standard that addresses your concern.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
PPL Electric Utilities	No	<p>Since Reliability Directives are a subset of Operating Communications, if this was done to lower the VRF for Operating Communications that are not Reliability Directives, this modification makes sense. However, having two stds/rqmts address 3-part communication (even if not in same words) is not as clear as it could be. One standard requiring 3-part comm for Real-time operating communications which includes Reliability Directives would be more straight-forward, with a higher VRF for Reliability Directives.</p>
<p><b>Response: Thank you for your comments. The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” This is a broader scope for communications than that for Project 2006-06.</b></p>		

Organization	Yes or No	Question 6 Comment
Illinois Municipal Electric Agency	No	IMEA agrees with comments submitted by the SERC OC Standards Review Group.
<p><b>Response: Thank you for your comments. Please see the response to comments submitted by the SERC OC Standards Review Group.</b></p>		
Ameren	No	From our perspective, use of such a split for all Operating Communications (not directives) would add to the confusion.
<p><b>Response: Thank you for your comments. The SDT believes that a separate requirement for the sender and receiver is the only reasonable manner in which to capture applicability. The SDT is using the language of COM-002-3, R2 and R3 in draft 3 of COM 003-1.</b></p>		
Idaho Power Company	No	I'm not sure I understand the separation of Directives and these Operating Instructions. They seem very similar and could be incorporated into the same standard. The split between Issuer and Receiver seems to add some clarity.
<p><b>Response: Thank you for your comments. The purpose of the SAR for this project is "Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time." This is a broader scope for communications than that for Project 2006-06.</b></p>		
American Transmission Company, LLC	No	<p>The prescriptive requirements currently in R2, and R3, tell how, not what, an entity is obligated to do. To address the fact that most Operating entities engage in "Operating Communications", one requirement(combining R2 and R3) is all that is needed, and ATC recommends that Requirement 2 be restated as follows:</p> <p>R2 Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider that issues, or receives an Operating Communication, excluding Reliability Directives, shall use Three-part Communications.</p>

Organization	Yes or No	Question 6 Comment
		<p><b>Response: The SDT believes that a separate requirement for the sender and receiver is the only reasonable manner in which to capture applicability and to avoid possible violations that are caused by one entity to be awarded to the other.</b></p> <p>Furthermore, ATC recommends that the SDT reconsider adding the “three-part communication” as a defined term properly vetted through the appropriate process, and added to the NERC Glossary of Terms. The definition as previously noted in Draft #1 is below.</p> <p>Three-part Communication - A Communications Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct by the party who initiated the communication.</p> <p><b>Response: The SDT proposed that in draft 1 and was heavily criticized by stakeholders. It was eliminated in draft 2 in response to those comments.</b></p>
<p><b>Response: Thank you for your comments. Please see the comments above.</b></p>		
MISO	No	<p>Given the broad applicability of R2 and R3 as a result of the definition of Operating Communication, the split of requirements may result in entities being assessed violations for multiple requirements as a result of 1 (one) communication or operating event. While MISO appreciates the clarity in roles and responsibilities the split provides, it is concerned about the future application and feasibility thereof. Please refer to MISO’s comments regarding the definition of Operating Communication for more detail on the likely adverse impact to reliability that will result from the diversion of time and resources the split will require.</p> <p>MISO cannot, at this time, support the addition of those requirements.</p>
<p><b>Response: Thank you for your comments. The SDT has developed a different approach to the standard that addresses your concern.</b></p>		

Organization	Yes or No	Question 6 Comment
NextEra Energy, Inc	No	<p>NextEra does not agree with R2 or R3, as drafted. COM-002-2, which applies to three-way communications for Reliability Directives, is not mirrored by the proposed COM-003-1, thus creating two different three-way communication protocols. This disconnect between the two three-way communication Standards is counterproductive for System Operators, who we want focused on the reliable operation of the system, rather than memorizing multiple three-way communication protocols. As a member of the Standards Committee, NextEra has expressed its concern that Standard Drafting Teams (SDTs) are not sufficiently communicating and coordinating in a manner that promotes clear and effective Reliability Standards. It appears that the COM-002 and COM-003 SDTs have not coordinated their efforts, because COM-003-1 proposes to implement a more restrictive three-way communication protocol via R1, R2 and R3 than proposed for COM-002-3. NextEra believes that the easiest way to make COM-003-1 consistent with COM-002-3 is to implement the same three-part communication language contained in COM-002-3. Specifically, COM-003-1 R1, R2 and R3 would be replaced with the following language that mirrors COM-002-3:</p> <p>“R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as an Operating Communication, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as an Operating Communication to the recipient.</p> <p>R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of an Operating Communication shall repeat, restate, rephrase or recapitulate the Reliability Directive.</p> <p>R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues an Operating Communication shall either:</p> <ul style="list-style-type: none"> <li>o Confirm that the response from the recipient of the Operating Communication (in accordance with Requirement R2) was accurate, or</li> </ul>



Organization	Yes or No	Question 6 Comment
		<p>o Reissue the Operating Communication to resolve any misunderstandings.”</p> <p>Although NextEra prefers that the SDT use the above language, in the event the SDT chooses not to mirror COM-002-3, NextEra requests the SDT implement the proposed modifications to R1 and R2 as set forth in response to questions 5, 7 and 10.</p>
<p><b>Response: Thank you for your comments. The OPCPSDT agrees and has changed the language in COM-003-1 in draft 3 to be the same language as stated in COM-002-3, R2 and R3.</b></p>		
Alliant Energy	No	<p>We do not believe there is a need for COM-003 at all and recommend it be deleted. COM-002 covers Reliability Directives very well. For three-part communications in a non-Reliability Directive situation we believe it should be considered an industry best-practice. By requiring three-part communications as dictated in this standard, there will be requests for interpretations, CAN's produced for the CEA, and numerous violations written for what the industry considers a non-problem. In our opinion this standards goes against the concept of risk-based standard making and reinforces a zero-defect operation, which opposite of how the industry works.</p>
<p><b>Response: Thank you for your comments. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT's concern.</b></p>		
ISO New England Inc	No	<p>We agree with, support and have signed onto the ISO/RTO Standards Review Committee comments.</p>
<p><b>Response: Thank you for your comments. Please see the response to the ISO/RTO Standards Review Committee comments.</b></p>		
Seminole Electric Cooperative	No	<p>Splitting the requirement is okay but the exclusion of reliability directives and the</p>

Organization	Yes or No	Question 6 Comment
		structure of R2 and R3 to take one of the following actions based on the other party's action is ambiguous.
<b>Response: Thank you for your comments. The exclusion of Reliability Directives from COM-003-1 was incorporated to preclude double jeopardy.</b>		
NV Energy	No	I have not seen the parallel requirement that pertains to Reliability Directives, but I can imagine no reason why the communication protocols for Operating Communications would ever differ from those for Reliability Directives. Making the distinction here in this requirement adds unnecessary confusion.
<b>Response: Thank you for your comments. The OPCSDT agrees and has changed the language in COM-003-1 in draft 3 to be the same language as stated in COM-002-3, R2 and R3.</b>		
Exelon Corporation and its affiliates	No	Please see response to Q10.
<b>Response: Thank you for your comments. Please see the response to Question 10.</b>		
Brazos Electric Power Cooperative	No	Please see formal comments provided by APM.
<b>Response Thank you for your comments. Please see the response to the comments provided by APM.</b>		
Oncor Electric Delivery Company LLC	No	Oncor believes that the application of three part communication as prescribed in the proposed reliability standard COM-002-3 is appropriate as prescribed for emergencies. Any additional requirements, including those for routine operations go well beyond what is called for in the 2003 Blackout Report which focused on emergencies. As such, Oncor also takes the position that the term Operating Communications should also be removed.

Organization	Yes or No	Question 6 Comment
<p>Response: Thank you for your comments. The term “Reliability Directive” in the current draft of COM-002-3 covers a very narrow band of low frequency, high impact events. Communication protocols must be applicable to all BES Operating Communications to clarify content in order to avoid mistakes that could negatively impact the BES. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</p>		
Kansas City Power & Light	No	Do we lose the “speciality” of only using 3-part communication during times of issuing directives/emergencies?
<p>Response: Thank you for your comments. The SDT believes we have not lost a unique feature of emergency communication by requiring three part communication for routine operations. The SDT believes we are creating a higher level of communication discipline designed to avoid miscommunication and prevent mistakes that would harm the stability of the BES.</p>		
South Carolina Electric and Gas	No	
Ingleside Cogeneration LP	Yes	Ingleside Cogeneration LP agrees that Reliability Directives must be handled in a more prescriptive manner. Since Reliability Directives are also an important piece of Project 2006-06, it makes sense to move the developmental responsibility to them - and avoid unnecessary overlap between the two projects.
<p>Response: Thank you for your comments.</p>		
Manitoba Hydro	Yes	Manitoba Hydro agrees with splitting the single requirement into (R2) issuer and (R3) receiver, but as stated in our response, we do not agree with the term “Operating Communications”.
<p>Response: Thank you for your comments. Please see the response to your comments to Question 1.</p>		

Organization	Yes or No	Question 6 Comment
City of Tallahassee	Yes	TAL agrees with this split into two requirements for the protection of each party in the event of non-compliance by the opposing party. TAL seeks clarification on the application of this requirement in an instance where a receiver never acknowledges the issuer.
<p><b>Response: Thank you for your comments. The OPCPSDT would expect the issuer to continue to establish communication with the receiver through multiple attempts and multiple media. If voice communication is not achieved the issuer must assume lost communication and contemplate other alternatives.</b></p>		
City of Jacksonville Beach dba/Beaches Energy Services	Yes	None.
Imperial Irrigation District	Yes	
Detroit Edison	Yes	
BC Hydro	Yes	
Florida Municipal Power Agency	Yes	
Bonneville Power Administration	Yes	
GP Strategies	Yes	
Arizona Public Service Company	Yes	

Organization	Yes or No	Question 6 Comment
HHWP	Yes	
Flathead Electric Cooperative, Inc.	Yes	
NIPSCO	Yes	
Hydro-Quebec TransEnergie	Yes	
Orlando Utilities Commission	Yes	
Clark Public Utilities	Yes	
The United illuminating Company	Yes	
Utility Services, Inc.	Yes	
Colorado Springs Utilities	Yes	
Utility System Efficiencies, InC.	Yes	
Portland General Electric - Transmission & Reliability Services	Yes	
Puget Sound Energy	Yes	
Xcel Energy	Yes	

Organization	Yes or No	Question 6 Comment
City of Vero Beach	Yes	
Texas Relibility Entity	Yes	
U.S. Bureau of Reclamation	Yes	
Central Lincoln	Yes	but please see Q 10.
<b>Response: Thank you for your comments. Please see the response to your comments in Question 10.</b>		
Western Electricity Coordinating Council		Is the exclusion of Reliability Directives because they are covered under COM-002? Since all COM-002 covers is Reliability Directives, why not include it in this standard? Operators should use the same protocol for all Operating Communications. We agree with the split for the issuer and the receiver.
<b>Response: Thank you for your comments. Yes, the SDT wanted to avoid a double jeopardy situation.</b>		
New York Power Authority		NYPA supports the comments submitted by the NPCC Regional Standards Committee (RSC).
<b>Response: Thank you for your comments. Please see the response to the comments submitted by the NPCC Regional Standards Committee (RSC).</b>		
Public Service Enterprise Group		See #10.
<b>Response: Thank you for your comments. Please see the response to the comments in Question 10.</b>		



7. The SDT modified the requirement for use of the NATO phonetic alphabet to allow use of another correct alpha numeric clarifier. (See Requirement R1, Part 1.2.) Do you agree with this modification?

**Summary Consideration:**

Commenters were confused over the meaning of “accurate” alpha-numeric clarifier. The SDT stated these alpha-numeric clarifiers were offered as alternatives to the NATO alphabet required in draft 1. *The SDT noted other commenters who felt the NATO specification was too restrictive but felt alpha-numeric clarifiers were vague. The SDT will sustain the requirement for the use of alpha-numeric clarifier but has removed the word “accurate.”*

Commenters who disagreed felt this requirement is still overly prescriptive and did not improve reliability. *The SDT has developed an alternate approach to COM-003-1 that will allow an entity to establish internal processes to identify, assess, and correct communication deficiencies.*

Organization	Yes or No	Question 7 Comment
Northeast Power Coordinating Council	No	What determines whether a clarifier used is an “accurate alpha-numeric clarifier”? What dictates non-compliance? This is a procedural issue. The Standard should require the Functional Entities to have a communications protocol that could include this, but it should not be a standard on personnel. Complexity is being added to communications, not improvement. There are equipment designations that are commonly used and understood, and to force the use of clarifiers will disrupt operating communications.
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
ACES Power Marketing Standards Collaborators	No	<ol style="list-style-type: none"> <li>1. First the requirement uses the word “accurate” instead of “correct” as stated in this question.</li> <li>2. What is meant by the term “accurate alpha-numeric clarifiers?” Can someone make up their own alpha-numeric clarifiers in the heat of the moment and expect the other party to mentally “transition” and understand what they mean? Or does it</li> </ol>



Organization	Yes or No	Question 7 Comment
		<p>have to be another established and recognized alpha-numeric clarifier? A made up alpha-numeric clarifier could be confusing to someone who isn't familiar with the clarifiers being used. This is more of a mental "transition" than determining the difference between an Emergency (which will be stated up front as a Reliability Directive as proposed in draft COM-002-3) and a normal operating instruction. We suggest that only established alpha-numeric clarifiers be used.</p>
<p><b>Response: Thank you for your comments. The word "accurate" has been removed. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
<p>Midwest Reliability Organization NERC Standards Review Forum</p>	<p>No</p>	<p>The MRO NSRF recommends the following comments for consideration by the SDT: As written, if an operator simply states "open switch c138", they would be found non compliant. The SDT has not given any justification (reference to a FERC Directive) to why they are mandating the use of alpha-numeric clarifiers within this requirement. It is not needed to be written within this (or any other standard). It is agreed that it may be a good practice in some cases, but when written within a standard, it is driving for a zero tolerance. Entities will make a mistake and this non compliance issue will be forward via the CEA as an FFT. Section 81 of the Commission's March 15th, 2012 order questions if a violation is forwarded in an FFT format, is it really needed for reliability. This requirement needs to be deleted. If an entity wishes to use an alpha-numeric format, they can as part of their internal controls to reduce their risk of violating a different standard or for safety reasons. The requirement of using alpha-numeric as a standard will be administratively burdensome and punitive. For example: An operator states, "open switch fifteen twenty six" instead of "open switch one, five, two, six" is now subject to a potentially significant fine for no reliability benefit. Suggest dropping the Alpha Numeric clarifier requirement from the standard.</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		

Organization	Yes or No	Question 7 Comment
Detroit Edison	No	<p>"use accurate alpha-numeric clarifiers" is vague. Suggest re-wording and adding verbiage: "use defined (or standard or specified) alpha-numeric clarifiers as specified in Registered Entities communication protocols."Concern with requirement 1.2-alpha-numeric clarifiers. Would like clarification if any alpha clarifier can be used or must the phonetic alphabet listed in the white paper (military Communication protocol)be used. example: for "R", is it required to use "Romeo" or can "Robert" be used?</p> <p><b>Response: The word "accurate" has been removed.</b></p> <p>Concern with VSL table for R1. Current format shows that an entity must be 100% compliant. The break down from medium to severe is based on how many elements of R1 was not followed. Suggest changing the format to how many times it was not followed rather than the number of elements.</p> <p><b>Response: The SDT has developed a different approach to the standard that addresses your concern.</b></p>
<p><b>Response: Thank you for your comments. See the response above.</b></p>		
Duke Energy	No	<p>We think that this is over-reaching (As currently written, the Standard erroneously focuses on "how" an entity can be compliant, rather than describing "what" an entity needs to achieve to be compliant), and creating a requirement that can't reasonably be audited or certified.</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
BC Hydro	No	<p>BC Hydro does not support the full time use of alpha numeric clarifiers for all Operating Communication. In some cases we believe it detracts from the instruction being delivered. In our system, devices are identified by a combination of alpha and numeric. For example, to call transmission line 5L98, '5-Line-98' or a circuit breaker 5CB11, '5-circuit breaker-11' does not add value. This may help in some areas</p>

Organization	Yes or No	Question 7 Comment
		depending on their naming conventions. BC Hydro does not think the use of the term 'accurate' effectively describes what is permissible to be used as an alpha numeric clarifier.
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
Dominion	No	Dominion suggests that Requirement R1, Part 1.2 is ambiguous in that the use of alpha-numeric identifiers appears optional (but if they are used, they must be accurate). If the purpose of Part 1.2 is to USE alpha-numeric identifiers, then this statement needs to be modified to state that more directly and to give that clarity.
<b>Response: Thank you for your comments. Some Operating Instructions may not involve alpha-numeric qualifiers.</b>		
Associated Electric Cooperative JRO00088	No	AECI appreciates the SDT's desire to afford flexibility to the industry, and yet we still view this level of prescription as unnecessarily burdensome, given the current broad scope of this particular standard.
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
LG&E and KU Services	No	This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW" of communication as opposed to the "WHAT".
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
MEAG Power, Danny Dees, Steven Grego, Steve Jackson	No	Too prescriptive. The industry has performed for many decades, successfully. NERC should focus on risk and performance.
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
ISO/RTO Standards Review	No	This requirement is a procedural issue and is outside the scope of the approved SAR

Organization	Yes or No	Question 7 Comment
Committee		<p>which proposes responding to the Blackout Recommendation to tighten communications protocols especially during emergencies. This proposed requirement is both procedural and does not address tightening communications of situational awareness. The SRC would suggest that the standard should require the Functional Entities to have a communications protocol that could indeed include this suggestion, but it should not be a standard on personnel.</p>
<p><b>Response: Thank you for your comments. The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.”</b> Response: The OPCSDT disagrees that the Blackout Report (and FERC Order 693 and the SAR) only addresses the need to tighten protocols for Emergencies. The Blackout Report uses the phrase “<i>especially for emergencies</i>” which the SDT interprets to mean the authors were recommending applicability of communication protocols for the total population of operating communication and used this language to amplify the importance of such protocols during emergency conditions. FERC Order 693 and the SAR are very specific in that both include references to “normal” operating conditions.</p> <p>The SDT has developed a new approach to the standard that addresses your concern.</p>		
City Water Light and Power	No	<p>Again, this requirement attempts to dictate process as opposed to being a standard. The standard should only dictate the result, not how it is achieved.</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Hydro One Networks Inc.	No	<p>This requirement adds added complexity to communications, not improvement. There are equipment designations that are commonly used and understood, and to force the use of clarifiers will disrupt operating communications.</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
SERC OC Standards Review Group	No	<p>This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW” of communication as opposed to the “WHAT”.</p>

Organization	Yes or No	Question 7 Comment
<p><b>Response: The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
<p>Bonneville Power Administration</p>	<p>No</p>	<p>BPA disagrees with both clarifiers (NATO phonetic alphabet and alpha numeric) and believes the communication should be left to the discretion of each utility. This modification causes an undue burden when relaying communication; especially in a time of an emergency and dramatically increases the risk of human error. BPA recommends that the drafting team remove any and all language of NATO phonetic and alpha numeric identification of any device, (Alpha and especially numeric phonetic requirements). R2 and R3 clearly ensure that all parties are already properly communicating clearly and concisely. Should the drafting team remove the NATO phonetic and alpha numeric language, BPA would change its negative position to affirmative.</p>
<p><b>Response: Thank you for your comments. The SDT respectfully disagrees with your assertion that the use of alpha numeric clarifiers will “dramatically increase the risk of human error”. Use of phonetic clarifiers is a Human Performance tool designed to reduce the rate of human error and communication problems.</b></p> <p><b>The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
<p>Southern Company</p>	<p>No</p>	<p>Southern does not agree with R1 and its sub-requirements as they appear to force a single communications procedure on the industry and are focused on the “HOW” of communication when they should be more focused on the “WHAT”. Also, the word "accurate" should be removed from R1.2, as it is not needed.</p>
<p><b>Response: The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
<p>The Dayton Power and Light Company</p>	<p>No</p>	<p>This requires using a 'correct' alpha numeric clarifier, while the proposed standard is written as 'accurate'. It would be great if there were consistency between the proposed standard and the comment form. Not sure how one can define accurate or correct. The standard indicates that NATO has one, but there are others as well. The moniker for “A” in the LAPD definition is ADAM, while NATO is ALPHA. Both are</p>

Organization	Yes or No	Question 7 Comment
		<p>'accurate and/or correct' but if I use one version and the person I'm talking to uses another, is this a violation of the standard? The language in this proposed version is better than the last (where they required the use of the NATO language) but I'm still not comfortable this proposal fixes the problem.</p>
<p><b>Response: Thank you for your comments. The word "accurate" has been removed. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
<p>CenterPoint Energy Houston Electric, LLC.</p>	<p>No</p>	<p>Question 7 Comments: The use of correct alpha numeric clarifiers represents a "how to" and although it may be an example of a good utility practice, it should not be a requirement to the extent of not only just having to use the alpha numeric clarifiers, but required to use them correctly or "accurate" as it is currently worded in the language of proposed COM-003-1 R 1.2 draft 2. The requirement is unclear as to whether the accurate use of alpha -numeric clarifiers is required only when the clarifiers are used, or whether accurate use of alpha-numeric clarifiers are required for all oral Operating Communications. The use of any alpha- numeric clarifiers should be left up to the discretion of the communicating entities during their exchange, acknowledgement, and agreement of information of any such communication.</p>
<p><b>Response: Thank you for your comments. The word "accurate" has been removed. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
<p>SMUD</p>	<p>No</p>	<p>Communication should not be restricted to only use of the phonetic alphabet. Referencing a "103-C" switch versus a "103-Charley" does not enhance reliability and has the potential of hindering reliable operation of the BPS by forcing the Operator Communications personnel to focus on being compliant with the correct phonetics rather than the actual instruction.</p>
<p><b>Response: Thank you for your comments. The SDT respectfully disagrees with your thought that the use of alpha numeric</b></p>		

Organization	Yes or No	Question 7 Comment
<p>clarifiers has the potential to “hinder reliable operation”. Use of phonetic clarifiers is a Human Performance tool designed to reduce the rate of human error and communication problems. The SDT has developed a new approach to the standard that addresses your concern.</p>		
Liberty Electric Power LLC	No	Again, this is beyond the proper scope of reliability standards.
<p><b>Response: Thank you for your comments. The SDT respectfully disagrees and has developed a new approach to the standard that addresses your concern.</b></p>		
PPL Generation, LLC on behalf of its Supply NERC Registered Entities	No	<p>PPL Generation, LLC on behalf of its Supply NERC Registered Entities does not believe that this sub requirement is appropriate when applied with the new definition “Operating Communication.” Common operating communications should not be considered a compliance event that requires the use of correct alpha numeric clarifiers. Under the current language, it could be interpreted that according to “Operating Communication” that every change in generation output must be stated in alpha numeric clarifiers in every instance of communication. This requirement shifts operators focus from communicating proper information to a focus on communicating using the specified terms in all instances of communication, where in everyday normal business activities and operation should not require such scrutiny.</p>
<p><b>Response: The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Orlando Utilities Commission	No	Use a phonetic alphabet only when further clarification is needed.
<p><b>Response: Thank you for your comments. Use of phonetic alphabet only when further clarification is needed could be subjective. The receiver of the communication may have thought that they clearly heard “Open breaker 13D” when what was really said was to “Open breaker 13B”. Use of the phonetic alphabet would correct this potential error.</b></p>		
Clark Public Utilities	No	This requirement is still overly prescriptive. Practically all switches, breakers, and transformers have alpha-numeric identifiers and the proposed Requirement R1.2 will require the use of some form of alpha-numeric clarifier (either NATO or some other

Organization	Yes or No	Question 7 Comment
		<p>accurate clarifier). However, many alpha-numeric identities need no clarifier to be accurately understood. Additionally, any such mis-understandings would become obvious during the three-way communication process. The SDT needs to modify this requirement to allow the judgment of the system operator to be used in the determination of whether an alpha-numeric clarifier is needed. This judgment would be based on</p> <p>(1) common sense in understanding that some letters or numbers may sound similar when broadcast over communications equipment,</p> <p>(2) past experience with certain letters or numbers requiring clarification,</p> <p>(3) an understanding by each individual system operator (as supplemented by managerial oversight) of that system operator’s ability to correctly pronounce letters and numbers (in the English language, unless another language is mandated by law or regulation), and</p> <p>(4) confidence derived from the accurate and understandable repetition of the alpha-numeric identifiers in the three way communication process.</p> <p>Clark believes that Requirement R1.2 needs to rely on the determination by the system operator as to whether the use of an alpha-numeric clarifier is needed or not. These system operators are required to obtain certifications and ongoing training and the operating process needs to defer to the judgment of trained and certified system operators to resolve this potential communication issue.</p>
<p><b>Response: Thank you for your comments. The SDT believes that it would be more consistent and less confusing for the operators to utilize alpha numeric clarifiers at all times instead of having to go through a determination if it is needed in each operating situation.</b></p>		
<p>Indiana Municipal Power Agency</p>	<p>No</p>	<p>The question uses the word “correct” and the requirement uses the word “accurate”. The use of either word adds ambiguity to the requirement, and an entity being found compliant or non-compliant depends on how the entity and the auditor interprets</p>



Organization	Yes or No	Question 7 Comment
		the meaning of “use of an accurate alpha-numeric clarifier”. The SDT should allow the entity to pick the alpha-numeric clarifier that its company wants to use or the same clarifier that was used when the Operating Communication was given, and not give an auditor the chance to say it is not an “accurate” alpha-numeric clarifier.
<b>Response: Thank you for your comments. The word “accurate” has been removed. The SDT has developed a new approach to the standard that addresses your concern.</b>		
Sacramento Municipal Utility District	No	See response in #10
Energy Services	No	See our responses to Questions #1, 2 and 4.
<b>Response: Thank you for your comments. See responses to these questions.</b>		
City of Austin dba Austin Energy	No	There is not enough evidence to support the need for these types of specifics. Recommendation 26 encourages NERC “to ensure that all key parties ... receive timely and accurate information.” COM-003-1 seems to interpret the recommendation by telling entities “how” to ensure information is accurate (e.g., use English, 24-hour clock, time zones, alpha-numeric identifiers, etc.). This standard reaches too far into the “how” instead of focusing on the “what,” which is accurate information. Registered entities should decide the best methods to ensure accurate information for themselves (through three-part communication, use of the 24-hour clock or otherwise).
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
Colorado Springs Utilities	No	the term "correct alpha-numeric clarifier" is itself unclear. Searching on Google, I can find no other use of this term outside of this Standard. Therefore, this does not appear to be a standard term or concept. Did the SDT mean to require the use of a phonetic alphabet (NATO's or any other)? If so, please just state so. If the intent was

Organization	Yes or No	Question 7 Comment
		to permit means other than phonetic alphabets to ensure clear communication of alpha-numeric identifiers, then I suggest clarifying the Standard's language. Perhaps, "When participating in oral Operating Communications and using alpha-numeric identifiers, use a phonetic alphabet or similar means to ensure clear understanding."
<p><b>Response: Thank you for your comments. The SDT used the term “alpha numeric clarifier” as a substitute for the NATO alphabet, which generated many comments from draft 1. It gives entities freedom to use their own clarifier that conveys the correct number or letter of equipment nomenclature they are referring to. The word “accurate” has been removed.</b></p>		
Essential Power, LLC	No	If the purpose of this Standard is to improve and standardize communications, than all entities should use the same alpha numeric clarifiers.
<p><b>Response: Thank you for your comments. Previous versions of this Standard required the use of the NATO phonetic alphabet. This was seen as too prescriptive by industry. While there is nothing to prevent entities from using standardized alpha numeric clarifiers, it is not a requirement in this version of the standard.</b></p>		
Wisconsin Electric dba We Energies	No	Use of “accurate” accurate alpha-numeric clarifiers is subjective. What are they? Who decides what is “accurate”? An auditor? The NATO phonetic alphabet is really still being mandated. What if I use the NATO version and another entity uses a different one. Can we talk to each other? We will now also have to specify what phonetic alphabet we are using before any communication.
<p><b>Response: Thank you for your comments. The word “accurate” has been removed. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Manitoba Hydro	No	Manitoba Hydro agrees with the use ‘accurate alpha-numeric identifiers’ and feels that they should also be required when referring to a Transmission interface Element or a Transmission interface Facility in R1.1.4
<p><b>Response: Thank you for your comments.</b></p>		

Organization	Yes or No	Question 7 Comment
Portland General Electric - Transmission & Reliability Services	No	Requirement 1.2 requiring the use of alpha-numeric clarifiers would unnecessarily complicate operator communications, especially inter-company communications where transmission facilities have historically and are commonly identified by alpha-numeric characters. The use of three-way communications ensures accurate communications without the complications of alpha-numeric clarifiers.
<p><b>Response: Thank you for your comments. Use of phonetic clarifiers is a Human Performance tool designed to reduce the rate of human error and communication problems. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Puget Sound Energy	No	No. The current language addressing alpha-numeric clarifiers is a significant improvement over the formulation addressing the same issue in the previous draft. However, this requirement remains overly-prescriptive, especially with respect to numeric clarifiers. Even with the NATO clarifiers, not all numbers have clarifiers. As a result, it not clear when a numeric clarifier would be required and when it is acceptable not to use such a clarifier. The requirement to use alpha-numeric clarifiers should be removed from the proposed standard entirely. If the requirement is not removed in its entirety, the requirement should be modified to exclude numeric clarification.
<p><b>Response: Thank you for your comments. The word “accurate” has been removed. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Illinois Municipal Electric Agency	No	IMEA agrees with comments submitted by the SERC OC Standards Review Group.
<p><b>Response: Thank you for your comments. Please see the response for the SERC OC Standards Review Group.</b></p>		
Xcel Energy	No	1) “Accurate alpha-numeric identifier” needs to be clarified. Could each entity (or even each operator) create their own alpha-numeric identifiers? Further would it be a violation if an operator used “Charlie” in one conversation and “chalk” in another?

Organization	Yes or No	Question 7 Comment
		<p>Or, is it an expectation that the entity/operator adopts an existing list of alpha-numeric identifiers, which is published publicly?</p> <p><b>Response: The standard does not mandate any one clarifier over another. The word “accurate” has been removed.</b></p> <p>2) We recommend that device names be excluded from the requirement to use alpha-numeric identifiers when both parties are working off of written instructions. We do not feel requiring this would improve reliability. Instead, it could actually slow down the recovery of the system. For example, we have devices in the field that may be labeled 12B34-W gang switches and it makes no sense to say, “Open and tag the one, two, B as in Bravo, three, four W as in Whiskey gang switch, when both parties have “12B34-W” written in the instructions they are both working from. Three-way communications are occurring and if there is any question as to the device name, it can be caught and clarified during that process.</p> <p><b>Response: Thank you for your comments. The SDT disagrees with exempting equipment names even when written down. This is another check that the correct equipment is being operated. The SDT disagrees that use of alpha numeric clarifiers would slow down recovery.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
Ameren	No	<p>We recommend to the SDT that one industry-wide alpha-numeric clarifying system should be used. Multiple systems may add confusion by use of clarifying words that some Operators may not be familiar with. We agree with use of the NATO Spelling Alphabet.</p>
<p><b>Response: Thank you for your comments. Previous versions of this Standard required the use of the NATO phonetic alphabet. This was seen as too prescriptive by industry. While there is nothing to prevent entities from using standardized alpha numeric clarifiers, it is not a requirement.</b></p>		

Organization	Yes or No	Question 7 Comment
Idaho Power Company	No	They should specify the alphabet to use for consistency.
<p><b>Response: Thank you for your comments. Previous versions of this Standard required the use of the NATO phonetic alphabet. This was seen as too prescriptive by industry. While there is nothing to prevent entities from using standardized alpha numeric clarifiers, it is not a requirement.</b></p>		
MISO	No	<p>MISO is concerned that the phrase “accurate alpha-numeric clarifiers” is ambiguous and could lead to unintended compliance burdens. Further, MISO notes that this provision will have, at most, a minimally beneficial impact on reliability while requiring Registered Entities to expend substantial additional resources and will increase the likelihood of adverse impacts to reliability resulting from confusion caused by non-standard alpha-numeric clarifiers.</p>
<p><b>Response: Thank you for your comments. The word “accurate” has been removed. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Consumers Energy	No	<p>As there is no definition of what alpha - numeric clarifiers must be used, this leaves too much room for interpretation for audit staff.</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
NextEra Energy, Inc	No	<p>Similar to the 24 clock, it appears that R1.2 does not fully consider how communications and naming conventions are used in the industry. Specifically, alpha-numeric identifiers are used when there is an uncommon naming convention. Examples of common naming conventions include AM/PM, breaker names such as (8W15), etc. As written, the requirement could be interpreted to require alpha-numeric identifiers for all alpha applications even though the industry has never had a need to use such identifiers. This will likely lead to unnecessary confusion, and, therefore, will likely not promote reliability. Moreover, the R1.2 and COM-003-1 technical paper suggest there is only one set of alpha-numeric clarifiers that are “accurate.” NextEra does not agree with this perspective, and believes it is</p>

Organization	Yes or No	Question 7 Comment
		counterproductive to narrowing a System Operator’s discretion on which alpha-numeric clarifiers he or she may use. To address these matters, NextEra recommends that R1.2 be revised to read: “When an oral Operating Communication does not use a common naming convention, alpha-numeric identifiers shall be used.”
<b>Response: Thank you for your comments. The standard does not mandate any one clarifier over another. The word “accurate” has been removed. The SDT has developed a new approach to the standard that addresses your concern.</b>		
ISO New England Inc	No	We agree with, support and have signed onto the ISO/RTO Standards Review Committee comments.
<b>Response: Thank you for your comments. Please see the response to ISO/RTO Standards Review Committee.</b>		
U.S. Bureau of Reclamation	No	By using the term "correct" alpha numeric clarifier, it implies that an incorrect alpha numeric clarifier can exist. In reality as long as an alpha numeric clarifier is used to verify the letters or numbers are conveyed the intent is made. The standard language should be revised to state that "When participating in oral Operating Communications and using alpha-numeric identifiers, use alpha-numeric clarifiers for the letters and numbers to convey the correct numbers and letters in the Operating Communication."
<b>Response: Thank you for your comments. An example of an incorrect alpha numeric clarifier would be “k as in known”. The word “accurate” has been removed.</b>		
Exelon Corporation and its affiliates	No	While Exelon agrees with the modification to allow the use of another alpha numeric clarifier, Exelon does not agree with the designation of "correct" related to alpha numeric communication. Requiring "accurate" alpha-numeric clarifiers is overly prescriptive and unclear. An entity should not be held accountable for 100% adherence to a set phonetic alphabet. For example, if a communicator and receiver use the phonetic nomenclature "motor operated disconnect one foxtrot" but in a later communication the equipment is referenced as "motor operated disconnect

Organization	Yes or No	Question 7 Comment
		<p>one fox" by the Standard as written this could be considered a violation. It should be an expectation but not a requirement as long as the transmitter and receiver use three way communications effectively. Again, the standard should emphasis entity practice for effective communication not impose an overly prescriptive set of requirements that pose compliance challenges.</p>
<p><b>Response: Thank you for your comments. The word "accurate" has been removed. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Brazos Electric Power Cooperative	No	Please see formal comments provided by APM.
<p><b>Response: Thank you for your comments. Please see response to APM.</b></p>		
Oncor Electric Delivery Company LLC	No	<p>Oncor take the position that this requirement is far too much detail and goes well beyond the 2003 Blackout recommendations. Furthermore, Oncor take the position that a more appropriate approach would be to require internal procedures that address internal communication protocols.</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
South Carolina Electric and Gas	No	
Imperial Irrigation District	Yes	
JEA	Yes	<p>R1.2 is unclear. The term "alpha-numeric identifiers" is not defined. We believe examples would help. For example we assume that if we say the Northside 1, this would not be alpha-numeric but what if we used logical letters such as NS1 in internal communications. Is it all alpha-numeric communications or just illogical meaningless letters and numbers. We believe we should be able to use logical alpha numeric</p>

Organization	Yes or No	Question 7 Comment
		things like MS for motor-switch and not have to use alpha-numeric clarifiers. Also please specify if this is for both internal and external communications. Again we believe that this should be for external communications using illogical meaningless letters and numbers not for internal normal nomenclature.
<p><b>Response: Thank you for your comments. Alpha numeric clarifiers are not required for common terms like CB or MS or names like “Northside”. They would be required for Element or Facility alpha-numeric identifiers. In addition, the definition of Operating Instruction has been modified to provide clarity around when alpha-numeric identifiers are required.</b></p>		
Pepco Holdings Inc & Affiliates	Yes	However not sure if it is applicable to Reliability Directives.
<p><b>Response: Thank you for your comments. Alpha numeric clarifiers are required for an Operating Instruction, which is a “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</b></p>		
SPP Standards Review Group	Yes	<p>We concur with the elimination of the NATO phonetic alphabet and thank the SDT for making this change. This is an excellent example of backing away from being overly prescriptive by requiring the NATO alphabet and allowing the industry to use any of several other options to ensure effective communications. We do have concerns with the use of ‘correct’ or ‘accurate’, depending on which document you refer to. What is correct? What is accurate? How does one measure compliance with these terms? We would propose to delete the word ‘accurate’ altogether. The requirement would then read:</p> <p>When participating in oral Operating Communications and using alpha-numeric identifiers, use alpha-numeric clarifiers.<sup>1</sup></p>
<p><b>Response: Thank you for your comments. An example of an incorrect alpha numeric clarifier would be “k as in known”. The word “accurate” has been removed.</b></p>		
IESO	Yes	While we agree with allowing appropriate alpha numeric qualifiers other than the



Organization	Yes or No	Question 7 Comment
		NATO phonetic alphabet, we do not support the mandatory use of these qualifiers for each and every instruction. They should only be required when clarification by either party is requested.
<p><b>Response: Thank you for your comments. Use of phonetic alphabet only when further clarification is needed could be subjective. The receiver of the communication may have thought that they clearly heard “Open breaker 13D” when what was really said was to “Open breaker 13B”. Use of the phonetic alphabet would correct this potential error.</b></p>		
Texas Reliability Entity	Yes	Consider removing the word “accurate” from part 1.2. We do not believe it adds anything to the requirement, and it may cause confusion.
<p><b>Response: Thank you for your comments. The word “accurate” has been removed.</b></p>		
NV Energy	Yes	Agree that it ought not to be restricted to NATO only, but we are confused about what "correct" means. Perhaps it means any spoken word that begins with the subject alpha character?
<p><b>Response: Thank you for your comments. An example of an incorrect alpha numeric clarifier would be “k as in known”. The word “accurate” has been removed.</b></p>		
Central Lincoln	Yes	but please see Q 10.
City of Jacksonville Beach dba/Beaches Energy Services	Yes	None.
Florida Municipal Power Agency	Yes	
GP Strategies	Yes	
Progress Energy	Yes	

Organization	Yes or No	Question 7 Comment
Arizona Public Service Company	Yes	
HHWP	Yes	
Lakeland Electric	Yes	
Flathead Electric Cooperative, Inc.	Yes	
NIPSCO	Yes	
Hydro-Quebec TransEnergie	Yes	
The United illuminating Company	Yes	
Ingleside Cogeneration LP	Yes	
Utility Services, Inc.	Yes	
Salt River Project	Yes	
Utility System Efficiencies, Inc.	Yes	
PPL Electric Utilities	Yes	
American Transmission Company, LLC	Yes	

Organization	Yes or No	Question 7 Comment
City of Tallahassee	Yes	
City of Vero Beach	Yes	
Seminole Electric Cooperative	Yes	
California Independent System Operator	Yes	
Kansas City Power & Light	Yes	
Western Electricity Coordinating Council		<p>From an enforcement perspective, this could be problematic. As drafted this will allow virtually any alpha numeric clarifier. Who is to determine if the identifies is "correct?" This will put the auditor in the position of determining whether or not a clarifier was correct or accurate. For auditing purposes there should be clear direction on what is acceptable.</p>
<p><b>Response: Thank you for your comments. An example of an incorrect alpha numeric clarifier would be “k as in known”. The word “accurate” has been removed.</b></p>		
NERC Operating Committee		See Response 10
Roger Zaklukiewicz Consulting		Not certain as I do not know the specifics of the NATO phonetic alphabet.
<p><b>Response: Thank you for your comments.</b></p>		
New York Power Authority		NYPA supports the comments submitted by the NPCC Regional Standards Committee (RSC).
Public Service Enterprise		See #10.

Organization	Yes or No	Question 7 Comment
Group		

8. The SDT modified the requirement for use of identifiers to limit the applicability to operating communications involving Transmission interface Elements/Facilities and to require use of the name for that Element/Facilities specified by the Element/Facility’s owner(s). Do you agree with this modification?

**Summary Consideration:**

Many commenters believe this requirement is not necessary, stating that it is covered by Standard TOP-002.2a R18. *The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. Project 2007-03 chose to eliminate TOP-002-2a Requirement R18 on the basis that “This requirement adds no reliability benefit. Entities have existing processes that handle this issue. There has never been a documented case of the lack of uniform line identifiers contributing to a System reliability issue. This is an administrative item, as seen in the measure, which simply requires a list of line identifiers. The true reliability issue is not the name of a line but what is happening to it, pointing out the difficulty in assigning compliance responsibility for such a requirement, as well as the near impossibility of coming up with truly unique identifiers on a nation-wide basis. The bottom line is that this situation is handled by the operators as part of their normal responsibilities, and no one is aware of a switching error caused by confusion over line identifiers.” COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.*

Other commenters believe the requirement is too prescriptive and focuses on how instead of what. *When defining common communication protocols to be used for communication between entities, it is necessary to be specific on what must be communicated and how it must be communicated.*

A few commenters cited uncertainty over what Elements and Facilities are in scope of Requirement. *The SDT intends that interface BES Elements and BES Facilities are in the scope of this requirement. The benefit is that neighboring entities can quickly and knowledgeably react to changing operating conditions on the BES without getting confused over which Element or Facility they are referring to.*

Organization	Yes or No	Question 8 Comment
Northeast Power Coordinating Council	No	The applicability of this Standard is unclear in the case of Distribution Providers. The definition of Operating Communication includes “Elements” that could impact the BES. The NERC Glossary definition for Elements includes non-BES devices and

Organization	Yes or No	Question 8 Comment
		<p>equipment. Additionally, the Purpose section of the Standard states "harmful to the reliability of the BES." Since non-BES Elements could affect the BES this Standard could be deemed applicable to non-BES devices. If it is the intent of the SDT to apply this Standard to All Operating Communications concerning both BES and non-BES Facilities this should be explicitly stated in the applicability section for transparency. Otherwise clarifying language should be added to exclude non-BES Facilities. This is a procedural issue. Suggest that the Standard should require the Functional Entities to have a communications protocol that could indeed include this suggestion, but it should not be a standard on personnel.</p>
<p><b>Response: Thank you for your comments. This requirement refers to Transmission interface Elements and Facilities. The SDT has developed a different approach to the standard that addresses your concern.</b></p>		
<p>ACES Power Marketing Standards Collaborators</p>	<p>No</p>	<p>1. We don't believe this requirement is necessary. A similar requirement was removed from TOP-002-2 Project 2007-03. From the Project 2007-03 mapping document:"R18. Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network."Project 2007-03 SDT's reason for deletion of R18 from TOP-002-2:"This requirement adds no reliability benefit. Entities have existing processes that handle this issue. There has never been a documented case of the lack of uniform line identifiers contributing to a System reliability issue. The bottom line is that this situation is handled by the operators as part of their normal responsibilities, and no one is aware of a switching error caused by confusion over line identifiers."We agree with these reasons and believe they should apply to R1 Part 1.1.4 in COM-003-1. 2. Another issue we have with the requirement is that this draft standard is not applicable to TOs or GOs yet the requirement calls for the use of "the name specified by the owner(s) for that Transmission interface Element or Transmission interface Facility." Are the auditors going to ask the TOs and GOs for their list of named Elements or Facilities when they audit the applicable entities in</p>

Organization	Yes or No	Question 8 Comment
		this standard?
<p><b>Response:</b> Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.</p>		
<p>Midwest Reliability Organization NERC Standards Review Forum</p>	<p>No</p>	<p>The MRO NSRF recommends the following comments for consideration by the SDT:</p> <ol style="list-style-type: none"> <li>1. This requirement is too closely associated with TOP-002-2b, R18. As written, a BA, TOP, and GOP will be in double jeopardy of non compliance if either TOP-002-2b, R18 or COM-003, R1.1.4 is violated.</li> <li>2. A similar requirement was removed from TOP-002-2 Project 2007-03. From the Project 2007-03 mapping document: "R18. Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network." Project 2007-03 SDT's reason for deletion of R18 from TOP-002-2: "This requirement adds no reliability benefit. Entities have existing processes that handle this issue. There has never been a documented case of the lack of uniform line identifiers contributing to a System reliability issue. The bottom line is that this situation is handled by the operators as part of their normal responsibilities, and no one is aware of a switching error caused by confusion over line identifiers." The standard is not applicable to TOs or GOs yet the requirement calls for the use of "the name specified by the owner(s) for that Transmission interface Element or Transmission interface Facility." Suggest deleting this requirement.</li> </ol>
<p><b>Response:</b> Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the</p>		

Organization	Yes or No	Question 8 Comment
<p>same equipment for the Operating Instruction.</p>		
<p>Duke Energy</p>	<p>No</p>	<p>We don't believe that this requirement is consistent with the TOP requirement to use common line identifiers. This is more restrictive, in that it mandates the use of a name specified by the asset owner, while TOP simply requires the development of common identifiers without dictating what party defines the names. We understand the issue of identifying common terms for equipment, but believe the development and use of "common identifiers" is already covered in the TOP Standard and should be eliminated altogether from COM-003.</p>
<p>Response: Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.</p>		
<p>BC Hydro</p>	<p>No</p>	<p>BC Hydro supports this in most cases, especially when dealing with the RC, but in many cases there may be lack of clarity around ownership. We believe this needs to be reworded to account for designation that is agreed to by the parties that are communicating.</p>
<p>Response: Thank you for your comments. The SDT has developed a different approach to the standard that addresses your concern.</p>		
<p>Dominion</p>	<p>No</p>	<p>The requirement as written is superior to Requirement R18 of TOP-002b which requires the use of ". . . uniform line identifiers when referring to transmission facilities of an interconnected network." However, the industry can't have two different standards with different requirements for identifying transmission facilities.</p>
<p>Response: Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the</p>		



Organization	Yes or No	Question 8 Comment
<b>same equipment for the Operating Instruction.</b>		
Associated Electric Cooperative JRO00088	No	AECI agrees with SERC OC STANDARDS REVIEW GROUP's response to Question 8.
<b>Response: Please see response to SERC OC Standards Review Group.</b>		
LG&E and KU Services	No	This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW" of communication as opposed to the "WHAT". Requirement 1.1.4 does not need to be in this standard as the requirement for unique line identifiers is stipulated in TOP-002-2 R18.
<b>Response: Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.</b>		
MEAG Power, Danny Dees, Steven Grego, Steve Jackson	No	Too prescriptive.
<b>Response: Thank you for your comments. The SDT has developed a different approach to the standard that addresses your concern.</b>		
ISO/RTO Standards Review Committee	No	This requirement is a procedural issue and is outside the scope of the approved SAR which proposes responding to the Blackout Recommendation to tighten communications protocols especially during emergencies. This proposed requirement is both procedural and does not address tightening communications of situational awareness.
<b>Response: Thank you for your comments. The purpose of the SAR for this project is "Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten</b>		

Organization	Yes or No	Question 8 Comment
<p>response time.” Additionally, the SAR is very specific in that it also includes the term “normal” operating conditions under Applicability: “Clear and mutually established communications protocols used during real time operations under normal and emergency conditions ensure universal understanding of terms and reduce errors.”</p>		
City Water Light and Power	No	This is already addressed in TOP-002 R18. Even if moved, the requirement should be focused on agreed upon identifiers and the process for coordination should be left to the entities.
<p><b>Response: Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. The SDT has developed a different approach to the standard that addresses your concern.</b></p>		
FirstEnergy	No	The requirement for line identifiers should not be included and is unnecessary. This type of requirement was also removed from standard TOP-002 in recently board approved project 2007-03. The drafting team position for the removal was the following: “This requirement adds no reliability benefit. Entities have existing processes that handle this issue. There has never been a documented case of the lack of uniform line identifiers contributing to a System reliability issue. This is an administrative item, as seen in the measure, which simply requires a list of line identifiers. The true reliability issue is not the name of a line but what is happening to it, pointing out the difficulty in assigning compliance responsibility for such a requirement, as well as the near impossibility of coming up with truly unique identifiers on a nation-wide basis. The bottom line is that this situation is handled by the operators as part of their normal responsibilities, and no one is aware of a switching error caused by confusion over line identifiers.” Therefore we suggest the removal of R1.1.4 for the same reason.
<p><b>Response: Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.</b></p>		

Organization	Yes or No	Question 8 Comment
SERC OC Standards Review Group	No	This sub-part is part of the SDT forcing a single communication procedure on the industry. This goes far too deeply into the HOW” of communication as opposed to the “WHAT”. Requirement 1.1.4 does not need to be in this standard as the requirement for unique line identifiers is stipulated in TOP-002-2 R18.
<p>Response: Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.</p>		
Western Electricity Coordinating Council	No	We question the need for this part of the requirement based on the fact that it appears to be redundant with TOP-002-2b, R18.
<p>Response: Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.</p>		
Bonneville Power Administration	No	BPA believes that the uniform line identifiers between utilities should be identified by mutual consent and suggests the drafting team use the language from COM-003-1 R7, “Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity and Distribution Provider shall use pre-determined, mutually agreed upon line and equipment identifiers for verbal and written Interoperability Communications”. BPA also recognizes that uniform line identifiers are already addressed in TOP-002-2b.
<p>Response: Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the</p>		

Organization	Yes or No	Question 8 Comment
<p>same equipment for the Operating Instruction. The SDT has developed a different approach to the standard that addresses your concern.</p>		
NERC Operating Committee	No	See Response 10
Southern Company	No	<p>Southern does not agree with R1 and its sub requirements as they appear to force a single communications procedure on the industry and are focused on the “HOW” of communication when they should be more focused on the “WHAT”. Furthermore, requirement 1.1.4 does not need to be in this standard as the requirement for unique line identifiers is stipulated in TOP-002-2 R18. Also, is it certain that both parties in the communication will know the name for the element/facility that is specified by the element/facility's owner(s)?</p>
<p>Response: Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.</p>		
HHWP	No	<p>Recommend that R1.1.4 incorporate use of the term Uniform Line Identifiers, in conformance with R18 of TOP-002.</p>
<p>Response: Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.</p>		
CenterPoint Energy Houston Electric, LLC.	No	<p>Question 8 Comments: The language in requirement 1.1.4 will require the limitation to a single identifier for an interface element or facility between neighboring entities which will require the neighboring entities to agree upon a specified single identifier. This may possibly require entities to make changes to their EMS system and their model and incur a cost to complete such tasks. Similar language is currently enforced</p>

Organization	Yes or No	Question 8 Comment
		in TOP-002-2 R18, where Entities are required to use uniform line identifiers when referring to transmission facilities of an interconnected network, making this requirement language redundant.
<p><b>Response:</b> Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction. The SDT has developed a different approach to the standard that addresses your concern.</p>		
Flathead Electric Cooperative, Inc.	No	Think this requirement is duplicative of TOP-002a, R18
<p><b>Response:</b> Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.</p>		
SMUD	No	First, this requirement is redundant to Requirement R18 in the TOP-002 standard. It also put an administrative burden on the RC to know each “correct” name specified by the respective entity’s line segment causing a hindering timely operation of BPS elements.
<p><b>Response:</b> Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction. The SDT has developed a different approach to the standard that addresses your concern.</p>		
Liberty Electric Power LLC	No	This requirement is already covered under TOP-002 R18, and opens double-jeopardy

Organization	Yes or No	Question 8 Comment
		for entities by including it in a second standard.
<p><b>Response: Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.</b></p>		
Orlando Utilities Commission	No	For example, the (OUC)Indian River to (FPL)Cape Canaveral #1 230kv line is equivalent to the (FPL)Cape Canaveral to (OUC)Indian River #1 230kv line. Either description is accurate and acceptable.
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Indiana Municipal Power Agency	No	The requirement that requires entities to use uniform line identifiers when referring to transmission facilities of an interconnected network is in the TOP-002-2b standard (R18). Requirement R1.1.4 of COM-003-1 draft is not needed and should be deleted.
<p><b>Response: Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.</b></p>		
Ingleside Cogeneration LP	No	Ingleside Cogeneration LP agrees with restricting the applicability of COM-003-1 R1.2 to Transmission interface Elements/Facilities. These are the most likely to carry more than one identifier, as each entity may use different numbering conventions. However, we see two separate types of identifiers which may need to be addressed separately. First, those provided on control room monitors often come from a centrally managed Regional database. It is not reasonable to expect System Operators to refer to a Facility owner’s one-line diagram to reference these interconnections - and may reduce reliability. Conversely, field personnel and engineers may rely on the one-line for their identifiers. The use of the owner’s

Organization	Yes or No	Question 8 Comment
		documentation is more appropriate in these cases. We will further point out that COM-003-1 does not apply to Facility owners, so it seems as though they could decline to provide identifiers if they so choose.
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Roger Zaklukiewicz Consulting	No	We should always use the identifier adopted by the RTO, not one developed by the Element/Facility's owner.
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern. Not all entities are included in an RTO.</b></p>		
Sacramento Municipal Utility District	No	See response in #10
Energy Services	No	See our responses to Questions #1, 2 and 4.
Salt River Project	No	The interface names that should be used are the names that are registered in the TSIN.
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
South Carolina Electric and Gas	No	
Wisconsin Electric dba We Energies	No	See the Mapping Document for Project 2007-03 Real-time Operations, TOP-002 R18: "This requirement adds no reliability benefit. Entities have existing processes that handle this issue. There has never been a documented case of the lack of uniform line identifiers contributing to a System reliability issue. This is an administrative item, as seen in the measure, which simply requires a list of line identifiers. The true reliability issue is not the name of a line but what is happening to it, pointing out the difficulty

Organization	Yes or No	Question 8 Comment
		<p>in assigning compliance responsibility for such a requirement, as well as the near impossibility of coming up with truly unique identifiers on a nation-wide basis. The bottom line is that this situation is handled by the operators as part of their normal responsibilities, and no one is aware of a switching error caused by confusion over line identifiers.”</p>
<p><b>Response: Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.</b></p>		
PPL Electric Utilities	No	This requirement seems duplicative of TOP-002-2 R18.
<p><b>Response: Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.</b></p>		
Illinois Municipal Electric Agency	No	IMEA agrees with comments submitted by the SERC OC Standards Review Group.
<p><b>Response: Thank you for your comments. Please see our response to comments from SERC OC Standards Review Group</b></p>		
Ameren	No	<p>We suggest the SDT to provide clarification and guidance on precisely what Elements and Facilities are included in these terms. Since the word “interface” is not capitalized or defined in the NERC Glossary or this Standard, it will be difficult for TO, TOP, GO, GOP and DP entities to precisely identify the equipment associated with these terms. We also recommend that the SDT consider use of the term “Interconnected Facilities” as defined by Project 2007-06 System Protection Coordination for use in the new Standard PRC-027-1. Multiple definitions in multiple Standards for the same BES Elements and Facilities create unnecessary risk and</p>



Organization	Yes or No	Question 8 Comment
		uncertainty for both Auditors and Functional Entities.
<p><b>Response: Thank you for your comments. The term “interface” is used in other places without confusion. In addition, not all interface Facilities are “electrically joined by one or more Element(s) and are owned by different functional, operating, or corporate entities.” The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
American Transmission Company, LLC	No	Entities will face double jeopardy with existing Reliability Standard TOP-002-2b R18. Requirement 18 of TOP-002-2b is proposed to be removed from NERC Standards by the respective SDT because it adds no reliability benefit.
<p><b>Response: Thank you for your comments. The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.</b></p>		
MISO	No	To date, System Operators have identified equipment by to/from station and voltage level. Such identification has been sufficient to ensure the accurate identification of Transmission interface Elements and Facilities. Additionally, MISO notes that internal identifiers utilized by owners may result from internal coding or naming conventions that would not be known by or comprehensible to external entities. Hence, MISO cannot support this requirement based on the potential adverse impacts to reliability that could result.
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
NextEra Energy, Inc	No	See comments in response to question 7.
Texas Reliability Entity	No	The name specified by the operators of the equipment should be used, rather than the name given by the owner, and it should be jointly agreed to as the identifier for the equipment. For example, an owner name could be the “Lyndon Baines Johnson East Johnson City Substation Line 3” but the Transmission Operator refers to it as

Organization	Yes or No	Question 8 Comment
		<p>“East Johnson City 3” or “EJC3” or “Johnson 3”. The Planning Authority/Coordinator may dictate a naming convention to be used in Operations systems that are used by the System Operators (i.e. RTCA, outage scheduler, etc.). The name to be used should be clearly identifiable, concise, and easily understood by all parties involved in the Operating Communication. We suggest re-wording R1.1.4 to “When referring to a Transmission interface Element or a Transmission interface Facility, each responsible entity shall use a pre-determined, uniform identifier for each Element or Facility.”</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
ISO New England Inc	No	<p>We agree with, support and have signed onto the ISO/RTO Standards Review Committee comments.</p>
<p><b>Response: Thank you for your comments. Please see the response to the ISO/RTO Standard Review Committee comments.</b></p>		
Exelon Corporation and its affiliates	No	<p>Exelon is concerned with the requirement to use “the name” for the Element/Facility specified by the Element/Facility's owner(s). By dictating “the name” this requirement may become overly prescriptive. An entity should not be held accountable for 100% adherence to a set "specified name" for an Element/Facility. It is reasonable for entities to fully understand what Element/Facility is communicated; however, verbatim use of a "specified name" should not in itself be a requirement. For instance, if the formal name of a generating unit is "ABC Fossil Generating Station Unit 1" and an entity communicates "ABC Station Unit 1" or "ABC Generating Station 1" by the Standard as written this could be considered a violation even though it can effectively communicate the needed information. As in other sub-requirements to R1, the use of "specified name" should be an expectation but not a requirement as long as the transmitter and receiver use three way communications effectively. Further, this appears as an internal inconsistency in the standard between R1 and R2. For example, an entity owner specifies a unique name for an interface element.</p>

Organization	Yes or No	Question 8 Comment
		R1.1.4 requires the use of that unique identifier but R2 does not require verbatim response. It is not clear which part of the repeated information three part response in R2 is allowed to be non-verbatim.
<p><b>Response: Thank you for your comments. The SDT is not suggesting that this requirement need be as complex as you indicate. We think it is fairly easy to follow the owner’s naming convention. The SDT has developed a different approach to the standard that addresses your concern.</b></p>		
Brazos Electric Power Cooperative	No	Please see formal comments provided by APM.
Oncor Electric Delivery Company LLC	No	Again, Oncor take the position that this requirement contains far too much detail and goes well beyond the 2003 Blackout recommendations. Furthermore, Oncor take the position that a more appropriate approach would be to require internal procedures that address internal communication protocols.
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
JEA	Yes	R1.1.4 is unclear. Does this apply to both internal and external communications? JEA believes that this should only apply to external communications only. Many entities have internal numbering systems that have been in place without incident for decades and should be able to continue to use these internal systems when performing internal communications.
<p><b>Response: Thank you for your comments. It applies when issuing Operating Instruction between functional entities. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
SPP Standards Review Group	Yes	While the industry probably understands what is meant by ‘Transmission interface Element or Facility’, the terms are somewhat cumbersome. Additionally, for situations where there may be an agreement between owners designating multiple names for an Element or Facility, we propose adding an ‘(s)’ to ‘name’. For example,

Organization	Yes or No	Question 8 Comment
		if one owner calls a line A-B and the other owner calls the line B-A and they agree to use both names interchangeably, then either would be correct. Requirement 1.1.4 would then read: When referring to an Element or Facility that is part of an interconnection between entities, use the name(s) specified by the owner(s) for that Element or Facility.
<b>Response: Thank you for your comments. The SDT has developed a different approach to the standard that addresses your concern.</b>		
City of Jacksonville Beach dba/Beaches Energy Services	Yes	None.
Colorado Springs Utilities	Yes	The possibility exists for an element/facility to be co-owned and for each owner to have a different name.
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
Manitoba Hydro	Yes	See question 7 comments
NV Energy	Yes	Agree, however, we suggest that there be more clarity provided about what constitutes a Transmission interface Element/Facility. Is it a connection between BA's or between TOP's within a BA?
<b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b>		
Central Lincoln	Yes	but please see Q 10.
Imperial Irrigation District	Yes	
Detroit Edison	Yes	

Organization	Yes or No	Question 8 Comment
Pepco Holdings Inc & Affiliates	Yes	
Hydro One Networks Inc.	Yes	
Florida Municipal Power Agency	Yes	
GP Strategies	Yes	
Progress Energy	Yes	
Arizona Public Service Company	Yes	
Lakeland Electric	Yes	
IESO	Yes	
PPL Generation, LLC on behalf of its Supply NERC Registered Entities	Yes	
Hydro-Quebec TransEnergie	Yes	
Clark Public Utilities	Yes	
The United illuminating Company	Yes	
Utility Services, Inc.	Yes	

Organization	Yes or No	Question 8 Comment
City of Austin dba Autin Energy	Yes	
Utility System Efficiencies, InC.	Yes	
Puget Sound Energy	Yes	
Xcel Energy	Yes	
Idaho Power Company	Yes	
City of Tallahassee	Yes	
City of Vero Beach	Yes	
Seminole Electric Cooperative	Yes	
U.S. Bureau of Reclamation	Yes	
Kansas City Power & Light	Yes	
New York Power Authority		NYPA supports the comments submitted by the NPCC Regional Standards Committee (RSC).
Public Service Enterprise Group		See #10.



9. Do you agree with the VRFs and VSLs for Requirements R1, R2 and R3?

**Summary Consideration:**

The major comment issues covered:

Commenters proposed the deletion of some or all of the requirements altogether. The commenters disagreed with the requirements and thus disagreed with the associated VRFs and VSLs. Many other commenters called for reduction of all VRF levels to low. Some believe there not be a severe VSL for R1 and that there is no justification for why some parts of R1 have higher VSL impact than others. Other commenters believe there should not be a zero tolerance VSL. *The SDT response is that due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and had to be consistent with FERC and NERC guidelines.*

Some minor comment issues are:

Commenters believe the VSL should provide for a Lower Violation Severity Level for first occurrences of the violation and additional clarity could be added in the VSLs. *The SDT response is that due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and had to be consistent with FERC and NERC guidelines.*

Organization	Yes or No	Question 9 Comment
Northeast Power Coordinating Council	No	The white paper discusses many non-utility industries use of the three-part communication. However, they are not out of compliance if they fail to use three-part communications. Only the Reliability Directives should require three-part communications (and dictate compliance). This should be enforceable only if the miscommunication results in an error on the BES. We support the use of three-part communications with limitations. There is concern over the potential for being out of compliance when there is no BES impact. Failure to meet Requirement R2, part 2.2 bullets 1 or 3 is either a Moderate or High. Failure to meet bullet 2 is a Severe VSL. It is not clear why this differentiation was adopted. The White Paper reflects on Human



Organization	Yes or No	Question 9 Comment
		<p>Performance, and how miscommunications can cause a BES error resulting in an outage, or possible cascading effects. Then the Standard (and the associated out of compliance) should apply when, and to the extent that communications lapse (e.g., when there is an impactful violation of bullets 1, 2 and/or 3) results in an impactful error on the BES. Otherwise, an out of compliance is inappropriate. Non-impactful violations should be rated “Lower VSL.”</p>
<p><b>Response: The SDT thanks the commenter for the comments provided. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</b></p>		
<p>ACES Power Marketing Standards Collaborators</p>	<p>No</p>	<p>1. The first Severe VSL listed for R1 says, “...did not correctly implement any of the parts...” What is the definition of the word “any” in this VSL? We’ve interpreted the VSL to mean that none of the parts of R1 were implemented. If this is the intent of the SDT, then we suggest removing this VSL since the next Severe VSL listed says, “...did not correctly implement three (3) or more of the four (4) parts...” Three or more would include all of the parts (4 of 4) not being implemented correctly. Not implementing 1 of the 4 parts is a Moderate VSL while not implementing 2 of the 4 parts is a High VSL. So, not implementing 3 or more of the parts would be a Severe VSL.2. The second Moderate VSL for R1 says, “The responsible entity did not correctly implement Part 1.2 of the requirement.” Corresponding with our comments in Question 7 above, we don’t know how this requirement will be measured since the term “accurate” in the requirement is not defined. If an entity can make up their own clarifiers, who determines if they were “accurate” and whether they were correctly implemented? Measure M1 doesn’t specify a measurement for Part 1.2 of R1.3. The High VSL for R3 should be clarified to align with our suggestion of adding the words, “before taking action” in Question 6 above.</p>
<p><b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC</b></p>		

Organization	Yes or No	Question 9 Comment
<b>and NERC guidelines.</b>		
Midwest Reliability Organization NERC Standards Review Forum	No	The MRO NSRF recommends the following comments for consideration by the SDT: System Operators receive and issue many Operating Communications a day. The VSL for one Operating Communication is Moderate. That is too high. While improving communications is a laudable goal, the zero tolerance VSL is unacceptable and will lead to a preponderance of self-reports and compliance and administrative overhead. Also overlooked is the added stress that every time a System Operator speaks they may be in violation.
<b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</b>		
Detroit Edison	No	VSL table for R1. Current format shows that an entity must be 100% compliant. The break down from medium to severe is based on how many elements of R1 was not followed. Suggest changing the format to how many times it was not followed rather than the number of elements.
<b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</b>		
Duke Energy	No	The VRF's should all be "Low". For example, there will be thousands of routine communications per year, and each instance of missing one alpha numeric identifier (ex. "balloon" versus "baker") would be a violation. As written, this standard would drive allocation of resources for little reliability benefit.
<b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC</b>		

Organization	Yes or No	Question 9 Comment
and NERC guidelines.		
JEA	No	R2 & R3 should be removed from the standard. They are a best practice and do not substantially affect reliability when a simple command such as increase load by 100MW for a new purchase agreement.
Response: Thank you for your comments.		
Associated Electric Cooperative JRO00088	No	AECI agrees with SERC OC STANDARDS REVIEW GROUP's response to question 9.
LG&E and KU Services	No	LG&E and KU Services suggest deletion of all three requirements
Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.		
MEAG Power, Danny Dees, Steven Grego, Steve Jackson	No	VRFs and VSLs should be eliminated across the board.
Response: Thank you for your comments. The SDT notes your comments.		
City Water Light and Power	No	These requirements should be eliminated entirely
Response: Thank you for your comments.		
Hydro One Networks Inc.	No	The white paper discusses many non-utility industries use of the three-part communication. However, they are not out of compliance if they fail to use three-point communications. Only the Reliability Directives should require three-part communications (and dictate compliance). This should be enforceable only if the miscommunication results in an error on the BES. We support the use of three-part

Organization	Yes or No	Question 9 Comment
		<p>communications. There is concern over the potential for being out of compliance when there is no BES impact. Failure to meet Requirement R2, part 2.2 bullets 1 or 3 is either a Moderate or High. Failure to meet bullet 2 is a Severe VSL. It is not clear why this differentiation was adopted. The White Paper reflects on Human Performance, and how miscommunications can cause a BES error resulting in an outage, or possible cascading effects. Then the Standard (and the associated out of compliance) should apply when, and to the extent that communications lapse (e.g., when there is an impactful violation of bullets 1, 2 and/or 3) results in an impactful error on the BES. Otherwise, an out of compliance is inappropriate. Non-impactful violations should be rated "Lower VSL."</p>
<p><b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</b></p>		
<p>SPP Standards Review Group</p>	<p>No</p>	<p>With the additional burden of monitoring and tracking compliance and the increased risk of the zero-tolerance VSLs without a subsequent improvement in reliability of the BES, the VRFs should be changed to Low. The VSLs should be reduced to Lower. We suggest modifying the second part of the existing Moderate VSL for Requirement 1 to include specific reference to Requirement 1 as is done in the first part of that VSL. The VSL would then read: The responsible entity did not correctly implement Requirement R1, Part 1.2. Likewise, we also suggest modifying the second part of the existing High VSL for Requirement 1 to include specific reference to Requirement 1. The VSL would then read: The responsible entity did not correctly implement one (1) of the four (4) parts of Requirement R1 when it was appropriate to use three of the four parts.</p>
<p><b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</b></p>		

Organization	Yes or No	Question 9 Comment
SERC OC Standards Review Group	No	We suggest deletion of all three requirements.
<p><b>Response: Thank you for your comments. The SDT notes your comments.</b></p>		
Bonneville Power Administration	No	<p>BPA believes the VSLs for R3 are too extreme as written. The SDT needs to add emphasis and clarity to the second *AND*. The requirement only asks for one of the two bullets; the VSL could be incorrectly interpreted by and auditor that both bullets are needed. Compliance is met if: (a) the receiver repeats back the Operating Communication and waits for confirmation, or (b) requests it to be repeated because it may not have been heard correctly. Compliance is not met if neither is done. So if the entity received a communication but did not repeat it AND did not request it to be repeated, that violation would be severe. For severity levels add impact to the Bulk Electric System as a qualifier. IF Cascading outage or 1000 MW of load is lost due to failure to repeat information back *AND* wait for confirmation ( equals SEVERE). If equipment is damaged as a result (equals Moderate). If fails to repeat *AND* fails to wait for confirmation (equals LOW). BPA would change its position if categorizing a level of impact to the BES beginning with an equivalent to the severity of the violation.</p>
<p><b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</b></p>		
NERC Operating Committee	No	See Response 10
Progress Energy	No	Progress Energy does not agree with having "Severe VSL" for all of R1
<p><b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC</b></p>		

Organization	Yes or No	Question 9 Comment
<b>and NERC guidelines.</b>		
Southern Company	No	As mentioned in the previous comments, Southern does not agree with R1 as it is imposing a single communications procedure on the industry and is focused on the “HOW” as opposed to the “WHAT”, and does not agree with R2 and R3 as they imply that that 3-part communications are needed for all communications, not just during Reliability Directives, emergencies, or alerts. As such, Southern disagrees with the VRFs and VSLs.
<b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</b>		
HHWP	No	VSL should provide for a Lower Violation Severity Level for first occurrences of the violation. For the most part violation of this standard should be addressable through FFT process.
<b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with the guidelines.</b>		
CenterPoint Energy Houston Electric, LLC.	No	Question 9 Comments: No. VRFs and VSLs for requirements R1, R2, and R3 should not be high or severe unless Adverse Reliability Impact has occurred.
<b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with the guidelines.</b>		
IESO	No	We do not agree with Requirements R2 and R3 to begin with. We therefore do not agree with the VRFs and VSLs for these two requirements.

Organization	Yes or No	Question 9 Comment
<p><b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</b></p>		
<p>PPL Generation, LLC on behalf of its Supply NERC Registered Entities</p>	<p>No</p>	<p>PPL Generation, LLC on behalf of its Supply NERC Registered Entities does believe that this sub requirement R1.2 should be considered a moderate violation when alpha numeric clarifiers are not used in general communication.</p>
<p><b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</b></p>		
<p>Clark Public Utilities</p>	<p>No</p>	<p>Failure to implement R1.2 is not necessarily a reliability problem. As stated in our previous comments, not all alpha-numeric identifiers need clarification. However, the current proposed standard would deem a failure to use a clarifier in any Operating Communication that uses alpha-numeric identifiers as a violation.</p>
<p><b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</b></p>		
<p>Roger Zaklukiewicz Consulting</p>	<p>No</p>	<p>The standard should not be mandating the "HOW".</p>
<p><b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</b></p>		
<p>Sacramento Municipal Utility District</p>	<p>No</p>	<p>We have a problem with the standard and therefore we inherently don't agree with VRFs and VSLs.</p>

Organization	Yes or No	Question 9 Comment
<p>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</p>		
Entergy Services	No	<p>We disagree only in the sense that we disagree with the requirements, therefore, the VRFs and VSLs are not relevant. We suggest deletion of all three requirements, and the insertion of one new requirement. See Response to Questions 1, 2 and 4.</p>
<p>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</p>		
Reliability First	No	<p>Reliability First votes in the Affirmative for this standard because the standard further enhances reliability by providing communication protocols when participating in Operating Communications (specifically three way communication). Clear, formal and universally-applied communication protocols will help reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Even though Reliability First votes in the Affirmative standard, Reliability First votes in the negative for the VSLs and offer the following comments for consideration:</p> <ol style="list-style-type: none"> <li>1. VSL for Requirement R2 a. When referencing “Part” numbers within the VSL, a consistent format (e.g. Requirement R2, Part 2.2 first bullet) should be used.</li> <li>2. VSL for Requirement R3               <ol style="list-style-type: none"> <li>a. The VSLs should state “oral ... Operating Communication” rather than “verbal ... Operating Communication” to be consistent with the language in the requirement.</li> <li>b. For consistency with the first part of the first bullet in Requirement R3, RFC recommends the following language be considered for the “High” VSL: “The responsible entity received and repeated an oral two-party, person-to-person</li> </ol> </li> </ol>



Organization	Yes or No	Question 9 Comment
		Operating Communication but did not wait for confirmation that the repetition was correct. (Requirement R3, first bullet)”
<p><b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with the guidelines.</b></p>		
City of Austin dba Austin Energy	No	<p>AE respectfully objects to the contents of COM-003-1 as described in these comments. If, however, AE were to assume agreement with the requirements, we offer the following comments regarding the VSLs:</p> <p>AE does not believe the R1 VSLs provide for a fair application in practice. Risk to the BES is not increased when fewer communication protocols apply to an entity. As proposed, missing 1 of 4 parts when 4 parts are required is a Moderate VSL. Missing 1 of 4 when 3 are required is a High VSL (and it never has an opportunity for a lower severity level because Moderate VSL applies only when 4 parts are required). Similarly, if an entity misses 1 of 4 when 2 are required, it should not be penalized with a Severe VSL. AE suggests the solution to this issue is to assign Moderate VSL to missing 1 of 4, High VSL to missing 2 of 4 and Severe VSL to missing 3 or more of 4, in all instances regardless of how many parts are required.</p> <p>If the structure suggested above is not adopted, AE offers the following comments for consideration:</p> <p>Within the Severe VSL column for R1, the first paragraph (missing all of the parts when four are required) duplicates the second paragraph (missing three or more when four are required.) Within the Severe VSL column for R1, the third and final paragraphs should say “two (2) or more” and “one (1) or more,” respectively, to account for all possible situations. Doing so aligns with the second paragraph which already says “three (3) or more.” Finally, with respect to the VSLs for R2 and R3, all instances of “verbal” should be changed to “oral” to match the language of the</p>

Organization	Yes or No	Question 9 Comment
		requirement.
<p><b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</b></p>		
Utility System Efficiencies, InC.	No	<p>We agree with the classification of VRF as medium for Requirements R1, R2, and R3; however, hopefully this will not detract from the vital importance of using three-part communications in ALL operations communications relevant to the Bulk Electric System (BES). We disagree with the VSLs for Requirements R1, R2, and R3. For R1 we don't believe it is valid to claim that various combinations of not using the 24-hour clock, or alphanumeric definitions, etc. will make any difference in the outcome of poor communications. We recommend the following approach: For R1, failure to use any of the required elements of this requirement should be documented for each incident during the audit period. Greater than three failures but less than or equal to 5 would be considered "moderate;" greater than 5 but less than or equal to 8 would be considered "high;" greater than 8 would be considered "severe." Any failure to use the required elements of this Requirement R1 which results in a reportable incident on the BES should be considered "severe." For Requirements R2 and R3, all failures to use the required three-part communications should be documented by the Registered Entity for the audit period. Greater than three failures but less than or equal to 5 would be considered "moderate;" greater than 5 but less than or equal to 8 would be considered "high;" greater than 8 would be considered "severe." Any failure to use three-part communication which results in a reportable incident on the BES should be considered "severe."</p>
<p><b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</b></p>		

Organization	Yes or No	Question 9 Comment
Illinois Municipal Electric Agency	No	IMEA agrees with comments submitted by the SERC OC Standards Review Group.
Xcel Energy	No	The Moderate VSL for missing one part of the sub-requirements in R1.1.1 thru R1.1.4 is too harsh with a six month effective date. We suggest a phased in VSL or a twelve month effective date, as further explained under question 10.
<p><b>Response:</b> Thank you for your comments. We have extended the implementation time period to twelve calendar months. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</p>		
Ameren	No	We believe that the VSLs in this draft Standard create the potential for a violation or self-report for almost every single individual conversation about the BES by real-time operators. In this regard, we are concerned that the Functional Entities will greatly decrease their oral communications to minimize the risk of a self-report or violation which ultimately would undermine necessary discussions between operating entities.
<p><b>Response:</b> Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</p>		
American Transmission Company, LLC	No	System Operators receive and issue many Operating Communications each day. The VSL for “one” Operating Communication is Moderate, which is considered too high. While improving communications is a laudable goal, the zero tolerance VSL is unacceptable and will lead to a preponderance of self-reports and compliance and administrative overhead. Also overlooked is the added stress that every time a System Operator speaks, they may be in violation.
<p><b>Response:</b> Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC</p>		

Organization	Yes or No	Question 9 Comment
<b>and NERC guidelines.</b>		
MISO	No	MISO respectfully submits that no justification has been provided regarding the VRF and VSLs assigned to COM-003-0. Additionally, MISO suggests that the proposed VRFs and VSLs may be disproportionate to the actual impacts of non-compliance with the proposed standard and its requirements. For example, the proposed Standard suggests that a failure to implement one of the four parts of Requirement R1, Part 1.1 when all four parts are required is less harmful than a failure to implement one of the four parts when only two parts are required but fails to justify why the former presents a lesser risk to reliability than the latter or why a more substantial penalty would be appropriate in the latter instance. MISO respectfully suggests that the SDT revisit the proposed VRF and VSLs and revise them to ensure the consistency with the likely actual impacts on reliability.
<p><b>Response: Thank you for your comments. The VRF and VSL justification was posted with the standard. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</b></p>		
Seminole Electric Cooperative	No	See previous comments
Exelon Corporation and its affiliates	No	Exelon does not agree with the VRFs and VSLs for Requirements R1, R2 and R3. Requirement R1 - The Violation Severity Levels imply that if the responsible entity did not correctly implement any one (1) of the four (4) parts of R1 at any time that that entity would be non-compliant. It is not reasonable to hold an entity responsible to verify that every communication be in accordance with R1 at all times. It should be an expectation, but not a requirement. Requirements R2 and R3 - Similar to R1 it is not reasonable to hold an entity responsible to verify that every communication meet the requirement of R2 or R3 in all instances. Exelon suggests that this requirement be revised to address those instances where an actual event occurred due to improper communication or be limited to communication of a stated Reliability Directive. In general, the current VSLs for the current draft of COM-003-1

Organization	Yes or No	Question 9 Comment
		do not seem commensurate to the risk to the BES. See the response to Q10 for a reasonable approach to implementation of the intent of this requirement.
<p><b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</b></p>		
Brazos Electric Power Cooperative	No	Please see formal comments provided by APM.
Kansas City Power & Light	No	VRFs and VSLs should be low.
Flathead Electric Cooperative, Inc.	No	
SMUD	No	
Liberty Electric Power LLC	No	
Salt River Project	No	
South Carolina Electric and Gas	No	
Ingleside Cogeneration LP	Yes	With the transition of emergency communications to other projects, it is appropriate to downgrade COM-003-1's VRFs from "High" to "Medium".
<p><b>Response: Thank you for your comments. Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with the guidelines.</b></p>		

Organization	Yes or No	Question 9 Comment
Idaho Power Company	Yes	At least I don't have a good reason not to agree.
City of Jacksonville Beach dba/Beaches Energy Services	Yes	None.
Imperial Irrigation District	Yes	
BC Hydro	Yes	
Florida Municipal Power Agency	Yes	
GP Strategies	Yes	
Arizona Public Service Company	Yes	
Lakeland Electric	Yes	
Hydro-Quebec TransEnergie	Yes	
Orlando Utilities Commission	Yes	
The United illuminating Company	Yes	
Utility Services, Inc.	Yes	
Colorado Springs Utilities	Yes	

Organization	Yes or No	Question 9 Comment
Manitoba Hydro	Yes	
City of Vero Beach	Yes	
U.S. Bureau of Reclamation	Yes	
New York Power Authority		NYPA supports the comments submitted by the NPCC Regional Standards Committee (RSC).
Public Service Enterprise Group		See #10.

10. If you have any other comments or suggestions to improve the draft standard that you have not already provided in response to the previous questions please provide them here.

#### Summary Consideration:

A common theme among many entities is that the approach to COM-003-1 should be changed. Most agreed with the comments submitted by the NERC Operating Committee that applicable entities should be required to

1. develop written communication protocols that address the elements in draft 2 of COM-003-1,
2. train on those protocols, and
3. develop internal controls to find and correct deviances from those protocols.

*After discussion, the SDT agreed with the commenters and modified its approach to closely align with the proposal. In addition, the SDT felt that it would be beneficial to develop the RSAW for this standard in conjunction with NERC Compliance staff, and has posted it for comment along with draft 3 of COM-003-1.*

Another prevalent theme was questioning the necessity of the standard, specifically one that requires three part communication for routine operations.

*During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT's concern.*

Another theme was the concern that the work of the SDT was overreaching the scope of the SAR.

*The purpose of the SAR for this project is "Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time." Additionally, the SAR is very specific in that it also includes the term "normal" operating conditions under Applicability: "Clear and mutually established communications protocols used during real time operations under normal and emergency conditions ensure universal understanding of terms and reduce errors."*

Another theme was that the use of three part communications should be limited to Reliability Directives only.



*A Reliability Directive, by definition, is limited to instances where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact. The SDT believes that it is necessary to specify 3 part communication as a necessary communications protocol for all Operating Instructions, not just emergency situations. The OPCPSDT believes that the potential for risk to the reliability of the BES exists for all Operating Instructions.*

Still others express a desire to combine COM-002-3 and COM-003-1 into a single standard.

*The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” This is a broader scope for communications than that for Project 2006-06.*

Another concern was that this standard addressed “how” to communicate instead of “what” to communicate.

*When defining common communication protocols to be used for communication between entities, it is necessary to be specific on what must be communicated and how it must be communicated.*

Many commenters also questioned the purpose of the whitepaper that was posted by the SDT during draft 2.

*The whitepaper was intended to assist industry stakeholders understand the rationale behind the content in the standard. For further information on communication guidelines, please refer to the paper developed by the NERC Operating Committee titled “Reliability Guideline: System Operator Verbal Communication – Current Industry Practices” located at <http://www.nerc.com/filez/oc.html>.*

Several commenters expressed the desire that the language pertaining to three part communication in COM-003-1 match that in COM-002-3.

*The SDT agrees and is using the language of COM-002-3, R2 and R3 in draft 3 of COM 003-1.*

Organization	Yes or No	Question 10 Comment
Hydro One Networks Inc.		- Hydro One strongly believes that three-part communication should be limited to Reliability Directives only. Its application to virtually all communications will prove to be an additional burden for operators, burden that is not justified and would not in

Organization	Yes or No	Question 10 Comment
<p><b>Response: Thank you for your comments. A Reliability Directive, by definition, is limited to instances where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact. The SDT believes that it is necessary to specify 3 part communication as a necessary communications protocol for all Operating Instructions, not just emergency situations. The OPCSDT believes that the potential for risk to the reliability of the BES exists for all Operating Instructions.</b></p>		
<p>Xcel Energy</p>		<p>(1) Requirement R1.1 refers to both written and oral Operating Communications. It was our understanding that COM-003-1 was to be focused solely on oral communications. If that was the SDT’s intent, then we suggest striking the word “written” from this sub-requirement.</p> <p><b>Response: The scope of the SAR for Project 2007-02 is not limited to oral communications.</b></p> <p>(2) Six month Effective Date is not likely to be enough time to develop, implement, and test a new communication program. We need enough time to train the field personnel, plant control room operators and system operators to use alpha-numeric identifiers, 24-hr clock, time zone, etc. before the standard becomes effective. A twelve month implementation period would be more appropriate.</p> <p><b>Response: The SDT agrees and has made the suggested change.</b></p>
<p><b>Response: Thank you for your comments. Please see the response above.</b></p>		
<p>Central Lincoln</p>		<p>1) Central Lincoln supports the comments provided by PNGC. We have a similar situation, and believe the redirection of resources needed for compliance can only have a negative effect on our local level of service.</p> <p><b>Response: Please see our response to PNGC.</b></p> <p>2) Central Lincoln is greatly concerned regarding how this standard will be audited. We expect the Compliance Enforcement Authority, in order to avoid a data dump in the form of a six year audit period’s worth of radio recordings consisting of mainly distribution related instructions, will request searchable transcripts with pointers to</p>

Organization	Yes or No	Question 10 Comment
		<p>the relevant &gt;100 kV parts. This will represent a huge amount of time to transcribe the recordings and provide the pointers. This administrative burden in proving compliance after the fact will not result in any improvement in reliability.</p> <p><b>Response: The SDT understands your concerns and has developed a new approach to the standard that addresses your concern.</b></p>
<p><b>Response Thank you for your comments. Please see the response above.</b></p>		
<p>IESO</p>		<p>1. This standard is over-reaching into routine operations as it requires 3-part communication for all instructions that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. This type of instructions occurs every hour, if not every minute. Requiring operating personnel to apply a 3-part communication procedure for each and all of these instructions is absolutely unnecessary and overburdening, and can in fact adversely affect reliability. We strongly suggest that any requirement for 3-part communication for routine operating instructions be removed.</p> <p><b>Response: The SDT believes that it is necessary to specify 3 part communication as a necessary communications protocol for all Operating Instructions, not just emergency situations. The OPCSDT believes that the potential for risk to the reliability of the BES exists for all Operating Instructions.</b></p> <p>2. The proposed implementation plan conflicts with Ontario regulatory practice respecting the effective date of the standard. It is suggested that this conflict be removed by appending to the implementation plan wording, after “applicable regulatory approval” in the Effective Dates Section A5 on P. 4 of the draft standard COM-001, COM-002 and IRO-001, and on P. 2 of COM-001’s Implementation Plan and P. 1 of COM-002’s and IRO-001’s Implementation Plans, to the following effect:”, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.”</p>

Organization	Yes or No	Question 10 Comment
		<p><b>Response: The SDT modified the section in response to your comments.</b></p>
<p><b>Response: Thank you for your comments. Please see the response above.</b></p>		
<p>ACES Power Marketing Standards Collaborators</p>		<p>1. It is not clear that COM-003-1 R1 applies to COM-002-3. The latest draft of COM-002-3 doesn't reference the communications protocols listed in COM-003-1 R1 and the definition of Reliability Directive does not state that it is a type of Operating Communication. The only place that describes the relationship between a Reliability Directive and Operating Communications is the text box under the definition of Operating Communication in COM-003-1. There should be a better connection between the two standards to emphasize this fact. We recommend the SDTs work together to bridge this gap.</p> <p><b>Response: COM-003-1, R1 applies to all communications that involve a "command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System."</b></p> <p>2. Bullet 2 of the Implementation Plan Effective Dates is missing a word or words (section in question in parentheses): "If the version of COM-001-2 revised under Project 2006-06 is not approved before COM-003-1 is approved, then COM-001-1.1 shall expire midnight of the day (immediately the) version of COM-001-2 developed under Project 2007-02 ..." In addition, this bullet is simply too wordy and difficult to comprehend. We suggest re-wording or splitting into separate sentences for easier comprehension.</p> <p><b>Response: The SDT agrees and has corrected the bullet.</b></p> <p>3. Because all three Measures include voice recordings as evidence, the Data Retention section inappropriately and without justification raises the bar on retention of voice recordings. The section requires 365 days of voice recordings for R1 and 180 days for R2 and R3. Many registered entities keep no more than 90 days of voice recordings. Keeping more than 90 days would require unnecessary</p>

Organization	Yes or No	Question 10 Comment
		<p>additional storage. Furthermore, it is not consistent with any other NERC standard (including COM-002) that compels, at most, 90 days. Thus, many registered entities probably have evidence retention policies that actually require destruction of such recordings after 90 days.</p> <p><b>Response: The SDT has developed a new approach to the standard that addresses your concern.</b></p> <p>4. While we do not agree with all parts of the Whitepaper, we believe one major point of clarification is needed. On page 3, in the first bullet regarding a general description of how three-part communications is conducted, the face-to-face communication needs to be clarified or removed. Including face-to-face communications is not necessary for two primary reasons. First, the major reason that three-part is necessary for telephonic communications is because you cannot see the receiver and really tell if they comprehend the message. Second, this could draw in communications between operators within the control center. Since these conversations are not easily recordable, how does a registered entity prove compliance?</p> <p><b>Response: The SDT believes that Operating Communication on a face to face basis is subject to the same risk of mistakes and misunderstanding. The OPCPSDT has participated in the development of the RSAW for COM-003-1 and considered your comments.</b></p>
<p><b>Response: Thank you for your comments. Please see the response above.</b></p>		
Texas Reliability Entity		<p>1. The use of exploder or hotline calls, where a single oral communication is used to alert a multitude of entities simultaneously to issues and directions affecting the BES, should be addressed by this Standard. The use of these types of calls is economic, efficient, and should be recognized for the purpose of providing Operating Communications, including Reliability Directives. Not addressing this issue will have a serious impact on System Operators during times, normal or emergency, when clear,</p>

Organization	Yes or No	Question 10 Comment
		<p>concise, and effective communications are needed. The 2003 Blackout Recommendation #26 includes the following text: “Standing hotline networks, or a functional equivalent, should be established for use in alerts and emergencies (as opposed to one-on-one phone calls) to ensure that all key parties are able to give and receive timely and accurate information.” This proposed Standard should address the issue of what communication protocols should be applied to exploder or hotline calls.</p> <p><b>Response: The SDT has addressed all calls in draft 3.</b></p> <p>2. There is a disconnect between COM-003-1 and COM-002-3 that will create confusion within the industry regarding communications. COM-002-3 has limited applicability, restricted to use of Reliability Directives ONLY in an Emergency or Adverse Reliability Impact. COM-003-1 is limited to oral two party communications, but it applies outside of Emergency situations. With proposed IRO-001-3 contained in Project 2006-06, a Reliability Coordinator or other entity may not be certain of whether to give a directive, a Reliability Directive, or an Operating Communication, and a recipient may dispute whether the correct communication type was used. What is the intended compliance impact of using the wrong type of communication, for both the initiating entity and the receiving entity?</p> <p><b>Response: Only a Reliability Directive must be identified as such. If a “directive” is a “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System,” it is an Operating Instruction and must use the protocols identified in COM-003-1.</b></p> <p>3. COM-003-1 and COM-002-3 will cause substantial confusion as drafted because they both require three-part communication, but they use different language to describe it. That suggests that the communication protocols that are required must be different, and as an entity moves from non-Emergency into Emergency operations, its communication protocol will be expected to change. We strongly</p>

Organization	Yes or No	Question 10 Comment
		<p>suggest that a single three-part-communication protocol be set forth in one place only, and that any differences between Emergency and non-Emergency communication requirements be clearly identified.</p> <p><b>Response: The SDT agrees and is using the language of COM-002-3, R2 and R3 in draft 3 of COM 003-1.</b></p>
<p><b>Response: Thank you for your comments. Please see the response above.</b></p>		
<p>Hydro-Quebec TransEnergie</p>		<p>1. Inconsistency between the sentences in R2 of COM-003 "that issues an oral, two-party, person-to-person Operating Communications" and R3 "that receives an oral two-party, person-to-person Operating Communication". The sentence in R2 has a comma after the word oral, the sentence in R3 does not. Furthermore, what is the difference between two-party and person-to-person communication?</p> <p><b>Response: The SDT will remove the comma in R2. "Two party" was added based on concerns that the requirement would be applicable to multi addressee or burst communication. Person to person was added to address concerns of the requirements applying to "machine" messages that some entities utilize.</b></p> <p>2. For R2 of COM-003, should the Generator Operator be involved in this requirement as an authority able to issue an oral Operating Communication?</p> <p><b>Response: Based on the revised definition of Operating Instruction, a GOP can only be a receiver of an Operating Instruction.</b></p> <p>3. It's not clear when an action is defined as a Reliability Directive. Does each utility define the instruction to be included in the Reliability Directive? Our current practice is that 3 ways communication is always directive. We still don't see the need to separate the COM-002 (emergency) and COM-003 (normal operating).</p> <p><b>Response: The Reliability Coordinator, Transmission Operator, or Balancing</b></p>

Organization	Yes or No	Question 10 Comment
		<p><b>Authority will issue a Reliability Directive during Emergency and Adverse Reliability Impacts in accordance with COM-002-3.</b></p> <p>4. The requirement R1 of COM-003 should also be reflected in the COM-002 standard. Especially during the Emergency situation, the Operation Communication should be followed.</p> <p><b>Response: The SDT thanks you for your comment.</b></p>
<p><b>Response: Thank you for your comments. Please see the response above.</b></p>		
<p>Associated Electric Cooperative JRO00088</p>		<p>AECI remains unconvinced that COM-003-1 adds sufficient value to our industry reliability, for the degree of non-compliance risk it imposes. There are several issues with the supporting white paper:</p> <p>1) this paper appears void of citations supporting its assertions,</p> <p><b>Response: The SDT disagrees. There are many citations especially those dealing with human behaviors applicable to communication.</b></p> <p>2) It also fails to differentiate cited industry failures in communication, between; situations where somebody failed to communicate a field-change that significantly affected BES situational awareness, situations where the change was clearly understood and yet its situational impact was not, and situations where the affected objects were misunderstood. All of these failures are critical to our industry's assessing true value in introducing and enforcing broad-scope three-part communication, because COM-003-1 can only improve the last of those three miscommunications,</p> <p><b>Response: The SDT did not go into that detail because of ongoing discussion of violations.</b></p> <p>3) its citation, of 12 Entity's broadly adopting three-point communication, seems hardly a majority practice within our industry,</p>



Organization	Yes or No	Question 10 Comment
		<p><b>Response: The SDT would ask you to look at the load and customer impacts that sample covered. The SDT could have added another 20 entities and believes the results would not differ.</b></p> <p>4) while Entities may internally adopt similar policies, that does not mean we should risk being subject to Federal law in support of conceptual theories,</p> <p><b>Response: The formalization of communication protocols enhances reliability by reducing errors on the BES.</b></p> <p>5) Citations of similar adoptions by other industries or cultures, fail to provide useful differentiation between their critical and casual operational communications, except in the case of military, where COM-003’s proposed broad scope of communication appears to be inconsistent, while COM-002’s narrowed scope appears in alignment with the military’s adopted practices as described.</p> <p><b>Response: The OPCPSDT has military expertise that would suggest otherwise.</b></p>
<p><b>Response: Thank you for your comments. Please see the response above.</b></p>		
FirstEnergy		<p>Although we believe the team made significant improvements to the standard, and would support a 3-part communication standard, we believe the introduction of both COM-002-2 which utilizes Reliability Directives and COM-003-1 which utilizes Operating Communications cause confusion for system operators and may in fact be detrimental to reliability. We do not support two standards on three-part communication. We suggest, as we have in the past, that the subject of three-part communication be addressed in a single standard, and that the requirements be developed for simplicity. The industry is, and has been, using three-part communication for decades and although we agree it should be more consistently practiced and standardized, the required communications protocols should be simple while meeting the goal of BES reliability. Introducing complicated requirements and standards that have different definitions such as Reliability Directive and Operating</p>

Organization	Yes or No	Question 10 Comment
		<p>Communication may cause the operator to hesitate when issuing directives in real-time and every second counts when a potential system emergency must be mitigated. Therefore, FE does not support the creation of neither COM-003-1 nor COM-002-2 (see project 2006-06 vote and comments) and ask NERC to reevaluate the need to have two separate standards for three-part communication.</p>
<p><b>Response:</b> Thank you for your comments. The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” This is a broader scope than that for Project 2006-06.</p>		
<p>Western Electricity Coordinating Council</p>		<p>As noted in our response to question 6, there is still a concern about having two standards for communications on changes to elements of the BES. Bifurcations may lead to the misuses of one protocol in place of another for the two standards.</p>
<p><b>Response:</b> Thank you for your comments. The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” This is a broader scope than that for Project 2006-06.</p>		
<p>City of Austin dba Austin Energy</p>		<p>Austin Energy (AE) respectfully disagrees with COM-003-1 because it:</p> <p>(1) reaches beyond the SAR and</p> <p><b>Response:</b> The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” Additionally, the SAR is very specific in that it also includes the term “normal” operating conditions under Applicability: “<i>Clear and mutually established communications protocols used during real time operations under normal and emergency conditions ensure universal understanding of terms and reduce errors.</i>”</p> <p>(2) Requires “how” communication should take place instead of “what” and “when.”</p> <p><b>Response:</b> When defining common communication protocols to be used for</p>

Organization	Yes or No	Question 10 Comment
		<p><b>communication between entities, it is necessary to be specific on what must be communicated and how it must be communicated.</b></p> <p>The scope of COM-003-1 reaches beyond the SAR by imposing protocols on normal communications when the focus of the 2003 Blackout Report, Recommendation 26 and Order 693, Paragraph 532 is on timely and accurate EMERGENCY communication. Recommendation 26 does not recommend tightened communication protocols under normal operating conditions. It recommends that NERC “work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations....” AE believes Project 2006-06 (COM-002-3) sufficiently addresses this recommendation by requiring three-part communication for Reliability Directives. If used correctly, the say-repeat-confirm method improves effectiveness of communications during alerts, emergencies and other critical time periods.</p> <p><b>Response: Response: The OPCSDT disagrees that the Blackout Report (and FERC Order 693 and the SAR) only addresses the need to tighten protocols for Emergencies. The Blackout Report uses the phrase “especially for emergencies” which the SDT interprets to mean the authors were recommending applicability of communication protocols for the total population of operating communication and used this language to amplify the importance of such protocols during emergency conditions. FERC Order 693 paragraph 532 (“This will eliminate possible ambiguities in communications during <u>normal</u>, alert and emergency conditions”) and the SAR are very specific in that both include the term “normal” operating conditions.</b></p> <p>The other source for COM-003-1 (Paragraph 532) references communications during normal conditions, but only in response to an EEI comment. The actual directive is in paragraph 535, where FERC states, “Accordingly, we direct the ERO to either modify COM-002-2 or develop a new Reliability Standard that requires tightened communications protocols, especially for communications during alerts and emergencies.” AE notes that the directive focuses on communications during alerts and emergencies, similar to Recommendation 26. AE recognizes that the SDT reads</p>

Organization	Yes or No	Question 10 Comment
		<p>Paragraph 532 to indicate a need for communication protocols even under normal operating conditions. However, AE believes that a NERC Reliability Standard is not the appropriate place to address the “how” of communication protocols under normal conditions.</p> <p><b>Response: FERC Order 693 paragraph 532 (This will eliminate possible ambiguities in communications during normal, alert and emergency conditions”) and the SAR are very specific in that both include the term “normal” operating conditions.</b></p> <p>Industry stakeholders are justifiably concerned that deviations from the requirements during normal operating conditions will inevitably occur (human performance factor) without a risk to reliability. The potential number of self-reports industry-wide carries an overly burdensome cost without an associated benefit to the BES. AE believes that efforts at the regional level (e.g., training, guidelines, etc.) would be more effective and relevant.</p> <p>In summary, AE believes the focus of COM-003-1 should be on achieving accurate and timely information (the “what” and “when”), not prescribing exactly “how” registered entities achieve it. As written, COM-003-1 goes too far into the realm of mandating best practices and claiming it is necessary for reliability.</p> <p><b>Response The SDT understands your concerns and has developed a new approach to the standard that addresses your concern.</b></p>
<p><b>Response: Thank you for your comments. Please see our response above.</b></p>		
Pepco Holdings Inc & Affiliates		<p>COM-002 and COM-003 must be combined into one standard. COM-002 dealing with emergency, reliability situations requires 3 part communication as specified. COM-003 dealing with normal conditions, non reliability issues should not require 3 part communications.</p>
<p><b>Response: Thank you for your comments. The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten</b></p>		

Organization	Yes or No	Question 10 Comment
<p>response time.” This is a broader scope than that for Project 2006-06.</p>		
<p>ITC Holdings</p>		<p>COM-003-1 and COM-002-3 cannot be processed separately since they are inextricably inter-related. In fact, they are so inter-related that there is no compelling reason provided that suggests they should be separate standards. The comment form for COM-003-1 even indicates that Reliability Directives are a subset of Operational Communication which further indicates that all of the requirements surrounding how communication is performed regardless of the nature of the content should be addressed in one standard.</p> <p><b>Response: Thank you for your comments. The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” This is a broader scope than that for Project 2006-06.</b></p> <p>Further, 3 part communication is being cited as ensuring reliable operation of the BES. It is not the act of 3 part communication that ensures reliable operation. Rather, it is the effective transfer of information that does. Requiring 3 part communication for all communication will reduce the effectiveness of the communication as the novelty factor wears off and individuals only go through the motions. Active listening and truly understanding the communication is what accomplishes the intent. Use of 3 part communication for situations that the initiator determines it is warranted based on their knowledge and training is the most appropriate approach to ensure reliable operation of the BES.</p> <p><b>Response: The SDT believes that it is necessary to specify 3 part communication as a necessary communications protocol for all Operating Instructions, not just emergency situations. The OPCSDT believes that the potential for risk to the reliability of the BES exists for all Operating Instructions.</b></p>

Organization	Yes or No	Question 10 Comment
<p>Response: Response: Thank you for your comments. Please see the responses above.</p>		
JEA		Combine COM002 & COM003.
<p>Response: Thank you for your comments. The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” This is a broader scope than that for Project 2006-06.</p>		
City Water Light and Power		CWLP generally echoes the SERC Operating Committee comments. Additional comments have been provided to suggest better functionality if the standard moves forward in its current form.
<p>Response: Thank you for your comments. Please refer to the response to the SERC Operating Committee comments.</p>		
LG&E and KU Services		<p>Does the industry agree that we need a standard on three part communications for normal operations? Has a lack of a standard on three part communications for normal operations created any reliability issues? If so, what are they? LG&amp;E and KU Services believes that the concerns expressed by the Blackout Report and cited as the reason for creating this NERC Project are already addressed through EOP and TOP Standards that specify what information is to be communicated, instead of how information is to be communicated. “Lack of situational awareness” (2003 Blackout Report, Recommendation 26) cannot be overcome by dictating “how” communication takes place, but instead, can be overcome by responsible individuals (NERC certified operators) ensuring that proper information is communicated. LG&amp;E and KU Services believes that the concerns expressed by the Blackout Report and FERC Order 693, Paragraph 532 are not (and need not be) addressed by this or any other NERC RS Project.</p> <p>First, the recommendation for “tightened communication protocols” (FERC Order 693, Paragraph 531) is within the context of “alerts and emergencies.”</p>

Organization	Yes or No	Question 10 Comment
		<p>Second, FERC’s Order 693, Paragraph 532 calls for “communication uniformity as much as practical on a continent-wide basis.” This is calling for uniformity in emergency communications, which was the context within which FERC was speaking, as evidenced by the previous sentence (“during emergencies”). By establishing emergency communication uniformity, “ambiguities in communications during normal, alert and emergency conditions” will be eliminated. Nothing in the Commission’s Determination was calling for establishing communication uniformity for all communications.</p> <p><b>Response: During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</b></p> <p><b>The OPCPSDT disagrees that both the Blackout Report and the FERC directive deal with tightening protocols for Emergencies only. The Blackout Report uses the language “Tighten communications protocols, especially for communications during alerts and emergencies.” The SDT believes the authors are recommending applicability of communication protocols for the total population of operating levels and wanted to amplify the importance of it “especially” during emergency conditions. FERC Order 693, paragraph 532 (<i>This will eliminate possible ambiguities in communications during normal, alert and emergency conditions</i>) and the SAR are very specific in that both include the term “normal” operating conditions. Additionally the excerpts from the text you cite (<i>“Paragraph 532 calls for “communication uniformity as much as practical on a continent-wide basis”</i>) are very clear in their intent and meaning and support the standard as drafted.</b></p> <p>LG&amp;E and KU Services suggest removing requirements R2 and R3. These requirements do not improve reliability, but instead shift Operator focus from</p>

Organization	Yes or No	Question 10 Comment
		<p>communicating proper information (“what”) to communicating in a compliant manner (“how”). System Operator need to be wholly concerned with the information they are communicating, not making sure they “say things the right way” so they will not be non-compliant. Every communication should not be a compliance event.</p> <p><b>Response: The SDT believes that it is necessary to specify 3 part communication as a necessary communications protocol for all Operating Instructions, not just emergency situations. The OPCPSDT believes that the potential for risk to the reliability of the BES exists for all Operating Instructions.</b></p> <p>While LG&amp;E and KU Services supports the addition of using the 24-hour clock format, subpart 1.1.4 is already addressed in TOP-002-2b R18.</p> <p>Including such a similar requirement here simply provides entities with a double jeopardy opportunity to be non-compliant. We suggest subpart 1.1.4 be removed, along with subpart 1.2, which again goes too far in dictating “how” and simply creates another compliance event.</p> <p><b>Response: The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. Project 2007-03 chose to eliminate TOP-002-2a Requirement R18 on the basis that “This requirement adds no reliability benefit. Entities have existing processes that handle this issue. There has never been a documented case of the lack of uniform line identifiers contributing to a System reliability issue. This is an administrative item, as seen in the measure, which simply requires a list of line identifiers. The true reliability issue is not the name of a line but what is happening to it, pointing out the difficulty in assigning compliance responsibility for such a requirement, as well as the near impossibility of coming up with truly unique identifiers on a nation-wide basis. The bottom line is that this situation is handled by the operators as part of their normal responsibilities, and no one is aware of a switching error caused by confusion over line identifiers.” COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only</b></p>



Organization	Yes or No	Question 10 Comment
		<p><b>Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are referring to the same equipment for the Operating Instruction.</b></p> <p>We suggest subpart 1.1.3 be rewritten to explicitly allow for entities to agree upon using a particular format for communicating time. With these suggestions in mind, it would be more appropriate to put the remaining requirements into COM-001. We also suggest removing the definition for Operating Communication since this also unnecessarily creates opportunities for non-compliance.</p> <p><b>Response: When defining common communication protocols to be used for communication between entities, it is necessary to be specific on what must be communicated and how it must be communicated. Comments on prior postings of COM-003-1 rejected allowances for entities to agree upon particular protocols, feeling that the documentation of those agreements would be overly burdensome and is contrary to the purpose of the SAR, which is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” The SDT is using the term “Operating Instruction” to limit the communications that are subject to COM-003-1.</b></p> <p>LG&amp;E and KU Services have concerns about the white paper posted on the project page. Some assertions made in the white paper are not defensible, and some are not technically sound. This should not be used as support for the existing draft of COM-003.</p> <p><b>Response: The SDT believes its assertions are defensible, technically sound, and carefully researched. The White Paper is intended to assist industry stakeholders understand the rationale behind the content in the standard. For further information on communication guidelines, please refer to the paper developed by the NERC Operating Committee titled “Reliability Guideline: System Operator Verbal Communication – Current Industry Practices” located at</b></p>

Organization	Yes or No	Question 10 Comment
		<a href="http://www.nerc.com/filez/oc.html">http://www.nerc.com/filez/oc.html</a>
<p>Response: Thank you for your comments. Please see the response above.</p>		
<p>Dominion</p>		<p>Dominion acknowledges the term Reliability Directive is proposed for inclusion in the draft of COM-002-3, but we also prefer a notation be added, to clarify this is not an existing term in the current version of the NERC Glossary of Terms. As mentioned in response to Question #1; When the standard is implemented, the text box (on page 2 of the clean standard) will be removed, therefore losing any tieback to a Reliability Directive as a type of operating communication.</p> <p><b>Response: After filing with FERC and receiving FERC approval the definition will be added to the NERC Glossary of Terms. The OPCPSDT and the RCSDT were attempting to explain the relationship between the two standards to help stakeholders understand. The textbox was an attempt to explain that relationship. Draft 3 of the standard no longer contains the reference.</b></p> <p>The data retention period for this standard for normal operating communications is extensively longer than the COM-002-3 standard for emergency communications as discussed in Project 2006-06. Dominion suggests the same data retention period as COM-002-3 for Requirements 1, 2 and 3 of this standard, which is for the most recent 3 months.</p> <p><b>Response: The SDT has developed a new approach to the standard that addresses your concern.</b></p> <p>Dominion also questions why the proposed standard is applicable to Distribution Providers since changing the state of BES elements is not what they do. Therefore, they would never receive an Operating Communication instructing them to do anything to a BES element, so it would not be practical or useful for a DP to include this standard in its compliance program. DP is included as an applicable Registered Entity in COM-002. Other than a load shed Reliability Directive (during emergencies),</p>

Organization	Yes or No	Question 10 Comment
		<p>what other Operating Communication would a DP receive?</p> <p><b>Response: The SDT is aware of some DPs that operate and own BES assets. Load shedding communications are the main reason they are applicable. Load shedding can be requested during non emergency conditions.</b></p>
<p><b>Response: Thank you for your comments. Please see the response above.</b></p>		
<p>Arizona Public Service Company</p>		<p>Equipment identifiers at individual locations (generating stations as an example) have the same alpha preceding the unique device numeric. It is unnecessary, redundant and confusing to the operator to repeat the station location with an alpha clarifier.</p>
<p><b>Response: Thank you for your comments. The SDT is has developed an alternate approach to COM-003-1. Using the approach in draft 3, an entity could define in their communication protocols that the equipment identifier does not include the preceding alpha that designates the location.</b></p>		
<p>Exelon Corporation and its affiliates</p>		<p>Exelon believes that the proposed COM-003-1 exceeds what is necessary for reliability and creates other problems such that the proposed standard may in fact result in a decrease in reliability. In particular the language is overly prescriptive and presents significant compliance questions both in terms of creating a credible compliance measure and a reasonable way for entities to demonstrate compliance or conduct internal self-assessment. Exelon believes that an alternative approach to COM-003 is needed. The standard should set desired outcomes and leave the specific implementation of communication protocols to registered entities. Standards should not impede use of best practices and should encourage effective innovation.</p> <p>An alternate approach is worth consideration:</p> <p>Requirements:</p> <ol style="list-style-type: none"> <li>1. Entities must have a protocol addressing communications for operating personnel.</li> </ol>

Organization	Yes or No	Question 10 Comment
		<p>1.1. The protocol should address; three part communication, English language usage (include footnote for requirement to use legislatively prescribed language), time zone, entity unique identifiers, 24 hour clock and alpha numeric identifiers.</p> <p>1.2. All control center operating personnel should be trained on the use of the protocol. Measure: In an audit, a company would be expected to demonstrate that they had such a protocol and that they trained their operators on its use.</p> <p>This proposal would satisfy the Directives and Blackout Recommendation #26 which were to “tighten communication protocols, especially for... emergencies”. Stakeholders and the NERC BOT approved COM-002-2 which addressed communications capabilities being staffed and available for addressing a real-time emergency condition. An associated interpretation of COM-002 clarified whether routine operating instructions are “directives” or whether “directives” are limited to actual and anticipated emergency operating conditions. Our proposed changes to COM-003 are responsive to the FERC recommendation to tighten operating protocols. Other possible responses to this recommendation would be to conduct an assessment of NERC certification requirements and if found lacking in this area, strengthen them. For the reasons stated above, we urge NERC to change the focus of COM-003 from a prescriptive what to do approach and allow entities to develop and implement protocols in keeping with NERC and ISO/RTO operator certification requirements and best practices within the industry.</p> <p>Thank you for the opportunity to comment.</p>
<p><b>Response: Thank you for your comments. The SDT has developed a similar approach in draft 3.</b></p>		
Idaho Power Company		I believe the requirements for Directive should be included in this standard and

Organization	Yes or No	Question 10 Comment
		removed from COM-002.
<b>Response: Thank you for your comments.</b>		
Illinois Municipal Electric Agency		IMEA agrees with comments submitted by the SERC OC Standards Review Group.
<b>Response: Thank you for your comments. Please see our response to SERC Operating Committee comments.</b>		
Indiana Municipal Power Agency		<p>IMPA believes that each organization should follow its internal communication protocol up to the point where a Reliability Directive is issued. IMPA does not see why NERC is stating the “how” in this standard (sub-requirements 1.1, 1.1.1 thru 1.1.4) when its common practice has been to stay away from telling the entities “how” to do a standard requirement. Therefore, IMPA believes that COM-003 should just state that an entity needs to have a communication protocol in place for issuing and receiving instructions. In addition, an entity should only have to do training on its communication protocol in order to prove compliance that it is following or using it. The record keeping or data retention of phone recordings will become very burdensome on entities, especially if they have to keep five or six years worth (back to its last audit date).</p>
<b>Response: Thank you for your comments. The SDT has developed a similar approach in draft 3.</b>		
Ingleside Cogeneration LP		<p>Ingleside Cogeneration LP agrees in principle with the need for Operators and Field Personnel to express and validate their intent before taking actions that may pose a risk to the BES. However, we have serious reservations with the use of the audit methodology to drive consistent behavior. Perhaps most significant is the assessment of violations for a single instance where an operator does not use alphanumeric identifiers or a 24 hour clock during the course of an Operating Communication. We believe that even in an extremely well managed organization that 100% adherence is statistically impossible. In our view, this flies in the face of</p>

Organization	Yes or No	Question 10 Comment
		<p>fairness - and raises serious questions about the “public/private partnership” that is supposed to be the foundation of NERC standards. This points to the “bean counting” type of Standards that NERC is trying to get away from, rather than focusing on reliability of the BES. Furthermore, entities will be assessed violations if they cannot prove that every side conversation did not take place in accordance with COM-003-1. In order to comply, we estimate it will take two or three times the time to document a non-recorded communication than it will be to actually conduct one. This is not an appropriate use of our front-line resources available time - nor does the documentation serve a reliability purpose in our view.</p> <p><b>Response: The SDT has developed a new approach in draft 3 that addresses your concerns.</b></p> <p>In addition, COM-003-1 is silent as to multiparty calls that are typical in some regions, where an entity at random is elected for the three part response for the group on conference calls, and not all parties are required to respond, but rather only participate on the call.</p> <p><b>Response: The SDT is incorporating protocols for multiparty calls in draft 3.</b></p>
<p><b>Response: Thank you for your comments. Please see the comments above.</b></p>		
Manitoba Hydro		<p>Manitoba Hydro is voting negative on COM-003-1 based on our comments in the previous questions in addition to the following:(M1/M2/M3)- it is unclear what specifically is meant by ‘on site observations’ or how ‘on site observations’ can be an effective measure of compliance with the standard’s requirements.</p>
<p><b>Response: Thank you for your comments. The measures have been modified in response to changes in the requirement language.</b></p>		
PNGC Small Entity Comment Group		<p>Modified PNGC Small Entity Group Comments:</p> <p>The PNGC comment group believes there should be a distinction in the “Applicability” section of the standard between “Scheduling Distribution Provider” and “Non-</p>

Organization	Yes or No	Question 10 Comment
		<p>scheduling Distribution Provider”. PNGC members are small rural cooperatives that are “Full service BPA customers.” This means that BPA is our power supplier and scheduling agent and therefore handles all reliability directives, scheduling, tagging, dispatching of resources and curtailments of load from breakers on BPA’s system for PNGC members.</p> <p>According to a letter from the WECC Reliability Coordinator (VRCC and LRCC) none of PNGC’s members will ever receive a “Reliability Directive”. Such a Directive would be sent to either a Balancing Authority (BA), or a Transmission Operator (TOP). We estimate there are over 100 entities that are BPA Full Service customers that are in a similar position and making this standard applicable to them does nothing to enhance reliability. A simple declarative statement in the Applicability section of the standard could focus the intent of the SDT on those entities that need it while lessening the compliance risk and clerical burden for other entities that the standard should not apply to.</p> <p>We suggest:</p> <p>4. Applicability:</p> <p>4.1. Functional Entities</p> <p>4.1.1 Reliability Coordinator</p> <p>4.1.2 Transmission Operator</p> <p>4.1.3 Balancing Authority</p> <p>4.1.4 Generator Operator</p> <p>4.1.5 Distribution Provider:</p> <p>With Real-time Operations and Scheduling desk the PNGC comment group believes the above change will lessen the compliance burden on small, non-scheduling entities while still meeting the SDT’s intent with regard to Operating Personnel Communications. We also note that FERC and NERC, on multiple occasions and in</p>

Organization	Yes or No	Question 10 Comment
		multiple filings, have indicated their openness to lessening unnecessary compliance requirements for small entities.
<p><b>Response: Thank you for your comments. The SDT notes that COM-002-3, draft 6 states that in addition to Reliability Coordinators, Balancing Authorities and Transmission Operators can also issue Reliability Directives. Draft 3 of COM-003-1 also limits protocols for Distribution Providers to those that apply to receiving Operating Instructions.</b></p>		
NERC Operating Committee		<p>NERC Operating Committee (OC) comments on COM-003 (Operating Personnel Communications Protocols) The current draft of COM-003 is prescriptive and is in fact a procedure or rather a set of discrete tasks / actions that are not focused to support the reliability intent. The NERC OC recommends that the SDT develop a purpose that speaks to operators and their responsibility to maintain reliability not a process or set of protocols that cannot account for every nuance and variable in the realm of communications and human interaction.</p> <p>Restated Purpose: To provide system operators a holistic communications program that reduces the possibility of miscommunication that could lead to action or inaction harmful to the reliability of BES.</p> <p>The OC just approved a guideline for System Operator Verbal Communications. The OC feels this could be used as a basis for a new approach for COM-003-1. The OC proposes that the SDT changes the draft of COM-003 to the following three requirements:</p> <p>R1: Each RC, TOP, GOP, BA, DP shall develop a written communications procedure to address the following:</p> <ul style="list-style-type: none"> <li>o Protocols</li> <li>o Training and education</li> <li>o Internal controls (Preventive, Detective and Corrective) that demonstrates a process that will find, fix, track, trend, analyze and continuously improve</li> </ul>



Organization	Yes or No	Question 10 Comment
		<p>R2: Each RC, TOP, GOP, BA, DP shall train applicable personnel on the communication procedure developed for R1</p> <p>R3: Each RC, TOP, GOP, BA, DP shall take appropriate actions to address deficiencies revealed by internal controls.</p> <p><b>Response: The SDT has developed a similar approach in draft 3.</b></p> <p>Data retention must be rethought to focus less on significant data and evidence archiving (backwards looking) and more on the internal program to continuously improve (forward looking). Individual instances of not following the company's procedure should not be the basis of violation but instead - a demonstration of internal assessment and refinement.</p> <p><b>Response: The SDT has modified its approach to data and evidence retention.</b></p> <p>The VRF/VSL should be based on an entity either not having a program, not demonstrating their assessment and corrective action process or egregious / systemic problems with the implementation of their program.</p> <p><b>Response: The SDT has modified the VRFs and VSLs accordingly.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
Entergy Services		<p>NERC standards are not procedures and this standard attempts to impose a single procedure on the industry. Tightening of communications protocols between entities does not equate to a procedural requirement to use 3-part communications between personnel at various registered entities.</p> <p>The actual impact to reliability of routine communications between entities is minimal and further diminished by the Reliability Directive construct espoused by RC SDT (Project 2006-06), which fully addresses the reliability implications of communications.</p> <p><b>Response: The SDT is aware of draft 6 of COM-002-3 from project 2006-06 and</b></p>

Organization	Yes or No	Question 10 Comment
		<p>believes that while COM-002-3 addresses the risks to reliability during Emergencies and Adverse Reliability Impacts it does not address the risks to reliability that exist due to communication mistakes that occur during normal operating conditions. The events that generate a Reliability Directive are high impact and low frequency events. Most of the time the BES is operated in a normal state sustained by large numbers of Element and Facility changes that require Operating Communications.</p> <p>The communication protocols the SDT is proposing have been proven effective for clarifying critical content in commands or orders. Reducing the potential for mistakes on the BES enhances reliability.</p> <p>While most of the industry practices three-way communications routinely, this is not necessary to assure reliable operations. Rather, in many cases, entities are viewing this as a “best practice”, that helps to formalize communications so that Operators will develop good communications habits. The work by the RC SDT (Project 2006-06) on Reliability Directives is all that is necessary to assure BES reliability, and the approach currently espoused by OPCP SDT (Project 2007-02) in this COM-003 standard is massively redundant to that effort while not helping reliability. We agree with SERC in suggesting another approach to COM-003. Rather than to specify the solutions to achieving effective communication, COM-003 should instead focus on developing and training on an approach that is designed appropriately for each RE.</p> <p>For instance, another approach to COM-003 might be along the lines of:</p> <p>Requirement 1 (See our suggested alternate language in our response to Question 1) could be written in a manner to require the appropriate registered entities to develop a communication protocol that is appropriate for each RE. This communications protocol should address how the RE is handling:</p> <p>Time Zone Designations - for both internal and external communications Language</p>

Organization	Yes or No	Question 10 Comment
		<p>Alpha-numeric identifiers</p> <p>Three - part communications - circumstances in which is it required, etc</p> <p>Use of defined terminology. This approach would require the RE to address how it is addressing these issues, without prescribing solutions. For instance, a RE could include in its protocol a section dealing with time zone designation. In this section the RE could explain that it, and its neighbors, all are in and use the same time zone. As a result, the RE has determined that requiring the identification of time zone reference in communication is not necessary.</p> <p>Procedures should address the training of operators on the communication protocol</p> <p>Procedures should address the internal controls that the RE uses to review that its protocol is being followed.</p> <p>The compliance approach would be to: Assess whether the RE has developed a written protocol and whether the protocol addresses each item - this does not mean there is an assessment of HOW each item is assessed; assess whether the RE has trained its operators on the communications protocol and assess whether the RE is following its internal controls. Compliance with this requirement should not require 100% accuracy in compliance with the entities communication procedure by real-time operations staff. That would cause misdirection of resources and training time from issues more important to BES reliability.</p> <p><b>Response: The SDT has developed a similar approach in draft 3.</b></p> <p>Any data retention requirements should be consistent with the COM-002 reliability standard.</p> <p><b>Response: The SDT has modified its approach to data and evidence retention.</b></p> <p>What is the role of the Operating Communications Protocols White paper? Is it a position of the STD? Was there a minority opinion? Why was it not vetted with a</p>

Organization	Yes or No	Question 10 Comment
		<p>wide spectrum of industry stakeholders (we are unaware of any effort to circulate this white paper even as far as to the standing Technical Committees of NERC).</p> <p><b>Response: The White Paper is intended to assist industry stakeholders understand the rationale behind the content in the standard. For further information on communication guidelines, please refer to the paper developed by the NERC Operating Committee titled “Reliability Guideline: System Operator Verbal Communication – Current Industry Practices” located at <a href="http://www.nerc.com/filez/oc.html">http://www.nerc.com/filez/oc.html</a>.</b></p> <p>The White Paper was requested by members of the Standards Committee to provide a foundation for the team’s position on communication protocols for normal operations.</p> <p>Does the industry agree that we need a standard on three part communications for normal operations? We have seen no evidence to support this contention. This revision to COM-003 seems to have sprung into existence without any substantive industry comments indicating that the industry would benefit from having a procedure memorialized as a set of Requirements.</p> <p><b>Response: During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
Southern Company		<p>NERC standards are not procedures and this standard attempts to impose a single procedure on the industry. Where is the demonstrated need for such a standard?</p>

Organization	Yes or No	Question 10 Comment
		<p>Have communications, especially during periods of normal operations, been shown to be the root cause of many, if any, events? Registered Entities agree that there is a need of clear and concise communication between entities; however, we must avoid creating a system that is unmanageable and quite possibly results in less reliability. FERC Order 693 directs the ERO to “and (3) requires tightened communications protocols, especially for communications during alerts and emergencies”, in paragraph 532. The proposed standard goes too far, especially for communications outside of alerts and emergencies.</p>
<p><b>Response:</b> Thank you for your comments. The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” Additionally, the SAR is very specific in that it also includes the term “normal” operating conditions under <b>Applicability:</b> “Clear and mutually established communications protocols used during real time operations under normal and emergency conditions ensure universal understanding of terms and reduce errors.” The SDT has developed a new approach to the standard that addresses your concern.</p>		
<p>NextEra Energy, Inc</p>		<p>Next Era has the following additional recommended changes to increase the clarity of COM-003-1:</p> <ol style="list-style-type: none"> <li>1. A new provision on written Operating Communications that requires that the sender to receive a notification that the recipient has received and read the communication. As currently written, there is no read receipt requirement for written Operating Communications. This appears to create a possible reliability gap, given that the sender will not know that its instructions were received and read, which leaves the system in a state of limbo as to what actions will or will not be taken.</li> </ol> <p>Accordingly, NextEra recommends that a requirement be added that reads as follows:”</p> <p>When a Reliability Coordinator, Transmission Operator and Balancing Authority sends a written Operating Communication it shall include a “read receipt” requirement or</p>

Organization	Yes or No	Question 10 Comment
		<p>similar mechanism to ensure the sender has received and read the Operating Communication. If a “read receipt” is not received by the sender, the sender shall call the intended recipient or rescind the Operating Communication.”</p> <p><b>Response: The SDT has limited three part communication to oral communication. In the alternative approach to COM003-1 an entity could address that concern in its communication protocols.</b></p> <p>2. R2.1 is confusing because it attempts to mix what occurs when a response is received and when no response is received during a oral communication. To ensure no confusion occurs, as well as providing for additional practical discretion when a response is not received, NextEra recommends that R2.1 be separated into two distinct sections and be rewritten to read as follows:</p> <p>R2.2. After the response is received, do the following:</p> <ul style="list-style-type: none"> <li>o Confirm the receiver’s response is correct (not necessarily verbatim).</li> <li>o Reissue the Operating Communication if the repeated information is incorrect or if the receiver does not issue a response.</li> <li>o Reissue the Operating Communication, if requested by the receiver.</li> </ul> <p>R2.3 If no response is received, do one of the following:</p> <ul style="list-style-type: none"> <li>o Ask the receiver if the Operating Communication was received. If receiver confirms receipt of the Operating Communication, then proceed through R2.2.</li> </ul> <p>If the receiver, however, does not confirm receipt or no response is received, the sender of the Operating Communication shall either reissue or rescind the Operating Communication.</p> <p><b>Response: The SDT has changed the language to the same language contained in COM-002-3, R2 and R3 to be consistent and to reduce confusion.</b></p>

Organization	Yes or No	Question 10 Comment
		<p>3. Unlike language on Reliability Directives in IRO-001-3 - “unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements” - there is no similar qualifier for Operating Communications. To provide the recipient of an Operating Communication the same rights as a Reliability Directive, NextEra requests that a new section be added:</p> <p>”The recipient of an Operating Communication is required to implement the instruction, unless compliance with the instruction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements.</p> <p>In the event the recipient is unable to carry out the instruction, it shall communicate this situation to the sender of the Operating Communication.”This last recommended addition should be added in both cases:</p> <p>(a) if Next Era’s response to question 6 is adopted, or</p> <p>(b) if NextEra’s response to question 6 is not adopted.</p> <p><b>Response: The SDT has developed a new approach in draft 3.</b></p> <p>.4. To provide clarity to COM-003-1, NextEra recommends that the purpose stated in the white paper be transferred to the purpose statement of COM-003-1. The white paper states that “[t]he purpose of the proposed standard is to: ‘Require that real time System Operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.’” NextEra recommends that this purpose statement replace the draft purpose statement in COM-003-1, so COM-003-1 is not misinterpreted to require three way communications outside of real-time system operations.</p> <p><b>Response: The SDT has modified the purpose statement in draft 3.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		

Organization	Yes or No	Question 10 Comment
New York Power Authority		<p>NYPA supports the comments submitted by the NPCC Regional Standards Committee (RSC).</p>
<p><b>Response: Thank you for your comments. Please see the response to the comments submitted by the NPCC Regional Standards Committee (RSC).</b></p>		
American Electric Power		<p>Our efforts in this regard should first be focused solely on Reliability Directives before expanding this work, and creating similar requirements for all other Operating Communications. Requiring three part communications for every scenario might be considered a best practice by some, but making it a mandatory practice for routine operations seems to emphasize the manner of communications rather than the operations themselves. In addition, requiring three part communications for Reliability Directives will likely result in more widespread usage for more routine operating communications, without making it a requirement.</p> <p><b>Response: The SDT has developed a different approach to the standard that addresses your concern.</b></p> <p>AEP believes that there should not be multiple project teams proposing concurrent changes to COM-001, COM-002, and COM-003. Unless there are overwhelming reasons for not doing so, these efforts should be consolidated and managed by a single project team. In addition, current efforts on COM-003 need to be co-located with the proposed changes to COM-002 within a single standard. Having multiple project teams proposing concurrent changes results in problems such as this, where a) changes are proposed to the same standard or b) similar changes are proposed to separate standards. AEP cannot support revisions on these matters until they are managed by a single project team.</p> <p><b>Response: Thank you for your comments.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		



Organization	Yes or No	Question 10 Comment
City of Palo Alto		Palo Alto supports the comments submitted by PNGC Power regarding limiting the applicability of the standard to a certain subset of Distribution Providers. Palo Alto is similarly situated as PNGC.
<b>Response: Thank you for your comments. Please see the response to the comments submitted by PNGC Power.</b>		
Brazos Electric Power Cooperative		Please see formal comments provided by APM.
<b>Response: Thank you for your comments. Please see the response to the comments submitted by APM.</b>		
Center Point Energy Houston Electric, LLC.		<p>Question 10 Comments: It appears that the SDT is using an undefined definition of Reliability Directive to propose the new definition of Operating Communication. Is the intent of the SDT to also introduce this definition for Reliability Directive with this project?</p> <p><b>Response: No. The OPCPSDT included it in COM-003-1 as a means to demonstrate the relationship between the two terms. Both standards were posted for stakeholder review at close to the same time. After filing with FERC and receiving FERC approval the definition will be added to the NERC Glossary of Terms. The OPCPSDT and the RCSDT were attempting to explain the relationship between the two standards to help stakeholders understand. The textbox was an attempt to explain that relationship. Draft 3 of the standard no longer contains the reference.</b></p> <p>The purpose is not consistent with language in other currently enforced standards. The words “could” and “possibility” needs to be removed from the language. The purpose needs to be concrete. An alternative purpose would be “To specify clear, formal, and universally-applied communication protocols for the operation of BES facilities that reduce miscommunication, which will have a negative influence on the reliability of the Bulk Electric System.</p>

Organization	Yes or No	Question 10 Comment
		<p><b>Response: The SDT has modified the purpose statement.</b></p> <p>The six month effective date following approval is too short and should be extended to 12 months to allow adequate time for training and implementation.</p> <p><b>Response: The SDT has changed the effective date to 12 months in draft 3.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
<p>Sacramento Municipal Utility District</p>		<p>Recommendation: Not-Approve</p> <p>We feel that the direction for this communications standard is grossly in error. Focus should be on ensuring proper training programs are in place that emphasize and best prepare the System Operator for effective communication. The idea that effective communication can be scripted is entirely mis-guided and that a regulatory body might subject an entity to financial penalties for communication standards that attempt to script the language spoken, how time is referenced, naming conventions and alpha-numeric clarifiers has no precedence in industry that we are aware of.</p> <p><b>Response: The SDT has developed a new approach to the standard that addresses your concern.</b></p> <p>The United States’ Air Traffic Control protocols for communications between controllers and commercial airline pilots are very tested, well trained and effective. Controllers and pilots are trained in effective communication and the situations and pronunciation types that may lead to confusion. But they are not fined for any instance of not following them.</p> <p>From the Air Traffic Controllers Handbook,  <a href="http://avstop.com/ac/atc/2-4-1.html#2-4-12-4-3">http://avstop.com/ac/atc/2-4-1.html#2-4-12-4-3</a></p> <p>Pilot Acknowledgment / Read back</p> <p>a. When issuing clearances or instructions ensure acknowledgment by the pilot.</p>

Organization	Yes or No	Question 10 Comment
		<p>NOTE - Pilots may acknowledge clearances, instructions, or other information by using "Wilco," "Roger," "Affirmative," or other words or remarks. REFERENCE - AIM, Contact Procedures, paragraph 4-2-3.</p> <p>b. If altitude, heading, or other items are read back by the pilot, ensure the read back is correct. If incorrect or incomplete, make corrections as appropriate.</p> <p><b>Response: The protocols above are analogous to the level of communication discipline that is desired when operating the BES.</b></p> <p>Mandating the use of the English language in all communications is not in the best interest of reliability. We are not aware of any issue that has been raised of significance with the current requirement contained within COM-001-1.1, R4</p> <p><b>Response: Referencing the example you cited above, the English language is mandated worldwide in the aviation industry. The SDT believes the aviation industry utilizes strong protocols.</b></p> <p><b>COM-003-1, R1 will replace COM-001-1.1, R4 when COM-003-1 is filed and approved.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
Utility System Efficiencies, InC.		<p>Regarding Measure 1, the "on-site observation" aspect should be expanded upon and clarified. This concept would be very important to identify and document "failures" to properly follow Requirements R1, R2, and R3, during the audit period. Registered Entities should be encouraged to use such observations to coach employees and reinforce their following proper communications protocols/procedures and complying with this standard.</p>
<p><b>Response: Thank you for your comments. The measures have been modified in response to changes in the requirement language.</b></p>		
PPL Electric Utilities		<p>Regarding R1.1.3: I request the SDT consider allowing for the Applicable Functional</p>

Organization	Yes or No	Question 10 Comment
		<p>Entity to develop an Operating Procedure such that if all parties in the communications are in the same time zone that the time zone does NOT need to be used in the Operating Instruction.</p> <p><b>Response: The use of a time zone reference is mandated only if one or more of the parties are in different time zones.</b></p> <p>Regarding the VSL/VRF: I request the SDT consider adjusting the std or VSLs to allow for compliance with a 95% confidence. Such that 1 incomplete 3-part Operating Communication could be considered low or not a PV. If sampling of voice recordings provides a 95% confidence, this should be sufficient. E.g. If one sample of 30 voice recordings results in 1 incomplete 3 part and a second Sample of 30 finds no issues, the audit result should be no PV. This is a standard sampling technique.</p> <p><b>Response: Due to changes made to the current draft of the standard as a result of comments, the requirements have been significantly modified and the VRFs and VSLs had to be modified accordingly and are consistent with FERC and NERC guidelines.</b></p> <p>We thank the SDT for their efforts. PPL EU supports the value added by using 3-part communications and a phonetic alphabet as both are included in our current communications operating instructions. Even with the many Human Performance tools we use, our concern with the standard is being found non-compliant if one of hundreds/thousands of operating communications in a year is not perfect 3-part comm.</p> <p><b>Response: The SDT applauds your use of 3-part communications and a phonetic alphabet. The SDT has developed a new approach to the standard that addresses your concern.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
City of Garland		Requirement 1.2 should be removed from the standard. The number of directives

Organization	Yes or No	Question 10 Comment
		<p>and switching orders that have been issued in North America over time probably number in the billions. If one could determine the percentage of issues caused by miscommunications out of that large number, it would be extremely small. The reason that miscommunication issues exist is because the communication is between two human beings and where people are involved, issues will happen. A requirement for three part communications is more than sufficient to address the issue of miscommunications.</p> <p><b>Response: The SDT has developed a new approach to the standard that addresses your concern.</b></p> <p>Adding a requirement to use alpha-numeric clarifiers such as the NATO Spelling Alphabet is not going to prevent miscommunications. The only thing that adding this requirement will accomplish is to require auditors to listen to recorded conversations trying to verify that operators used alpha-numeric clarifiers and then penalizing a company if an operator does not; even though the directive or switching order was followed correctly.</p> <p><b>Response: The SDT has developed a new approach to the standard that addresses your concern.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
City of Tallahassee		<p>TAL is concerned that the proposed standard focuses too heavily on the communications method without consideration of a successful result. While the administrative approach/focus of this proposed language appears to be crafted with the intent of standardizing communications and thereby improving communications, it does not appear to place sufficient value on results-based performance. Should an entity take proper action on a communication that is not delivered precisely in accordance with this language, consideration of such at the Enforcement level would be warranted.</p>

Organization	Yes or No	Question 10 Comment
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
<p>Utility Services, Inc.</p>		<p>The applicability of this standard is unclear in the case of Distribution Providers.</p> <p><b>Response: The SDT believes Distribution Providers can be receivers of Operating Communications and are applicable entities for requirements that govern protocols for receiver. Load shedding is the most common Operating Communication a Distribution Provider would receive.</b></p> <p>The definition of Operating Communication includes “Elements” that could impact the BES. The NERC Glossary definition for Elements includes non-BES devices and equipment. Additionally, the Purpose section of the standard states "harmful to the reliability of the BES." Since non-BES Elements could affect the BES this standard could be deemed applicable to non-BES devices. If it is the intent of the SDT to apply this standard to All Operating Communications concerning both BES and non-BES Facilities this should be explicitly stated in the applicability section for transparency. Otherwise clarifying language should be added to exclude non-BES Facilities.</p> <p><b>Response: The SDT intended Operating Communication to apply to the BES and has modified the definition accordingly.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
<p>TransAlta Centralia Generation LLC</p>		<p>The current effective date only gives the registered entities 6 calendar months to be compliant with the requirements. We do not think this will be achievable. A longer implementation time is required, such as 12 months. In order to comply with standard requirements, the registered entities need to develop the internal controls, such as the procedures/operator training documents, and then provides the training to the operators. The 6 calendar months are not long enough to complete these tasks.</p> <p>In the white paper, Table 1-A shows only the three-part communication are currently</p>

Organization	Yes or No	Question 10 Comment
		<p>used in the registered entities. However, for all other requirements, such as using alpha-numeric clarifiers, the white paper does not show that these are currently used in the registered entities. Thus, there is no base to justify that 6 months is reasonable to achieve the compliance.</p>
<p><b>Response: Thank you for your comments. The SDT agrees and has made the suggested change.</b></p>		
<p>Midwest Reliability Organization NERC Standards Review Forum</p>		<p>The MRO NSRF recommends the following comments for consideration by the SDT:</p> <ol style="list-style-type: none"> <li>Concerning the “Purpose”: Recommend rewrite to state: “To specify universally-applied communication protocols that reduce the possibility of miscommunication which could impact the reliability of BES”. This shorter and to the point purpose clearly defines the intent of the Standard.</li> </ol> <p><b>Response: The SDT modified the purpose statement based on comments provided.</b></p> <ol style="list-style-type: none"> <li>R1.1.3, An entity will be found non compliant if it merely has a written BES switching order that does not contain a time, time zone or whether it is daylight savings time or standard time. The Requirement states nothing about implementing the written communication, just that it is written. The NSRF does not believe that this is the intent of the SDT.</li> </ol> <p><b>Response: The SDT has developed a new approach to the standard that addresses your concern.</b></p> <ol style="list-style-type: none"> <li>This also applies to oral communications. If two operators are communicating between each other while in different time zones and executing a BES switching order, they would need to establish what time it is in both time zones, indicate whether it is daylight saving time or standard time. So, since a Reliability Directive is a component of an Operating Communication, prior to receiving an oral Reliability Directive senders and receivers would need to establish what time it is in both time zones, indicate whether it is daylight saving time or standard time and then give and receive the Reliability Directive. The NSRF does not believe that this is the intent of</li> </ol>

Organization	Yes or No	Question 10 Comment
		<p>the SDT.</p> <p><b>Response: The SDT appreciates your comments and clarifies that the statement above is the intent of the SDT, if the communication is occurring between functional entities (not internal to a specific functional entity).</b></p> <p>4. The SAR for this standard incorrectly addresses the blackout recommendation number 26.</p> <p>Recommendation 26 states:</p> <p>"26. Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate".</p> <p>"NERC should work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations, and ensure that all key parties, including state and local officials, receive timely and accurate information."</p> <p>"NERC should task the regional councils to work together to develop communications protocols by December 31, 2004, and to assess and report on the adequacy of emergency communications systems within their regions against the protocols by that date."</p> <p><b>Response: The SAR is an industry vetted document and believes it does support Blackout Recommendation 26. The SDT believes the Blackout report itself supports the protocols established by COM- 003-1 based on the excerpts you provided.</b></p> <p>5. Order No. 693 clearly says that the tightened protocols are primarily intended for actions during alerts and emergencies. This was partially addressed in the interpretation on COM-002 and is being addressed in Project 2006-06. Below is the summary determination in the Order on this issue."535, Accordingly, we direct the ERO to either modify COM-002 or develop a new Reliability Standard that requires tightened communication protocols, especially for communications during alerts and</p>



Organization	Yes or No	Question 10 Comment
		<p>emergencies."</p> <p><b>Response: FERC Order 693, paragraph 532 (This will eliminate possible ambiguities in communications during normal, alert and emergency conditions") and the SAR are very specific in that both include the term "normal" operating conditions.</b></p> <p>6. It is not clear that COM-003-1 R1 applies to COM-002-3. The latest draft of COM-002-3 doesn't reference the communications protocols listed in COM-003-1 R1 and the definition of Reliability Directive does not state that it is a type of Operating Communication. Suggest combining the two standards into a single communication standard.</p> <p><b>Response: COM-003-1, R1 applies to any communication that involves a "command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System."</b></p> <p>7. The white paper states "Significant events have occurred on the BES when unclear communication created or exacerbated misunderstandings that led to instability and separation." However, no specific examples were identified. During the June 7 webinar when this question was brought up, it was stated that three part communication was used during these events. This begs the question as to why this standard is needed for normal operations.</p> <p><b>Response: During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System.</b></p> <p>8. In order to assign the same level of responsibility as COM-002-2, R2, the RC, TOP, and BA should be the only applicable entities since a Reliability Directive is a sub component of Operating Communications. The RC, TOP, and BA clearly understand clear, concise and definitive communications. They are the only required entities to be NERC Certified and should be held to the highest standards. They can establish</p>

Organization	Yes or No	Question 10 Comment
		<p>other controls to mitigate their risk by training and informing DPs and GOPs that are within their control. DPs and GOPs do not need to be included in R3.</p> <p><b>Response: DPs and GOPs receive Operating Communications and must be able to execute the requirements of a receiver, so they must be included as applicable entities in COM-003-1.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
<p>PNGC Small Entity Comment Group</p>		<p>The PNGC comment group believes there should be a distinction in the “Applicability” section of the standard between “Scheduling Distribution Provider” and “Non-scheduling Distribution Provider”. PNGC members are small rural cooperatives that are “Full service BPA customers.” This means that BPA is our power supplier and scheduling agent and therefore handles all reliability directives, scheduling, tagging, dispatching of resources and curtailments of load from breakers on BPA’s system for PNGC members. According to a letter from the WECC Reliability Coordinator (VRCC and LRCC) none of PNGC’s members will ever receive a “Reliability Directive”. Such a Directive would be sent to either a Balancing Authority (BA), or a Transmission Operator (TOP). We estimate there are over 100 entities that are BPA Full Service customers that are in a similar position and making this standard applicable to them does nothing to enhance reliability. A simple declarative statement in the Applicability section of the standard could focus the intent of the SDT on those entities that need it while lessening the compliance risk and clerical burden for other entities that the standard should not apply to.</p> <p>We suggest:</p> <p>4. Applicability:</p> <p>4.1. Functional Entities</p> <p>4.1.1 Reliability Coordinator</p>

Organization	Yes or No	Question 10 Comment
		<p>4.1.2 Transmission Operator</p> <p>4.1.3 Balancing Authority</p> <p>4.1.4 Generator Operator</p> <p>4.1.5 Distribution Provider: With Real-time Operations desk</p> <p>The PNGC comment group believes the above change will lessen the compliance burden on small, non-scheduling entities while still meeting the SDT’s intent with regard to Operating Personnel Communications. We also note that FERC and NERC, on multiple occasions and in multiple filings, have indicated their openness to lessening unnecessary compliance requirements for small entities.</p>
<p><b>Response: The SDT appreciates your comments. The SDT notes that COM-002-3, draft 6 states that in addition to Reliability Coordinators, Balancing Authorities and Transmission Operators can also issue Reliability Directives. Draft 3 of COM-003-1 also limits protocols for Distribution Providers to those that apply to receiving Operating Instructions.</b></p>		
<p>ISO/RTO Standards Review Committee</p>		<p>The SDT’s proposals do not conform to the Standards Process because those proposals do not reflect the public comments that were submitted. The Process requires the SDT to use the Industry’s comments to drive the requirements and as such the requirements should not be mandating a three part communications procedure for all “changes in status” much less the maintaining of such status. Such a request was not made by any of the commenters let alone a majority of the commenters. It would be more appropriate if the SDT asked who favored the approach being used, as opposed to asking if an “adjustment” to the requirement were acceptable. Many of the adjustments are better than if they were not there, but that ignores the fact that the requirement itself is not supported by the majority of commenters.</p> <p><b>Response: During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary</b></p>

Organization	Yes or No	Question 10 Comment
		<p>communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern. The SDT has developed a new approach to the standard based on industry feedback that addresses your concern.</p> <p>The SDT’s proposals expand the scope of the SAR by totally ignoring communications protocols used during emergencies and simply focusing on procedures imposed on personnel during normal situations. This standard over-reaches into routine operations by requiring 3-part communication for all instructions that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. This type of instructions occurs every hour, if not minute. Requiring operating personnel to apply a 3-part communication procedure for these instructions is absolutely unnecessary and overburdening, and can in fact adversely affect reliability.</p> <p><i>We strongly suggest that any requirement for 3-part communication for routine operating instructions be removed.</i></p> <p><b>Response: The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” Additionally, the SAR is very specific in that it also includes the term “normal” operating conditions under Applicability: “Clear and mutually established communications protocols used during real time operations under normal and emergency conditions ensure universal understanding of terms and reduce errors.”</b></p> <p>****FERC Order 693</p> <p>510. “The Commission proposed...</p> <p>(4) requires tightened communications protocols, especially for communications during alerts and emergencies.</p>

Organization	Yes or No	Question 10 Comment
		<p><i>"SRC Note - The above language while allowing for a requirement to go beyond emergencies, it states that the primary intent is "during alerts and emergencies". The SDT has no requirement for "alerts and emergencies" and focuses solely on normal operations.</i></p> <p><b>Response: The specified communication protocols are applicable to normal and emergency operations.</b></p> <p>532. While we agree with EEI that EOP-001-0, Requirement R4.1 requires communications protocols to be used during emergencies, we believe, and the ERO agrees, that the communications protocols need to be tightened to ensure Reliable Operation of the Bulk-Power System. We also believe an integral component in tightening the protocols is to establish communication uniformity as much as practical on a continent-wide basis. This will eliminate possible ambiguities in communications during normal, alert and emergency conditions. This is important because the Bulk-Power System is so tightly interconnected that system impacts often cross several operating entities' areas.</p> <p>230 EOP-001-0, Requirement R4 provides, in relevant part, that: "[e]ach Transmission Operator and Balancing Authority shall have emergency plans that will enable it to mitigate operating emergencies. At a minimum, Transmission Operator and Balancing Authority emergency plan shall include [c]ommunication protocols to be used during emergencies.</p> <p><i>"SRC Note - the communications ambiguities noted above do not refer to issues with interpersonal communications but rather refer to situational ambiguities.</i></p> <p><b>Response: The SDT respectfully disagrees. The wording in paragraph 532 says "This will eliminate <u>possible ambiguities</u> in communications during normal, alert and emergency conditions." There is no reference to <i>situational</i> ambiguities. The SDT interprets ambiguities in communications to mean "unclear" communication.</b></p> <p><b>With regard to EOP-001-0, Requirement R4, the SDT believes this to be an</b></p>

Organization	Yes or No	Question 10 Comment
		<p>emergency planning requirement which only states <i>“emergency plan shall include communication protocols to be used during emergencies.”</i> The requirement does not address the development of those protocols.</p> <p>540. “While the Commission identified concerns regarding COM-002-2, the proposed Reliability Standard serves an important purpose by requiring users, owners and operators to implement the necessary communications and coordination among ENTITIES.</p> <p><i>SRC Note - the above does not say “among OPERATING PERSONNEL” it says “among ENTITIES”.</i></p> <p><b>Response: The SDT respectfully points out that paragraph 540 also includes “the proposed Reliability Standard serves an important purpose <u>by requiring users, owners and operators to implement the necessary communications and coordination</u> among entities. “ The SDT believes this is another statement that sanctions the protocols the team has developed.</b></p> <p>540. (Continued)ALTERNATIVELY, with respect to this final issue, the ERO may develop a new Reliability Standard that responds to Blackout Report Recommendation No. 26 in the manner described above.</p> <p><i>“SRC note - The above is a key directive. It states tightened communications protocols [it does not say three part communications for normal actions]’Also note that the Blackout report recommendation is “an alternative” solution and not necessarily a part of the FERC proposed solution.</i></p> <p><b>Response: The SDT believes it has responded to Blackout Report Recommendation No. 26 properly and effectively. The implementation of three part communication during normal operation of the BES is tightening communications. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication</b></p>

Organization	Yes or No	Question 10 Comment
		<p>protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</p> <p>The SDT is also asked to identify the role of the posted White Paper. Is the White paper to be retained as part of the support documentation? If so, then the paper must be vetted by the Industry. The SDT did not afford the opportunity to respond to the paper. There was no indication if the paper was a unanimous SDT position or if there were any minority opinions.</p> <p><b>Response: The Operating Communications Protocols White paper is the position of the SDT.</b></p> <p><b>The White Paper was requested by the Standards Committee to support the team’s position on communication protocols for normal operations. Since the standard did not reference the White Paper there was no requirement for vetting. The SDT posted it for industry stakeholders to share the rationale for the team’s position.</b></p> <p>The SRC would offer the following “whitepaper” to help in deciding whether or not a requirement for 3 part communications for all operational communications rises to the level of requiring a mandatory standard. The “whitepaper” frames the communications issues generically providing an alternative to a zero defects standard.</p> <p>*****The strides NERC is making in the areas of Events Analysis and Human Factors will likely lead to useful practices and value-added standards. A fact-based approach to standards will lead to improved reliability. This paper attempts to quantify the problem that COM-003 is trying to address. While human error is often the first theory to explain major accidents, the follow-on investigation typically finds many factors beyond the front-line operator’s control. There is an axiom in the field</p>

Organization	Yes or No	Question 10 Comment
		<p>of quality control that attributes 80% of manufacturing defects are controllable by management rather than the cause of the front-line workers .Many people make errors that contribute to outages. Manufacturers have equipment defects, planners make incorrect design decisions, technicians draw maps incorrectly, managers cut budgets (plant maintenance, vegetation management), etc. A study of errors at nuclear power plants sheds light on the causes behind the scenes. Although 92% of all root causes were man-made, only a small number of these were initiated by front-line operators. Most originated in either maintenance-related activities or in bad decisions within the organization. In another study, a review of summaries of three major industrial events (Three Mile Island, Bhopal, and Chernobyl) identified operators as committing less than 10% of the missteps that led to the disasters. Table 1 Contributors to Major Accidents To be conservative, this paper assumes that 30% of all major human errors that impact the BPS are attributed to front-line workers (dispatchers, field operators, technicians and maintenance personnel).With regard to which front-line workers commit errors, a study of electrical system incidents at nuclear plants were generally evenly distributed between operators, maintenance personnel and technicians. As to communications problems causing trouble, an EPRI study reviewed nearly 400 switching mishaps by electric utilities and found that roughly 19% of errors (generally classified as loss of load, breach of safety, or equipment damage) were due to communication failures. This was nearly identical to another study of dispatchers from 18 utilities representing nearly 2000 years of operating experience that found that 18% of the operators’ errors were due to communication problems. Figure 1 EPRI Study Results on Operating Errors. Bringing the pieces of this discussion together, the following assumptions are used to estimate the percent of human errors on the BPS caused by operator communication breakdowns:</p> <ul style="list-style-type: none"> <li>o 30% of human failures impacting the BPS are due to front line workers</li> <li>o Front line errors were generally evenly split into 3 groups</li> </ul>



Organization	Yes or No	Question 10 Comment
		<ul style="list-style-type: none"> <li>o Dispatchers</li> <li>o Field Personnel</li> <li>o Maintenance and Relaying Technicians</li> </ul> <p>o 18% of dispatcher errors are due to communication problems.</p> <p>The net result is that using estimates of existing research shows that dispatcher communications represent roughly 2% of the human failure on the BPS. Figure 2 Summary Human Failure Estimate.</p> <p>While it has been stated that communication problems are found during the review of all system events, this is similar to saying that gravity is involved in all trips and falls. The statements are true, but the solutions to the problems are multidimensional.</p> <p>During a system event, there are hundreds, if not thousands of communications among different operators, often on situations never seen by the participants. Many of the communications are troubleshooting and information sharing that requires give and take and must be done quickly. If every communication during a disturbance needed to be 3-way, system restoration times for those disturbances would increase.</p> <p>NERC has built a solid foundation to make informed decisions in the future. The Events Analysis process, GADS, and TADS should yield data on the impacts and contributors to BPS failures. NERC’s Human Factors efforts can be used to develop good practices for all front line personnel. NERC should build on the research similar to that outlined in this paper via industry-wide surveys of operators to collect additional data, lessons-learned and tips for improvement.</p> <p>*****A quick estimate of the workload associated with COM-003, for the number of registered entities under the standard’s applicability list. If we assume 1 call each 10 minutes for a BA, TOP and RC and ¼ this amount for GOP and DP, you get the totals below. Each of these is an auditable and sanctionable event. The</p>

Organization	Yes or No	Question 10 Comment
		<p>review and self report on all of these is incompatible with the reliability impacts realized?</p> <p>BA TOP RC GOP DP Total 132 181 22 795 551</p> <p># of Entities 19008 26064 3168 28620 19836</p> <p>96,696 Calls per Day</p> <p>35,294,040 Calls per year</p> <p>*****Lastly, the SRC requests that in the next posting that the SDT include the question:</p> <p>Does the Industry:</p> <ul style="list-style-type: none"> <li>o Support continued development of a standard on personnel discussions during non-emergency conditions?</li> <li>o Support withdrawal of the standard?</li> <li>o Support the creation of an alternative non-standard (e.g. certification) that addresses the corporate protocols on communications?</li> </ul> <p><b>Response: The SDT has read the attached white paper and a file copy that had more content and found some aspects of it very supportive of the OPCPSDT efforts and decisions. It is especially noteworthy that “18% of dispatcher errors are due to communication problems.” That is what this standard is addressing.</b></p> <p><b>With regard to your last request:</b></p> <p><b>During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. Including the proposed question would be counterproductive to the Board’s direction and will not be entertained by the SDT.</b></p>

Organization	Yes or No	Question 10 Comment
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
<p>U.S. Bureau of Reclamation</p>		<p>The standard should clarify what is evidence is considered acceptable to demonstrate compliance with R 1.2. The requirement 3 appears to require the use of voice recording to demonstrate compliance with repeating the operating communication requirement. Not all facilities in which operating instruction may be received have voice recording capability. The requirement/measure should clarify alternative evidence when such a means is not present.</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern. Also please refer to the RSAW posted with COM-003-1 draft 3.</b></p>		
<p>PPL Generation, LLC on behalf of its Supply NERC Registered Entities</p>		<p>The statement, “Evidence may include, but is not limited to, voice recordings, transcripts of voice recordings, on-site observations, or other equivalent evidence,” in the Measures section of COM-003 is impractical. Any comprehensive body of evidence would be unreasonably voluminous as well as requiring far more effort to compile than could be justified. The only evidence required for Generation Owners should be a procedure on the subject and a record showing that all applicable personnel have been trained.</p>
<p><b>Response: The SDT appreciates your comments. The SDT has developed a new approach to the standard that addresses your concern. Also please refer to the RSAW posted with COM-003-1 draft 3.</b></p>		
<p>Northeast Power Coordinating Council</p>		<p>The three-part communications in COM-003-1 are expanded beyond reliability directives which unnecessarily force the inclusion of conversations which may be impractical or unnecessary. Good practice dictates that three part communication be used as a tool, but it should not be a requirement. The Standard is specifying how to accomplish, not just what is required.”</p> <p><b>Response: During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a</b></p>

Organization	Yes or No	Question 10 Comment
		<p>comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</p> <p>1.1.4 When referring to a Transmission interface Element or a Transmission interface Facility, use the name specified by the owner(s) for that Transmission interface Element or Transmission interface Facility” may create a detriment to reliability. Oftentimes, for switching, TOs have very detailed names for individual elements, devices, equipment which may not translate into the TOP/RC systems. However, it is known what equipment is being talked about. The requirement is unnecessary, unreasonable and burdensome.</p> <p><b>Response: The revised wording in draft 3 states:</b></p> <p style="padding-left: 40px;"><b>“When referring to a Transmission interface Element or a Transmission interface Facility, use the name specified by the owner(s) for that Transmission interface Element or Transmission interface Facility <i>unless another name is mutually agreed to by the functional entities .”</i></b></p> <p>The communications protocol to be followed in the event that there is a situation that requires the removal of BES (or any other power system equipment for that matter) from service on an immediate and emergency basis to protect the health and safety of the public and/or an employee/s needs to be addressed. The instructions issued to meet this condition fall under the definition of Operating Communication, but in an emergency situation the time taken for the required repetition could be catastrophic.</p> <p>This also applies to BES (or any other power system) equipment that is in imminent danger of failure, phase angle regulator or transformer tap changer runaway, or other emergency conditions.</p>

Organization	Yes or No	Question 10 Comment
		<p>This is also true of situations where the BES response to a disturbance results in a facility or facilities being overloaded real time over their STE and LTE ratings, and those facility loadings have to be reduced below their STE and LTE ratings within five and fifteen minutes respectively. The time spent for the necessary three part communication could mean the difference between maintaining continuity of service, or having to shed load.</p> <p>Suggest that wording be added to address the emergency situations described by recognizing the possibility that an operator might have to respond to a situation by issuing a “one way” order, then have a requirement for after the fact communications which would be informational as to what emergency actions were taken, and then resume normal communications protocols for subsequent actions.</p> <p><b>Response: The SDT understands the gravity of the situations you describe. While speed in response to an emergency involving life and property is critical, so is the accuracy of the command to operate the Facility and the Element that will alleviate the threat.</b></p> <p><b>The SDT has developed a new approach to the standard the team believes will mitigate your underlying concern by providing an entity the flexibility to assess its own performance with respect to following its protocols.</b></p> <p>Regarding the wording for the issuer in R2 “...that issues an oral, two-party, person-to-person Operating Communication”, and the wording for the receiver in R3 “...that receives an oral two-party, person-to-person Operating Communication”, what is the significance of the use of the comma after “oral” in R2? What is the difference between two-party and person-to-person communication?</p> <p><b>Response: The comma was an error and is removed in draft 3. Two party was added to preclude all call or multiple addressee communication. Person to person was added to denote human to human rather than human to machine.</b></p> <p>Also regarding R2, the Generator Operator should be included as an authority to</p>

Organization	Yes or No	Question 10 Comment
		<p>issue an Operating Communication.</p> <p><b>Response: The SDT discussed this and determined that a GOP would only be a receiver of an Operating Instruction.</b></p> <p>It is not necessary to separate normal and emergency communications into two standards (COM-003, COM-002). One standard should encompass both. But having two Standards, the communication protocols in COM-003 R1 should be incorporated in COM-002.</p> <p><b>Response: COM-003-1 R1 applies to all communications that involve a “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.” The SDT has changed the language in COM-003-1 concerning protocols to the same language contained in COM-002-3, R2 and R3 to be consistent and to reduce confusion.</b></p> <p>The proposals expand the scope of the SAR by ignoring communications protocols used during emergencies and focusing on procedures imposed on personnel during normal situations. This standard overreaches into routine operations by requiring three-part communication for all instructions that change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System. Because of the real-time frequency of use these instructions, requiring operating personnel to apply a three-part communication procedure for these instructions is unnecessary and can in fact adversely affect reliability. Any requirement for three-part communication for routine operating instructions should be removed.</p> <p><b>Response: The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” Additionally, the SAR is very specific in that it also includes the term “normal” operating conditions under Applicability: “Clear and mutually established communications protocols used during real time operations under normal and</b></p>

Organization	Yes or No	Question 10 Comment
		<p>emergency conditions ensure universal understanding of terms and reduce errors.”</p> <p>During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</p>
<p>Response: Thank you for your comments. Please see the responses above.</p>		
<p>Detroit Edison</p>		<p>There is a significant amount of redundancy between COM-002-3 and COM-003-1. These two standards should be combined and one of them eliminated. COM-002 purpose states "To ensure communications by operating personnel are effective." COM-003 could be sub-requirements under R2 of COM-002. The blue box on page 2 does not clarify Reliability Directives. Suggest using the same language as the proposed definition of Reliability Directive from COM-002-3.</p>
<p>Response: The SDT appreciates your comments. COM-003-1, R1 applies to all communications that involve a “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.” The purpose of the SAR for this project is “Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” This is a broader scope than that for Project 2006-06.</p> <p>The blue text box and the exclusionary language regarding Reliability Directives in COM-003-1, R2 and R3 were added to address concerns over potential double jeopardy. The text box has been removed from this draft of COM-003-1.</p>		
<p>NIPSCO</p>		<p>There was a COM-002 NOP issued in January 2011, a COM-002 interpretation recently approved by NERC, and presently there is a draft of both a COM-002 and a COM-003 out for vote. These projects appear to address 3 part communication requirements in a non-consistent manner. Why not combine these efforts into a</p>

Organization	Yes or No	Question 10 Comment
		<p>single project that the industry can review and understand? The VRF/VSL difference between routine and emergency does not warrant having two standards.</p> <p>A suggested plan of attack could be to withdraw the NERC approved COM-002 interpretation from FERC and combine the COM002-COM003 drafting efforts into one project resulting in a new version of COM-002; we already have enough standards. The content of the two new drafts is good, the webinar was informative, and the work of the SDTs is appreciated.</p>
<p><b>Response: Thank you for your comments and your support. The SDT has changed the language to the same language contained in COM-002-3, R2 and R3 to be consistent and to reduce confusion.</b></p>		
Public Service Enterprise Group		<p>This standard (COM-003-1) should be combined with COM-002-3 and issued as one standard to require ONE 3-part communications protocol for both Reliability Directives and non-Reliability Directives. Both require 3-part communications; however, COM-003-1 sets ADDITIONAL communications protocols and introduces a new definition (Operating Communication) that is not contained in COM-002-3. In addition, the text box on page 2 appears to redefine “Reliability Directive” inappropriately. While the sentence confusion is the text box may be unintended, it needs to be clarified.</p>
<p><b>Response: Thank you for your comments. The SDT has changed the language to the same language contained in COM-002-3, R2 and R3 to be consistent and to reduce confusion. The blue text box and the exclusionary language regarding Reliability Directives in COM-003-1, R2 and R3 were added to address concerns over potential double jeopardy. The text box has been removed from this draft of COM-003-1.</b></p>		
Avista		<p>This standard as drafted is very prescriptive and will not ensure improved reliability. A better approach would be to require applicable entities to; develop and implement an internal communication plan that takes into consideration recommendations discussed in the proposed NERC OC System Operator Verbal Communications Guideline, implement internal controls and monitoring to ensure adherence to the</p>



Organization	Yes or No	Question 10 Comment
		communication plan, and implement an adequate communication training program.
<p><b>Response: The SDT appreciates your comments. The SDT has developed a new approach to the standard that adopts many of your suggestions.</b></p>		
Kansas City Power & Light		<p>This standard needs to be written such that it allows for entity flexibility. Many entities already have COM protocols that are used. To prove compliance in an audit, entities will we need to provide 3 years worth of voice recordings to the auditors? It would take a full-time position to review the daily voice recordings for submission and what value does this add to the reliability or security of the BES. This standard is “overkill” from what is existing standard already dictates. Overall - this standard is going to cost the registered entities way more than the realized benefits.</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
The United illuminating Company		<p>UI disagrees with the necessity for this Standard. The intent of Recommendation 26 was to improve the communications around situational awareness. The SAR states the purpose is to “efficiently convey and mutually understood for all operating conditions.” This Draft does not address the concern and a Reliability Standard will not resolve the problem. It will create a compliance burden.</p> <p><b>Response: During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT has developed a new approach to the standard and believes that it may address your concern.</b></p> <p>The White Paper does not provide justification for imposing a compliance burden of recording, reviewing and tagging every conversation in a control center for the applicability of COM-003. There is no correlation between non-emergency communication and BES reliability.</p> <p><b>Response: The OPCSDT White Paper does provide ample justification for</b></p>

Organization	Yes or No	Question 10 Comment
		<p><b>establishing a higher level of communication discipline in an industry that serves one of the most critical needs in North America. The SDT believes the correlation between any operating communication and BES reliability is high.</b></p> <p>There is no study to demonstrate that the cause of awkwardness when transitioning from non-emergency to emergency communication will be resolved by any of the requirements in this Standard. Awkwardness has been resolved by Com-002 Requirement to explicitly identify an action as a Directive.</p> <p><b>Response: The Blackout Report provides instances where the reaction of operators is described as confused and the communications are cited as unprofessional, contributing to the lack of situational awareness.</b></p>
<p><b>Response: Response: Thank you for your comments. Please see the responses above.</b></p>		
<p>Wisconsin Electric dba We Energies</p>		<p>We agree that accurate communication is necessary and we must strive to eliminate mistakes due to miscommunications.</p> <p>In the White Paper, other industries are cited that use three-part communication. Which of these industries also imposes sanctions and penalties on a company if an operator says “for” instead of “fow-er”?</p> <p><b>Response: The SDT responded to this in the previous draft 1 and also made provisions in draft 2 to allow for the use of alpha-numeric identifiers in lieu of the strict NATO Alphabet.</b></p> <p>In order to verify compliance with this standard, there will be entities that will need to listen to thousands of hours of voice recordings (8760 hours in a year, and multiple operators). Listening to 10% of the voice recordings will be a full time job for one or more persons.</p> <p>What is the reliability benefit of this cost? Unless it is tempered with some reasonableness, this standard as written will be detrimental to reliability because it will slow down communications considerably with innumerable repeats because of</p>

Organization	Yes or No	Question 10 Comment
		<p>fear of violating the standard.</p> <p><b>Response: The SDT has developed a new approach to the standard that addresses your concern.</b></p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
ISO New England Inc		<p>We agree with, support and have signed onto the ISO/RTO Standards Review Committee comments. Lastly, we do not believe this rises to the level of a Standard.</p>
<p><b>Response: Thank you for your comments. Please see the responses to the ISO/RTO Standards Review Committee comments</b></p>		
Duke Energy		<p>We believe that having effective communications is an important goal; and there are instances where the use of 3-part communication is appropriate. We also believe that the industry is maturing, and the use of 3-part communication as a tool to achieve effective communication has grown (as evidenced by Table 1-A in the May 2012 COM-003-1 Whitepaper.</p> <p>This maturity and expanded use of 3-part communication has occurred without a Standard in place; and that we do not believe a Standard is needed that focuses on one way of establishing effective communication.</p>
<p><b>Response: Thank you for your comments. The SDT has modified its approach into a standard that focuses on an entity's communication protocols and the controls they have in place to evaluate and minimize deficiencies.</b></p>		
Ameren		<p>We believe that multiple communication standards (COM-002, COM-003) are not necessary and suggest that SDT work with the NERC Operating Committee members to appropriately address what requirements are necessary from operating/reliability perspective as well as any related FERC directives.</p>

Organization	Yes or No	Question 10 Comment
<p><b>Response: Thank you for your comments. Please refer to the response to the NERC Operating Committee comments.</b></p>		
<p>SPP Standards Review Group</p>		<p>We believe the standard is too prescriptive as written. The purpose of the standard is to ensure effective communications. The standard has given us a very specific listing of items that must be done in a specific manner in order to accomplish this goal. What the industry needs is flexibility in how it achieves the goal of effective communications. The standard does not recognize that flexibility.</p> <p>The Measures for Requirements 1, 2 and 3 do not contain specific references to the requirements they are associated with. There is a parenthetical following the measure that does include that reference but including the reference specifically in the measure is a stronger statement and eliminates any possibility for confusion.</p> <p>The section of M1 to be modified would then read: ‘...that the communication protocols specified by Requirement 1 were implemented...’</p> <p>The section of M2 to be modified would then read: ‘...that the communication protocol specified by Requirement 2 was implemented.’</p> <p>The section of M3 to be modified would then read: ‘...that the communication protocol specified by Requirement 3 was implemented.’</p>
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
<p>Flathead Electric Cooperative, Inc.</p>		<p>We believe there should be a distinction in the “Applicability” section of the standard between “Scheduling Distribution Provider” and “Non-scheduling Distribution Provider”. Many small WECC entities re small rural cooperatives and PUDs are Full service customers. This means that the TO/TOP is the power supplier and scheduling agent and therefore handles all reliability directives, scheduling, tagging, dispatching of resources and curtailments of load from breakers on the BES system. According to a letter from the WECC Reliability Coordinator (VRCC and LRCC) none of the smaller entities in the Pacific Northwest will ever receive a “Reliability Directive” directly</p>

Organization	Yes or No	Question 10 Comment
		<p>from teh RC. Such a Directive would be sent to either a Balancing Authority (BA), or a Transmission Operator (TOP). We estimate there are over 100 entities that are BPA Full Service customers that are in a similar position and making this standard applicable to them does nothing to enhance reliability. A simple declarative statement in the Applicability section of the standard could focus the intent of the SDT on those entities that need it while lessening the compliance risk and clerical burden for other entities that the standard should not apply to.</p> <p>We suggest:</p> <p>4. Applicability:</p> <p>4.1. Functional Entities</p> <p>4.1.1 Reliability Coordinator</p> <p>4.1.2 Transmission Operator</p> <p>4.1.3 Balancing Authority</p> <p>4.1.4 Generator Operator</p> <p>4.1.5 Distribution Provider: With Real-time Operations and Scheduling desk</p> <p>We believe the above change will lessen the compliance burden on small, non-scheduling entities while still meeting the SDT’s intent with regard to Operating Personnel Communications. We also note that FERC and NERC, on multiple occasions and in multiple filings, have indicated their openness to lessening unnecessary compliance requirements for small entities.</p>
<p><b>Response: Thank you for your comments. The SDT notes that COM-002-3, draft 6 states that in addition to Reliability Coordinators, Balancing Authorities and Transmission Operators can also issue Reliability Directives. Draft 3 of COM-003-1 also limits protocols for Distribution Providers to those that apply to receiving Operating Instructions.</b></p>		
Consumers Energy		We believe this standard attempts to redefine “Reliability Directive” and should not

Organization	Yes or No	Question 10 Comment
		do so. Specifics of communication for this standard should be centered on emergency operations and not a blanket protocol for almost all operations communications.
<p><b>Response:</b> The SDT appreciates your comments. The OPCPSDT did not redefine the term Reliability Directive. The SDT supports the term. The SDT believes the two standards will work together to improve reliability and desires to demonstrate that to industry stakeholders. During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System.</p>		
GP Strategies		<p>We disagree that all DP’s should be subject to this Standard. For many small entities, it is the TOP who will control the equipment to shed load. These DP’s do not operate a 24x7 control center for receiving such instructions. During non-business hours calls are forwarded to an answering service or an on-call technician.</p> <p>We recommend the drafting team modify the applicability as follows:</p> <p>Applicability:</p> <ul style="list-style-type: none"> <li>4.1. Functional Entities               <ul style="list-style-type: none"> <li>4.1.1 Reliability Coordinator</li> <li>4.1.2 Transmission Operator</li> <li>4.1.3 Balancing Authority</li> <li>4.1.4 Generator Operator</li> <li>4.1.5 Distribution Provider who is the 24 x 7 entity that operates their load shedding equipment when instructed by the RC, TOP, or BA.</li> </ul> </li> </ul> <p>The TOP should be the responsible entity unless the Distribution Provider has agreed on the responsibility for taking the action.</p>
<p><b>Response:</b> Thank you for your comments. The SDT notes that COM-002-3, draft 6 states that in addition to Reliability Coordinators, Balancing Authorities and Transmission Operators can also issue Reliability Directives. Draft 3 of COM-003-1 also</p>		

Organization	Yes or No	Question 10 Comment
<b>limits protocols for Distribution Providers to those that apply to receiving Operating Instructions.</b>		
MISO		<p>We support the need to strive for good communications among users, owners, and operators of the grid, but believe the standard, as drafted is misdirected. Review of research done by Electrical Power Research Institute (EPRI) and others show that dispatcher communications cause approximately 1-2% of human failure impacting the Bulk Power System (BPS) and less than 1% of all BPS failures.</p> <p><b>Response: The SDT has read the study and believes it supports the need for COM-003-1.</b></p> <p><i><u>“As to communications problems causing trouble, an EPRI study<sup>2</sup> reviewed nearly 400 switching mishaps by electric utilities and found that roughly 19% of errors (generally classified as loss of load, breach of safety, or equipment damage) were due to communication failures. This was nearly identical to another study of dispatchers from 18 utilities representing nearly 2000 years of operating experience that found that 18% of the operators’ errors were due to communication problems.”<sup>3</sup></u></i></p> <p><b>We believe the more relevant and significant conclusion to be that, of 400 switching mishaps, 19% were caused communication failures.</b></p> <p>As drafted, this standard can actually impede reliability as there are at times better ways to communicate when group action is needed and there are times when speed or “give and take” are needed.</p> <p>More specifically, the proposed Reliability Standard clearly and significantly expands the requirement to utilize 3-way communication, to the obvious detriment of reliability. The definition of Operating Communication results in the applicability of 3-</p>

<sup>2</sup> Beare, A., Taylor, J. *Field Operation Power Switching Safety*, WO2944-10, Electric Power Research Institute.

<sup>3</sup> Bilke, T., *Cause and prevention of human error in electric utility operations*, Colorado State University, 1998.

Organization	Yes or No	Question 10 Comment
		<p>way communication to non-requests / non-directives. As a result, COM-003-1 would result in the additional expenditure of time and resources to ensure that 3-way communication is utilized even when an entity is maintaining the <i>status quo</i>. This expenditure may divert time and attention away from ensuring that changes necessary for reliability are properly understood and implemented.</p> <p><b>Response: The SDT has modified definition of Operating Communication (now Operating Instruction) to be a “command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”</b></p> <p>The standard also fails to acknowledge that Supervisory Control and Data Acquisition (SCADA) and other forms of data exchange also can form part of the feedback process in communications. For example, observation of Area Control Error (ACE) recovery and generation movement during a Disturbance Control Standard (DCS) event are better confirmation that the message was received and understood than just parroting back a phone call.</p> <p><b>Response: During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. COM-003-1 concerns human to human communications.</b></p> <p>Therefore, MISO cannot at this time support the current version of COM-003-1.</p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
<p>American Transmission Company, LLC</p>		<p>When a situation necessitating alpha-numeric clarifiers in an Operational Communication arises, per the standard requirement, it becomes mandatory. There</p>



Organization	Yes or No	Question 10 Comment
		<p>are many instances when marginally defined elements such as a carrier grounding switch, may need to be operated or changed state. If these devices can't be clearly defined as an element or facility, yet have alpha-numeric identifiers, the use of clarifiers should be discretionary.</p> <p><b>Response: The SDT's intent is to focus on those BES Elements or BES Facilities that are capable of changing the operating state of the BES.</b></p> <p>FERC Orders and recommendations point to "Tightening communications protocols, especially for communications during alerts and emergencies." The NERC standards addressing this issue are not approved yet. When they are approved by FERC, subsequently implemented, and allowed to mature, the concept of tighter protocols for normal operations may be developed.</p> <p><b>Response: During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System.</b></p>
<p><b>Response: Thank you for your comments. Please see our responses above.</b></p>		
<p>SERC OC Standards Review Group</p>		<p>Where is the demonstrated need for such a Standard? Has communications, especially during periods of normal operations, been shown to be the root cause of many, if any, events?</p> <p><b>Response: From a recently published paper "Estimating the Magnitude of the Operator Communications Problem" by Terry Bilke, the following excerpt points out the results of an EPRI study.</b></p> <p><b><i>"As to communications problems causing trouble, an EPRI study<sup>4</sup> reviewed nearly 400 switching mishaps by electric utilities and found that roughly 19% of errors</i></b></p>

<sup>4</sup> Beare, A., Taylor, J. *Field Operation Power Switching Safety*, WO2944-10, Electric Power Research

Organization	Yes or No	Question 10 Comment
		<p><u><i>(generally classified as loss of load, breach of safety, or equipment damage) were due to communication failures.</i></u></p> <p><b>We believe the more relevant and significant conclusion to be that, of 400 switching mishaps, 19% were caused communication failures.</b></p> <p>While there is easy agreement for the need of clear and concise communication between entities, we must avoid creating a system that is unmanageable and quite possibly results in less reliability. FERC Order 693 directs the ERO to “and (3) requires tightened communications protocols, especially for communications during alerts and emergencies.” in paragraph 532.</p> <p>The proposed standard goes too far, especially for communications outside of alerts and emergencies. NERC standards are not procedures and this standard attempts to impose a single procedure on the industry. SERC suggests another approach to COM-003. Rather than to specify the solutions to achieving effective communication, COM-003 should instead focus on developing and training on an approach that is designed appropriately for each RE.</p> <p>For instance, another approach to COM-003 might be along the lines of:</p> <p>Requirement 1 could be written in a manner to require the appropriate registered entities to develop a communication protocol that is appropriate for each RE.</p> <p>This communications protocol should address how the RE is handling the following:</p> <ul style="list-style-type: none"> <li>Time Zone Designations - for both internal and external communications language comm</li> <li>Alpha-numeric identifiers</li> <li>Three - part communications - when is it required, etc.</li> <li>Use of defined terminology</li> </ul>

Institute.

Organization	Yes or No	Question 10 Comment
		<p>Other items deemed important for the communications protocol to address - again, this would not define HOW these items are addressed This approach would require the RE to address how it is addressing these issues, without prescribing solutions. For instance, a RE could include in its protocol a section dealing with time zone designation. In this section the RE could explain that it, and its neighbors, all are in and use the same time zone. As a result, the RE has determined that requiring the identification of time zone reference in communication is not necessary Procedures should address the training of operators on the communication protocol</p> <p>Procedures should address the internal controls that the RE uses to review that its protocol is being followed.</p> <p>The compliance approach would be to:</p> <p>Assess whether the RE has developed a written protocol and whether the protocol addresses each item - this does not mean there is an assessment of HOW each item is assessed; assess whether the RE has trained its operators on the communications protocol and assess whether the RE is following its internal controls.</p> <p><b>Response: The SDT has developed a new approach to the standard that addresses your concern.</b></p> <p>Any data retention requirements should be consistent with the COM-002 reliability standard.</p> <p><b>Response: The data retention requirements have been modified based on the new approach.</b></p> <p>What is the role of the Operating Communications Protocols White paper? Is it a position of the STD? If not, was there a minority opinion? Will it be part of the standard?</p> <p><b>Response: The leadership of the Standards Committee asked the OPCPSDT to develop the White Paper as a means of explaining the rationale for the team’s decisions. The team reached consensus on content based on deep and thoughtful</b></p>

Organization	Yes or No	Question 10 Comment
		<p><b>discussion. It will not be part of the standard, nor is it referenced by the standard.</b></p> <p>Does the industry agree that we need a standard on three part communications for normal operations? Yes or No?</p> <p><b>Response: During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT’s concern.</b></p> <p>Has a lack of a standard on three part communications for normal operations created any reliability issues? If so, what are they?</p> <p><b>Response: In the paper cited in our response above, 19% of errors (generally classified as loss of load, breach of safety, or equipment damage) were due to communication failures. Three part communication is one essential step in addressing this reliability issue.</b></p> <p>“The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers.”</p>
<p><b>Response: Thank you for your comments. Please see the responses above.</b></p>		
Seminole Electric Cooperative		<p>While we absolutely support the promotion and use of 3-part oral communication protocol and the other features identified, the failure of individual persons to use "proper" and "correct" oral operational communications should NOT constitute a Standard violation. It is reasonable to require the responsible entity to have written procedures requiring such use; to have evidence of applicable personnel training on such; and to have a program for internal monitoring and enforcement of such. As</p>

Organization	Yes or No	Question 10 Comment
		written, a subjective review of many oral operational communications will arguably be identified by Compliance Auditors as medium, high or even severe levels.
<p><b>Response: Thank you for your comments. The SDT has developed a new approach to the standard that addresses your concern.</b></p>		
Liberty Electric Power LLC		Yes. The regulation of market communications between entities is not the proper subject for NERC standards. The STD proposes placing entities into the realm of zero tolerance for thousands of routine communications. This assures failure. Further, this will force entities to reallocate precious resources away from more critical reliability functions to assure compliance and allow for self-certification. As such, the proposed standard weakens the reliability of the BES. The proposed standard should be withdrawn and the SAR closed.
<p><b>Response: Thank you for your comments. Draft 3 of the standard does not include market communications. The SDT has developed a new approach to the standard that addresses your concern about the number of communications.</b></p>		
City of Vero Beach		NONE
City of Jacksonville Beach dba/Beaches Energy Services		None.

END OF REPORT

## Standard Development Roadmap

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

### Development Steps Completed:

1. The Standards Committee (SC) approved the Standard Authorization Request (SAR) for posting on March 1, 2007.
2. The SAR was posted for comment from March 19 through April 17, 2007.
3. The SC sought SAR drafting team nominations April 18 through May 2, 2007.
4. The SAR drafting team posted reply comments to industry comments received on the first posting SAR on June 8, 2007
5. Standard drafting team appointed by SC Executive Committee on June 28, 2007
6. Version 1 draft of Standard posted November 2009 for Informal Comments closed January 15 2010.
7. Version 2 draft of Standard posted May 2012 for Formal Comments, Initial Ballot closed June 20 2012.

### Description of Current Draft:

This is the third draft of a new standard requiring the use of standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The drafting team requests posting for a 30-day concurrent Formal Comment period and Ballot.

### Future Development Plan:

Anticipated Actions	Anticipated Date
1. Drafting team considers comments, makes conforming changes, and requests SC approval to proceed to pre-ballot comment period.	July 2012
2. Second Ballot of Standards.	August 2012
3. Successive Ballot of Standards	September 2012
4. Recirculation ballot of standards.	October 2012
5. Board adopts standards.	November 2012

### **Definitions of Terms Used in Standard**

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

*When using terms or phrases contained in the Reliability Standards Glossary of Terms for communications it should be cited as the source. When used in written communications, terms or phrases contained in the Reliability Standards Glossary of Terms are capitalized.*

**Operating Instruction** —Command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.

## A. Introduction

1. **Title:** Operating Personnel Communications Protocols
2. **Number:** COM-003-1
3. **Purpose:** To provide System Operators uniform communications protocols that reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of BES.
4. **Applicability:**
  - 4.1. **Functional Entities**
    - 4.1.1 Balancing Authority
    - 4.1.2 Distribution Provider
    - 4.1.3 Generator Operator
    - 4.1.4 Reliability Coordinator
    - 4.1.5 Transmission Operator
5. **(Proposed) Effective Date:** First day of first calendar quarter, twelve (12) calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter twelve (12) calendar months from the date of Board of Trustee adoption.

## B. Requirements

- R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented communication protocols for Operating Instructions that incorporate the following: [*Violation Risk Factor: Low*] [*Time Horizon: Long-term Planning* ]
  - 1.1. Use of the English language when issuing an oral or written Operating Instruction between functional entities, unless another language is mandated by law or regulation. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.
  - 1.2. Use of the 24-hour clock format when referring to clock times when issuing an oral or written Operating Instruction.
  - 1.3. When issuing an oral or written Operating Instruction between functional entities in different time zones, when referring to clock times include the time, the time zone where the action will occur and indicate whether the time is daylight saving time or standard time.
  - 1.4. When referring to a Transmission interface Element or a Transmission interface Facility in an oral or written Operating Instruction between functional entities, use the name specified by the owner(s) for that Transmission interface Element or Transmission interface Facility unless another name is mutually agreed to by the functional entities.
  - 1.5. Use of alpha-numeric clarifiers when issuing an oral Operating Instruction for Facilities and Elements in instances where the nomenclature of Facilities or



Elements is in alpha-numeric format (e.g. if an entity designated a circuit breaker “12B” 12B would need alpha-numeric clarifiers if used in an oral Operating Instruction)

- 1.6.** When issuing an oral two party, person-to-person Operating Instruction, require the issuer to:
    - Confirm that the response from the recipient of the Operating Instruction was accurate, or
    - Reissue the Operating Instruction to resolve a misunderstanding.
  - 1.7.** When receiving an oral two party, person-to-person Operating Instruction, require the recipient to repeat, restate, rephrase, or recapitulate the Operating Instruction.
  - 1.8.** When issuing an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), verbally or electronically confirm receipt from one or more receiving parties.
  - 1.9.** When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), request clarification from the initiator if the communication is not understood.
- R2.** Each Distribution Provider and Generator Operator shall have documented communication protocols for Operating Instructions that incorporate the following: [*Violation Risk Factor: Low*] [*Time Horizon: Long-term Planning* ]
- 2.1.** When receiving an oral two party, person-to-person Operating Instruction, require the recipient to repeat, restate, rephrase, or recapitulate the Operating Instruction.
  - 2.2.** When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), request clarification from the initiator if the communication is not understood.
- R3.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R1 that: [*Violation Risk Factor: Medium*] [*Time Horizon: Operations Planning* ]
- 3.1.** Identifies potential deficiencies,
  - 3.2.** Assesses the deficiencies found,
  - 3.3.** Corrects the deficiencies, and
  - 3.4.** Evaluates the process based on deficiencies found external to Part 3.1 and either
    - implements modifications to the process when the evaluation determines that modification of the process is necessary to address the deficiencies found; or

- demonstrates that no modification to the process is necessary to address the deficiencies.
- R4.** Each Distribution Provider and Generator Operator shall implement a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R2 that: [*Violation Risk Factor: Medium*] [*Time Horizon: Operations Planning* ]
- 4.1.** Identifies potential deficiencies,
  - 4.2.** Assesses the deficiencies found,
  - 4.3.** Corrects the deficiencies, and
  - 4.4.** Evaluates the process based on deficiencies found external to Part 4.1 and either
    - implements modifications to the process when the evaluation determines that modification of the process is necessary to address the deficiencies found; or
    - demonstrates that no modification to the process is necessary to address the deficiencies.

## C. Measures

- M1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator, shall provide its documented communications protocols developed for Requirement R1.
- M2.** Each Distribution Provider and Generator Operator shall provide its documented communications protocols developed for Requirement R2.
- M3.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide the results of its process developed for Requirement R3.
- M4.** Each Distribution Provider and Generator Operator shall provide the results of its process developed for Requirement R4.

## D. Compliance

### 1. Compliance Monitoring Process

#### 1.1. Compliance Enforcement Authority

The Regional Entity shall serve as the Compliance Enforcement Authority (CEA) unless the applicable entity is owned, operated, or controlled by the Regional Entity. In such cases the ERO or a Regional Entity approved by FERC or other applicable governmental authority shall serve as the CEA.

#### 1.2. Data Retention

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to

provide other evidence to show that it was compliant for the full time period since the last audit.

Each Transmission Operator, Balancing Authority, Reliability Coordinator, Generator Operator, and Distribution Provider shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall retain evidence for Requirement R3 Measure M3 for the most recent 90 days.

Each Distribution Provider and Generator Operator shall retain evidence for Requirement R4 Measure M4 for the most recent 90 days.

If a Transmission Operator, Balancing Authority, Reliability Coordinator, Generator Operator or Distribution Provider is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

### **Compliance Monitoring and Assessment Processes**

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

### **1.3. Additional Compliance Information**

None

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R1</b>	Long Term Planning	Low	The responsible entity did not include one (1) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols	The responsible entity did not include two (2) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols	The responsible entity did not include three (3) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols	The responsible entity did not include four (4) or more of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols  OR The responsible entity did not have documented communication protocols as required in Requirement R1.
<b>R2</b>	Long Term Planning	Low	N/A	N/A	The responsible entity did not include one (1) of the two (2) parts of Requirement R2, Parts 2.1 to 2.2 in their documented communication protocols	The responsible entity did not include Parts 2.1 to 2.3 (3) of Requirement R2, in their documented communication protocols  OR The responsible entity did not have documented communication protocols as required in Requirement R2.

R3	Operations Planning	Medium	N/A	N/A	N/A	<p>The Responsible Entity does not have a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R1;</p> <p>Or</p> <p>The Responsible Entity did not evaluate their process based on deficiencies found external to Part 3.1 to determine whether modification of the process is necessary;</p> <p>Or</p> <p>The Responsible Entity did not implement modifications to the process when the evaluation determined that modification of the process was necessary to address the deficiencies found;</p> <p>Or</p> <p>The Responsible Entity did not demonstrate that no modification to the process was necessary to address the deficiencies found external to Part 3.1.</p>
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R4	Operations Planning	Medium	N/A	N/A	N/A	<p>The Responsible Entity does not have a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R2;</p> <p>Or</p> <p>The Responsible Entity did not evaluate their process based on deficiencies found external to Part 4.1 to determine whether modification of the process is necessary;</p> <p>Or</p> <p>The Responsible Entity did not implement modifications to the process when the evaluation determined that modification of the process was necessary to address the deficiencies found;</p> <p>Or</p> <p>The Responsible Entity did not demonstrate that no modification to the process was necessary to address the deficiencies found external to Part 4.1.</p>
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**E. Regional Variances**

None.

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>

## Implementation Plan

Project 2007-02 - Operating Personnel Communications Protocols

### Implementation Plan for COM-003-1 – Operating Personnel Communications Protocols Standard

#### *Approvals Required*

COM-003-1 – Operating Personnel Communications Protocols Standard

#### *Prerequisite Approvals*

None

#### *Revisions to Glossary*

The following term is proposed for addition to the NERC Glossary of Terms:

**Operating Instruction** — Command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.

#### *Applicable Entities*

Balancing Authority  
Distribution Provider  
Generator Operator  
Reliability Coordinator  
Transmission Operator

#### *Revisions or Retirements to Approved Standards*

Approved Requirement to be Retired	Proposed Replacement Requirement(s)
<p>COM-001-1.1 Requirement R4</p> <p>R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations</p>	<p>COM-003-1 Requirement R1 Part 1.1</p> <p>R1. Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, and Transmission Operator shall have documented communications protocols that incorporate the following:</p> <p>1.1. Use of the English language when issuing an oral or written Operating Instruction between functional entities, unless another language is mandated</p>



	<p>by law or regulation. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.</p>
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***Conforming Changes to Other Standards***

None

***Effective Dates***

COM-003-1 shall become effective the first day of first calendar quarter, 12 calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter 12 calendar months from the date of Board of Trustee adoption.

COM-001-1.1 Requirement R4 shall expire midnight of the day immediately prior to the Effective Date of COM-001-2 in the particular Jurisdiction in which COM-001-2 is becoming effective.

## Implementation Plan

Project 2007-02 - Operating Personnel Communications Protocols

### Implementation Plan for COM-003-1 – Operating Personnel Communications Protocols Standard

#### *Approvals Required*

COM-003-1 – Operating Personnel Communications Protocols Standard

#### *Prerequisite Approvals*

None

#### *Revisions to Glossary*

The following term is proposed for addition to the NERC Glossary of Terms:

**Operating ~~Communication Instruction~~ — ~~Communication of instruction~~ Command from a System Operator** to change or ~~maintain~~ preserve the state, status, output, or input of an Element of the Bulk Electric System, or Facility of the Bulk Electric System.

#### *Applicable Entities*

Balancing Authority  
Distribution Provider  
Generator Operator  
Reliability Coordinator  
Transmission Operator

#### *Revisions or Retirements to Approved Standards*

Approved Requirement to be Retired	Proposed Replacement Requirement(s)
<p>COM-001-1.1 Requirement R4</p> <p>R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for</p>	<p>COM-003-1 Requirement R1 Part 1.1.1 <del>4</del></p> <p>R1. Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, and Transmission Operator shall <del>use</del> <u>the following have documented</u> communications protocols <u>that incorporate the following</u>:</p> <p>1.1. <u>Use of the English language when issuing an oral or written Operating Instruction between functional entities, unless another</u></p>

<p>internal operations</p>	<p><u>language is mandated by law or regulation. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.</u> <del>When participating in verbal or written Operating Communications:</del></p> <p><del>1.1.1. Use the English language when communicating between functional entities, unless another language is mandated by law or regulation.</del></p>
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***Conforming Changes to Other Standards***

None

***Effective Dates***

~~COM-001-2 and~~ COM-003-1 shall become effective the first day of first calendar quarter, ~~six~~ twelve calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter ~~twelve~~ 12 calendar months ~~a year~~ from the date of Board of Trustee adoption.

COM-001-1.1 Requirement R4 shall expire midnight of the day immediately prior to the Effective Date of COM-001-2 in the particular Jurisdiction in which COM-001-2 is becoming effective.

## Operating Personnel Communications Protocols Project 2007-02

### *Unofficial Comment Form for Standard COM-003-1 —Operating Personnel Communications Protocols*

Please **DO NOT** use this form. Please use the [electronic comment form](#) located at the link below to submit comments on the proposed draft COM-003-1 Operating Personnel Communications Protocols standard. Comments must be submitted by **September 20, 2012**. If you have questions please contact Joseph Krisiak at [Joseph.Krisiak@nerc.net](mailto:Joseph.Krisiak@nerc.net) or by telephone at 609-651-0903.

[http://www.nerc.com/filez/standards/Op\\_Comm\\_Protocol\\_Project\\_2007-02.html](http://www.nerc.com/filez/standards/Op_Comm_Protocol_Project_2007-02.html)

### **Background Information**

Effective communication is critical for real-time operations. Failure to successfully communicate clearly can create misunderstandings resulting in improper operations increasing the potential for failure of the BES.

The Standard Authorization Request (SAR) for this project was initiated on March 1, 2007 and approved by the Standards Committee on June 8, 2007. It established the scope of work to be done for Project 2007-02 Operating Personnel Communications Protocols (OPCP SDT). The scope described in the SAR is to establish essential elements of communications protocols and communications paths, such that operators and users of the North American Bulk Electric System will efficiently convey information and ensure mutual understanding. The August 2003 Blackout Report, Recommendation Number 26, calls for a tightening of communications protocols. FERC Order 693 paragraph 532 amplifies this need and applies it to all Operating Instructions. This proposed standard's goal is to ensure that effective communication is practiced and delivered in clear language and standardized format via pre-established communications paths among pre-identified operating entities.

The SAR indicated that references to communication protocols in other NERC Reliability Standards may be moved to this new standard. The SAR instructed the standard drafting team to consider incorporating the use of Alert Level Guidelines and three-part communications in developing this new standard to achieve high level consistency across regions. The SDT believes the Alert Level Guidelines, while valuable, belong in a separate standard and has petitioned the Standards Committee to approve the transfer to another standard or to start a separate project.

The upgrade of communication system hardware where appropriate is not included in this project (it is included in NERC Project 2007-08 Emergency Operations).

The standard will be applicable to Transmission Operators, Transmission Owners, Balancing Authorities, Reliability Coordinators, Generator Operators, and Distribution Providers. These requirements ensure that communications include essential elements, such that information is efficiently conveyed and mutually understood for communicating changes to real-time operating conditions and responding to directives, notifications, directions, instructions, orders, or other reliability related operating information.

The purpose statement of COM 003-1 states: "To provide system operators uniform communications protocols that reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of BES."

- 1) **New NERC Glossary terms:** The SDT has changed the definition Operating Communications proposed in the Standard version 2 and added *Operating Instructions*. *Operating Instructions* more accurately define the broad class of communications that deal with changing or altering the state of the BES. Changes to the BES operating state with unclear communications create increased opportunities for events that could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures.

This term is proposed for addition to the NERC Glossary to establish meaning and usage within the electricity industry.

- 2) **Documented Communication Protocols:** The OPCP SDT has incorporated a requirement for an applicable entity to have documented communication protocols that incorporate the following elements:
  - a) **English language:** Use of the English language when issuing an oral or written Operating Instruction between functional entities, unless another language is mandated by law or regulation. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.
  - b) **24-hour clock R1 Part 1.2 and time zone reference R1 Part 1.3:**  
Use the 24-hour clock format when referring to clock times when issuing an oral or written Operating Instruction.  
  
When issuing an oral or written Operating Instruction between functional entities in different time zones, include the time, time zone and indicate whether the time is daylight saving time or standard time. (Example: 1500 EST or Eastern Standard Time)  
  
The OPCP SDT proposed this change to address comments by industry while adhering to the recommendations of the August 14, 2003 task force report.
  - c) **Line and equipment identifiers:** When referring to a Transmission interface Element or a Transmission interface Facility in an oral or written Operating Instruction between functional entities, use the name specified by the owner(s) for that Transmission interface Element or Transmission interface Facility unless another name is mutually agreed to by the functional entities.
  - d) **Alpha-numeric clarifiers:** Use of alpha-numeric clarifiers when issuing an oral Operating Instruction for Facilities and Elements in instances where the nomenclature of Facilities or Elements are in alpha-numeric format (e.g. if an entity designated a circuit breaker "12B" 12B would need alpha-numeric clarifiers if used in an oral Operating Instruction).

- e) **Three-part Communication:**  
**When issuing** an oral two-party, person-to-person Operating Instruction, require the issuer to:
- Confirm that the response from the recipient of the Operating Instruction was accurate, or
  - Reissue the Operating Instruction to resolve a misunderstanding.
- When receiving** an oral two-party, person-to-person Operating Instruction, require the recipient to repeat, restate, rephrase, or recapitulate the Operating Instruction.
- f) **One-way burst messaging system to multiple parties (all call):** When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), request clarification from the initiator if the communication is not understood.
- g) **Three-part Communication: For Distribution Providers (DP) and Generator Operators (GOP):** When receiving an oral two-party, person-to-person Operating Instruction, require the recipient to repeat, restate, rephrase, or recapitulate the Operating Instruction.
- h) **One-way burst messaging system to multiple parties (all call): For Distribution Providers (DP) and Generator Operators (GOP):** When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), request clarification from the initiator if the communication is not understood.
- 3) **Implement a process for identifying deficiencies:** (COM-003-1, R3 and R4) The SDT proposes a process to identify, assess and correct deficiencies with adherence to the documented communication protocols. The process is evaluated to determine and improve its effectiveness. Deficiencies that are identified, assessed and corrected will not be determined as non-compliant.
- 4) **VSL and VRF Changes from version two:** The OPCP SDT reviewed the VRFs and VSLs associated with R1, R2, R3 and R4 and made changes to more closely conform to NERC and FERC guidelines.

**The SDT is proposing to retire Requirement R4 from COM-001** and incorporate it into Requirement R2 of this draft COM-003-1. Since Requirement R4 from COM-001-1 carries over essentially unchanged there is no specific question related to it in this comment form.

The choice of VRFs was made on the basis of the potential impact on the Bulk Electric System of a miscommunication during Operating Instructions. Requirements R1 and R2 are assigned a Low Violation Risk Factor due to their potential direct impact on BES reliability. Requirements R3 and R4 are assigned a Medium Violation Risk due to their potential direct impact on BES reliability.

Time Horizons were selected to reflect the period within which the requirements applied. Requirements R1 and R2 must be implemented in long term planning operations and therefore

were assigned a Time Horizon of Long Term Planning. Requirements R3 and R4 must be implemented during operations planning and therefore were assigned a Time Horizon of Operations Planning. The drafting team is posting the standard for industry comment for a 30-day comment period.

The Operating Personnel Communications Protocols Drafting Team would like to receive industry comments on this draft standard. Accordingly, we request that you include your comments on this form by **September 20, 2012**.

## Comment Form

**\*Please use the [electronic comment form](#) to submit your final comments to NERC.**

1. Do you agree with the changes made to the proposed definition "Operating Instruction" (now proposed as a "*Command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System?*") to be added as a term for the NERC Glossary? If not, please explain in the comment area.  
 Yes  
 No
2. The SDT has proposed that the applicable entities have documented communication protocols that incorporate elements listed in COM-003-1, R1 and R2. Do you agree with these proposed requirements? If not, please explain in the comment area.  
 Yes  
 No
3. The SDT has proposed requirements (COM-003-1, R3 and R4) for applicable entities to implement a process to identify, assess and correct deficiencies related to the entity's documented communication protocols; and to evaluate that process based on deficiencies found externally from the process. Do you agree with the proposed requirements? If not, please explain in the comment area.
4. Do you agree with the VRFs and VSLs for Requirements R1, R2, R3 and R4?  
 Yes  
 No
5. Do you have any other comments or suggestions to improve the draft standard?  
Comments:



## Operating Personnel Communications Protocols Project 2007-02

### *Unofficial Comment Form for Standard COM-003-1 —Operating Personnel Communications Protocols*

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[http://www.nerc.com/filez/standards/Op\\_Comm\\_Protocol\\_Project\\_2007-02.html](http://www.nerc.com/filez/standards/Op_Comm_Protocol_Project_2007-02.html)

### **Background Information**

Effective communication is critical for real-time operations. Failure to successfully communicate clearly can create misunderstandings resulting in improper operations increasing the potential for failure of the BES.

The Standard Authorization Request (SAR) for this project was initiated on March 1, 2007 and approved by the Standards Committee on June 8, 2007. It established the scope of work to be done for Project 2007-02 Operating Personnel Communications Protocols (OPCP SDT). The scope described in the SAR is to establish essential elements of communications protocols and communications paths, such that operators and users of the North American Bulk Electric System will efficiently convey information and ensure mutual understanding. The August 2003 Blackout Report, Recommendation Number 26, calls for a tightening of communications protocols. FERC Order 693 paragraph 532 amplifies this need and applies it to all Operating Instructions. This proposed standard's goal is to ensure that effective communication is practiced and delivered in clear language and standardized format via pre-established communications paths among pre-identified operating entities.

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The standard will be applicable to Transmission Operators, Transmission Owners, Balancing Authorities, Reliability Coordinators, Generator Operators, and Distribution Providers. These requirements ensure that communications include essential elements, such that information is efficiently conveyed and mutually understood for communicating changes to real-time operating conditions and responding to directives, notifications, directions, instructions, orders, or other reliability related operating information.

The purpose statement of COM 003-1 states: "To provide system operators uniform communications protocols that reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of BES."

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This term is proposed for addition to the NERC Glossary to establish meaning and usage within the electricity industry.

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  - b) **24-hour clock R1 Part 1.2 and time zone reference R1 Part 1.3:**  
 Use the 24-hour clock format when referring to clock times when issuing an oral or written Operating Instruction.  
  
 When issuing an oral or written Operating Instruction between functional entities in different time zones, include the time, time zone and indicate whether the time is daylight saving time or standard time. (Example: 1500 EST or Eastern Standard Time)  
  
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- g) **Three-part Communication: For Distribution Providers (DP) and Generator Operators (GOP):** When receiving an oral two-party, person-to-person Operating Instruction, require the recipient to repeat, restate, rephrase, or recapitulate the Operating Instruction.
- h) **One-way burst messaging system to multiple parties (all call): For Distribution Providers (DP) and Generator Operators (GOP):** When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), request clarification from the initiator if the communication is not understood.
- 3) **Implement a process for identifying deficiencies:** (COM-003-1, R3 and R4) The SDT proposes a process to identify, assess and correct deficiencies with adherence to the documented communication protocols. The process is evaluated to determine and improve its effectiveness. Deficiencies that are identified, assessed and corrected will not be determined as non-compliant.
- 4) **VSL and VRF Changes from version two:** The OPCP SDT reviewed the VRFs and VSLs associated with R1, R2, R3 and R4 and made changes to more closely conform to NERC and FERC guidelines.

**The SDT is proposing to retire Requirement R4 from COM-001** and incorporate it into Requirement R2 of this draft COM-003-1. Since Requirement R4 from COM-001-1 carries over essentially unchanged there is no specific question related to it in this comment form.

The choice of VRFs was made on the basis of the potential impact on the Bulk Electric System of a miscommunication during Operating Instructions. Requirements R1 and R2 are assigned a Low Violation Risk Factor due to their potential direct impact on BES reliability. Requirements R3 and R4 are assigned a Medium Violation Risk due to their potential direct impact on BES reliability.

Time Horizons were selected to reflect the period within which the requirements applied. Requirements R1 and R2 must be implemented in long term planning operations and therefore

were assigned a Time Horizon of Long Term Planning. Requirements R3 and R4 must be implemented during operations planning and therefore were assigned a Time Horizon of Operations Planning. The drafting team is posting the standard for industry comment for a 30-day comment period.

The Operating Personnel Communications Protocols Drafting Team would like to receive industry comments on this draft standard. Accordingly, we request that you include your comments on this form by **September 20, 2012**.

## Comment Form

**\*Please use the [electronic comment form](#) to submit your final comments to NERC.**

1. Do you agree with the changes made to the proposed definition "Operating Instruction" (now proposed as a "*Command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System?*") to be added as a term for the NERC Glossary? If not, please explain in the comment area.  
 Yes  
 No
2. The SDT has proposed that the applicable entities have documented communication protocols that incorporate elements listed in COM-003-1, R1 and R2. Do you agree with these proposed requirements? If not, please explain in the comment area.  
 Yes  
 No
3. The SDT has proposed requirements (COM-003-1, R3 and R4) for applicable entities to implement a process to identify, assess and correct deficiencies related to the entity's documented communication protocols; and to evaluate that process based on deficiencies found externally from the process. Do you agree with the proposed requirements? If not, please explain in the comment area.
4. Do you agree with the VRFs and VSLs for Requirements R1, R2, R3 and R4?  
 Yes  
 No
5. Do you have any other comments or suggestions to improve the draft standard?  
Comments:

# Project 2007-02, COM-003-1 Operating Personnel Communication Protocols Rationale and Technical Justification

Justification for Requirements in Draft 4

## Rationale and Technical Justification

The Quality Review team for the draft 2 posting of COM-003-1 highly recommended that the OPCPSDT provide a justification or rationale document to aid reviewers in their examination of this draft of COM-003-1. The OPCPSDT agrees with the QR recommendation and has developed the following to support the standard and to help stakeholders understand the intent and scope of the standard. This version of the standard features a non traditional approach to standards that could alleviate concerns that surfaced in comments in drafts one, two and three.

### **Requirement R1**

Requirement R1 requires entities that can both issue and receive Operating Instructions to implement documented communication protocols in a manner that identifies, assesses, and corrects deficiencies. Because Operating Instructions affect Facilities and Elements of the Bulk Electric System, the communication of those Operating Instructions must be understood by all involved parties, especially when those communications occur between functional entities. An EPRI study reviewed nearly 400 switching mishaps by electric utilities and found that roughly 19% of errors (generally classified as loss of load, breach of safety, or equipment damage) were due to communication failures.<sup>1</sup> This was nearly identical to another study of dispatchers from 18 utilities representing nearly 2000 years of operating experience that found that 18% of the operators' errors were due to communication problems.<sup>2</sup> The necessary protocols include the use of the

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<sup>1</sup> Beare, A., Taylor, J. *Field Operation Power Switching Safety*, WO2944-10, Electric Power Research Institute.

<sup>2</sup> Bilke, T., *Cause and prevention of human error in electric utility operations*, Colorado State University, 1998.

English language (from COM-001-1.1 R4), time formatting, mutually agreed nomenclature for Transmission interface Elements, alpha-numeric clarifiers, and three part communications.

### ***Requirement R2***

Requirement R2 requires entities that only receive Operating Instructions to implement documented communication protocols in a manner that identifies, assesses, and corrects deficiencies .

The two protocols (R2 , Parts 2.1 and 2.2) required are repeat back for three part communication and clarification if an “all call” communication is unclear.

### ***Rationale***

The SDT has incorporated within this standard a recognition that these requirements should not focus on individual instances of failure as a basis for violating the standard. In particular, the SDT has incorporated an approach to empower and enable the industry to identify, assess, and correct deficiencies in the implementation of certain requirements. The intent is to change the basis of a violation in those requirements so that they are not focused on whether there is a deficiency, but on identifying, assessing, and correcting deficiencies. It is presented in those requirements by modifying “implement” as follows:

Each ... shall implement, in a manner that identifies, assesses, and corrects deficiencies, . . .

The term *documented communication protocols* refers to a set of required protocols specific to the Functional Entity and the Functional Entities they must communicate with. This term does not imply any particular naming or approval structure beyond what is stated in the requirements. An entity should include as much as it believes necessary in their documented protocols, but they must address all of the applicable parts of the Requirement. The documented protocols themselves are not required to include the “. . . identifies, assesses, and corrects deficiencies, . . .” elements described in the preceding paragraph, as those aspects are related to the manner of implementation of the documented protocols and could be accomplished through other controls or compliance management activities.

## Project 2007-02: Operating Personnel Communication Protocols

Mapping Document

### 1. Mapping Document Showing Translation of COM-001-1, R4 – Telecommunications into COM-003-1–Operating Personnel Communications Protocol

Requirement in Approved Standard	Translation to New Standard or Other Action	Comments
<p>R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations</p>	<p>Moved into COM 003-1 R1.1</p>	<p>R1 Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, and Transmission Operator shall have documented communications protocols that incorporate the following:</p> <p>1.1. Use of the English language when issuing an oral or written Operating Instruction between functional entities, unless another language is mandated by law or regulation. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.</p>



## Project 2007-02: Operating Personnel Communication Protocols

Mapping Document

### 1. Mapping Document Showing Translation of COM-001-1, R4– Telecommunications into COM-003-1–Operating Personnel Communications Protocol

Requirement in Approved Standard	Translation to New Standard or Other Action	Comments
<p>R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations</p>	<p>Moved into COM 003-1 R1.1. <del>1</del></p>	<p>R1 Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, Transmission Operator, and Transmission Owner shall <u>have documented use the following</u> communications protocols <u>that incorporate the following</u>: [Violation Risk Factor: <del>Medium</del><u>Low</u>] [Time Horizon: <del>Real-time Operations</del><u>Long-term Planning</u> ]</p> <p>1.1. <u>Use of the English language when issuing an oral or written Operating Instruction between functional entities, unless another language is mandated by law or regulation. Transmission Operators and Balancing</u></p>

# Communications Protocols: Operating Personnel Communication

Requirement in Approved Standard	Translation to New Standard or Other Action	Comments
		<p><u>Authorities may use an alternate language for internal operations</u><del>When participating in oral or written Operating Communications:</del></p> <p><del>1.1.1 Use the English language when communicating between functional entities, unless another language is mandated by law or regulation.</del></p>

## Project 2007-2 – Operating Personnel Communications Protocol

### VRF and VSL Justifications

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in COM 003-1 Operating Personnel Communications Protocols.

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Operations Personnel Communications Protocol Standard Drafting Team applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSLs for the requirements under this project:

### NERC Criteria - Violation Risk Factors

#### **High Risk Requirement**

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a

cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

### **Medium Risk Requirement**

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

### **Lower Risk Requirement**

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

## **FERC Violation Risk Factor Guidelines**

### **Guideline (1) — Consistency with the Conclusions of the Final Blackout Report**

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief

#### **Guideline (2) — Consistency within a Reliability Standard**

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

#### **Guideline (3) — Consistency among Reliability Standards**

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

#### **Guideline (4) — Consistency with NERC's Definition of the Violation Risk Factor Level**

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC's definition of that risk level.

**Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation**

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC's VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC's Reliability Standards and implies that these requirements should be assigned a "High" VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

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VRF for COM-003-1:

There are three requirements in COM-003-1. Requirements R1, R2 and R3 were assigned a "Medium" VRF.

## NERC Criteria - Violation Severity Levels

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple "degrees" of noncompliant performance and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
<p>Missing a minor element (or a small percentage) of the required performance</p> <p>The performance or product measured has significant value as it almost meets the full intent of the requirement.</p>	<p>Missing at least one significant element (or a moderate percentage) of the required performance.</p> <p>The performance or product measured still has significant value in meeting the intent of the requirement.</p>	<p>Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component.</p> <p>The performance or product has limited value in meeting the intent of the requirement.</p>	<p>Missing most or all of the significant elements (or a significant percentage) of the required performance.</p> <p>The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.</p>

## **FERC Order on Violation Severity Levels**

In its June 19, 2008 Order on Violation Severity Levels, FERC indicated it would use the following four guidelines for determining whether to approve VSLs:

### **Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance**

Compare the VSLs to any prior Levels of Non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when Levels of Non-compliance were used.

### **Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties**

Guideline 2a: A violation of a “binary” type requirement must be a “Severe” VSL.

Guideline 2b: Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

### **Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement**

VSLs should not expand on what is required in the requirement.

### **Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations**



. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

The drafting team will complete the following table, providing of analysis and justification for each VRF and VSL, for each requirement.

VRF and VSL Justifications – COM 003-1, R1	
Proposed VRF	Low
NERC VRF Discussion	R1 is a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system The VRF for this requirement is “Low” which is consistent with NERC guidelines
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R1 falls under Recommendation 24 of the Blackout Report. The VRF for this requirement is “Low” which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for the establishment of communication protocols that reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability,

VRF and VSL Justifications – COM 003-1, R1			
	separation, or cascading failures. The VRF for this requirement is “Low” which is consistent with NERC guidelines		
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R1 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.		
Proposed VSL			
Lower	Moderate	High	Severe
The responsible entity did not include one (1) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols	The responsible entity did not include two (2) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols	The responsible entity did not include three (3) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols	The responsible entity did not include four (4) or more of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols  OR  The responsible entity did not have documented communication protocols as required in Requirement R1.

**VRF and VSL Justifications – COM 003-1, R1**

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of common communication protocols. If no communication protocols are used at all or if the number of required protocols falls below the listed thresholds, then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R1 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

VRF and VSL Justifications – COM 003-1, R1	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 003-1, R2	
<b>Proposed VRF</b>	Low
NERC VRF Discussion	R2 is a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system The VRF for this requirement is “Low” which is consistent with NERC guidelines
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R2 falls under Recommendation 24 of the Blackout Report. The VRF for this requirement is “Low” which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for the establishment of communication protocols that reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Low” which is consistent with NERC guidelines
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R2 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.

VRF and VSL Justifications – COM 003-1, R2			
Proposed VSL			
Lower	Moderate	High	Severe
N/A	N/A	The responsible entity did not include one (1) of the two (2) parts of Requirement R2, Parts 2.1 to 2.2 in their documented communication protocols	The responsible entity did not include Parts 2.1 to 2.3 (3) of Requirement R2, in their documented communication protocols  OR  The responsible entity did not have documented communication protocols as required in Requirement R2.

**VRF and VSL Justifications – COM 003-1, R2**

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of common communication protocols. If no communication protocols are used at all or if the number of required protocols falls below the listed thresholds, then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R2 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

VRF and VSL Justifications – COM 003-1, R2	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP



VRF and VSL Justifications – COM 003-1, R3	
<b>Proposed VRF</b>	Medium
NERC VRF Discussion	R3 is a requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R3 falls under Recommendation 24 of the Blackout Report. The VRF for this requirement is “Medium” which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for use of formal three part communication, among other communication protocols. This requirement is analogous to R2 of COM-002-2, which describes a communication protocol required for operating personnel to use when given a directive. The VRF for this requirement (COM-002-2, R2) is “Medium” which is consistent with COM-003-1 R3 at a “Medium”. The SDT considers “Medium” as the proper assignment because it is consistent with NERC and FERC guidelines.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to utilize formal communication protocols could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R3 contains only one objective which is to implement a process for identifying

VRF and VSL Justifications – COM 003-1, R3			
	deficiencies with adherence to the documented communication protocols. Since the requirement has only one objective, only one VRF was assigned.		
Proposed VSL			
Lower	Moderate	High	Severe
N/A	N/A	N/A	<p>The Responsible Entity does not have a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R1;</p> <p>Or</p> <p>The Responsible Entity did not evaluate their process based on deficiencies found external to Part 3.1 to determine whether modification of the process is necessary;</p> <p>Or</p> <p>The Responsible Entity did not implement modifications to the process when the evaluation</p>

VRF and VSL Justifications – COM 003-1, R3

			<p>determined that modification of the process was necessary to address the deficiencies found;</p> <p>Or</p> <p>The Responsible Entity did not demonstrate that no modification to the process was necessary to address the deficiencies found external to Part 3.1.</p>
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**VRF and VSL Justifications – COM 003-1, R3**

<b>VRF and VSL Justifications – COM 003-1, R3</b>	
<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Since R3 represents a new approach that does not currently exist, the VSL does not lower the current level of compliance.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R3 is binary and Severe.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

VRF and VSL Justifications – COM 003-1, R3	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 003-1, R4	
<b>Proposed VRF</b>	Medium
NERC VRF Discussion	R4 is a requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R4 falls under Recommendation 24 of the Blackout Report. The VRF for this requirement is “Medium” which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for use of formal three part communication, among other communication protocols. This requirement is analogous to R2 of COM-002-2, which describes a communication protocol required for operating personnel to use when given a directive. The VRF for this requirement (COM-002-2, R2) is “Medium” which is consistent with COM-003-1 R4 at a “Medium”. The SDT considers “Medium” as the proper assignment because it is consistent with NERC and FERC guidelines.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to utilize formal communication protocols could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R4 contains only one objective which is to implement a process for identifying

VRF and VSL Justifications – COM 003-1, R4			
	deficiencies with adherence to the documented communication protocols. Since the requirement has only one objective, only one VRF was assigned.		
Proposed VSL			
Lower	Moderate	High	Severe
N/A	N/A	N/A	<p>The Responsible Entity does not have a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R2;</p> <p>Or</p> <p>The Responsible Entity did not evaluate their process based on deficiencies found external to Part 4.1 to determine whether modification of the process is necessary;</p> <p>Or</p> <p>The Responsible Entity did not implement modifications to the process when the evaluation</p>

**VRF and VSL Justifications – COM 003-1, R4**

			<p>determined that modification of the process was necessary to address the deficiencies found;</p> <p>Or</p> <p>The Responsible Entity did not demonstrate that no modification to the process was necessary to address the deficiencies found external to Part 4.1.</p>
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**VRF and VSL Justifications – COM 003-1, R4**

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Since R4 represents a new approach that does not currently exist, the VSL does not lower the current level of compliance.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R4 is binary and Severe.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

**VRF and VSL Justifications – COM 003-1, R4**

<b>VRF and VSL Justifications – COM 003-1, R4</b>	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

Requirement R4 was assigned to Project 2007-02. All other requirements were assigned to Project 2006-06 and are being revised or retired under Project 2006-06.

**A. Introduction**

- 1. Title:** **Telecommunications**
- 2. Number:** COM-001-2
- 3. Purpose:** Each Reliability Coordinator, Transmission Operator and Balancing Authority needs adequate and reliable telecommunications facilities internally and with others for the exchange of Interconnection and operating information necessary to maintain reliability.
- 4. Applicability**
  - 4.1.** Transmission Operators.
  - 4.2.** Balancing Authorities.
  - 4.3.** Reliability Coordinators.
  - 4.4.** NERCNet User Organizations.
- 5. (Proposed) Effective Date:** First day of the first calendar quarter, six calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter a year from the date of Board of Trustee adoption.

**B. Requirements**

- R1.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information:
  - R1.1.** Internally.
  - R1.2.** Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities.
  - R1.3.** With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability.
  - R1.4.** Where applicable, these facilities shall be redundant and diversely routed.
- R2.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.
- R3.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas.
- R4.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities.
- R5.** Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, “NERCNet Security Policy.”

**C. Measures**

- M1.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to communication facility test-procedure documents, records of testing, and maintenance records for communication facilities or equivalent that will be used to confirm that it manages, alarms, tests and/or actively monitors vital telecommunications facilities. (Requirement 2 part 1)
- M2.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request its current operating instructions and procedures, either electronic or hard copy, that will be used to confirm that it meets Requirement 4.
- M3.** The NERCnet User Organization shall have and provide upon request evidence that could include, but is not limited to, documented procedures, operator logs, voice recordings or transcripts of voice recordings, electronic communications, etc., that will be used to determine if it adhered to the (User Accountability and Compliance) requirements in Attachment 1-COM-001. (Requirement 5)

## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance Monitoring Responsibility**

NERC shall be responsible for compliance monitoring of the Regional Reliability Organizations  
Regional Reliability Organizations shall be responsible for compliance monitoring of all other entities

#### **1.2. Compliance Monitoring and Reset Time Frame**

One or more of the following methods will be used to assess compliance:

- Self-certification (Conducted annually with submission according to schedule.)
- Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)
- Periodic Audit (Conducted once every three years according to schedule.)
- Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 calendar days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)

The Performance-Reset Period shall be 12 months from the last finding of non-compliance.

#### **1.3. Data Retention**

For Measure 1 each Reliability Coordinator, Transmission Operator, Balancing Authority shall keep evidence of compliance for the previous two calendar years plus the current year.

For Measure 2, each Reliability Coordinator, Transmission Operator, Balancing Authority shall have its current operating instructions and procedures to confirm that it meets Requirement 4.

For Measure 3, each Reliability Coordinator, Transmission Operator, Balancing Authority and NERCnet User Organization shall keep 90 days of historical data (evidence).

If an entity is found non-compliant the entity shall keep information related to the noncompliance until found compliant or for two years plus the current year, whichever is longer.

Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor.

The Compliance Monitor shall keep the last periodic audit report and all requested and submitted subsequent compliance records.

**1.4. Additional Compliance Information**

Attachment 1 — COM-001 — NERCnet Security Policy

**2. Levels of Non-Compliance for Transmission Operator, Balancing Authority or Reliability Coordinator**

**2.1. Level 1:** Not applicable.

**2.2. Level 2:** Not applicable.

**2.3. Level 3:** There shall be a separate Level 3 non-compliance for every one of the following requirements that is in violation:

**2.3.1** There are no written operating instructions and procedures to enable continued operation of the system during the loss of telecommunication facilities, as specified in R4.

**2.4. Level 4:** Telecommunication systems are not actively monitored, tested, managed or alarmed, as specified in R2.

**3. Levels of Non-Compliance — NERCnet User Organization**

**3.1. Level 1:** Not applicable.

**3.2. Level 2:** Not applicable.

**3.3. Level 3:** Not applicable.

**3.4. Level 4:** Did not adhere to the requirements in Attachment 1-COM-001, NERCnet Security Policy.

**E. Regional Differences**

None Identified.

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
1.1	October 29, 2008	BOT adopted errata changes; updated version number to “1.1”	Errata

### Attachment 1 — COM-001 — NERCnet Security Policy

#### Policy Statement

The purpose of this NERCnet Security Policy is to establish responsibilities and minimum requirements for the protection of information assets, computer systems and facilities of NERC and other users of the NERC frame relay network known as “NERCnet.” The goal of this policy is to prevent misuse and loss of assets.

For the purpose of this document, information assets shall be defined as processed or unprocessed data using the NERCnet Telecommunications Facilities including network documentation. This policy shall also apply as appropriate to employees and agents of other corporations or organizations that may be directly or indirectly granted access to information associated with NERCnet.

The objectives of the NERCnet Security Policy are:

- To ensure that NERCnet information assets are adequately protected on a cost-effective basis and to a level that allows NERC to fulfill its mission.
- To establish connectivity guidelines for a minimum level of security for the network.
- To provide a mandate to all Users of NERCnet to properly handle and protect the information that they have access to in order for NERC to be able to properly conduct its business and provide services to its customers.

#### NERC’s Security Mission Statement

NERC recognizes its dependency on data, information, and the computer systems used to facilitate effective operation of its business and fulfillment of its mission. NERC also recognizes the value of the information maintained and provided to its members and others authorized to have access to NERCnet. It is, therefore, essential that this data, information, and computer systems, and the manual and technical infrastructure that supports it, are secure from destruction, corruption, unauthorized access, and accidental or deliberate breach of confidentiality.

#### Implementation and Responsibilities

This section identifies the various roles and responsibilities related to the protection of NERCnet resources.

#### NERCnet User Organizations

Users of NERCnet who have received authorization from NERC to access the NERC network are considered users of NERCnet resources. To be granted access, users shall complete a User Application Form and submit this form to the NERC Telecommunications Manager.

#### Responsibilities

It is the responsibility of NERCnet User Organizations to:

- Use NERCnet facilities for NERC-authorized business purposes only.
- Comply with the NERCnet security policies, standards, and guidelines, as well as any procedures specified by the data owner.
- Prevent unauthorized disclosure of the data.
- Report security exposures, misuse, or non-compliance situations via Reliability Coordinator Information System or the NERC Telecommunications Manager.
- Protect the confidentiality of all user IDs and passwords.
- Maintain the data they own.
- Maintain documentation identifying the users who are granted access to NERCnet data or applications.
- Authorize users within their organizations to access NERCnet data and applications.

- Advise staff on NERCnet Security Policy.
- Ensure that all NERCnet users understand their obligation to protect these assets.
- Conduct self-assessments for compliance.

### **User Accountability and Compliance**

All users of NERCnet shall be familiar and ensure compliance with the policies in this document.

Violations of the NERCnet Security Policy shall include, but not be limited to any act that:

- Exposes NERC or any user of NERCnet to actual or potential monetary loss through the compromise of data security or damage.
- Involves the disclosure of trade secrets, intellectual property, confidential information or the unauthorized use of data.

Involves the use of data for illicit purposes, which may include violation of any law, regulation or reporting requirement of any law enforcement or government body.

Requirement R4 was assigned to Project 2007-02. All other requirements were assigned to Project 2006-06 and are being revised or retired under Project 2006-06.

## A. Introduction

1. **Title:** Telecommunications
2. **Number:** COM-001-~~1.12~~
3. **Purpose:** Each Reliability Coordinator, Transmission Operator and Balancing Authority needs adequate and reliable telecommunications facilities internally and with others for the exchange of Interconnection and operating information necessary to maintain reliability.
4. **Applicability**
  - 4.1. Transmission Operators.
  - 4.2. Balancing Authorities.
  - 4.3. Reliability Coordinators.
  - 4.4. NERCNet User Organizations.
5. **(Proposed) Effective Date:** First day of the first calendar quarter, six calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter a year from the date of Board of Trustee adoption. ~~May 13, 2009~~

## B. Requirements

- R1. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information:
  - R1.1. Internally.
  - R1.2. Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities.
  - R1.3. With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability.
  - R1.4. Where applicable, these facilities shall be redundant and diversely routed.
- R2. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.
- R3. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas.

~~R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.~~

~~R5.~~R4. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities.



~~R6-R5.~~ Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001, “NERCNet Security Policy.”

### C. Measures

**M1.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to communication facility test-procedure documents, records of testing, and maintenance records for communication facilities or equivalent that will be used to confirm that it manages, alarms, tests and/or actively monitors vital telecommunications facilities. (Requirement 2 part 1)

~~M2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request its current operating instructions and procedures, either electronic or hard copy, that will be used to confirm that it meets Requirement 4. The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine compliance to Requirement 4.~~

~~M3. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request its current operating instructions and procedures, either electronic or hard copy that will be used to confirm that it meets Requirement 5.~~

~~M4.~~**M3.** The NERCnet User Organization shall have and provide upon request evidence that could include, but is not limited to, documented procedures, operator logs, voice recordings or transcripts of voice recordings, electronic communications, etc., that will be used to determine if it adhered to the (User Accountability and Compliance) requirements in Attachment 1-COM-001. (Requirement 65)

### D. Compliance

#### 1. Compliance Monitoring Process

##### 1.1. Compliance Monitoring Responsibility

NERC shall be responsible for compliance monitoring of the Regional Reliability Organizations  
Regional Reliability Organizations shall be responsible for compliance monitoring of all other entities

##### 1.2. Compliance Monitoring and Reset Time Frame

One or more of the following methods will be used to assess compliance:

- Self-certification (Conducted annually with submission according to schedule.)
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The Performance-Reset Period shall be 12 months from the last finding of non-compliance.

##### 1.3. Data Retention

For Measure 1 each Reliability Coordinator, Transmission Operator, Balancing Authority shall keep evidence of compliance for the previous two calendar years plus the current year.

~~For Measure 2 each Reliability Coordinator, Transmission Operator, and Balancing Authority shall keep 90 days of historical data (evidence).~~

For Measure ~~3~~2, each Reliability Coordinator, Transmission Operator, Balancing Authority shall have its current operating instructions and procedures to confirm that it meets Requirement ~~5~~4.

For Measure ~~4~~3, each Reliability Coordinator, Transmission Operator, Balancing Authority and NERCnet User Organization shall keep 90 days of historical data (evidence).

If an entity is found non-compliant the entity shall keep information related to the noncompliance until found compliant or for two years plus the current year, whichever is longer.

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#### 1.4. Additional Compliance Information

Attachment 1 — COM-001 — NERCnet Security Policy

### 2. Levels of Non-Compliance for Transmission Operator, Balancing Authority or Reliability Coordinator

2.1. Level 1: Not applicable.

2.2. Level 2: Not applicable.

2.3. Level 3: There shall be a separate Level 3 non-compliance, for every one of the following requirements that is in violation:

~~2.3.1 — The Transmission Operator, Balancing Authority or Reliability Coordinator used a language other than English without agreement as specified in R4.~~

~~2.3.2.3.1~~ There are no written operating instructions and procedures to enable continued operation of the system during the loss of telecommunication facilities, as specified in ~~R5~~R4.

2.4. Level 4: Telecommunication systems are not actively monitored, tested, managed or alarmed, as specified in R2.

### 3. Levels of Non-Compliance — NERCnet User Organization

3.1. Level 1: Not applicable.

3.2. Level 2: Not applicable.

3.3. Level 3: Not applicable.

3.4. Level 4: Did not adhere to the requirements in Attachment 1-COM-001, NERCnet Security Policy.

## E. Regional Differences

None Identified.

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
1.1	October 29, 2008	BOT adopted errata changes; updated version number to “1.1”	Errata

## **Attachment 1 — COM-001 — NERCnet Security Policy**

### **Policy Statement**

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#### **Responsibilities**

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- Use NERCnet facilities for NERC-authorized business purposes only.
- Comply with the NERCnet security policies, standards, and guidelines, as well as any procedures specified by the data owner.
- Prevent unauthorized disclosure of the data.
- Report security exposures, misuse, or non-compliance situations via Reliability Coordinator Information System or the NERC Telecommunications Manager.
- Protect the confidentiality of all user IDs and passwords.
- Maintain the data they own.
- Maintain documentation identifying the users who are granted access to NERCnet data or applications.
- Authorize users within their organizations to access NERCnet data and applications.

- Advise staff on NERCnet Security Policy.
- Ensure that all NERCnet users understand their obligation to protect these assets.
- Conduct self-assessments for compliance.

**User Accountability and Compliance**

All users of NERCnet shall be familiar and ensure compliance with the policies in this document.

Violations of the NERCnet Security Policy shall include, but not be limited to any act that:

- Exposes NERC or any user of NERCnet to actual or potential monetary loss through the compromise of data security or damage.
- Involves the disclosure of trade secrets, intellectual property, confidential information or the unauthorized use of data.

Involves the use of data for illicit purposes, which may include violation of any law, regulation or reporting requirement of any law enforcement or government body.

## Standards Announcement

### Project 2007-02 – Operating Personnel Communications Protocols

Successive Ballot and Non-Binding Poll Open Through 8 p.m.  
Thursday, September 20, 2012

#### [Now Available](#)

A successive ballot of COM-003-1 – Operating Personnel Communications and Protocols and a non-binding poll of the associated VRFs/VSLs is open through **8 p.m. Eastern on Thursday, September 20, 2012.**

#### **Instructions**

Members of the ballot pools associated with this project may log in and submit their vote for the Standard and opinion in the non-binding poll of the associated VRFs and VSLs by clicking [here](#).

**Please read carefully:** All stakeholders with comments (both members of the ballot pool, as well as other stakeholders; including groups such as trade associations and committees) must submit comments through the [electronic comment form](#). During the ballot window, balloters who wish to submit comments with their ballot *may no longer enter comments on the balloting screen*, but may still enter comments through the electronic comment form. **Balloters who wish to express support for comments submitted by another entity or group will have an opportunity to enter that information and are not required to answer any other questions.**

#### **Next Steps**

The drafting team plans anticipates posting COM-003 for a recirculation ballot in October 2012.

#### **Background**

The purpose of this project is to require that real-time system operators use standardized communication protocols during normal and emergency operations to enhance the clarity of communications, improve situational awareness, shorten response time and ultimately serve reliability. As requested in the SAR, in the development of this proposed standard, the drafting team reviewed communication protocols in other NERC standards and considered the use of alert level guidelines and three-part communications to achieve consistency across regions. The proposed standard is designed to ensure that reliability-related information is conveyed effectively, accurately, consistently and in a timely manner to ensure mutual understanding by all key parties, both during alerts and emergencies and during the communication of routine operating instructions.

There are two projects that include the modification of the COM family of standards in the scope of their SAR. This project, Project 2007-02 – Operating Personnel Communications Protocols, is concerned with communication protocols for normal and emergency operations. The other project, Project 2006-06 – Reliability Coordination, is concerned with ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, enforceable, and sufficient to maintain reliability of the Bulk Electric System.

The Project 2006-06 Reliability Coordination drafting team (RC SDT) has limited the scope of its modifications to those that address communication during emergency operations. The RC SDT has developed a new term, “Reliability Directive,” to specifically address those communications, and this term has been approved by the ballot pool. The proposed definition of Reliability Directive is “A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.” The RC SDT is proposing to require three-part communication for Reliability Directives, with a High Violation Risk Factor for those requirements.

Since Project 2007-02 – Operating Personnel Communications Protocols addresses communication protocols for normal *and* emergency operations, the drafting team has proposed a new term, “Operating Instruction,” to define the scope of communications to which the COM-003-1 protocols would apply. The proposed definition of Operating Instruction is “Command from a System Operator to change or preserve the state, status, output or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”

The two standards complement each other. COM-003 establishes the practice of using communication protocols for all Operating Instructions, and provides for an entity to identify, assess and correct any deficiencies with that practice. COM-002 is focused on communications during emergency situations.

Additional information is available on the [project page](#).

### **Standards Development Process**

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact Monica Benson,  
Standards Process Administrator, at [monica.benson@nerc.net](mailto:monica.benson@nerc.net) or at 404-446-2560.*

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## Standards Announcement

### Operating Personnel Communications Protocols Project 2007-02

Formal Comment Period Open: August 22 – September 20, 2012

RSAW Posted for  
Industry Comments: August 22 – September 20, 2012

**Upcoming:**  
Successive Ballot and Non-binding Poll: September 11 – September 20, 2012

#### [Now Available](#)

A formal comment period for **COM-003-1 – Operating Personnel Communication Protocols** is open through **8 p.m. Eastern on Thursday, September 20, 2012**

In response to comments received during the last comment period and other input, the drafting team has taken a new approach to COM-003-1.

This version requires entities to establish communication protocols and then implement a process for identifying, assessing and correcting deficiencies with adherence to those communication protocols. The entity is to ensure that its process is working, rather than requiring the demonstration of absolute compliance with communication protocols at all times and identifying each deficiency as a possible violation.

Additionally, this version was drafted in conjunction with the development of the Reliability Standard Audit Worksheet (RSAW). The parallel development of these documents provided the opportunity for the drafting team to consider the compliance implications of the language in the standard and to offer input into the language of the RSAW. The RSAW is posted for informal comments along with COM-003-1.

#### **Instructions for Commenting**

A formal comment period on the draft standard is open through **8 p.m. Eastern on Thursday, September 20**. Please use this [electronic form](#) to submit comments. If you experience any difficulties in



using the electronic form, please contact Monica Benson at [monica.benson@nerc.net](mailto:monica.benson@nerc.net). An off-line, unofficial copy of the comment form is posted on the [project page](#).

**Please read carefully:** All stakeholders with comments (both members of the ballot pool as well as other stakeholders, including groups such as trade associations and committees) must submit comments through the [electronic comment form](#). During the ballot window, balloters who wish to submit comments with their ballot *may no longer enter comments on the balloting screen*, but may still enter the comments through the electronic comment form. **Balloters who wish to express support for comments submitted by another entity or group will have an opportunity to enter that information and are not required to answer any other questions.**

A comment period on the draft RSAW is open through **8 p.m. Eastern on Thursday, September 20, 2012**. The draft RSAW is posted on the [NERC Compliance Reliability Standard Audit Worksheet \(RSAW\) page](#). Please submit comments on the draft RSAW using the [RSAW comment form](#) (located under “Tools”) to [RSAWfeedback@nerc.net](mailto:RSAWfeedback@nerc.net).

### Next Steps

A webinar on COM-003-1 is planned for the week of September 17, 2012. A separate announcement will be sent when the date and time are finalized.

A successive ballot of COM-003-1 and a non-binding poll of the associated VRFs and VSLs will be conducted beginning on Tuesday, September 11, 2012 through 8 p.m. Eastern on Thursday, September 20, 2012.

### Background

The purpose of this project is to require that real-time system operators use standardized communication protocols during normal and emergency operations to enhance the clarity of communications, improve situational awareness, shorten response time and ultimately serve reliability. As requested in the SAR, in the development of this proposed standard, the drafting team reviewed communication protocols in other NERC standards and considered the use of alert level guidelines and three-part communications to achieve consistency across regions. The proposed standard is designed to ensure that reliability-related information is conveyed effectively, accurately, consistently and in a timely manner to ensure mutual understanding by all key parties, both during alerts and emergencies and during the communication of routine operating instructions.

There are two projects that include the modification of the COM family of standards in the scope of their SAR. This project, Project 2007-02 – Operating Personnel Communications Protocols, is concerned with communication protocols for normal and emergency operations. The other project, Project 2006-06 – Reliability Coordination, is concerned with ensuring that the reliability-related

requirements applicable to the Reliability Coordinator are clear, measurable, unique, enforceable, and sufficient to maintain reliability of the Bulk Electric System.

The Project 2006-06 Reliability Coordination drafting team (RC SDT) has limited the scope of its modifications to those that address communication during emergency operations. The RC SDT has developed a new term, “Reliability Directive,” to specifically address those communications, and this term has been approved by the ballot pool. The proposed definition of Reliability Directive is “A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.” The RC SDT is proposing to require three-part communication for Reliability Directives, with a High Violation Risk Factor for those requirements.

Since Project 2007-02 – Operating Personnel Communications Protocols addresses communication protocols for normal *and* emergency operations, the drafting team has proposed a new term, “Operating Instruction,” to define the scope of communications to which the COM-003-1 protocols would apply. The proposed definition of Operating Instruction is “Command from a System Operator to change or preserve the state, status, output or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”

The two standards complement each other. COM-003 establishes the practice of using communication protocols for all Operating Instructions, and provides for an entity to identify, assess and correct any deficiencies with that practice. COM-002 is focused on communications during emergency situations.

Additional information is available on the [project page](#).

### Standards Process

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact Monica Benson,  
Standards Process Administrator, at [monica.benson@nerc.net](mailto:monica.benson@nerc.net) or at 404-446-2560.*

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## Standards Announcement

### Operating Personnel Communications Protocols Project 2007-02

Formal Comment Period Open: August 22 – September 20, 2012

RSAW Posted for  
Industry Comments: August 22 – September 20, 2012

#### Upcoming:

Successive Ballot and Non-binding Poll: September 11 – September 20, 2012

#### [Now Available](#)

A formal comment period for **COM-003-1 – Operating Personnel Communication Protocols** is open through **8 p.m. Eastern on Thursday, September 20, 2012**

In response to comments received during the last comment period and other input, the drafting team has taken a new approach to COM-003-1.

This version requires entities to establish communication protocols and then implement a process for identifying, assessing and correcting deficiencies with adherence to those communication protocols. The entity is to ensure that its process is working, rather than requiring the demonstration of absolute compliance with communication protocols at all times and identifying each deficiency as a possible violation.

Additionally, this version was drafted in conjunction with the development of the Reliability Standard Audit Worksheet (RSAW). The parallel development of these documents provided the opportunity for the drafting team to consider the compliance implications of the language in the standard and to offer input into the language of the RSAW. The RSAW is posted for informal comments along with COM-003-1.

#### Instructions for Commenting

A formal comment period on the draft standard is open through **8 p.m. Eastern on Thursday, September 20**. Please use this [electronic form](#) to submit comments. If you experience any difficulties in

using the electronic form, please contact Monica Benson at [monica.benson@nerc.net](mailto:monica.benson@nerc.net). An off-line, unofficial copy of the comment form is posted on the [project page](#).

**Please read carefully:** All stakeholders with comments (both members of the ballot pool as well as other stakeholders, including groups such as trade associations and committees) must submit comments through the [electronic comment form](#). During the ballot window, balloters who wish to submit comments with their ballot *may no longer enter comments on the balloting screen*, but may still enter the comments through the electronic comment form. **Balloters who wish to express support for comments submitted by another entity or group will have an opportunity to enter that information and are not required to answer any other questions.**

A comment period on the draft RSAW is open through **8 p.m. Eastern on Thursday, September 20, 2012**. The draft RSAW is posted on the [NERC Compliance Reliability Standard Audit Worksheet \(RSAW\) page](#). Please submit comments on the draft RSAW using the [RSAW comment form](#) (located under “Tools”) to [RSAWfeedback@nerc.net](mailto:RSAWfeedback@nerc.net).

### Next Steps

A webinar on COM-003-1 is planned for the week of September 17, 2012. A separate announcement will be sent when the date and time are finalized.

A successive ballot of COM-003-1 and a non-binding poll of the associated VRFs and VSLs will be conducted beginning on Tuesday, September 11, 2012 through 8 p.m. Eastern on Thursday, September 20, 2012.

### Background

The purpose of this project is to require that real-time system operators use standardized communication protocols during normal and emergency operations to enhance the clarity of communications, improve situational awareness, shorten response time and ultimately serve reliability. As requested in the SAR, in the development of this proposed standard, the drafting team reviewed communication protocols in other NERC standards and considered the use of alert level guidelines and three-part communications to achieve consistency across regions. The proposed standard is designed to ensure that reliability-related information is conveyed effectively, accurately, consistently and in a timely manner to ensure mutual understanding by all key parties, both during alerts and emergencies and during the communication of routine operating instructions.

There are two projects that include the modification of the COM family of standards in the scope of their SAR. This project, Project 2007-02 – Operating Personnel Communications Protocols, is concerned with communication protocols for normal and emergency operations. The other project, Project 2006-06 – Reliability Coordination, is concerned with ensuring that the reliability-related

requirements applicable to the Reliability Coordinator are clear, measurable, unique, enforceable, and sufficient to maintain reliability of the Bulk Electric System.

The Project 2006-06 Reliability Coordination drafting team (RC SDT) has limited the scope of its modifications to those that address communication during emergency operations. The RC SDT has developed a new term, “Reliability Directive,” to specifically address those communications, and this term has been approved by the ballot pool. The proposed definition of Reliability Directive is “A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.” The RC SDT is proposing to require three-part communication for Reliability Directives, with a High Violation Risk Factor for those requirements.

Since Project 2007-02 – Operating Personnel Communications Protocols addresses communication protocols for normal *and* emergency operations, the drafting team has proposed a new term, “Operating Instruction,” to define the scope of communications to which the COM-003-1 protocols would apply. The proposed definition of Operating Instruction is “Command from a System Operator to change or preserve the state, status, output or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”

The two standards complement each other. COM-003 establishes the practice of using communication protocols for all Operating Instructions, and provides for an entity to identify, assess and correct any deficiencies with that practice. COM-002 is focused on communications during emergency situations.

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### Standards Process

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## Standards Announcement

### Project 2007-02 – Operating Personnel Communications Protocols

#### Successive Ballot and Non-Binding Poll Results

##### [Now Available](#)

A successive ballot of **COM-003-1 – Operating Personnel Communications and Protocols** and a non-binding poll of the associated VRFs/VSLs concluded on Thursday, September 20, 2012.

Voting statistics for each ballot are listed below, and the [Ballots Results](#) page provides a link to the detailed results.

Approval	Non-binding Poll Results
Quorum: 77.70%	Quorum: 84.05%
Approval: 50.57%	Supportive Opinions: 54.07%

#### Next Steps

The drafting team is reviewing comments to determine next steps..

#### Background

The purpose of this project is to require that real-time system operators use standardized communication protocols during normal and emergency operations to enhance the clarity of communications, improve situational awareness, shorten response time and ultimately serve reliability. As requested in the SAR, in the development of this proposed standard, the drafting team reviewed communication protocols in other NERC standards and considered the use of alert level guidelines and three-part communications to achieve consistency across regions. The proposed standard is designed to ensure that reliability-related information is conveyed effectively, accurately, consistently and in a timely manner to ensure mutual understanding by all key parties, both during alerts and emergencies and during the communication of routine operating instructions.

There are two projects that include the modification of the COM family of standards in the scope of their SAR. This project, Project 2007-02 – Operating Personnel Communications Protocols, is concerned with communication protocols for normal and emergency operations. The other project, Project 2006-06 – Reliability Coordination, is concerned with ensuring that the reliability-related

requirements applicable to the Reliability Coordinator are clear, measurable, unique, enforceable, and sufficient to maintain reliability of the Bulk Electric System.

The Project 2006-06 Reliability Coordination drafting team (RC SDT) has limited the scope of its modifications to those that address communication during emergency operations. The RC SDT has developed a new term, “Reliability Directive,” to specifically address those communications, and this term has been approved by the ballot pool. The proposed definition of Reliability Directive is “A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.” The RC SDT is proposing to require three-part communication for Reliability Directives, with a High Violation Risk Factor for those requirements.

Since Project 2007-02 – Operating Personnel Communications Protocols addresses communication protocols for normal *and* emergency operations, the drafting team has proposed a new term, “Operating Instruction,” to define the scope of communications to which the COM-003-1 protocols would apply. The proposed definition of Operating Instruction is “Command from a System Operator to change or preserve the state, status, output or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”

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- Ballot Pools
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- Registered Ballot Body
- Proxy Voters

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Ballot Results	
<b>Ballot Name:</b>	Project 2007-02 COM-003 Successive Ballot
<b>Ballot Period:</b>	9/11/2012 - 9/20/2012
<b>Ballot Type:</b>	Initial
<b>Total # Votes:</b>	338
<b>Total Ballot Pool:</b>	435
<b>Quorum:</b>	<b>77.70 % The Quorum has been reached</b>
<b>Weighted Segment Vote:</b>	50.57 %
<b>Ballot Results:</b>	<b>The drafting team will review comments received.</b>

Summary of Ballot Results									
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Abstain # Votes	No Vote	
			# Votes	Fraction	# Votes	Fraction			
1 - Segment 1.	110	1	44	0.537	38	0.463	4	24	
2 - Segment 2.	11	0.7	1	0.1	6	0.6	0	4	
3 - Segment 3.	103	1	39	0.459	46	0.541	2	16	
4 - Segment 4.	39	1	18	0.643	10	0.357	2	9	
5 - Segment 5.	93	1	34	0.5	34	0.5	7	18	
6 - Segment 6.	53	1	24	0.6	16	0.4	0	13	
7 - Segment 7.	0	0	0	0	0	0	0	0	
8 - Segment 8.	12	0.3	1	0.1	2	0.2	0	9	
9 - Segment 9.	5	0	0	0	0	0	1	4	
10 - Segment 10.	9	0.8	5	0.5	3	0.3	1	0	
<b>Totals</b>	<b>435</b>	<b>6.8</b>	<b>166</b>	<b>3.439</b>	<b>155</b>	<b>3.361</b>	<b>17</b>	<b>97</b>	

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Ameren Services	Kirit Shah	Negative	
1	American Electric Power	Paul B. Johnson	Negative	
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman	Negative	
1	ATCO Electric	Glen Sutton		
1	Austin Energy	James Armke	Negative	
1	Avista Corp.	Scott J Kinney	Abstain	



1	Balancing Authority of Northern California	Kevin Smith	Affirmative
1	Baltimore Gas & Electric Company	Gregory S Miller	Abstain
1	BC Hydro and Power Authority	Patricia Robertson	Abstain
1	Beaches Energy Services	Joseph S Stonecipher	Affirmative
1	Black Hills Corp	Eric Egge	
1	Bonneville Power Administration	Donald S. Watkins	Negative
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	
1	Bryan Texas Utilities	John C Fontenot	Affirmative
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Negative
1	Central Electric Power Cooperative	Michael B Bax	Negative
1	City of Pasadena	Marco A Sustaita	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative
1	City Utilities of Springfield, Missouri	Jeff Knottek	Affirmative
1	City Water, Light & Power of Springfield	Shaun Anders	
1	Clark Public Utilities	Jack Stamper	Affirmative
1	Cleco Power LLC	Danny McDaniel	Negative
1	Colorado Springs Utilities	Paul Morland	Affirmative
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative
1	Consumers Power Inc.	Stuart Sloan	Negative
1	CPS Energy	Richard Castrejana	Affirmative
1	Dairyland Power Coop.	Robert W. Roddy	Negative
1	Dayton Power & Light Co.	Hertzel Shamash	
1	Deseret Power	James Tucker	
1	Dominion Virginia Power	Michael S Crowley	Affirmative
1	Duke Energy Carolina	Douglas E. Hils	Negative
1	Empire District Electric Co.	Ralph F Meyer	Negative
1	Entergy Services, Inc.	Edward J Davis	Negative
1	FirstEnergy Corp.	William J Smith	Affirmative
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	
1	Florida Power & Light Co.	Mike O'Neil	Negative
1	Gainesville Regional Utilities	Richard Bachmeier	Affirmative
1	Georgia Transmission Corporation	Jason Snodgrass	
1	Great River Energy	Gordon Pietsch	Negative
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon	
1	Hydro One Networks, Inc.	Ajay Garg	Negative
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Negative
1	Idaho Power Company	Molly Devine	Affirmative
1	Imperial Irrigation District	Tino Zaragoza	
1	International Transmission Company Holdings Corp	Michael Moltane	Negative
1	JEA	Ted Hobson	Affirmative
1	KAMO Electric Cooperative	Walter Kenyon	Negative
1	Kansas City Power & Light Co.	Michael Gammon	
1	Keys Energy Services	Stanley T Rzad	
1	Lakeland Electric	Larry E Watt	Affirmative
1	Lee County Electric Cooperative	John W Delucca	Affirmative
1	LG&E Energy Transmission Services	Bradley C. Young	
1	Long Island Power Authority	Robert Ganley	
1	Los Angeles Department of Water & Power	John Burnett	
1	Lower Colorado River Authority	Martyn Turner	Affirmative
1	M & A Electric Power Cooperative	William Price	Negative
1	Manitoba Hydro	Joe D Petaski	Affirmative
1	MEAG Power	Danny Dees	Affirmative
1	MidAmerican Energy Co.	Terry Harbour	Affirmative
1	Minnesota Power, Inc.	Randi K. Nyholm	Abstain
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Negative
1	National Grid USA	Michael Jones	Affirmative
1	Nebraska Public Power District	Cole C Brodine	Negative
1	New York Power Authority	Bruce Metruck	Affirmative
1	New York State Electric & Gas Corp.	Raymond P Kinney	
1	Northeast Missouri Electric Power Cooperative	Kevin White	Negative
1	Northeast Utilities	David Boguslawski	Affirmative
1	Northern Indiana Public Service Co.	Kevin M Largura	Negative
1	NorthWestern Energy	John Canavan	Negative
1	NStar Gas and Electric	John Robertson	
1	Ohio Valley Electric Corp.	Robert Matthey	Negative

1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Negative	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Jen Fiegel	Negative	
1	Orlando Utilities Commission	Brad Chase		
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan		
1	PacifiCorp	Ryan Millard	Negative	
1	PECO Energy	Ronald Schloendorn	Affirmative	
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	John T Walker	Negative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Negative	
1	Public Service Company of New Mexico	Laurie Williams	Affirmative	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Negative	
1	Public Utility District No. 2 of Grant County, Washington	Rod Noteboom		
1	Puget Sound Energy, Inc.	Denise M Lietz	Affirmative	
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell	Affirmative	
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Sho-Me Power Electric Cooperative	Denise Stevens	Negative	
1	Sierra Pacific Power Co.	Rich Salgo	Affirmative	
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	
1	South California Edison Company	Steven Mavis	Affirmative	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Negative	
1	Southern Illinois Power Coop.	William Hutchison		
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	
1	Tampa Electric Co.	Beth Young		
1	Tennessee Valley Authority	Larry G Akens	Negative	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Affirmative	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Xcel Energy, Inc.	Gregory L Pieper	Negative	
2	Alberta Electric System Operator	Mark B Thompson		
2	BC Hydro	Venkataramakrishnan Vinnakota		
2	California ISO	Rich Vine	Negative	
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Negative	
2	Independent Electricity System Operator	Barbara Constantinescu	Negative	
2	ISO New England, Inc.	Kathleen Goodman	Negative	
2	Midwest ISO, Inc.	Marie Knox		
2	New Brunswick System Operator	Alden Briggs	Negative	
2	New York Independent System Operator	Gregory Campoli		
2	PJM Interconnection, L.L.C.	stephanie monzon	Affirmative	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Negative	
3	Alabama Power Company	Richard J. Mandes	Negative	
3	Alameda Municipal Power	Douglas Draeger		
3	Ameren Services	Mark Peters	Negative	
3	APS	Steven Norris	Affirmative	
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Negative	
3	Atlantic City Electric Company	NICOLE BUCKMAN	Affirmative	
3	Avista Corp.	Robert Lafferty		
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Blachly-Lane Electric Co-op	Bud Tracy	Negative	
3	Bonneville Power Administration	Rebecca Berdahl	Negative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Negative	
3	Central Electric Power Cooperative	Adam M Weber	Negative	
3	Central Lincoln PUD	Steve Alexanderson	Negative	
3	City of Austin dba Austin Energy	Andrew Gallo	Negative	
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila	Affirmative	
3	City of Farmington	Linda R Jacobson	Affirmative	

3	City of Garland	Ronnie C Hoeinghaus		
3	City of Green Cove Springs	Gregg R Griffin		
3	City of Lodi, California	Elizabeth Kirkley		
3	City of Palo Alto	Eric R Scott	Affirmative	
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey	Affirmative	
3	City Water, Light & Power of Springfield	Roger Powers	Abstain	
3	Clearwater Power Co.	Dave Hagen	Negative	
3	Cleco Corporation	Michelle A Corley	Negative	
3	Colorado Springs Utilities	Charles Morgan	Affirmative	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy	Richard Blumenstock	Negative	
3	Consumers Power Inc.	Roman Gillen	Negative	
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Negative	
3	Cowlitz County PUD	Russell A Noble	Negative	
3	CPS Energy	Jose Escamilla	Affirmative	
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Detroit Edison Company	Kent Kujala		
3	Dominion Resources, Inc.	Connie B Lowe	Affirmative	
3	Duke Energy Carolina	Henry Ernst-Jr		
3	Entergy	Joel T Plessinger	Negative	
3	Fall River Rural Electric Cooperative	Bryan Case	Negative	
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Affirmative	
3	Florida Power Corporation	Lee Schuster	Negative	
3	Georgia Power Company	Danny Lindsey	Negative	
3	Georgia System Operations Corporation	Scott McGough	Negative	
3	Great River Energy	Brian Glover	Negative	
3	Gulf Power Company	Paul C Caldwell	Negative	
3	Hydro One Networks, Inc.	David Kiguel	Negative	
3	KAMO Electric Cooperative	Theodore J Hilmes		
3	Kansas City Power & Light Co.	Charles Locke	Negative	
3	Kissimmee Utility Authority	Gregory D Woessner		
3	Lakeland Electric	Mace D Hunter	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Negative	
3	Lincoln Electric System	Jason Fortik	Affirmative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Louisville Gas and Electric Co.	Charles A. Freibert	Negative	
3	M & A Electric Power Cooperative	Stephen D Pogue	Negative	
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Mississippi Power	Jeff Franklin	Negative	
3	Modesto Irrigation District	Jack W Savage	Affirmative	
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Negative	
3	Nebraska Public Power District	Tony Eddleman	Negative	
3	New York Power Authority	David R Rivera	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann	Negative	
3	Northern Indiana Public Service Co.	William SeDoris	Negative	
3	Northern Lights Inc.	Jon Shelby	Negative	
3	NW Electric Power Cooperative, Inc.	David McDowell	Negative	
3	Omaha Public Power District	Blaine R. Dinwiddie		
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative	
3	Owensboro Municipal Utilities	Thomas T Lyons	Negative	
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	Pacific Northwest Generating Cooperative	Rick Paschall	Negative	
3	PacifiCorp	Dan Zollner	Negative	
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	PNM Resources	Michael Mertz		
3	Portland General Electric Co.	Thomas G Ward	Negative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Progress Energy Carolinas	Sam Waters		
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Negative	
3	Puget Sound Energy, Inc.	Erin Apperson	Affirmative	

3	Raft River Rural Electric Cooperative	Heber Carpenter	Negative
3	Rutherford EMC	Thomas M Haire	Negative
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative
3	Salmon River Electric Cooperative	Ken Dizes	
3	Salt River Project	John T. Underhill	Affirmative
3	Santee Cooper	James M Poston	Affirmative
3	Seattle City Light	Dana Wheelock	Affirmative
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Negative
3	South Carolina Electric & Gas Co.	Hubert C Young	Affirmative
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative
3	Tampa Electric Co.	Ronald L. Donahey	
3	Tennessee Valley Authority	Ian S Grant	Negative
3	Tri-County Electric Cooperative, Inc.	Mike Swearingen	Affirmative
3	Tri-State G & T Association, Inc.	Janelle Marriott	
3	Umatilla Electric Cooperative	Steve Eldrige	Negative
3	Westar Energy	Bo Jones	Affirmative
3	Wisconsin Electric Power Marketing	James R Keller	Negative
3	Xcel Energy, Inc.	Michael Ibold	Negative
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Negative
4	American Municipal Power	Kevin Koloini	Negative
4	Blue Ridge Power Agency	Duane S Dahlquist	
4	Central Lincoln PUD	Shamus J Gamache	
4	City of Austin dba Austin Energy	Reza Ebrahimian	Negative
4	City of Clewiston	Kevin McCarthy	Affirmative
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Affirmative
4	City of Redding	Nicholas Zettel	Affirmative
4	City Utilities of Springfield, Missouri	John Allen	Affirmative
4	Consumers Energy	David Frank Ronk	Negative
4	Cowlitz County PUD	Rick Syring	Negative
4	Detroit Edison Company	Daniel Herring	
4	Flathead Electric Cooperative	Russ Schneider	Negative
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative
4	Fort Pierce Utilities Authority	Cairo Vanegas	Affirmative
4	Georgia System Operations Corporation	Guy Andrews	Negative
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative
4	Imperial Irrigation District	Diana U Torres	
4	Indiana Municipal Power Agency	Jack Alvey	Affirmative
4	LaGen	Richard Comeaux	
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative
4	Modesto Irrigation District	Spencer Tacke	Affirmative
4	Northern California Power Agency	Tracy R Bibb	
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative
4	Oklahoma Municipal Power Authority	Ashley Stringer	Affirmative
4	Old Dominion Electric Coop.	Mark Ringhausen	
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Negative
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative
4	Seattle City Light	Hao Li	Affirmative
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative
4	South Mississippi Electric Power Association	Steven McElhanev	
4	Southern Minnesota Municipal Power Agency	Richard L Koch	Abstain
4	Tacoma Public Utilities	Keith Morissette	Affirmative
4	Turlock Irrigation District	Steven C Hill	Affirmative
4	West Oregon Electric Cooperative, Inc.	Marc M Farmer	Negative
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative
4	WPPI Energy	Todd Komplin	Abstain
5	AEP Service Corp.	Brock Ondayko	Negative
5	AES Corporation	Leo Bernier	Affirmative
5	Amerenue	Sam Dwyer	Negative
5	Arizona Public Service Co.	Edward Cambridge	Affirmative
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Negative
5	Avista Corp.	Edward F. Groce	Abstain
5	BC Hydro and Power Authority	Clement Ma	Abstain

5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	Affirmative
5	Bonneville Power Administration	Francis J. Halpin	Negative
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative
5	Calpine Corporation	Phillip Porter	
5	City and County of San Francisco	Daniel Mason	Affirmative
5	City of Austin dba Austin Energy	Jeanie Doty	Negative
5	City of Redding	Paul A. Cummings	Affirmative
5	City of Tallahassee	Karen Webb	Affirmative
5	City Water, Light & Power of Springfield	Steve Rose	
5	Cleco Power	Stephanie Huffman	Negative
5	Cogentrix Energy, Inc.	Mike D Hirst	
5	Colorado Springs Utilities	Jennifer Eckels	Affirmative
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Affirmative
5	Consumers Energy Company	David C Greyerbiehl	Negative
5	Cowlitz County PUD	Bob Essex	Negative
5	Dairyland Power Coop.	Tommy Drea	
5	Deseret Power	Philip B Tice Jr	Affirmative
5	Detroit Edison Company	Christy Wicke	Negative
5	Dominion Resources, Inc.	Mike Garton	Affirmative
5	Duke Energy	Dale Q Goodwine	Negative
5	Dynegy Inc.	Dan Roethemeyer	Negative
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain
5	Edison Mission Marketing & Trading Inc.	Brenda J Frazer	Negative
5	Electric Power Supply Association	John R Cashin	Affirmative
5	Essential Power, LLC	Patrick Brown	Negative
5	Exelon Nuclear	Michael Korchynsky	Affirmative
5	ExxonMobil Research and Engineering	Martin Kaufman	
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative
5	Florida Municipal Power Agency	David Schumann	Affirmative
5	Great River Energy	Preston L Walsh	Negative
5	Hydro-Québec Production	Roger Dufresne	
5	ICF International	Brent B Hebert	
5	Imperial Irrigation District	Marcela Y Caballero	
5	JEA	John J Babik	Affirmative
5	Kansas City Power & Light Co.	Brett Holland	Negative
5	Kissimmee Utility Authority	Mike Blough	
5	Lakeland Electric	James M Howard	
5	Liberty Electric Power LLC	Daniel Duff	Negative
5	Lincoln Electric System	Dennis Florom	Affirmative
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative
5	Luminant Generation Company LLC	Mike Laney	Negative
5	Manitoba Hydro	S N Fernando	Affirmative
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain
5	MEAG Power	Steven Grego	Affirmative
5	MidAmerican Energy Co.	Christopher Schneider	Affirmative
5	Muscatine Power & Water	Mike Avesing	Negative
5	Nebraska Public Power District	Don Schmit	Negative
5	New York Power Authority	Wayne Sipperly	Affirmative
5	NextEra Energy	Allen D Schriver	Negative
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative
5	Northern Indiana Public Service Co.	William O. Thompson	Negative
5	Occidental Chemical	Michelle R DAntuono	Affirmative
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative
5	Orlando Utilities Commission	Richard Kinas	
5	Pacific Gas and Electric Company	Richard J. Padilla	
5	PacifiCorp	Sandra L. Shaffer	Negative
5	Platte River Power Authority	Roland Thiel	Affirmative
5	Portland General Electric Co.	Matt E. Jastram	Negative
5	PowerSouth Energy Cooperative	Tim Hattaway	Negative
5	PPL Generation LLC	Annette M Bannon	Negative
5	Progress Energy Carolinas	Wayne Lewis	
5	PSEG Fossil LLC	Tim Kucey	Negative
5	Public Utility District No. 1 of Lewis County	Steven Grega	Abstain
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	

5	Puget Sound Energy, Inc.	Tom Flynn	Affirmative
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative
5	Salt River Project	William Alkema	Affirmative
5	Santee Cooper	Lewis P Pierce	Affirmative
5	Seattle City Light	Michael J. Haynes	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative
5	South Carolina Electric & Gas Co.	Edward Magic	Affirmative
5	Southeastern Power Administration	Douglas Spencer	Negative
5	Southern California Edison Co.	Denise Yaffe	Affirmative
5	Southern Company Generation	William D Shultz	Negative
5	Tacoma Power	Chris Mattson	Affirmative
5	Tampa Electric Co.	RJames Rocha	
5	Tenaska, Inc.	Scott M. Helyer	Abstain
5	Tennessee Valley Authority	David Thompson	Negative
5	TransAlta Corporation	Rebbekka McFadden	
5	U.S. Army Corps of Engineers	Melissa Kurtz	
5	U.S. Bureau of Reclamation	Martin Bauer	Affirmative
5	Westar Energy	Bryan Taggart	Negative
5	Wisconsin Electric Power Co.	Linda Horn	Negative
5	WPPI Energy	Steven Leovy	Abstain
5	Xcel Energy, Inc.	Liam Noailles	Negative
6	AEP Marketing	Edward P. Cox	Negative
6	Ameren Energy Marketing Co.	Jennifer Richardson	Negative
6	APS	Randy A. Young	Affirmative
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Negative
6	Bonneville Power Administration	Brenda S. Anderson	Negative
6	City of Austin dba Austin Energy	Lisa L Martin	Negative
6	City of Redding	Marvin Briggs	Affirmative
6	Cleco Power LLC	Robert Hirschak	Negative
6	Colorado Springs Utilities	Lisa C Rosintoski	Affirmative
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative
6	Constellation Energy Commodities Group	Donald Schopp	Affirmative
6	Discount Power, Inc.	David Feldman	
6	Dominion Resources, Inc.	Louis S. Slade	Affirmative
6	Duke Energy	Greg Cecil	Negative
6	Entergy Services, Inc.	Terri F Benoit	Negative
6	FirstEnergy Solutions	Kevin Querry	Affirmative
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative
6	Great River Energy	Donna Stephenson	
6	Imperial Irrigation District	Cathy Bretz	
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative
6	Lakeland Electric	Paul Shipps	
6	Lincoln Electric System	Eric Ruskamp	Affirmative
6	Los Angeles Department of Water & Power	Brad Packer	Affirmative
6	Luminant Energy	Brad Jones	
6	Manitoba Hydro	Daniel Prowse	Affirmative
6	MidAmerican Energy Co.	Dennis Kimm	Affirmative
6	Modesto Irrigation District	James McFall	Affirmative
6	Muscatine Power & Water	John Stolley	Negative
6	New York Power Authority	Saul Rojas	Affirmative
6	Northern Indiana Public Service Co.	Joseph O'Brien	Negative
6	NRG Energy, Inc.	Alan Johnson	
6	Omaha Public Power District	David Ried	
6	PacifiCorp	Scott L Smith	Negative
6	Platte River Power Authority	Carol Ballantine	Affirmative
6	Progress Energy	John T Sturgeon	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Negative
6	Public Utility District No. 1 of Chelan County	Hugh A. Owen	
6	Sacramento Municipal Utility District	Diane Enderby	Affirmative
6	Salt River Project	Steven J Hulet	Affirmative
6	Santee Cooper	Michael Brown	Affirmative
6	Seattle City Light	Dennis Sismaet	Affirmative
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative
6	Snohomish County PUD No. 1	William T Moojen	

6	South California Edison Company	Lujuanna Medina		
6	Southern Company Generation and Energy Marketing	John J. Ciza	Negative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Negative	
6	Westar Energy	Grant L Wilkerson	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons		
8		Roger C Zaklukiewicz	Affirmative	
8		James A Maenner		
8		Edward C Stein		
8	APX	Michael Johnson		
8	INTELLIBIND	Kevin Conway		
8	JDRJC Associates	Jim Cyrulewski	Negative	
8	Massachusetts Attorney General	Frederick R Plett		
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Negative	
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon		
8	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman		
8	Volkman Consulting, Inc.	Terry Volkman		
9	California Energy Commission	William M Chamberlain		
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson		
9	National Association of Regulatory Utility Commissioners	Diane J. Barney		
9	Oregon Public Utility Commission	Jerome Murray	Abstain	
9	Public Utilities Commission of Ohio	Klaus Lambeck		
10	Florida Reliability Coordinating Council	Linda Campbell	Affirmative	
10	Midwest Reliability Organization	William S Smith	Abstain	
10	New York State Reliability Council	Alan Adamson	Negative	
10	Northeast Power Coordinating Council	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Negative	
10	SERC Reliability Corporation	Carter B. Edge	Affirmative	
10	Southwest Power Pool RE	Emily Pennel	Affirmative	
10	Texas Reliability Entity, Inc.	Donald G Jones	Negative	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Affirmative	

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A New Jersey Nonprofit Corporation

# Non-binding Poll Results

Project 2007-02 COM-003

Non-binding Poll Results				
<b>Non-binding Poll Name:</b>	Project 2007-02 COM-003 Non-binding Poll			
<b>Poll Period:</b>	9/11/2012 - 9/21/2012			
<b>Total # Opinions:</b>	332			
<b>Total Ballot Pool:</b>	395			
<b>Summary Results:</b>	84.05% of those who registered to participate provided an opinion or an abstention; 54.07% of those who provided an opinion indicates support for the VRFs and VSLs.			
Individual Ballot Pool Results				
Segment	Organization	Member	Opinions	Comments
1	Ameren Services	Kirit Shah	Negative	
1	American Electric Power	Paul B. Johnson	Negative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman	Negative	
1	ATCO Electric	Glen Sutton	Affirmative	
1	Austin Energy	James Armke	Affirmative	
1	Avista Corp.	Scott J Kinney	Abstain	
1	Balancing Authority of Northern California	Kevin Smith	Abstain	
1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher	Affirmative	
1	Black Hills Corp	Eric Egge	Negative	
1	Bonneville Power Administration	Donald S. Watkins	Negative	
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	Negative	
1	Bryan Texas Utilities	John C Fontenot	Affirmative	
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Negative	
1	Central Electric Power Cooperative	Michael B Bax	Negative	
1	City of Pasadena	Marco A Sustaita	Abstain	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City Utilities of Springfield, Missouri	Jeff Knottek	Affirmative	
1	City Water, Light & Power of Springfield	Shaun Anders		
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Negative	
1	Colorado Springs Utilities	Paul Morland	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	CPS Energy	Richard Castrejuna	Affirmative	
1	Dairyland Power Coop.	Robert W. Roddy	Negative	



1	Dayton Power & Light Co.	Hertzel Shamash		
1	Deseret Power	James Tucker		
1	Dominion Virginia Power	Michael S Crowley	Abstain	
1	Duke Energy Carolina	Douglas E. Hills	Negative	
1	Empire District Electric Co.	Ralph F Meyer	Negative	
1	Entergy Services, Inc.	Edward J Davis	Negative	
1	FirstEnergy Corp.	William J Smith	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton		
1	Florida Power & Light Co.	Mike O'Neil	Negative	
1	Gainesville Regional Utilities	Richard Bachmeier	Affirmative	
1	Georgia Transmission Corporation	Jason Snodgrass	Negative	
1	Great River Energy	Gordon Pietsch	Negative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon	Negative	
1	Hydro One Networks, Inc.	Ajay Garg	Abstain	
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Negative	
1	Idaho Power Company	Molly Devine	Affirmative	
1	Imperial Irrigation District	Tino Zaragoza	Abstain	
1	International Transmission Company Holdings Corp	Michael Moltane	Abstain	
1	JEA	Ted Hobson	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon	Negative	
1	Kansas City Power & Light Co.	Michael Gammon		
1	Keys Energy Services	Stanley T Rzad		
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca	Affirmative	
1	LG&E Energy Transmission Services	Bradley C. Young		
1	Long Island Power Authority	Robert Ganley	Negative	
1	Los Angeles Department of Water & Power	John Burnett		
1	Lower Colorado River Authority	Martyn Turner	Affirmative	
1	M & A Electric Power Cooperative	William Price	Negative	
1	Manitoba Hydro	Joe D Petaski	Affirmative	
1	MEAG Power	Danny Dees	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Abstain	
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Negative	
1	National Grid USA	Michael Jones	Affirmative	
1	Nebraska Public Power District	Cole C Brodine	Negative	
1	New York Power Authority	Bruce Metruck	Affirmative	
1	New York State Electric & Gas Corp.	Raymond P Kinney		
1	Northeast Missouri Electric Power Cooperative	Kevin White	Negative	
1	Northeast Utilities	David Boguslawski		
1	Northern Indiana Public Service Co.	Kevin M Largura	Negative	
1	NorthWestern Energy	John Canavan	Negative	
1	NStar Gas and Electric	John Robertson	Affirmative	
1	Ohio Valley Electric Corp.	Robert Matthey	Negative	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Negative	

1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Jen Fiegel	Negative	
1	Orlando Utilities Commission	Brad Chase		
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan		
1	PacifiCorp	Ryan Millard	Negative	
1	PECO Energy	Ronald Schloendorn		
1	Platte River Power Authority	John C. Collins	Abstain	
1	Portland General Electric Co.	John T Walker	Negative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Negative	
1	Public Service Company of New Mexico	Laurie Williams	Affirmative	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Abstain	
1	Public Utility District No. 2 of Grant County, Washington	Rod Noteboom		
1	Puget Sound Energy, Inc.	Denise M Lietz	Affirmative	
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Abstain	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell	Affirmative	
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Sho-Me Power Electric Cooperative	Denise Stevens	Negative	
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	
1	South California Edison Company	Steven Mavis	Affirmative	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Negative	
1	Southern Illinois Power Coop.	William Hutchison		
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	
1	Tampa Electric Co.	Beth Young		
1	Tennessee Valley Authority	Larry G Akens	Abstain	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Abstain	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Xcel Energy, Inc.	Gregory L Pieper		
2	Alberta Electric System Operator	Mark B Thompson	Abstain	
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Rich Vine	Negative	
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Negative	
2	Independent Electricity System Operator	Barbara Constantinescu	Negative	
2	ISO New England, Inc.	Kathleen Goodman	Abstain	
2	Midwest ISO, Inc.	Marie Knox		
2	New Brunswick System Operator	Alden Briggs	Abstain	
2	New York Independent System Operator	Gregory Campoli		
2	PJM Interconnection, L.L.C.	stephanie monzon	Abstain	

2	Southwest Power Pool, Inc.	Charles H. Yeung	Abstain	
3	Alabama Power Company	Richard J. Mandes	Negative	
3	Alameda Municipal Power	Douglas Draeger		
3	Ameren Services	Mark Peters	Negative	
3	APS	Steven Norris	Affirmative	
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Negative	
3	Avista Corp.	Robert Lafferty		
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Bonneville Power Administration	Rebecca Berdahl	Negative	
3	Central Electric Power Cooperative	Adam M Weber	Negative	
3	Central Lincoln PUD	Steve Alexanderson	Negative	
3	City of Austin dba Austin Energy	Andrew Gallo	Affirmative	
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila	Affirmative	
3	City of Farmington	Linda R Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoeinghaus		
3	City of Green Cove Springs	Gregg R Griffin		
3	City of Lodi, California	Elizabeth Kirkley	Negative	
3	City of Palo Alto	Eric R Scott	Abstain	
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey	Negative	
3	Cleco Corporation	Michelle A Corley	Negative	
3	Colorado Springs Utilities	Charles Morgan	Affirmative	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy	Richard Blumenstock	Negative	
3	Cowlitz County PUD	Russell A Noble	Negative	
3	CPS Energy	Jose Escamilla	Affirmative	
3	Detroit Edison Company	Kent Kujala	Negative	
3	Duke Energy Carolina	Henry Ernst-Jr		
3	Entergy	Joel T Plessinger	Negative	
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Affirmative	
3	Florida Power Corporation	Lee Schuster	Negative	
3	Georgia Power Company	Danny Lindsey	Negative	
3	Georgia System Operations Corporation	Scott McGough	Negative	
3	Great River Energy	Brian Glover	Negative	
3	Gulf Power Company	Paul C Caldwell	Negative	
3	Hydro One Networks, Inc.	David Kiguel	Abstain	
3	KAMO Electric Cooperative	Theodore J Hilmes	Negative	
3	Kansas City Power & Light Co.	Charles Locke	Negative	
3	Kissimmee Utility Authority	Gregory D Woessner		
3	Lakeland Electric	Mace D Hunter	Affirmative	
3	Lincoln Electric System	Jason Fortik	Affirmative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Louisville Gas and Electric Co.	Charles A. Freibert		
3	M & A Electric Power Cooperative	Stephen D Pogue	Negative	

3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Mississippi Power	Jeff Franklin	Negative	
3	Modesto Irrigation District	Jack W Savage	Affirmative	
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Negative	
3	Nebraska Public Power District	Tony Eddleman	Negative	
3	New York Power Authority	David R Rivera	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann	Negative	
3	Northern Indiana Public Service Co.	William SeDoris	Negative	
3	NW Electric Power Cooperative, Inc.	David McDowell	Negative	
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Owensboro Municipal Utilities	Thomas T Lyons	Negative	
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	PacifiCorp	Dan Zollner	Abstain	
3	Platte River Power Authority	Terry L Baker	Abstain	
3	PNM Resources	Michael Mertz		
3	Portland General Electric Co.	Thomas G Ward	Negative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Progress Energy Carolinas	Sam Waters		
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Abstain	
3	Puget Sound Energy, Inc.	Erin Apperson	Affirmative	
3	Rutherford EMC	Thomas M Haire	Negative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Abstain	
3	Salmon River Electric Cooperative	Ken Dizes	Negative	
3	Salt River Project	John T. Underhill	Affirmative	
3	Santee Cooper	James M Poston	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Negative	
3	South Carolina Electric & Gas Co.	Hubert C Young	Affirmative	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L. Donahey		
3	Tennessee Valley Authority	Ian S Grant	Abstain	
3	Tri-County Electric Cooperative, Inc.	Mike Swearingen	Affirmative	
3	Tri-State G & T Association, Inc.	Janelle Marriott		
3	Westar Energy	Bo Jones	Affirmative	
3	Wisconsin Electric Power Marketing	James R Keller	Abstain	
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini	Negative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Negative	
4	City of Austin dba Austin Energy	Reza Ebrahimian	Affirmative	
4	City of Clewiston	Kevin McCarthy	Affirmative	

4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Affirmative	
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	
4	Consumers Energy	David Frank Ronk	Negative	
4	Cowlitz County PUD	Rick Syring	Negative	
4	Detroit Edison Company	Daniel Herring		
4	Flathead Electric Cooperative	Russ Schneider	Negative	
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Cairo Vanegas	Abstain	
4	Georgia System Operations Corporation	Guy Andrews	Negative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Imperial Irrigation District	Diana U Torres		
4	Indiana Municipal Power Agency	Jack Alvey	Abstain	
4	LaGen	Richard Comeaux	Abstain	
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4	Old Dominion Electric Coop.	Mark Ringhausen		
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	
4	Sacramento Municipal Utility District	Mike Ramirez	Abstain	
4	Seattle City Light	Hao Li	Affirmative	
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4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative	
4	WPPI Energy	Todd Komplin	Abstain	
5	AEP Service Corp.	Brock Ondayko	Negative	
5	AES Corporation	Leo Bernier	Affirmative	
5	Amerenue	Sam Dwyer	Negative	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Negative	
5	Avista Corp.	Edward F. Groce	Abstain	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	Abstain	
5	Bonneville Power Administration	Francis J. Halpin	Negative	
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative	
5	Calpine Corporation	Phillip Porter		
5	City and County of San Francisco	Daniel Mason	Abstain	
5	City of Austin dba Austin Energy	Jeanie Doty	Affirmative	
5	City of Redding	Paul A. Cummings	Affirmative	

5	City of Tallahassee	Karen Webb	Affirmative	
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative	
5	Cleco Power	Stephanie Huffman	Negative	
5	Cogentrix Energy, Inc.	Mike D Hirst	Abstain	
5	Colorado Springs Utilities	Jennifer Eckels	Affirmative	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Affirmative	
5	Consumers Energy Company	David C Greyerbiehl	Negative	
5	Cowlitz County PUD	Bob Essex	Negative	
5	Dairyland Power Coop.	Tommy Drea		
5	Deseret Power	Philip B Tice Jr	Affirmative	
5	Detroit Edison Company	Christy Wicke	Negative	
5	Dominion Resources, Inc.	Mike Garton		
5	Duke Energy	Dale Q Goodwine	Negative	
5	Dynegy Inc.	Dan Roethemeyer	Negative	
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain	
5	Edison Mission Marketing & Trading Inc.	Brenda J Frazer	Negative	
5	Electric Power Supply Association	John R Cashin	Affirmative	
5	Essential Power, LLC	Patrick Brown	Negative	
5	Exelon Nuclear	Michael Korchynsky	Abstain	
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative	
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	
5	Great River Energy	Preston L Walsh	Negative	
5	Hydro-Québec Production	Roger Dufresne		
5	Imperial Irrigation District	Marcela Y Caballero		
5	JEA	John J Babik	Affirmative	
5	Kansas City Power & Light Co.	Brett Holland	Negative	
5	Kissimmee Utility Authority	Mike Blough		
5	Lakeland Electric	James M Howard	Affirmative	
5	Liberty Electric Power LLC	Daniel Duff	Negative	
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative	
5	Luminant Generation Company LLC	Mike Laney	Negative	
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider	Affirmative	
5	Muscatine Power & Water	Mike Avesing	Negative	
5	Nebraska Public Power District	Don Schmit	Negative	
5	New York Power Authority	Wayne Sipperly	Affirmative	
5	NextEra Energy	Allen D Schriver	Negative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative	
5	Northern Indiana Public Service Co.	William O. Thompson	Negative	
5	Occidental Chemical	Michelle R DAntuono	Affirmative	

5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard Kinas		
5	Pacific Gas and Electric Company	Richard J. Padilla		
5	PacifiCorp	Sandra L. Shaffer	Abstain	
5	Platte River Power Authority	Roland Thiel	Affirmative	
5	Portland General Electric Co.	Matt E. Jastram	Negative	
5	PowerSouth Energy Cooperative	Tim Hattaway	Negative	
5	PPL Generation LLC	Annette M Bannon	Negative	
5	Progress Energy Carolinas	Wayne Lewis		
5	PSEG Fossil LLC	Tim Kucey	Abstain	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Abstain	
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Negative	
5	Puget Sound Energy, Inc.	Tom Flynn	Affirmative	
5	Sacramento Municipal Utility District	Bethany Hunter	Abstain	
5	Salt River Project	William Alkema	Affirmative	
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes		
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	South Carolina Electric & Gas Co.	Edward Magic	Affirmative	
5	Southeastern Power Administration	Douglas Spencer	Negative	
5	Southern California Edison Co.	Denise Yaffe	Affirmative	
5	Southern Company Generation	William D Shultz	Negative	
5	Tacoma Power	Chris Mattson	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Negative	
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Abstain	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Negative	
5	U.S. Bureau of Reclamation	Martin Bauer	Affirmative	
5	Wisconsin Electric Power Co.	Linda Horn	Abstain	
5	WPPI Energy	Steven Leovy	Abstain	
5	Xcel Energy, Inc.	Liam Noailles		
6	AEP Marketing	Edward P. Cox	Negative	
6	Ameren Energy Marketing Co.	Jennifer Richardson	Negative	
6	APS	Randy A. Young	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Negative	
6	City of Austin dba Austin Energy	Lisa L Martin	Affirmative	
6	City of Redding	Marvin Briggs	Affirmative	
6	Cleco Power LLC	Robert Hirschak	Negative	
6	Colorado Springs Utilities	Lisa C Rosintoski	Affirmative	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative	
6	Duke Energy	Greg Cecil	Negative	
6	Entergy Services, Inc.	Terri F Benoit		
6	FirstEnergy Solutions	Kevin Querry	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	

6	Florida Power & Light Co.	Silvia P. Mitchell	Negative	
6	Great River Energy	Donna Stephenson		
6	Imperial Irrigation District	Cathy Bretz	Abstain	
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	
6	Lakeland Electric	Paul Shipps	Affirmative	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Los Angeles Department of Water & Power	Brad Packer	Affirmative	
6	Luminant Energy	Brad Jones		
6	Manitoba Hydro	Daniel Prowse	Affirmative	
6	MidAmerican Energy Co.	Dennis Kimm	Affirmative	
6	Modesto Irrigation District	James McFall	Affirmative	
6	Muscatine Power & Water	John Stolley	Negative	
6	New York Power Authority	Saul Rojas	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Negative	
6	NRG Energy, Inc.	Alan Johnson		
6	Omaha Public Power District	David Ried	Affirmative	
6	PacifiCorp	Scott L Smith	Abstain	
6	Platte River Power Authority	Carol Ballantine	Abstain	
6	Progress Energy	John T Sturgeon		
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Abstain	
6	Sacramento Municipal Utility District	Diane Enderby	Abstain	
6	Salt River Project	Steven J Hulet	Affirmative	
6	Santee Cooper	Michael Brown	Affirmative	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Snohomish County PUD No. 1	William T Moojen	Affirmative	
6	South California Edison Company	Lujuanna Medina		
6	Southern Company Generation and Energy Marketing	John J. Ciza	Negative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Abstain	
6	Westar Energy	Grant L Wilkerson	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
8		James A Maenner		
8		Edward C Stein		
8		Roger C Zaklukiewicz	Affirmative	
8	APX	Michael Johnson		
8	JDRJC Associates	Jim Cyrulewski	Negative	
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon		
8	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman		
8	Volkman Consulting, Inc.	Terry Volkman		
9	California Energy Commission	William M Chamberlain		
9	Commonwealth of Massachusetts	Donald Nelson	Negative	



	Department of Public Utilities			
9	Public Utilities Commission of Ohio	Klaus Lambeck		
10	Florida Reliability Coordinating Council	Linda Campbell	Affirmative	
10	Midwest Reliability Organization	William S Smith	Abstain	
10	New York State Reliability Council	Alan Adamson	Negative	
10	Northeast Power Coordinating Council	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	
10	SERC Reliability Corporation	Carter B. Edge	Abstain	
10	Southwest Power Pool RE	Emily Pennel	Affirmative	
10	Texas Reliability Entity, Inc.	Donald G Jones	Negative	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Abstain	

**Group Name (23 Responses)**  
**Lead Contact (23 Responses)**  
**Contact Organization (23 Responses)**  
**IF YOU WISH TO EXPRESS SUPPORT FOR ANOTHER ENTITY'S COMMENTS WITHOUT ENTERING ANY ADDITIONAL COMMENTS, YOU MAY DO SO HERE. (9 Responses)**  
**Comments (80 Responses)**  
**Question 1 (61 Responses)**  
**Question 1 Comments (68 Responses)**  
**Question 2 (65 Responses)**  
**Question 2 Comments (68 Responses)**  
**Question 3 (62 Responses)**  
**Question 3 Comments (68 Responses)**  
**Question 4 (51 Responses)**  
**Question 4 Comments (68 Responses)**  
**Question 5 (0 Responses)**  
**Question 5 Comments (68 Responses)**

Group
Northeast Power Coordinating Council
Guy Zito
Northeast Power Coordinating Council
Yes
No
It must be made clear in the requirements that functional entities can incorporate exceptions (to address emergencies for example) in the protocols that are developed. Both of these requirements are too prescriptive. The sub-requirements drill down too deeply into the communications needed to conduct system operations.
No
It is unclear what identified reliability gap this Standard's development project is intending to fulfill given the recent adoption of the new COM-002-3 along with the OC white paper on communications protocols.
The white paper written by the OC addressed the issues covered by this Standard.
Individual
Yes
Yes
No
No
Modify R1 accordingly... R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have and follow documented communication protocols for Operating Instructions that incorporate the following: R3 & R4 Delete R3 and R4 and M3 and M4 and associated VRFs and VSLs Although R1 and R2 provide for better communications, R3 & R4... • Have little or no impact to the protection or reliable operation of the BES in the event that no responsible entity performed the requirement • Have little, if any, value as a reliability requirement Are requirements for monitoring and enforcing Reliability Standards and do not provide for Reliable Operation... • Including without

limiting the foregoing, requirements for the operation of existing Facilities • Including cyber security protection, and • Including the design of planned additions or modifications to such Facilities to the extent necessary for Reliable Operation M1 should read... • M1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator, shall provide its documented communications protocols developed for Requirement R1 and results of their internal compliance program's processes which assure that deficiencies with adherence to the documented communication protocols are identified, assessed, and corrected. M2 should read • M2. Each Distribution Provider and Generator Operator shall provide its documented communications protocols developed for Requirement R2 and results of their internal compliance program's processes which assure that deficiencies with adherence to the documented communication protocols are identified, assessed, and corrected. In addition, we recommend revision to the RSAW to be reflective of the removal of both R3 and R4.

Individual

No

The definition of the new term, "Operating Instruction," uses the NERC Glossary term "System Operator," which is defined as "An individual at a control center...whose responsibility it is to monitor and control that electric system in real time." The lack of clarity regarding what constitutes a control center leaves doubt as to which instructions would be covered by the standard.

No

The SDT shift from a zero-tolerance standard to a procedure required standard is admirable. Thank you for the open-mindedness and willingness to change direction after much hard work went into the original proposal. However, the requirements for specific content in the required procedure still goes beyond the proper role of the standard. Suggested revision - eliminate R1 and R2, replace with new R1: "Each (covered entity) shall have documented procedure(s) for communications with other users of the Bulk Power System. Such procedure(s) shall have provisions which, in the judgment of the registered entity, reduce the opportunity for miscommunications." This lowers the chances of miscommunications without dictating the content of business practices.

No

There is no statement of periodicity in R4, leaving entities guessing until the time of audit regarding the criteria for sufficient review. R4 also would appear to require a great deal of review of communications in order to satisfy the requirement to identify potential defects. One of the suggestions on the NERC Webinar for COM-003 was to review a "half-hour of communications" every week. This is especially intrusive on smaller entities with a single compliance individual, as more than an hour of that person's work-week would be spent randomizing, retrieving and listening to routine communications. This effort would reduce the reliability of the bulk power system as efforts with greater effect are reduced to comply with this requirement. Suggest requiring an annual review of communications procedures with staff instead.

No

The need for a prescriptive standard remains in doubt. The SDT has responded to comments questioning this need with a cite of a single study. The applicability of this study to GOPs is unclear. We do not know the details, and question the number of cited miscommunications which involved GOPs. Further, we are unclear as to the number of miscommunications which involved two entities, as opposed to an entity giving direction to their own field operator. Such single-entity communications would not be covered by the proposed standard. Lowering miscommunications is an admirable goal, and again the SDT deserves commendation for their willingness to rethink the direction of the proposed standard. However, the standard, if needed, should be limited to requiring an entity to have communications procedures, and to reinforce those procedures on a periodic basis. The content of those procedures should properly be left to the best judgement of the individual entity.

Individual

No

Requirement R1.6 provides inadequate protection against a misunderstanding when directives are issued. Granted, the Requirement does obligate the party receiving the directive to repeat back the

directive. However, if the recipient repeats the directive back to the person issuing the directive, and the "repeat back" indicates the recipient has misunderstood the directive, this Requirement merely obligates the person issuing the directive to state the directive again. The Requirement places no obligation on the person issuing the directive, who knows he has been misunderstood, to explicitly and clearly bring to the attention of the recipient that the recipient has misunderstood. All the party issuing the directive has to do is repeat what he has already said. The party issuing the directive is under no obligation to make it clear that there has been a misunderstanding. With respect, I suggest having the person issuing the directive merely repeat it if he's been misunderstood, with no explicit statement that there has been a mistake, leaves open the potential for the recipient to be unaware he has misunderstood and to execute a misunderstood directive. As an example, consider the following exchange. Transmission Operator to Field Operator: "Jim, open Breaker 104-696". Field Operator repeats back "I understand open Breaker 104-699". Transmission Operator, noting the error, states "Open Breaker 104-696". The field operator, having not been explicitly made aware there has been an error, opens Breaker 104-699. (Presumably, he would not do so had the Transmission Operator made him aware of the misunderstanding with an explicit statement that there has been an error.) Suggestion: Add verbiage to R1.6 obligating the person issuing the directive to make an explicit statement to the recipient that there has been an error if the recipient repeats the order back incorrectly. Presently, the standard imposes no such obligation on the person issuing the directive. One possible way to reword the standard might be: "...shall ensure the recipient of the directive repeats the information back correctly; and, if the repeat back is correct, shall acknowledge the response as correct. If the repeat back is incorrect, the person issuing the directive will state "You are wrong and have misunderstood the directive". The person issuing the directive will then repeat the directive correctly. This process will continue until the recipient repeats the directive back correctly.

Individual

Individual

Yes

Yes

Yes

Yes

No additional comments.

Individual

Yes

Yes

Yes

Yes

Individual

Yes

Yes
Yes
Yes
VSLs for R3 and R4: There is no contemplation of the entity failing to assess deficiencies (3.2 and 4.2) or failing to correct deficiencies (3.3, 4.3).
Section C. Measures: The measures are unclear as to what exactly the requirement to 'provide' entails? Would this be upon request or periodically? Please clarify. Section D. Compliance: Compliance Enforcement Authority is defined as CEA and then the full term Compliance Enforcement Authority is continually used throughout. The acronym or words should be used consistently. Section D. Compliance: There is no specification for R1 and R2 retention.
Group
ACES Power Marketing Standards Collaborators
Ben Engelby
ACES Power Marketing
No
The current definition of Operating Instruction, particularly "command from a System Operator" sounds like a Reliability Directive. We recommend revising the SAR of COM-003-1 to retire the definition of Reliability Directive and COM-002-3. There is no delineation between when COM-003-1 and COM-002-3 would apply, which could potentially subject registered entities to double jeopardy. For example, an Operating Instruction that occurs during an Emergency could open up the potential for a finding of non-compliance under both COM-002-3 and COM-003-1. We suggest that the SDT work with the RC SDT to clearly define when COM-002-3 and COM-003-1 would apply. A single communication should not result in multiple penalties.
No
(1) The SDT should strike all sub-parts of R1 and R2 and allow registered entities to define their own communications protocols based on internal policies and procedures; not from overly-prescriptive reliability standards. The SDT stated that COM-003-1 is shifting paradigms and putting the responsibility on the registered entity to monitor, assess and correct its own deficiencies. If that is true, then the registered entity should have the freedom to decide what elements are to be included in its communication protocols. R1 and R2 are administrative in nature and unnecessary. There is no need to include 9 sub-parts on how to achieve proper communications. (2) The standard, as currently written, does not allow a registered entity to implement superior practices, such as multi-modal communication (multiple mediums of communicating) or other superior communication methods and technologies. There are other ways to achieve efficient and accurate operating communications and the drafting team should modify the requirements to allow the registered entity to determine the best method of communication. There will be a disincentive for registered entities to seek out new technologies to improve communication if the standard remains with the current sub-parts. More discussion on each sub-part below. (3) R1, part 1.1, use of the English language. The SDT should not require use of the English language because the vast majority registered entities in North America speak English, except for a small number of entities in Canada and Mexico. If anything, the requirement should be modified to state that, "If the English language is not used by System Operators, there must be a legal justification, such as another language is mandated by law or regulation." Not using the English language is a much greater risk to reliability. The majority of companies that speak English should not have to maintain compliance policies to reaffirm something that everyone knows that they are doing. The real issue here is if an entity does not use English language, auditors should verify how they communicate internally and what controls are in place when the non-English speaking entity communicates with English-speaking neighbors. The SDT should not put the burden of compliance on English speakers. The team should focus on the entities that pose a risk to the BES by not using the English language and the increased potential for miscommunications from translation errors. (4) R1, part 1.2, the 24-hour clock, daylight/standard time. This sub-part does not take into account real time, such as "perform an action in 5 minutes."

The purpose statement of the SAR is to provide System Operators with uniform communications protocols that reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the BES. Requiring an operator to use the 24-hour clock for an action that is about to occur could cause more confusion and increase the possibility of miscommunication. The SDT should consider either inserting exceptions for the 24-hour clock for real time activities, or strike the 24-hour clock from the requirements. (5) R1, part 1.3, Standard or Daylight Savings. This sub-part also poses a risk for actions performed during real time operations and could increase the likelihood for error. For example, if WECC RC (daylight) was trying to communicate to a registered entity located in Arizona (no daylight savings time) to open a breaker. What is more effective, asking the entity to open a breaker in 5 minutes or at 11:05? In that scenario, 11:05 may be an hour difference because WECC RC is on daylight and Arizona is not, and the operators would be focusing on whether they accounted for the time changes and could potentially lose focus of the task at hand – opening the correct breaker. The SDT should consider either inserting exceptions for daylight savings/standard time for real time activities, or strike daylight savings/standard time from the requirements. (6) R1, part 1.4, Transmission interface Element or Facility. As discussed above, this sub-part is unnecessary and should be struck from the standard. A registered entity should be able to define its own communication protocol and the associated internal controls to ensure effective operating communications. Further, the Real-time Transmission Operations SDT (Project 2007-03) eliminated TOP-002 R18 which referred to the same concept as part 1.4, “uniform line identifiers when referring to transmission facilities.” The reason the Real-time TOP SDT removed the language from the new standard was because the “requirement adds no reliability benefit. ...There has never been a documented case of the lack of uniform line identifiers contributing to a System reliability issue.” Project 2007-03 was approved by the NERC Board of Trustees on May 9, 2012. Why is the OPCP SDT introducing language that the NERC Board has approved to remove from the requirements? There needs to be more awareness of the other projects and actions by the NERC Board. To be consistent, we recommend striking this sub-part in its entirety. (7) R1, part 1.5, Alpha-numeric Clarifiers. As discussed above, this sub-part is unnecessary and should be struck from the standard. A registered entity should be able to define its own communication protocol and the associated internal controls to ensure effective operating communications. (8) R1, part 1.6 and 1.7, Three-part Communication. As discussed above, these sub-parts are unnecessary and should be struck from the standard. There are more effective methods of communicating besides using three-part communication. Multi-modal communication utilizes several mediums (verbal, visual and other sensory cues) to enhance communication and may include three-part, but could also include other equally efficient and effective methods to communicate, such as through interactive smart phones and other remote communication devices. Different strategies may be needed for different utilities and their communication objectives. For instance, strategies and tools may be combined to meet a wide variety of communication functions to meet the needs of system operations, including utilizing new technologies to improve human performance when performing day-to-day operations. Three-part communications could be a part of the protocol, but three-part should not be in the requirements because it limits utilities from employing other methodologies are equally effective or superior to three-part communications. A registered entity should be able to define its own communication protocol and the associated internal controls to ensure effective operating communications. (9) R1, part 1.8 and 1.9, One-way Burst Messaging. As discussed above, these sub-parts are unnecessary and should be struck from the standard. An all call communication that is incorrect has just a big of an impact on reliability than one that is not understood. Also, the SDT does not take into account all the various technologies that exist in the marketplace; what does an entity do for an “all call conference call” where there are numerous humans on the line? R1, part 1.6 refers to “two party, person to person” and part 1.8 is limited to “one-way” communication. There is a gap here – does the SDT intend to exclude the “all call conference call” from the requirements? What happens if there are errors in the sent message? Would internal controls be the remedy? If the all call communication is not understood and there was no request for clarification, would an internal control resolve this issue or would the auditor find a PV? Also, sub-part 1.8 only requires confirmation from one party, even though the burst message could have been a request for eight parties to reply. There is a gap in reliability if all parties do not reply in that example. These sub-parts need additional information for clarity. Same comment for DP/GOP below. (10) R2 should allow DPs and GOPs to define their own communications protocols based on internal policies and procedures and there should not be a requirement to include sub-parts 2.1 and 2.2. (11) R2, part 2.1, Receiving a Three-part Communication. As discussed above, this sub-part is unnecessary and should be struck from the standard. There are more effective methods of

communicating besides using three-part communication. Multi-modal communication utilizes several mediums (verbal, visual and other sensory cues) to enhance communication and may include three-part, but could also include other equally efficient and effective methods to communicate, such as through interactive smart phones and other remote communication devices. Different strategies may be needed for different utilities and their communication objectives. For instance, strategies and tools may be combined to meet a wide variety of communication functions to meet the needs of system operations, including utilizing new technologies to improve human performance when performing day-to-day operations. Three-part communications could be a part of the protocol, but three-part should not be in the requirements because it limits utilities from employing other methodologies are equally effective or superior to three-part communications. A registered entity should be able to define its own communication protocol and the associated internal controls to ensure effective operating communications. (12) R2, part 2.2, One-way burst messaging for DP and GOP. As discussed above, this sub-part is unnecessary and should be struck from the standard. Please see (9) above for more discussion of one way burst messaging.

No

(1) We support the concept of internal controls that the SDT has proposed. We agree that finding a violation for each instance is burdensome and unreasonable and evaluating internal controls is a more efficient use of resources. However, we are concerned about the evaluation of internal controls from Regional audit staff. How is NERC planning to train the Regional auditors to ensure consistency during compliance audits? There is too much room for auditor subjectivity, especially when evaluating whether a single communication was deficient. There are so many communications that could occur on a daily basis and there is not clear guidance when the Regions will find or not find a possible violation in an audit. (2) In the webinar, SDT chair stated that a registered entity that catches a high percentage of deficiencies, then their process is working, but if the entity is only catching 50% then the entity needs to correct the process. There is currently no percentage or other guideline or metric to determine if an entity's process is sufficient. If this is the SDT's intent, please provide further detail. (3) We recommend the SDT provide additional information in the Rationale and Technical Justification document to include a guideline to show how the Regional auditors would assess compliance with a control-based standard. It seems that the trend in both COM-003-1 and CIP v5 is to find the errors and fix them without the need to self-report. How are the Regions going to determine when a PV is to be issued? The Technical Justification and the RSAW do not provide enough information when a communication deficiency crosses the threshold of becoming a violation. How does a registered entity know when to self-report? (4) We recommend adding more detail, perhaps including an application guidelines section as other risk-based standards, for acceptable remediation of deficient communications. For example, if an operator failed to use the 24-hour clock during an Operating Instruction, would a simple reminder be sufficient or would the operator need to attend a full-blown training session? What documentation would be required? It seems that a reminder would remedy the deficiency, but then that would have to be documented. The internal controls used to remedy deficiencies could turn into another documentation exercise instead of focusing on effective communication. We recommend the SDT consider ways of satisfying remediation without creating an unnecessary administrative burden for maintaining compliance. (5) Please clarify R3, part 3.4, "deficiencies found external to Part 3.1." Does the SDT mean that there would be deficiencies found in an audit? Who is the external entity finding these deficiencies? Does the SDT intend for registered entities to hire external consultants? Is this the RC notifying the DP that it has not communicated appropriately? Would these externally found deficiencies result in audit report recommendations?

No

(1) We agree with the VRF classifications. (2) We agree with the VSLs for R1 and R2. We note that there is a typo in Severe VSL for R2 – there is no part 2.3 in the standard. (3) We disagree with the Time Horizons for R1 and R2. Developing documented communications protocols are not long term planning, these activities are operations planning. (4) We disagree with the VSLs for R3 and R4. In particular, the binary nature of implementing communication protocols needs to be reconsidered. During the September 6 webinar, both Gerry Cauley and Mike Moon stated that internal controls should focus on fixing deficiencies and auditors were not to find PVs for single instances of noncompliance. Based on these statements, the VSLs should not be binary if the auditors are not to find PVs for single instances. Also during the webinar, Mike Moon stated that the auditors are to make recommendations in their audit reports to improve their processes, and not to be an "enforcement hammer" for each individual deficiency. The way the VSLs are drafted, each instance will be severe.

We recommend that the SDT revise the VSLs to allow for auditors to make recommendations instead of findings of potential noncompliance. (5) R3 VSL, "The Responsible Entity did not demonstrate that no modification to the process was necessary to address the deficiencies found external to Part 3.1." This is a documentation issue and should not result in a severe VSL classification. (6) There was a lot of discussion in the webinar about Regional auditors not finding a violation, but there needs to be clear guidelines describing when an auditor will find a PV. The VSLs currently describe a violation when a deficiency is not remediated, but that same instance could result in no finding at all, depending on how the individual auditor interprets the situation. This level of subjectivity is too high; the SDT needs to revise the VSL table to reflect a more reasonable approach, perhaps by including more information and examples of situations that might be viewed as non-compliance (communication breakdown) but because of internal controls, there should be no finding of non-compliance. In the alternative, the SDT could develop a guidance document outlining when an auditor is to find a PV and include examples to ensure consistency. The RSAW does not provide any additional clarity. (7) In the webinar, there were several references to "systemic or chronic" communication deficiencies. The VSLs do not reference any types of trends, but that seems to be the focus of compliance. We suggest revising the VSLs to focus on broader issues, such as systemic deficiencies that remain unresolved.

(1) If the Regional auditor is to make recommendations to registered entities on how to improve the COM-003-1 internal controls, would the Regions allow an initial safe harbor to assess the entity's program? If Regional auditors find PVs on the initial audit, that practice would go against the spirit of self-correcting and would stifle the entity's actions to monitor, assess, and correct deficiencies. The SDT should consider this sort of initial assessment in the implementation plan. (2) If there is discussion of combining COM-002 and COM-003 in the future, why not combine them now? It would be a better use of the ERO's resources to produce a single communication standard while both SDT projects are in development instead of going back through the entire process at some point in the future. (3) A Reliability Directive appears to be a subset of the Operating Instruction definition, which is basically an Operating Instruction that occurs during an Emergency. We suggest collaborating with the RC SDT to clarify the bounds of each definition to avoid overlap. As discussed above, it would be appropriate to combine the COM-002 and COM-003 and associated definitions to avoid confusion. (4) There is no requirement for data retention for R1 or R2. Again, we recommend striking these requirements. Thank you for the opportunity to comment.

Individual

Yes

Yes

Yes

These appear to be Internal Controls and they look good.

We want to see COM-002 and COM-003 combined, therefore we voted Negative. The Internal Controls in R3 & R4 are workable.

Individual

Yes

Thank you for making this change. Central Lincoln believes the SDT is on the right track to limit the scope of the standard to communications originating from System Operators. This will be less burdensome for many registered entities as well as the Compliance Enforcement Authorities.

Yes

We appreciate the work the SDT has done to ensure the standard is not about having zero communication defects, and is more about process.

Yes



1) We note that per the proposed definition of Operating Instruction, only commands regarding the states of BES Elements or Facilities are covered. We also note that per the Statement of Compliance Registry Criteria, Distribution Providers need not own or operate BES Elements or Facilities in order to be registered as DPs. This puts DPs without these facilities in the position of documenting protocols for and processes for finding deficiencies for communications that don't occur. We note the SDT stated in the last Consideration of Comments "DPs that operate BES Facilities or BES Elements and receive Operating Instructions are subject to the need for clear communication to avoid misunderstandings that could impact the BES", and we agree. We suggest: "4.1.2 Distribution Provider that operates Bulk Electric System Facilities or Elements and receives Operating Instructions"

2) The references to Part 3.1 in Sub-requirement 3.4 and Part 4.1 in Sub-requirement 4.4 make no sense, since the standard has no such sections. We assume the SDT meant Sub-requirements 3.1 and 4.1 respectively, and suggest that "Part" be replaced by "Sub-requirement." 3) We agree with the SDT's attempt to move away from zero defect compliance, and Requirements 1 and 2 and the RSAW all support this. We're afraid the CEA may still be able to find non-compliance for a single defect based on the language of R3 or R4. For example a CEA finds a single OI that referred to a 12 hour clock time in violation of the entity's protocol developed under R1.2. This is not a violation, but the CEA goes on to discover that the entity failed to identify the deficiency under R3.1. While the entity can show they have a process that has in fact identified and corrected deficiencies, the CEA maintains they failed to implement the process for this one instance and finds a violation. When the entity points to the RSAW that states the CEA should make recommendation rather than finding a violation, the CEA states they audit to the language of the standard requirement as stated in Footnote 1 of the very same RSAW.

Group

Detroit Edison

Kent Kujala

Detroit Edison

Yes

Yes

No

All actions that result in a potential violation must be reviewed and analysed to identify and correct deficiencies. Communication issues are no different. Requirements 3 and 4 are not required.

No

Analysis during Annual Review of work procedure for R1 and R2 automatically includes an analysis of the process and development of corrective actions.

Individual

Yes

No

Yes

Yes

Regarding Q2, Austin Energy (AE) believes that parts 1.1 through 1.5 of R1 are unnecessary. Three-part communication, as described in parts 1.6 through 1.9, is the preferred method for ensuring that both parties understand an Operating Instruction. It provides a sufficient mechanism for clear, concise and accurate communication. AE believes that creating a protocol that requires System

Operators to essentially relearn the way to speak (specifically using alpha-numeric identifiers) will only create confusion as operators try to follow protocol and catch/correct themselves. Additionally, the constant use of alpha-numeric identifiers in transmission switching orders that contain many, many steps will become burdensome. AE believes that its current use of three-part communication during these switching orders is more effective. Regarding Q4, the phrase "Parts 2.1 to 2.3 (3)" in the Severe VSL for R2 should be "Parts 2.1 and 2.2"

Individual

Yes

No

It must be made clear in the requirements that functional entities can incorporate exceptions (to address emergencies for example) in the protocols that are developed. Both of these requirements are too prescriptive. The sub-requirements drill down too deeply into the communications needed to conduct system operations.

No

It is unclear what identified reliability gap this Standard's development project is intending to fulfill given the recent adoption of the new COM-002-3 along with the OC white paper on communications protocols.

The white paper written by the OC addressed the issues covered by this Standard. Also the requirements 1.6, 1.7 and 2.1, 2.2 seem to be redundant with the requirement R2 of COM-002-2. Both touch on the issue of ensuring misunderstandings by requiring the parties to repeat, restate, rephrase or recapitulate the information transmitted/received. If adhering to the philosophy of Project 2013-02 Paragraph 81 of FERC, we should remove unnecessary requirements as part of NERC's Find, Fix and Track Process

Individual

Yes

Occidental Energy Ventures Corp. ("OEVC") agrees that it is important to specify that the command came from a System Operator. This allows us to leverage existing recording and monitoring systems to capture the event. The previous definition was open ended – which would have required us to expend an unknowable dollar amount in an attempt to capture every conversation related to a BES Facility or Element.

Yes

Although in general, OEVC does not believe that process documents should be the primary reliability consideration, it is the appropriate strategy in this case. Clearly, all of us want to eliminate Operator miscommunications – which make up nearly 20% of all BES mishaps – but it is impossible to assure 100% compliance over the course of thousands of System Operator communications. Furthermore, the effort required to capture the evidence needed by audit teams would overwhelm our resources, as well as those of the Regional compliance organizations. In our view, the path chosen by the drafting team is consistent with NERC's Risk-based Compliance program. It drives attention in areas that reliability data shows to be deficient, but recognizes that the benefit of COM-003-1 must outweigh the costs and resources required to implement it.

No

OEVC supports the concept underlying R3 and R4, but believe that far more detail must be provided in the measures and/or the RSAW. In general, we read these requirements as pertaining to System Operator monitoring and feedback processes that take place either in real-time or after the fact through the review of recordings. However, there may be other suitable options such as comprehensive Operator logging or even regular awareness training. Our concern is that without further clarification, auditors may choose to interpret these requirements to mean that 100% of all conversations must be monitored and assessed. This would result in a cost-prohibitive situation, with little incremental improvement in reliability. Every effective quality program relies on statistically significant sample assessments – and there must be an acceptable sample size defined. Furthermore,

OEVC would like to see the Cost Effective Analysis Process (CEAP) used in this initiative. Our initial assessment is that at least one resource will need to be added at our four generation facilities in order to supplement our Operator quality monitoring program to accommodate COM-003-1. However, this is based upon our assumptions of a statistical monitoring method – which is very sensitive to the number of samples required. If other industry stakeholders come to the same conclusion, the result could drive upward pressure on electricity rates – and should be compared to the expected benefits of the initiative.

Yes

Group

PNGC Comment Group

Ron Sporseen

PNGC Power

The PNGC Comment Group is fully in support of Central Lincoln PUD's comments.

Group

Arizona Public Service Company

Janet Smith, Regulatory Affairs Supervisor

Arizona Public Service Company

Yes

Yes

Yes

Yes

no

Individual

Yes

Yes

It will require us to write a communications protocol.

Yes

Yes

Individual

No

The definition of the new term, "Operating Instruction," uses the NERC Glossary term "System Operator," which is defined as "An individual at a control center...whose responsibility it is to monitor and control that electric system in real time." The lack of clarity regarding what constitutes a control center leaves doubt as to which instructions would be covered by the standard. Another disagreement with the proposed definition of "Operating Instruction" is that it inappropriately imposes three-part communication for routine communications of changes of generation output. Common operating communications to and from generation plants should not be considered compliance events requiring

the use of alphanumeric clarifiers. Such a requirement may shift operators' focus from providing proper information under critical situations to using the specified terms for every minor communication, distracting them rather than sharpening their concentration. The standard should specify the classes of TO/TOP-to-GOP communications that constitute compliance events, the formal designations by which such communications can be recognized, and the parties authorized to issue such commands.

No

Clarification is needed regarding what GOP procedures are to cover, ref. our comments to question #1 above.

No

There is no statement of periodicity in R4, leaving entities guessing until the time of audit regarding the criteria for sufficient review. R4 is also open-ended regarding scope, potentially requiring review of every voice communication for every plant for the audit period. Everyday communications do not merit such scrutiny, which would reduce rather than improve the attention that can be given to matters of significance. All standards (not just COM-003-1) should clearly specify pass/fail criteria and the associated evidence requirements. R4 should be split into DP and GOP sections, with the GOP requirement being: R4. Each Generator Operator shall conduct in each calendar year a review session with the operations function for registered entities, regarding the documented communication protocols specified in Requirement R2. Corrective action shall be implemented and documented for any potential deficiencies coming to light as a result of this review.

Individual

OG&E is in support of Southwest Power Pool Comments. OG&E also had individual comments (though I am now not allowed to submit via the questionnaire; therefore, will submit here). Q1: No We prefer the use of the word "Instruction" vs "Command", though we understand that word is already part of the term being defined. Could be open to using the term "Request" or "Order" or "Direction". Q2: No R2.1 does not read well. We would recommend changing to "When receiving an oral two party, person-to-person Operating Instruction, the recipient is required to repeat, restate, rephrase, or recapitulate the Operating Instruction." Regarding R2.2, we are struggling to identify what would be considered a "one-way burst messaging system". Perhaps examples could be provided to clarify what the SDT is trying to address. Consider adding similar language that is currently provided in TOP-001-1a R3 "...shall comply with reliability directives issued by the Transmission Operator, unless such actions would violate safety, equipment, regulatory or statutory requirements. Under these circumstances the Transmission Operator, Balancing Authority or Generator Operator shall immediately inform the Reliability Coordinator or Transmission Operator of the inability to perform the directive so that the Reliability Coordinator or Transmission Operator can implement alternate remedial actions." to allow for those circumstances in which a Distribution Provider or Generator Operator may not be able to respond to the Operating Instruction. Q3: The word "potential" in R3.1. and R4.1. could be subjective. Please remove this word such that both R3.1. and R4.1. state "Identifies deficiencies,". Q4: No We believe R3 and R4 should be considered Low VRF as they are establishing the process that supports R1 and R2 which are already designated as Low VRF. We do not think the subsequent process should have a higher VRF than the original requirement. Other Comments: OG&E continues to believe that the COM-003 standard, while obviously the result of significant effort and good intentions, is unnecessary. Even though we believe that three-part communication is a best practice, and we utilize it for switching and reliability-related instructions, we do not believe that it should be mandated through an enforceable standard. COM-002 addresses three-part communications during emergency conditions and we believe that is sufficient. With respect to the Paragraph 81 project, NERC should be focused on retiring standard requirements that meet the following criteria: (a) have little or no impact on reliability, (b) administrative, purely documentation, redundant, or hinders protection of the BES, and (c) Lower VRF/VSL, lower tier Actively Monitored Standard, etc. The industry has yet to be provided sufficient evidence that the lack of three-part communication during normal operations has been the direct cause, or even a contributing cause, to reliability failures. While a good idea in concept, the COM-003 standard is likely to take significant effort to interpret, understand and implement, at a time when industry is already overburdened with real reliability issues that we already know to be problematic. The documents

referenced in the Rationale and Technical Justification document supporting the need for this standard should be made available for review if the drafting team is using them as support for the justification for COM-003.

Individual

Yes

Yes

R1.3 should allow the use of prevailing time in addition to Daylight Savings and Standard time. Prevailing time eliminates the need to differentiate between daylight savings or standard time in notices and reduces confusion since the clocks are changed at a scheduled time by the US Government.

Yes

United Illuminating supports the language in COM-003 R3 and R4. Since the quantity of Operating Instructions will be very large it is more important to have a process to monitor the communication protocols and correct deficiencies.

Yes

It is not clear whether the protocols in COM-003 apply to Reliability Directives in Com-002. It can be reasoned that a Reliability Directive is a form of Operating Instruction. A double jeopardy situation is created. Also the COM-003 R3 and R4 requirements would be inappropriately applied to Reliability Directives. UI believes there is a difference between Reliability Directives and Operating Instructions and the difference should be maintained. A Directive occurs during an Emergency and has a higher risk than an Operating Instruction. Directives should be limited in occurrences and therefore is not conducive to sampling or error correction as opposed to Operating Instructions which occur multiple times in a day and are numerous. The data retention requirement of 90 days is reasonable. But UI is concerned with the approach to monitoring requiring an inventory of every conversation that occurred in that 90 day period to identify it as an Operating Instruction. Finally UI supports EEI's comment.

Individual

No

ReliabilityFirst does not agree with the changes made to the proposed definition "Operating Instruction". The definition of Operating Instruction begins with the word "Command". ReliabilityFirst is unsure what the word "command" means and believes it could be mistaken as a directive. ReliabilityFirst requests further clarification on the meaning of the word "command". ReliabilityFirst recommends the following for consideration: "Communication of instruction from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.

No

Requirements R1 and R2 require the responsible entities to have documented communication protocols for Operating Instructions, but does not require the responsible entity to implement the protocols. Absent implementation of the protocols, there is no need for the protocols themselves if the responsible entity is not required to follow them. ReliabilityFirst recommends the following wording as an example for Requirement R1: "Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have and implement a documented communication protocols for Operating Instructions..."

No

ReliabilityFirst believes the words "identifying deficiencies" (within R3 and R4) is ambiguous and could be open to interpretation. ReliabilityFirst believes the drafting team should further clarify the deficiencies in which will be required to be identified in Requirement R3 and R4.

Yes

ReliabilityFirst thanks the SDT for their work but has a question related to the Implementation Plan.

The SDT indicated in the consideration of comments report (from the draft 2 posting) the standard's six calendar month implementation time frame has been extended 12 calendar months to provide an adequate amount of time for training and implementation. As noted above, there is a conflict since the draft standard does not require implementation of the protocols. ReliabilityFirst believes absent any implementation requirement, the six calendar month implementation time frame is adequate for an entity to have documented communication protocols for Operating Instructions.

Individual

No

We do not see the need to define the term "Operating Instructions" for a number of reasons: For years, system operators deal with operating instructions on a daily if not minute basis. Having a defined term, and calling such communication as "Command" is totally unnecessary, and can confuse operators from what they understand to be the meaning of operating instructions. The main intent of this standard is to ensure no miscommunication between operating personnel, a part of which is proposed to be fulfilled by exercising 3-part communication for operating instructions.

Notwithstanding our disagreement to having such a requirement in this standard, such a requirement can be developed without having to define a term that adds nothing to the universal understanding of the term but which can confuse operators. For example, Requirement R1 can be revised to: R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented protocols for communicating operating instructions that will change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System, which incorporate the following: 1.1 1.2 ....

No

We disagree with the need to repeat and confirm operating instructions (Part 1.6 to 1.9 and R2) meant to be used for normal operating system conditions. As indicated in our previous comment, the term Reliability Directives and the recently approved COM-002-3 cover instructions not only emergency conditions but also conditions that can result in Adverse Reliability Impact. Requiring operating entities to exercise 3-part communications (repeating and confirming) for routine operating instructions that maintain the states or do not change the status of the BES Facilities, or simple actions such as removing a transmission line which has no impact on the BES, or simple switching, or adjusting a small amount of generation output, is totally unnecessary, and can in fact overburden System Operators and harm reliability. And we respectfully disagree with the SDT's response to our previous comment regarding the applicability of the term "Reliability Directive" in which the SDT claims that the term "Reliability Directive" in the approved version of COM-002-3, "...in the context of COM-002-3, is specifically for Emergency operating conditions" and "...covers a very narrow band of low frequency, high impact events. The definition covers not only emergency, but also Adverse Reliability Impacts" Further, the definition does not explicitly indicate, nor is it implied, that such conditions are "of low frequency, high impact events." To address the BoT's concerns expressed when approving the interpretation of COM-002-2, the term Reliability Directive now defined in COM-002-3 together with the NERC Operating Committee's guideline on System Operator Verbal Communication fully cover the condition under which 3-part communication need to be (to address Adverse Reliability Impacts) or should be (where deemed appropriate) exercised. We do not see the need for having a standard requirement for 3-part communication for conditions other than when Reliability Directives are issued. Regarding the other parts in Requirement R1, i.e. 1.1 to 1.5, these are good operating practices but are not absolutely necessary the "must follow" protocols that rise up to a continent-wide reliability standard level.

No

We do not see the need for these two requirements at all. Assuming Requirements R1 and R2 were to stay (which we disagree), Responsible Entities need to comply with these requirements to develop documented communication protocols for Operating Instructions that incorporate all parts in R1 and R2. Any deficiencies with adherence to the documented communication protocols specified in R1 and R2 will be assessed non-compliance, and sanction and remedial actions will be imposed to correct such deficiencies. Having two requirements to obligate entities that already violated the standard is totally unnecessary, and redundant and may result in double jeopardy.

No

We do not agree with the need for most if not all of these requirements, and therefore do not agree

with the proposed VRFs and VSLs.
We do not see the need for this standard. We feel that Reliability Standards should have performance based objectives, rather than prescriptive requirements that outline "how" to meet an objective. This draft is not consistent with this approach. If the majority of the industry also express a similar view, we urge the SDT to bring this to the Standards Committee's attention, and seek its advice on way forward, including stopping this project altogether.
Group
SERC OC Standards Review Group
Gerry Beckerle
Ameren
No
We do not see a significant difference between Operating Instructions and Operating Communications, and we believe neither definition is necessary.
No
We support having a documented communications protocol, but do not support prescriptive elements. Below is an example of language we could support. All the subparts of R1 and R2 need to be rewritten along these lines. "R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented communication protocols for Operating Instructions that address the following: .... 1.6. The conditions under which an issuer is expected to: • Confirm that the response from the recipient of the Operating Instruction was accurate, or • Reissue the Operating Instruction to resolve a misunderstanding."
No
We would suggest changing R3 and R4 to align with our suggestions for R1 and R2: "R3. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement a process for identifying deficiencies with adherence to their documented communication protocols that each entity developed in accordance with Requirement R1 that:"
Yes
We could agree within the context of our comments listed above.
The SERC OC Standards Review Group does not agree that the mandatory/prescriptive procedure for three part communications in essentially all oral communications will improve reliability of the BES. The standard needs to be changed to better reflect industry comments from this comment period and the previous ballot. The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review Group only and should not be construed as the position of SERC Reliability Corporation, its board, or its officers.
Individual
Yes
Yes
Yes
Yes
Regarding R1.4, drafting team should clarify whether "interface" means interfaces between neighboring entities or between functional entities. Regarding R1.8, does the drafting team have an appropriate response time-frame for the confirmation to occur from recipients? Regarding R1.9 and R2.2, these requirements seem unnecessary and unauditible. An audit team can evaluate whether the documented communications protocol contains language to address these requirements; however, evaluating the actual execution would be subjective. It is not possible to determine whether a recipient understood a message clearly and whether clarification was required. Further, it will be difficult for entities to identify deficiencies with this requirement, as required by R3, for the same

reasons.
Individual
Agree
MRO NSRF and MISO
Individual
Yes
No
No
No
CenterPoint Energy appreciates the revisions made to the current draft of COM-003 based on stakeholder feedback; however, the company maintains a negative vote based on the following: Requirements 1.1 through 1.5 are overly prescriptive. We recommend deletion of stated sub requirements as an effort to move away from detailed micro requirements. Additionally, CenterPoint Energy recommends deletion of R3 and R4. The "internal controls" concept can be incorporated into the remaining requirements. CenterPoint Energy would vote affirmative if the SDT revised the proposed standard as indicated below: R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses, and corrects deficiencies, documented communication protocols for Operating Instructions that incorporate the following: 1.1 When issuing an oral two party, person-to-person Operating Instruction, require the issuer to: • Confirm that the response from the recipient of the Operating Instruction was accurate, or • Reissue the Operating Instruction to resolve a misunderstanding 1.2. When receiving an oral two party, person-to-person Operating Instruction, require the recipient to repeat, restate, rephrase, or recapitulate the Operating Instruction. 1.3. When issuing an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), verbally or electronically confirm receipt from one or more receiving parties. 1.4. When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), request clarification from the initiator if the communication is not understood. R2. Each Distribution Provider and Generator Operator shall implement, in a manner that identifies, assesses, and corrects deficiencies, documented communication protocols for Operating Instructions that incorporate the following. [Violation Risk Factor: Low] [Time Horizon: Long-term Planning] 2.1 When receiving an oral two party, person-to-person Operating Instruction, require the recipient to repeat, restate, rephrase, or recapitulate the Operating Instruction. 2.2 When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), request clarification from the initiator if the communication is not understood.
Group
Duke Energy
Greg Rowland
Duke Energy
No
Duke Energy is very encouraged by the changes made by the Standard Drafting Team in the current version of COM-003-1. The shift to requiring a communications protocol and a process for identifying and correcting deficiencies is a major step in the right direction. Our concern with the definition is that additional clarity is needed to distinguish the definition of Operating Instruction from the definition of Reliability Directive so that entities know which communications COM-003-1 applies to. This could be accomplished by changing the definition of Operating Instruction; replacing the word "Command" with "Normal communication", and replacing the word "preserve" with the word "maintain". The revised



definition would read as follows: "Normal communication from a System Operator to change or maintain the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System".

No

1) In Requirements R1 and R2, the word "incorporate" should be changed to "address". This change will align the language of the requirements with the language of the RSAW, providing flexibility to entities in how their communications protocols will be structured. This change will also help to alleviate some of the following concerns. 2) In R1.1, 1.3 and 1.4 clarify the meaning of the phrase "between functional entities". Do these sub-requirements apply to Operating Instructions between individuals located in the same functional entity? 3) In R1.7, the phrase "repeat, restate, rephrase, or recapitulate" seems excessive. Suggest changing to just "repeat or rephrase". 4) R1.6 and 1.7 are describing 3-part communication. Suggest combining 1.6 and 1.7 5) R1.8 and 1.9 address "one-way burst messaging", but it's not clear whether, or to what extent, 3-part communication is required.

Yes

No

1) Consistent with our comment to Question 2 above regarding changing the word "incorporate" to "address" in Requirements R1 and R2, this change should also be made in the VSLs for R1 and R2, changing the word "include" to "address". 2) The Severe VSL for R2 incorrectly references a Part 2.3, whereas it should just refer to both Parts 2.1 and 2.2

Individual

Yes

Yes

Yes

Yes

Individual

Yes

Yes

Yes

The proposed requirements (COM-003-1, R3 and R4) are in line with Risk-Based Reliability Compliance Monitoring.

Yes

Requirement R1.5 should be an optional step to assist in resolving any misunderstanding found in requirement R1.6. Alpha-numeric clarifiers, Requirement R1.5, in every three part communication of an operating instruction is an activity that adds little if anything to promote the protection of the BES and can hinder/distract from the reliable operation of the BES.

Individual

Yes

No
LES requests the drafting team provide additional clarification regarding R2.1 as it relates to “oral two party, person-to-person” communication occurring between the System Operators and field crews. Does the drafting team intend for the communication protocols to be used for all communications between the System Operators and field crews (such as for normal day-to-day switching of distribution elements) or only as it occurs between defined functional entities? Within the Draft 2 consideration of comments under “Outstanding Unresolved Issues”, the drafting team states that “The SDT clarified that COM-003-1 only applies to communication between functional entities. For example, if a TOP System Operator is issuing an Operating Instruction to an individual that is internal to that TOP, three part communication is not required by this standard”. Although LES supports this clarification, it’s incorporation into the requirement is not obvious. Recommend the drafting team modify R2.1 as follows to ensure this clarification remains evident within the standard going forward: R2.1. When receiving an oral two party, person-to-person Operating Instruction between functional entities, the recipient is required to repeat, restate, rephrase, or recapitulate the Operating Instruction.
Yes
Yes
The Severe VSL for R2 should be modified to instead state “The responsible entity did not include Parts 2.1 to 2.2 of Requirement R2, in their documented communication protocols”. The current VSL incorrectly references Part 2.3 of R2 which does not exist.
LES believes additional clarification is needed to more clearly delineate who is considered to be the Generator Operator (the power plant operator vs. system operator) responsible for compliance with COM-003-1. As currently drafted, the Generator Operator, as the recipient of Operating Instruction, must have and utilize documented communication protocols per R2. In the event generation re-dispatch were to be requested, is it the power plant operator performing the task or the system operator requesting the execution of the task responsible for using the documented communication protocols?
Individual
No
Although NextEra Energy, Inc. (NextEra) is encouraged by the refinements made to draft COM-003-1, NextEra believes additional refinements are necessary for COM-003-1 to promote reliability, and in no way hinder reliability. NextEra’s perspective is heavily influenced by the years of experience of its system operators in their role as a large Transmission Operator, Reliability Coordinator agent and Balancing Authority. Specifically with respect to the definition of Operating Instruction, NextEra recommends that the definition more closely track the syntax of the definition of Reliability Directive in COM-002-3, and, thus, read as follows: Operating Instruction – a command from a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to change or preserve the state, status, output of an Element or Facility of the Bulk Electric System.
No
NextEra opposes any communication protocol in COM-003-1 that is not mirrored in COM-002-3. NextEra views the implementation of two different communication protocols -- one for Reliability Directives and one for Operating Instructions as problematic and not consistent with the promotion of a reliable Bulk Electric System. This concern is heightened by the fact that there are more specific protocols for Operating Instructions which are lower in the communication hierarchy when compared to Reliability Directives. Such a model is counterintuitive. If implemented, this model will also likely be counterproductive, increase confusion among System Operators and may unnecessarily cause a risk to the Bulk Electric System. The inherent risk caused by the lack of synergy and consistency between COM-003-1 and COM-002-3 could be resolved by combing the Standard Development projects and having the SDTs work together to produce one uniform work product. Therefore, NextEra urges the COM-003-1 SDT to request that the Standards Committee join the COM-002-3 and COM-003-1 efforts, so that one uniform three-way communication protocol can be developed and implemented that promotes reliability. Further, in addition to comments that NextEra has previously submitted, it asks that the following changes be made: R1.1 Delete “between functional entity” as unnecessary and delete the second sentence altogether (or clarify it), because it is unclear and may add confusion. In

the context of an Operating Instruction, it is best that English be used between Transmission Operators and Balancing Authorities for external and internal communications related to Operating Instruction. To allow for alternative languages to be used internally when an Operating Instruction is given will likely result in difficult transitions between internal and external conversations which may unintentionally result in a risk to the Bulk Electric System via an external miscommunication using a language other than English. Thus, NextEra prefers that English be promoted and used for internal and external communications related to Operating Instructions. R1.4 Add a comma after "Facility" in the fourth line. R1.8 Use the term "entities" instead of "parties" in the second line. Entities is a more widely recognized term than parties in the context of the Reliability Standards. Also, for clarity, re-write the end of 1.8 to read ". . . confirm receipt from each entity." The current wording states "confirmed receipt from one or more receiving parties" seems to miss the point that what the sender needs is confirmation from each entity that was sent the message. R1.9 Similarly, replace the term "parties" in line two with "entities".

No

Although NextEra supports Reliability Standards that are more risk and result based and provide for a corrective bandwidth or prosecutory discretion for possible violations, as drafted, R3 and R4 need refinement to meaningfully and clearly implement any of the above concepts. Therefore, NextEra recommends that R3 and R4 both be re-written to read as follows: R3 Absent a possible violation that resulted in (or could have resulted in) a significant risk to the Bulk Electric System, no violation of R1 and its subrequirements shall be found, provided that the Balancing Authority, Reliability Coordinator, and Transmission Operator has implemented a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R1 that: . . . R4 Absent a possible violation that resulted in (or could have resulted in) a significant risk to the Bulk Electric System, no violation of R2 and its subrequirements shall be found, provided that the Distribution Provider and Generator Operator shall implement a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R2 that: . . .

No

NextEra does not support VSLs that are checklist or document related. Rather NextEra favors VSLs that balance results and performance against reliability risk. As drafted, the current VSLs are a checklist approach to measuring reliability risk and compliance, which is not particularly helpful or meaningful. Thus, NextEra suggests that VSLs be re-drafted to measure whether the entity posed an actual risk to the Bulk Electric System based on how it delivered or received an Operating Instruction.

NextEra proposes the following as an alternative approach that more closely mirrors COM-0002-3 and includes the internal controls language in R4 and R5. R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as an Operating Communication, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as an Operating Instruction to the recipient. R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of an Operating Instruction shall repeat, restate, rephrase or recapitulate the Operating Instruction. R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues an Operating Instruction shall either: • Confirm that the response from the recipient of the Operating Instruction (in accordance with Requirement R2) was accurate, or • Reissue the Operating Instruction to resolve any misunderstandings. R4 Absent a possible violation that resulted in (or could have resulted in) a significant risk to the Bulk Electric System, no violation of R1 or R3 and its subrequirements shall be found, provided that the Balancing Authority, Reliability Coordinator, and Transmission Operator has implemented a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R1 and R3 that: 4.1. Identifies potential deficiencies, 4.2. Assesses the deficiencies found, 4.3. Corrects the deficiencies, and 4.4. Evaluates the process based on deficiencies found external to Part 3.1 and either • implements modifications to the process when the evaluation determines that modification of the process is necessary to address the deficiencies found; or • demonstrates that no modification to the process is necessary to address the deficiencies. R5 Absent a possible violation that resulted in (or could have resulted in) a significant risk to the Bulk Electric System, no violation of R2 and its subrequirements shall be found, no violation of R2 and its subrequirements shall be found, provided that the Distribution Provider and Generator Operator shall implement a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R2 that: 5.1. Identifies potential deficiencies, 5.2. Assesses the deficiencies found, 5.3. Corrects the deficiencies, and 5.4. Evaluates the process based on deficiencies

found external to Part 3.1 and either • implements modifications to the process when the evaluation determines that modification of the process is necessary to address the deficiencies found; or • demonstrates that no modification to the process is necessary to address the deficiencies.

Group

Tacoma Public Utilities

Chang Choi

Tacoma Power, City of Tacoma

Yes

Yes

Yes

Yes

Individual

Yes

Yes

Yes

Yes

The issuance of a draft RSAW in combination with the draft standard helped clarify the audit approach for some of the more subjective requirements such as R3 and R4 and how instances of deficiency will not be considered violations of the standard. PNMR, Inc. and its two utility subsidiaries operating in TRE, SPP and WECC would like to encourage other SDTs to follow the lead of this SDT with respect to understanding that the RSAW is a critical piece of the Standards Development process.

Group

PacifiCorp

Sandra Shaffer

PacifiCorp

Yes

No

PacifiCorp does not feel that the requirements listed in R1.5 regarding the use of alpha-numeric clarifiers when issuing an oral Operating Instruction is warranted. The requirements listed in R1.6, and R1.7 requiring the strict used of three-way communication should alleviate any possibility of miscommunication, which PacifiCorp understands to be the drafting team's intent in the development of separate Requirement R1.5. Also, implementing the use of alpha-numeric clarifiers poses additional risk due to the introduction of ambiguous language.

No

PacifiCorp supports the addition of non-zero defect language which follows the CIP model. [model PacifiCorp suggests that the language in Requirement R3 be modified and simplified as follows: "R3. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement R1 in a manner that identifies potential deficiencies, assesses deficiencies found, and corrects those

deficiencies.”
No
It is not clear to PacifiCorp why the VSLs are so much higher for R2 when R1 applies to Balancing Authorities, Reliability Coordinators, and Transmission Operators, and thus has a potentially broader application than R2. R2 applies to Distribution Providers and Generator Operators. Also, it is not clear why the R2 VSL R2.3, as there is no R2.3 in the current draft.
Group
JEA
Thomas McElhinney
JEA
We believe that three-part communications should only be necessary for directives. Also COM002 and COM003 should be merged into one standard.
Individual
No
Operating Instruction Definition is too broad; this essentially imposes on affected entities the need to use 3-part communication all the time. Additionally the broadness of the definition may cause compliance difficulties between COM-003-1 and COM-002 if the requirements are not looked at holistically between the two. A recommendation would be to combine the requirements into one standard.
No
R1.2 Prescribed use of a 24 hour clock format seems over-bearing R1.3 The use of “functional entities”- includes more entities than the applicability section and uses terms from the functional model which goes beyond registered entities, may be some confusion here. R1.4 Transmission interface Element Transmission interface Facility These terms may need to be defined. They may be ambiguous to some entities as to what is intended R1.5 Use of alpha-numeric clarifiers in some instances inhibit efficient communication, without increasing the effectiveness of the communication or reducing the risk to the BES. In keeping with the requirement of entities to document its protocols, it should be left to the entities of regions to define this. R2 Is missing a sub-requirement that requires a clarification of two party communication that is not understood.
No
R3 & R4 As written are confusing and do not convey the intent of the SDT. Below is recommended re-write: Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement a process that assesses conformance and performance to the R1 documented protocols. This process shall include identifying deficiencies, assessing the deficiencies and correcting the deficiencies when feasible. R3.4 & R4.4 This should be removed as a sub-requirement and made its own requirement Below is recommended re-write: Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall [insert time period] evaluate its process required by R3 (R4) for deficiencies. Identified deficiencies shall be assessed and corrected when feasible. If no deficiencies found this is to be documented.
No
VRF R3 & R4 NERC VRF Discussion: R3 (4) is a requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines The violation of R3 (R4) does not result in informal communication; it results in not identifying it. It is not a failure to identify that poses the risk to the

BES, but the actual communication. The process implemented in R3 (R4) identifies, assesses, and attempts to correct deficient communication practices in an attempt to make future communications better. The process in R3 (R4) has no real-time impact on the BES, it aims at having real-time impact on operators who have real-time impact on the BES. For these reasons the VRF should be "Low" FERC VRF G1 Discussion: Discussion references wrong FERC Recommendation; should have referenced Recommendation 26 rather than 24. Additionally, the SDT wrongly implies that Recommendation 26 applies to COM-003-1. Recommendation 26 "Tighten communications protocols, especially for communications during alerts and emergencies..." applies to COM-002, thus removing it from FERC VRF G1 allowing for a VRF of "Low" to be assigned. FERC VRF G3 Discussion: Though analogous to R2 of COM-002-2 they are not the same. One can argue that the importance of "directive" to the BES is greater than the importance of an "Operating Instruction" to the BES and thus the risk to the BES is less for R3 (R4) of COM-003-1, and accordingly should be assigned a lower VRF than R2 of COM-002-2 to promote consistency between the standards, while also elevating the importance of COM-002-2 over COM-003-2. Said another way (Though each requirement addresses communication protocol, the potential effects of the failure to follow the protocol are different in that one deals with Directives and Emergency conditions and the other with Normal operations. So the VRF's shouldn't necessarily be the same.) FERC VRF G4 Discussion: The violation of R3 (R4) does not result in informal communication; it results in not identifying it. It is not a failure to identify that poses the risk to the BES, but the actual communication. The process implemented in R3 (R4) identifies, assesses, and attempts to correct deficient communication practices in an attempt to make future communications better. The process in R3 (R4) has no real-time impact on the BES, it aims at having real-time impact on operators who have real-time impact on the BES. For these reasons the VRF should be "Low" FERC VRF G5 Discussion: The SDT has argued that R3 & R4 each contain only one objective (identification of deficiencies). An Alternative read suggests the R3 & R4 as written each have six objectives: 1. Identify deficiencies in 3-part communication as defined by protocols in R1 2. Assess identified deficiencies in 3-part communication 3. Correct identified deficiencies in 3-part communication 4. Identify deficiencies in process implemented in R3 (R4) 5. Assess identified deficiencies in process implemented in R3 (R4) 6. Correct identified deficiencies in process implemented in R3 (R4) VSL Justification R3 (R4) The SDT has argued that R3 & R4 each contain only one objective (identification of deficiencies). An Alternative read suggests the R3 & R4 as written each have six objectives: 1. Identify deficiencies in 3-part communication as defined by protocols in R1 2. Assess identified deficiencies in 3-part communication 3. Correct identified deficiencies in 3-part communication 4. Identify deficiencies in process implemented in R3 (R4) 5. Assess identified deficiencies in process implemented in R3 (R4) 6. Correct identified deficiencies in process implemented in R3 (R4) Because there are multiple objectives in R3 (R4) there is an opportunity for more granularities to the proposed VSL.

Applicability Section: Functional Entities Section may not be broad enough to capture all entities participating in communication for example a TO may have a switchman receiving Operating Instructions from a TOP; the way the standard is written the TO would not be required to participate in 3-part communication making it difficult for the TOP to fully implement its Communication Protocols. M3 & M4 impose more requirements on the registered entity than are be required in R3 & R4 respectively. For example R3 requires the implementation of a process, the measure looks for the results of the process, the measure should be measuring the implementation not the result of the process.

Individual
Yes
Yes
No

COM-003 cannot be a zero defect standard. We propose rewording R3 to state: "Each Reliability Coordinator, Transmission Operator and Balancing Authority shall implement the requirements in R1 in a manner that identifies, assesses, and corrects deficiencies, if any. Where the entity is identifying, assessing and correcting deficiencies, the entity is satisfactorily meeting the requirements or COM-003." If there is no leeway given, requirement 1 of this standard will generate a very large number of

violations and in our opinion it would become one of the most violated standards very quickly.
Yes
Individual
Agree
Central Lincoln
Individual
Yes
Yes
No
This is redundant with the continual improvement methodologies that the NERC process already has in place. If a company finds, through a self assessment or NERC audit, that they are not meeting a requirement in a standard, then the NERC process is to either self report, or be found in violation. In either case the entity must complete their deficiency in the standard in order for the mitigation to be approved by their regional entity. To have to have written process for this in order to meet R3 and R4 is redundant with the requirements on how NERC views the elements of a successful compliance program. Smaller entities do not have the man power for redundancies such as this. I would rather see R3 and R4 dropped from the standard for the reasons above. Most if not all companies will correct issues through the self report process and mitigation plan approval process.
No
See comments from SPP
As stated drop requirements R3 and R4 as they seem redundant with the overall NERC program of reporting and mitigation plan approval.
Individual
Agree
US Bureau of Reclamation
Individual
Agree
Florida Municipal Power Agency and Indiana Municipal Power Agency
Individual
No
While AEP would not argue against the definition of "Operating Instruction" as proposed, we object to its inclusion as we disagree with the concept of requiring three part communications for more routine operations. Our efforts in this regard should first be focused solely on Reliability Directives before expanding this work, and creating similar requirements for all other Operating Communications. Requiring three part communications for every scenario might be considered a best practice by some, but making it a mandatory practice for routine operations emphasizes the manner of communications rather than the operations themselves. In addition, requiring three part communication in such a broader scope could actually diminish the perceived urgency during more urgent situations where such communications are more appropriate. In any event, requiring three part communications for Reliability Directives will likely result in more widespread usage for more routine operating communications, without making it a requirement. AEP believes that there should not be multiple project teams proposing concurrent changes to COM-001, COM-002, and COM-003. Unless there are overwhelming reasons for not doing so, these efforts should be consolidated and managed by a single project team. In addition, current efforts on COM-003 need to be co-located with the proposed changes to COM-002 within a single standard. Having multiple project teams proposing concurrent changes results in problems such as this. where a) changes are proposed to the same standard or b)

similar changes are proposed to separate standards. AEP cannot support revisions on these matters until they are managed by a single project team. If the team believes it should still proceed in their current efforts, then there probably is no need for requiring three part communications for Reliability Directives (COM-002 R2). As a result, COM-002 R2 should be retired and this definition should include emergency situations as well.

No

AEP disagrees with the concept of requiring three part communications for more routine operations, and as a result, also disagrees with requiring that entities have documented communication protocols as proposed.

No

AEP disagrees with the concept of requiring three part communications for more routine operations, and as a result, also disagrees with R3 and R4 which require that the entity shall implement a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R1 and R2.

No

AEP disagrees with the concept of requiring three part communications for more routine operations, and as a result, has no comment at this time on the proposed VRFs and VLSs.

AEP does not agree with the perceived necessity of this standard, but does support the overall concept of the drafting team's building controls into the standards as well as proposing RSAWs during the comment that perpetuate the ideas and concepts of the drafting team.

Group

Wisconsin Electric Power Co.

James R. Keller

Wisconsin Electric Power Co.

Midwest ISO

The definition of Operating Instruction introduces a "Command" as opposed to COM-002 that defines and requires identification of a "Reliability Directive", yet there is no obligation to follow a Command nor to identify the communication as containing a Command. Fatal flaw with the proposed definition. The requirement to have a protocol is likely an ok approach with an objective to achieve well understood communications and without the laundry list of things that must be in the document. Then given the RC-BA-TOP have stringent training requirements in PER-005, duplicating the requirements for good training and personnel proficiency evaluation lends itself to mandate a how to accomplish this for a specific task. In addition, the type of oversight implied in COM-003 is overreaching by NERC.

Group

Dominion

Connie Lowe

Dominion

No

Dominion requests clarification of "Command" verses "Directive". Neither "Command" nor "Directive" is defined in the NERC Glossary of Terms – some guidance/reference is needed. The word "command" seems more forceful, how does a command differ from a directive?

No

We appreciate the SDT's response to stakeholder comments in the previous draft, but still find sub-requirements R1.1, R1.2, R1.3 to be too prescriptive. We agree that these entities should mutually agree on (1) the language they will use to communicate and (2) the manner in which they will communicate time (24 hour, zone, zulu, etc). Below are some additional suggestions; Dominion also disagrees that Distribution Provider is listed as an Applicable Entity. Distribution Provider load is not



considered part of a BES Element or Facility. The SDT response to an earlier comment on this issue was that the SDT is aware of some DPs that operate BES equipment. If that is the case, then the standard should be applicable to only those DPs that operate BES Elements or Facilities – not the numerous DPs who do not. R2 should be clarified to read as follows: “For Distribution Providers, and Generator Operators that operate BES Elements shall have documented communication protocols for Operating Instructions that incorporate the following: R1.1 – In lieu of the English language requirement, Dominion recommends defining the use of a common language for verbal or written communications for Operation Instruction(s). English shall be the default language unless otherwise mandated by the entity’s document or mandated by law, regulation, or mutual agreement. Under R.1.2 and R1.1.3, It doesn’t matter (and may not be exactly clear) in what time zone the action will occur. A transmission line can cross time zone boundaries. What is important is that all operators involved have the same understanding of what is going to happen, when, and who is to do it. If a TOP that operates in two different time zones already has a protocol that establishes one zone or the other as their time standard, will they have to revise their protocol and use two different zones? Dominion would recommend the following language to read as follows: Clock-time communications shall be precise and include the following: Use of a 24-hour format or 12-hour format with AM/PM designation Specification of the applicable Time-Zone when multiple Time-Zones are covered Specification of Standard Time or Daylight Saving Time for Operating Instructions that will be implemented beyond the present/current day R1.4 – This requirement is overly redundant as it is also covered by TOP-002 R18. Under R.1.8 and R.1.9, Dominion feels this would create an unnecessary burden to document routine notifications that rely on a burst messaging system and do not have any effect on the Bulk Power System. A one-way burst messaging system is typically used to quickly inform/advise. It is designed as one-way to provide efficiency and should not be used for Operating Instructions. It would be much simpler to state that, “for the communications of Operating Instructions (regardless of the technology employed), the message must be repeated or confirmed by the recipient, and validated by the sender.” This approach focuses on “Operating Instructions” and not the technology employed. The requirement as currently written does not allow for exceptions due to routine or informative communications. (Example: NERC Alerts to the Industry based are based on severity level and do not always require receipt of message by the Registered Entity). R2 – Why not simply include DP and GOP in R1? R4 – Why not simply include DP and GOP in R3? Dominion also recommends defining 3 Part Communication in the NERC glossary as a result of this standard to help eliminate confusion. We need to have the System Operator maintain a focus on reliability through precise communications without unduly adding unnecessary requirements that create a burden without adding value. The mandatory use of Time-Zones for parties communicating within the same Time-Zone, or the use of Standard/Daylight Savings Time for current day activities adds an administrative burden with no value to reliability.

No

No, Dominion does not agree that these requirements are needed. As part of any certification to R1 and R2, we would expect the entity to perform some sort of analysis to determine whether its communication protocols meet the intent of the purpose stated for this standard. We do not believe imposing a mandatory requirement to perform this analysis inherently increases reliability.

No

For the reasons cited in the comments above

Implementation plan – page 1; Revisions or Retirements to Approved Standard – Proposed Replacement Requirement(s), states; “COM-003-1 Requirement R1 Part 1.1.1 R1. Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, and Transmission Operator shall have documented communications protocols that incorporate the following: “ Distribution Provider and Generator Operator needs to be removed, also after communications protocols, ‘for Operating Instructions’ needs to be added (to match the R1 Requirement, if accepted as written). Mapping document, Page 1; Comments, states: “R1 Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, Transmission Operator, and Transmission Owner shall have documented communications protocols that incorporate the following: [Violation Risk Factor: Low] [Time Horizon: Long-term Planning ]” Distribution Provider and Generator Operator needs to be removed. Also after communications protocols, ‘for Operating Instructions’ needs to be added (to match the R1 Requirement, if accepted as written).

Individual

Yes
Yes
Yes
Yes
While TAL is voting affirmative, we still have some reservations that Compliance Enforcement will cite specific instances of non-3-way communications as violations. However, we are ready to codify the need for standardized communications as defined in the purpose of the standard and Blackout recommendation #26 and thank the drafting team for their hard work in avoiding a "zero-defect" standard.
Individual
Agree
Midwest Reliability Organization (MRO) NERC Standards Review Forum (NSRF); AND Southwest Power Pool (SPP) RTO
Group
MRO NSRF
WILL SMITH
MIDWEST RELIABILITY ORGANIZATION
No
Yes
Yes
The NSRF would like to thank the SDT for allowing entities to identify, assess, and correct deficiencies per R3 and R4. The proposed COM-003-1 uses the verb of "issuing" in R1.1, 1.2, 1.3, 1.4, 1.5, 1.6, and 1.8, and uses the verb of "receiving" in R1.7, 1.9, 2.1, and 2.2. Since these are real-time actions and FERC Order 693, section 532 states in part, "This will eliminate ambiguities in communications during normal, alert, and emergency conditions", The NSRF recommends that the proposed definition of Operating Instruction have the words "in Real-time" at the end of the definition. The definition of System Operator also uses the term in real time in its definition. R1.3 Some entities already have an agreed upon time zone standard such as MISO. MISO operates on Eastern Standard Time (EST) and has a business practice manual stating that. Suggest the requirement be modified to state: "that unless the operating entities already have an agreed upon operating time zone" then operations occurring across time zone boundaries should include a time-zone designation. R1.5 Naming conventions for terminal equipment can be long. For example, switch, P2ZDQEN. In a switching order, this switch name may be mentioned several times and with each communication there is a required echo. The Alpha-numeric requirement is a one-size fits all solution and is not needed in all situations. Recommend the following as an alternative to the above language; The risk of unclear communication is addressed by R1.6 and R1.7. R1.5 should be reworded to require alpha-numeric clarifiers when reissuing an Operating Instruction to resolve a misunderstanding (per R1.6). R1.4 The SDT has not made the case for the reliability benefit of the requirement for standardized names. Again, this requirement is being retired from TOP-002. "TOP-002-2a Requirement R18 on the basis that "This requirement adds no reliability benefit. Entities have existing processes that handle this issue." This requirement creates a compliance process where one is not needed. Each entity will be required to document and maintain each facility name and who is the responsible owner for the facility name. Suggest this requirement be removed. A list would be required for "every" element of the BES between entities to assure that the proper names are used in all Operating Instructions. The NSRF

does not see the reliability benefit of using this naming convention since TOP-002 is already enforceable. R.1.8 and R.1.9, The NSRF feels this would create an unnecessary burden to document routine notifications that rely on a burst messaging system and do not have any effect on the Bulk Power System. A one-way burst messaging system is typically used to quickly inform/advise. It is designed as one-way to provide efficiency and should not be used for Operating Instructions. It would be much simpler to state that, "for the communications of Operating Instructions (regardless of the technology employed), the message must be repeated or confirmed by the recipient, and validated by the sender." This approach focuses on "Operating Instructions" and not the technology employed. The requirement as currently written does not allow for exceptions due to routine or informative communications. (Example: NERC Alerts to the Industry based on severity level and do not always require receipt of message by the Registered Entity). R1.8 states in part, " When issuing an oral Operating Instruction through a one-way burst messaging system...". The NSRF does not understand how an oral Operating Instruction can be made through a one-way messaging system? Unless, the Operating Instruction was captured on an answering machine or on an un-listened to voice mail message system. The NSRF views this as an electronic source to electronic source, as explained in the "note to auditor" within the proposed RSAW states, "Communication that is generated by an electronic source to another electronic source is not to be included as "oral or written Operating Instruction". If the NSRF is correctly assuming this, then no verbal or electronic confirmation is required. Please clarify. R2. As stated in the Purpose statement, "To provide System Operators uniform communications protocols that reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of BES." The NSRF concurs with this statement but questions why "all" DPs and GOPs are included in COM-003-1, Applicability section? The NSRF recommends that the Applicability section have 4.1.2 updated to read "For Distribution Providers, and Generator Operators that operate BES Elements shall have documented communication protocols for Operating Instructions that incorporate the following". On page 7, under Severe VSL it states: "The responsible entity did not include Parts 2.1 to 2.3 (3) of Requirement R2, in their documented communication protocols", part 2.3 does not exist, please clarify if this is to mean "part 2.2"? The NSRF recommends R3 to be updated to state: "Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement R1 in a manner that identifies, assesses, and corrects deficiencies, if any. Where the entity is identifying, assessing, and correcting deficiencies, the entity is satisfactorily performing the requirement. Justification for R3. The above rewrite requires implementing a deficiency process, which puts the focus of R3 on a deficiency process and not on implementing R1. The proposed language changes says to implement R1 and does not require a specific process for deficiencies. This is consistent with CIP standards Version 5 draft 3 and Generally Accepted Government Auditing standard strategies (the yellow book or GAGAS). The proposed second sentence provides clarity on satisfactory performance expectations in the requirement. Note this proposed language should also be applied to R4.

Individual

ACES Power Marketing

No

See ACES comments.

No

See ACES comments. Additionally, if it is determined that all of the elements need to be kept in the standard, the list of elements needs to be improved. Some of the elements are noun phrases (e.g., 1.1 and 1.2) and some are instruction statements. All elements should be noun phrases. It is grammatically improper for a list to have more than one type of phrase and, more significantly, may lead to confusion about compliance obligations. Instruction statements could be construed to require perfect performance of those elements, but that does appear to be the intent of the SDT.

No

See ACES comments.

No

See ACES comments.

See ACES comments.

Individual

Agree

Consolidated Edison and Northeast Power Coordinating Council
Individual
Agree
ATC endorses and supports those comments submitted by the Edison Electric Institute(EEI)on behalf of ATC and other REAC members.
Group
Hydro One
Sasa Maljukan
Hydro One Networks Inc.
Yes
No
<p>- We request clarification on the rationale for limiting communication protocol requirements for DPs and GOPs. We believe that the communication protocol should contain essentially the same elements regardless of the function an entity performs. Consequently, we recommend combining R1 and R2 to state: "Each responsible entity (BA, RC, TOP, DP, GOP) shall have documented communication protocols for the communication of Operating Instructions. This protocol should contain following elements: ..." - In order to improve readability we recommend that the Sub-Requirements R1.1 through R1.9 be re-arranged and grouped. For example, R1.7 and R1.9 deal with information receiving. They should be combined into one with two sub-requirements or bullets. The same can be done with R1.3, R1.6 and 1.8 which deal with issuing Operating Instructions. - Requirement 1.6: We suggest that for clarity purposes the SDT rewords the first bullet as follows: "Confirm that the recipient's response of the Operating Instruction as per R1.7 was accurate, or" - Requirement 1.9: The requirement asks the recipient to request clarification when the communication is not understood. We believe that the requirement is not measurable and as such it should be deleted. Additionally, it represents common sense because in any type of communication if one party does not understand all or part of the conversation, it is natural that he/she will ask for clarification. - Requirement 2.2: Hydro One recommends deleting this section for the same reasons mentioned in our comment for Requirement 1.9 (measurability). - It must be made clear in the requirements that functional entities can incorporate exceptions in their protocols, for example, to address emergencies. As proposed, both of these requirements are too prescriptive. The sub-requirements drill down too deeply into the communications needed to conduct system operations.</p>
No
<p>- It is unclear what identified reliability gap this Standard development project is intending to address, given the recent adoption of the new COM-002-3 along with the OC white paper on communications protocols. - Hydro One believes that, as written, the requirements are too prescriptive. We think that the SDT should concentrate and focus on specifying WHAT is required to achieve the reliability objective of the standard rather than on HOW to go about achieving such objective. With this in mind, we recommend deleting R3.1 through R3.4 and R4.1 through R4.4. Additionally, in line with our comment regarding R1 and R2 we believe that these two requirements should be combined as well. We would like to propose following wording: "Each responsible entity shall develop and implement a process for identifying and addressing deficiencies found in the adherence to the documented communication protocol specified in Requirements R1 and R2."</p>
Yes
The white paper written by the OC addressed the issues covered by this Standard.
Individual
No
See response to question 5.
No
See response to question 5.

No
See response to question 5.
No
See response to question 5.
<p>(1)We believe the drafting team has made some great strides to get this to be a useful standard for industry. The idea that we have a process for self-correction instead of self-reporting is a good concept. However, the reasons for our “No” vote is that the current wordings in the latest draft still need some changes to provide clarification. In this regard, we agree in principle with alternate language provided by NextEra (which we have modified slightly) and have also provided additional clarifying comments and recommendations. (R1) When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as an Operating Instruction, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as an Operating Instruction to the recipient. (R2) Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of an Operating Instruction shall repeat, restate, rephrase or recapitulate the Operating Instruction. (R3) Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues an Operating Instruction shall either: (a)Confirm that the response from the recipient of the Operating Instruction (in accordance with Requirement (R2) was accurate, or (b) Reissue the Operating Instruction to resolve any misunderstandings. (2)Along with the revised language proposed above, we request the drafting team to clarify the concept of what constitutes an Operating Instruction (or command) because the current understanding is too broad. We strongly believe that it should focus only on instructions related directly to BES reliability and which are not considered Reliability Directives covered under COM-002, and that it should not include normal or routine dispatching instructions of generators. (3)Given the revised language proposed in comment (1) above, the definition of Operating Instruction should be revised to replace the term 'System Operator' with 'Reliability Coordinator, Transmission Operator, or Balancing Authority', since these functions are the ones who will initiate the Operating Instruction. (4)"Transmission interface Element" and "Transmission interface Facility" both are not in the NERC glossary as defined terms and they need to be added to the NERC glossary or clearly defined in the standard. (5)We suggest a 24 month Implementation Plan upon approval of COM-003. This would allow Registered Entities time to develop their compliance processes. (6)We request that the drafting team consider the possibility of substituting the CIP v.5 'zero defects' language in COM-003 in order to minimize potential confusion. (7)We request that any of the "violations" shown in the VSL table on pages 7, 8, and 9 should not qualify for a high or severe level and at the most these should either be categorized as low or, but no more than, moderate level. (8)In the VSL table for R2, in the column under Severe VSL, it states that "The responsible entity did not include Parts 2.1 to 2.3 (3) of Requirement R2..." Requirement R2 does not have a Part 2.3, only 2.1 and 2.2. (9)If the drafting team retains the current language we are concerned about the prescriptive language in R1 and R2. We request that the drafting team in both R1 and R2 have the word “incorporate” changed to “consider” or “address”, thereby making the requirements less prescriptive.</p>
Group
Associated Electric Cooperative Inc - JRO00088
David Dockery - NERC Reliability Compliance Coordinator
Associated Electric Cooperative Inc - NCR01177
No
<p>The Operating Instruction definition is no help beyond the “existing” Operating Command definition, as the later exists neither within the NERC Glossary downloaded this morning, 9/20/2012, nor within the Clean COM-003-1 copy downloaded for final review. The proposed Operating Instruction definition would add value, were the BES Definition itself properly scoped to only those assets and functions that undoubtedly affect the reliable Operation of bulk power system. However the BES Definition is, by NERC and FERC desire and design, too broad, and so our industry must now attempt containment of compliance scope and risk within multiple standards, including COM-003-1. As a result, AECI determines this Operation Instruction definition to insufficient to responsibly exclude conversations that have little to no effect upon the BES reliability.</p>
No

AECI believes the sub-parts of this requirement to be overly prescriptive, whereas communication clarity should be the stated requirement. The sub-parts should appear only as examples of elements to be considered for improving clarity. Less is better, as evidenced by additional qualifiers already necessary to sub-requirement R1.1. (see suggested language in comment 5 below.)

Yes

This could work, were wording per concepts already suggested per questions 1 & 2 and question 5, such that the documented evidence of an effective program, precludes violations of any individual requirement. In interest of providing our industry with greater consistency in wording and format throughout future standards, AECI strongly suggests that this SDT review the current draft release of CIP Version 5's draft (for ballot), and similarly format these requirements. However please see AECI's general observations concerning COM-003-1 in comment 5 below.

No

It could be appropriate, were the expectations properly bounded similar to the wording outlined for Question 5 below.

In general, AECI believes that NERC and FERC should completely reevaluate the necessity of COM-003-1. COM-003 still appears to overreach the cited 2003 blackout recommendation #26, whereas industry-approved changes to COM-002 do meet the expectation, pertaining to verbal communication protocols: "Tighten communications protocols, especially for communications during alerts and emergencies..." However AECI also offers the following observations: 1) Recommendation #26 is hardly top of the list. (Lessons-learned is that future industry recommendations really must be careful in what they recommend for improvements, because those can and will be extrapolated into future requirements.) 2) Recommendation #26 "especially" highlights alerts and emergencies, not normal operational communications, yet the scope of COM-003 pertains to any normal communication that would alter the state of anything BES, including mundane operational conditions that have questionable effect upon the BES reliability. 3) In AECI's opinion, there is greater risk of non-compliance with this standard for the industry, than non-compliance with the NERC BOT in their insistence to move it forward. The EEI suggested wording, recited below, helps to mitigate this risk, but still at cost of additional and often unnecessary communication overhead. Specific to the wording of COM-003-1 draft, AECI does believe the direction of EEI's wording, submitted in comment response to this draft, could help the industry with mitigating some risk of non-compliance to the proposed standard. In lieu of our being able to view EEI's posted comments, we recite them below:

=====  
Begin the EEI draft as circulated in emails earlier this week=====  
R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as an Operating Communication, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as an Operating Communication to the recipient. R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of an Operating Communication shall repeat, restate, rephrase or recapitulate the Operating Communication. R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues an Operating Communication shall either: • Confirm that the response from the recipient of the Operating Communication (in accordance with Requirement R2) was accurate, or • Reissue the Operating Communication to resolve any misunderstandings. R4 Absent a possible violation that resulted in (or could have resulted in) a significant risk to the Bulk Electric System, no violation of R1 or R3 and its subrequirements shall be found, provided that the Balancing Authority, Reliability Coordinator, and Transmission Operator has implemented a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R1 and R3 that: 4.1. Identifies potential deficiencies, 4.2. Assesses the deficiencies found, 4.3. Corrects the deficiencies, and 4.4. Evaluates the process based on deficiencies found external to Part 3.1 and either • implements modifications to the process when the evaluation determines that modification of the process is necessary to address the deficiencies found; or • demonstrates that no modification to the process is necessary to address the deficiencies. R5 Absent a possible violation that resulted in (or could have resulted in) a significant risk to the Bulk Electric System, no violation of R2 and its subrequirements shall be found, provided that the Distribution Provider and Generator Operator shall implement a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R2 that: 5.1. Identifies potential deficiencies, 5.2 Assesses the deficiencies found, 5.3. Corrects the deficiencies, and 5.4. Evaluates the process based on deficiencies found external to Part 3.1 and either • implements modifications to the process when the evaluation determines that modification of

the process is necessary to address the deficiencies found; or · demonstrates that no modification to the process is necessary to address the deficiencies. =====End the EEI draft as circulated in emails earlier this week=====

Individual

No

The definition of the new term, "Operating Instruction," uses the NERC Glossary term "System Operator," which is defined as "An individual at a control center...whose responsibility it is to monitor and control that electric system in real time." The lack of clarity regarding what constitutes a control center leaves doubt as to which instructions would be covered by the standard. Another disagreement with the proposed definition of "Operating Instruction" is that it inappropriately imposes three-part communication for routine communications of changes of generation output. Common operating communications to and from generation plants should not be considered compliance events requiring the use of alphanumeric clarifiers. Such a requirement may shift operators' focus from providing proper information under critical situations to using the specified terms for every minor communication, distracting them rather than sharpening their concentration. The standard should specify the classes of TO/TOP-to-GOP communications that constitute compliance events, the formal designations by which such communications can be recognized, and the parties authorized to issue such commands.

No

Clarification is needed regarding what GOP procedures are to cover, ref. our comments to question #1 above.

No

There is no statement of periodicity in R4, leaving entities guessing until the time of audit regarding the criteria for sufficient review. R4 is also open-ended regarding scope, potentially requiring review of every voice communication for every plant for the audit period. Everyday communications do not merit such scrutiny, which would reduce rather than improve the attention that can be given to matters of significance. All standards (not just COM-003-1) should clearly specify pass/fail criteria and the associated evidence requirements. R4 should be split into DP and GOP sections, with the GOP requirement being: R4. Each Generator Operator shall conduct in each calendar year a review session with the operations function for registered entities, regarding the documented communication protocols specified in Requirement R2. Corrective action shall be implemented and documented for any potential deficiencies coming to light as a result of this review.

No

The VRFs and VSLs are divided into long-term planning and operation planning categories. These terms are not explained in the standard, so the difference between them is unclear. They do suggest however that, in accordance with our comment #1 above, this standard is not meant to apply to routine transmission system operator-to-plant communications.

The SDT received many comments questioning the need for the standard. They are relying on a single EPRI study that claims 19% of 400 studied switching errors (76 events) resulted from miscommunication, but this statistic is meaningless without context. Specifically: -Did any of these 76 events involve GOPs? If not, is it appropriate to make COM-003-1 applicable to these entities at all, much less for routine communications of minor importance? -How many events involved oral communication, vs. written miscommunication? Of the oral miscommunications, how many involved miscommunication between separate entities, as opposed to internal entity miscommunication? After all, internal miscommunications, which may be the vast majority of the events, will not be covered by the standard.

Group

ISO/RTO Standards Review Committee

Albert DiCaprio

PJM

No

The proposal to standardize the meaning of "Operating Instruction" will likely cause more problems

than it solves. The concept of "to change or preserve the state, status..." is ambiguous enough for CEAs to still apply the requirement to virtually all verbal conversations. Such a proposed definition may help clarify what the SDT intends to address, however, by making such a common word a Glossary term potentially will result in the Industry having to redefine their own manuals and procedures in which they use the phrase "Operating Instruction". For years, system operators have dealt with operating instructions on a daily if not minute basis. To them, operating instructions are necessarily a communication to alter or preserve the state and status of the BES condition or BES Element/Facility. Having a defined term, and calling such communication a "Command" is totally unnecessary, and can confuse operators from what they understand to be the meaning of operating instructions. Any proposed standard must clearly limit the application of the communication protocol requirements to communications that impact reliability. As proposed, the standard does not do this. Based on the existing language and the proposed Defined term Operating Instruction, the scope could readily be interpreted to include numerous communications that have nothing to do with system reliability. To remedy this, the SDT should either revise the proposed term in accordance with Order 693's limited scope, or delete this term and focus the standard on reliability directives, which is in line with Order 693.

No

The SRC fully supports the concept that certain aspects of our business are better viewed based on the internal controls used by the entity. The SRC recognizes that the intention of the SDT is to be flexible. However, the nature of a standard is to eliminate that flexibility by not addressing how compliance will be monitored in the controls approach and by prescribing specific items for inclusion in the protocols. An entity is less likely to create a highly sophisticated best practice protocol if the RSAW subjects that entity to penalties for implementing that protocol. While presenters at the COM-003 Webinar presentation stated that violations are not based on implementing the steps of the protocols, the draft RSAW (dated July 2012) states: If the CEA finds in subsequent, follow up audits or other compliance monitoring activities that the same or similar deficiencies continue to occur after the entity was provided the feedback by the CEA, the CEA will seek to understand what changes the entity made to their process based on prior recommendations. If changes to the entity's process are not implemented to identify, assess and correct deficiencies, the Auditors may make a determination of possible non-compliance with Requirement 3, Part 3.4. The proposed requirements (R1 and R2) are a significant improvement from the previous postings. Requirement R1 is still too prescriptive. The elements within R1 make the requirement a checklist of rules and do not add to the reliability of the power system and do not address the reliability needs requested in Recommendation 26 and Order 693. The reliability need for clear protocols was in reference to "situational awareness" issues (i.e. when is the system in jeopardy and who makes that decision to respond - See references provided below). The reliability need was not related to common verbal mistakes. The proposed requirements do not address those needs. The SRC believes that IRO-016-1 does address those issues and needs. 2003 Blackout Report Section: Data Exchanged for Operational Reliability (pages 50-51) Voice Communications: Voice communication between control area operators and reliability is an essential part of exchanging operational data. When telemetry or electronic communications fail; some essential data values have to be manually entered into SCADA systems, state estimators, energy scheduling and accounting software, and contingency analysis systems. Direct voice contact between operators enables them to replace key data with readings from other systems' telemetry, or surmise what an appropriate value for manual replacement should be. Also when operators see spurious readings or suspicious flows, direct discussions with neighboring control centers can help avert problems like those experienced on August 14, 2003. SRC COMMENT - This is clearly focused on establishing communications where they potentially may not occur. It is not focused on prescribing particular terminology or protocols based on the belief that existing practices are inadequate. Page 109 Effectiveness of Communications Under NORMAL conditions, parties with reliability responsibility NEED TO COMMUNICATE important and prioritized information to each other in a timely way, to help preserve the integrity of the grid. This is especially important in emergencies. During emergencies, operators should be relieved of duties unrelated to preserving the grid. A common factor in several of the events described above was that information about outages occurring in one system was not provided to neighboring systems. SRC COMMENT - The above discussion is not related to terminology or repeating information. The concern focuses on the failure to provide appropriate information, which, as discussed above, as well as in Order 693, is focused on "important" and "prioritized" information. This is a limited set of communications that the proposed standard's new term Operating Instruction exceeds in scope. Pages 161-162 26. Tighten communications protocols, especially for



communications during alerts and emergencies. Upgrade communication system hardware where appropriate. NERC should work with reliability coordinators and control area operators to improve the EFFECTIVENESS of internal and external communications during alerts, emergencies, or other critical situations, and ENSURE that all key PARTIES, including state and local officials, RECEIVE timely and accurate information. NERC should task the regional councils to work together to develop communications protocols by December 31, 2004, and to assess and report on the adequacy of emergency communications systems within their regions against the protocols by that date. On August 14, 2003, reliability coordinator and control area communications REGARDING CONDITIONS in northeastern Ohio were in some cases ineffective, unprofessional, and confusing. INEFFECTIVE COMMUNICATIONS contributed to a LACK OF SITUATIONAL AWARENESS and PRECLUDED EFFECTIVE ACTIONS to prevent the cascade. Consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability. Standing hotline networks, or a functional equivalent, should be established for use in alerts and emergencies (as opposed to one-on-one phone calls) to ensure that all key parties are able to give and receive timely and accurate information. [SRC COMMENT: Recommendation 26 is clearly about communicating information about "conditions" and not about communicating the commands to a particular "asset". The proposed standard is unresponsive to the issues raised in the Blackout and by FERC. By not addressing the core reliability issues raised by the very report that drove this Project, the SDT is jeopardizing the reliability of the power system. The SRC strongly urges the SDT to reconsider this posting and to either rescind the Project and accept that IRO-016-1 has adequately responded to the Blackout Report, or to revise its proposal to directly address the issues noted above. If R1 is not rescinded as suggested above, then the prescriptive subparts 1.1 thru and including 1.6 should be removed.

No

The SRC fully supports the concept that functional entities' internal controls be used to monitor the effectiveness of their own protocols. The SRC suggests that any requirement to implement a plan may significantly reduce the incentives to create more effective protocols because of the Compliance uncertainty related to measuring effective internal controls. Requirement 3 requires entities to implement their process and to identify deficiencies with adherence to the protocol. The less complex a plan is the lower the number of deficiencies and therefore the lower the number of reports. Moreover, the RSAW states that the applicable entity could be found non-compliant if the entity did not follow an auditors suggested changes to remedy those deficiencies. Thus this standard would incent writing simple protocols.

No

The SRC does not agree with the VSLs of R3 and R4 . The SRC feels that it is not binary and actually fits the Requirements with Parts that Contribute Unequally to the Requirement in the VSL guideline document. While part 3.3 is the most critical, an entity would certainly not get any reliability benefit if you don't do parts 3.1 – 3.3 or 3.3 in itself, which could be a severe VSL. But if an entity performs parts 3.1 – 3.3 and does not perform part 3.4, it should not be a severe VSL because you are getting a substantial amount and majority of the reliability benefit from performing 3.1-3.3. Failure to do part 3.4 should be a high VSL perhaps, but it is not all binary. If an entity fails to do 3.2, it may be a medium only.

The SRC requests that the SDT include a milestone in the implementation plan that requires NERC and the industry to reach agreement on how internal controls will be monitored by the CEAs BEFORE this standard is effective. The SRC believes that this standard could be improved by modifying the subparts of R1 and R2 to include parts that are communication protocols directly relevant to the improving situational awareness and shortening response time. Requirements R1.1, 1.2 in theory shorten response time by providing a commonly understood language and clock format for Operating Instructions but are unnecessary in practice. The modification includes the removal of: • R1.3 as it does not improve situational awareness or shorten response time. This is such a small population of Operating Instructions and any real time Operating Instructions will be immediate. This is overly prescriptive and provides little if any reliability benefit. This is not a documented reliability concern in any investigation, FERC Order, Blackout report, etc. that the SRC is aware of. • R1.4 as it does not improve situational awareness or shorten response time. It may actually confuse entities that have established practices that may have to make changes to accommodate this requirement part. This is overly prescriptive and provides little if any reliability benefit. This is not a documented reliability concern in any investigation, FERC Order, Blackout report, etc. that the SRC is aware of. • R1.5 as it does not improve situational awareness or shorten response time. It may actually confuse entities

that have established practices that may have to make changes to accommodate this requirement part. This is overly prescriptive and provides little if any reliability benefit. This is not a documented reliability concern in any investigation, FERC Order, Blackout report, etc. that the SRC is aware of. • R1.6 and R1.7, and 2.1 as it does not improve situational awareness or shorten response time. It actually lengthens response time and does not improve situational awareness as it does not address the content of the communication. This is already addressed through COM-002-3 and will only add to confusion for entities to have a COM-003-1 requirement in the overlap it creates. This is not a documented reliability concern in any investigation, FERC Order, Blackout report, etc. that the SRC is aware of where lack of 3 part communication directly contributed to a adverse reliability impact on the BES. The NERC OC established guidelines that outline best practices for industry and are sufficient to communicate such best practices. As the drafting team has communicated in its previous white paper, a significant amount of industry already employs 3 part communication during normal and emergency situations. Requirements R1.8, 1.9, and 2.3 could shorten response time by providing a protocol for quickly disseminating information from one to multiple parties. The drafting team should craft the standard to address communication between functional entities and not within entities to properly address FERC Order and Blackout Recommendation that clearly speaks to communication protocols between entities. To not do so is expanding upon the scope of the SAR, creates confusion, and is not focusing on the reliability concerns cited in the FERC Order 693 and Blackout Report Recommendation #26. The draft RSAW introduces subjective concepts as well as a new requirement. An auditor is to: • The CEA is to ... • Understand the process .... • The CEA is to review a sample of the entity's communication activities to verify whether the entity is identifying, assessing, communicating and correcting deficiencies. If the entity had implemented corrections, the sample is to be pulled from activities conducted after any corrections to the entity's process were implemented or, if the correction had been recently implemented, the CEA is to consider the impact the correction will have when reviewing the samples. This sample size will be based on the auditor's confidence in the entity's ability to identify, assess, and correct its deficiencies. • Where the auditor ... • If an auditor cannot verify that the entity is adequately identifying [SRC: suggest changing "is" to "is not"], assessing, and correcting its own deficiencies due to limitations in its process, the auditor will not have a finding of non-compliance. The auditor will provide the entity with recommendations as necessary. If the CEA finds in subsequent, follow up audits or other compliance monitoring activities that the same or similar deficiencies continue to occur after the entity was provided the feedback by the CEA, the CEA will seek to understand what changes the entity made to their process based on prior recommendations. ["same or similar deficiencies" is subjective and opens the compliance to CEA vision of what is "similar".] New Requirement: If the CEA finds in subsequent, follow up audits or other compliance monitoring activities that the same or similar deficiencies continue to occur after the entity was provided the feedback by the CEA, the CEA will seek to understand what changes the entity made to their process based on prior recommendations. If changes to the entity's process are not implemented to identify, assess and correct deficiencies, the Auditors may make a determination of possible non-compliance with Requirement 3, Part 3.4.

Group

Southern Company

Antonio Grayson

Operations Compliance

No

Southern does not agree with the definition of "Operating Instruction" as it continues to be too broad and encompass routine communications between System Operators and other system personnel and other functional entities. While Southern agrees that 3-part communications is a good utility practice that has been used by operating entities for many years, Southern disagrees with the broadness of "Operating Instructions" as in some of these cases, 3-part communications are not required to protect the reliability of the system. In fact, this prescriptive requirement, if used on all communications that could fall under "Operating Instructions" (i.e. very general information at times), would take System Operators time from other tasks that are more critical to maintaining reliability. Please note that there are numerous (i.e. in the millions) of conversations between operating entities each year and some important tasks could be missed or delayed if required to follow a standard script for everything. If the SDT agrees with Southern's comments related to Requirements 1 and 2, then the definition of "Operating Instruction" would be unnecessary as each operating entity would define the times when

3-part are necessary, which in Southern's case, would be broader than emergency communications and reliability directives, but not so broad that it would cover general exchange of information between operating entities.
No
Southern supports having a documented communications protocol, but we do not support the prescriptive elements of this version of the standard. The protocols should give the entity the flexibility to define the conditions where they expect 3-part communications and the verbal cues they use to tell the recipient they expect 3-part communication or that action is required. Southern suggest the following changes to R1 and R2 and could support these changes in future drafts of this new standard.
Yes
Provided that the SDT incorporate the changes suggested for R1 and R2, Southern generally agrees with the concept of implementing a process to identify and correct deficiencies without compliance exposure for each deficiency. However, this is a new concept and we do have questions as to how it will be implemented. For example, how many discrepancies would it take for an entity to identify before requiring a self report rather than waiting to present the log of deficiencies found and corrected during an audit?
Yes
While Southern agrees that 3-part communications is a good utility practice that has been used by operating entities for many years, Southern disagrees with the broadness of the types of communications the SDT is suggesting for requiring 3-part communications. In some of these cases, 3-part communications are not required to protect the reliability of the system. In fact, this prescriptive requirement, if used on all communications that could fall under "Operating Instructions" (which can be very general information at times), would take System Operators time away from other tasks that are more critical to maintaining reliability. Please note that there are numerous (i.e. in the millions) of conversations between operating entities each year and some important tasks could be missed or delayed if required to follow a standard script for everything.
Individual
No
Previous version has a description regarding Reliability Directives. This version does not address Reliability Directives and the relationship to an Operating Instruction. Is a Reliability Directive a subset of Operating Instruction? Is a "directive," as mentioned in several standards, an Operating Instruction?
No
This Standard does not address electronic Operating Instructions, thus creating a possible gap. For example, ERCOT (acting as the BA) uses ICCP links to issue electronic dispatch instructions to generators (ERCOT Protocol 6.5.7.4). The recipient of the electronic dispatch instruction must acknowledge receipt of the dispatch instruction to ERCOT electronically, within one minute and must include the receiving operator's identification with the electronic acknowledgement (ERCOT Protocol 6.5.7.8(5)). ERCOT regional rules have similar language as current NERC standards regarding compliance with dispatch instructions, which include electronic dispatch instructions (ERCOT Protocol 6.5.7.9). Consider adding "Reliability Coordinator" or "Functional Entities" in 1.1 statement where TOPs and BAs are singled out: "Transmission Operators and Balancing Authorities may use an alternate language for internal operations."
No
If a deficiency is identified and then training is provided to attempt to correct it, what happens if the same deficiency is identified again? Is the entity considered to have failed to correct its identified deficiency? Does the entity need to file a self report when the second deficiency occurs? Texas RE agrees with the premise of having a process for identifying issues, but at some point if a pattern of deficiencies continues, when does a violation occur?
No
R2 Severe VSL references "Parts 2.1 to 2.3 (3)" when a "2.3" does not exist (this issue is also in the

VRF/VSL Justification document). The VSLs for R3 and R4 say nothing about assessing and correcting identified deficiencies per 3.2, 3.3, 4.2 and 4.3.

(1) Requirements R2 and R4 should also apply to Load-Serving Entities (TOP-001-2 R1, VAR-001-3 R5), Purchasing-Selling Entities (VAR-001-3 R5), and Generator Owners (VAR-001-3 R11, VAR-002-1.1b R5) so that all entities receiving Operating Instructions are covered. For M3 and M4 the process should be included as well as results. (2) Capitalize "responsible entity" in VSL language for R1 and R2 as was done in R3 and R4. (3) RELIABILITY GAP: We believe a reliability gap exists because no standard generally requires compliance with Operating Instructions, Reliability Directives and other valid instructions. We realize this issue may be considered to be outside of the scope of this project, but we are quite concerned that reliability is compromised because operating entities can elect to ignore valid instructions for economic or other reasons, and that much more attention is being given to the form of the instructions than to requiring that they be obeyed. VRF/VSL JUSTIFICATION: (4) In the VRF/VSL Justification document there is only reference to 3 requirements in the COM-003-1 Standard (page 5). There are 4 requirements. (5) The "Low" VRF rating for R1 and R2 seems unjustified based on the following points: 1) In the VRF/VSL Justification document there is the following statement at the top of page 5: "Requirements R1, R2 and R3 were assigned a "Medium" VRF." 2) In the Rationale and Technical Justification document there is the following statement: "Because Operating Instructions affect Facilities and Elements of the Bulk Electric System, the communication of those Operating Instructions must be understood by all involved parties, especially when those communications occur between functional entities. An EPRI study reviewed nearly 400 switching mishaps by electric utilities and found that roughly 19% of errors (generally classified as loss of load, breach of safety, or equipment damage) were due to communication failures. This was nearly identical to another study of dispatchers from 18 utilities representing nearly 2000 years of operating experience that found that 18% of the operators' errors were due to communication problems." If there is not a process, would there not be more errors? 3) In the VRF/VSL Justification document there is the following statement: "In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System" and "Communication protocol and facilities" is listed. R1 and R2 attempt to address this issue. (6) In the VRF and VSL Justification document, at page 15 and page 20, the FERC VRF Guideline 3 Discussion is inconsistent with R3 and R4 language respectively (R3 and R4 do not call for "use of formal three part communication").

Individual

MidAmerican Energy supports MRO NSRF comments

No

MidAmerican has concerns that Operating Instructions as defined is too broad.

Yes

Yes

Yes

MidAmerican would recommend the following changes to R3 as a primary consideration to allow COM-003-1 to move forward. COM-003 is only acceptable as a non-zero defect standard. R3 should be rewritten as follows: Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement R1 in a manner that identifies, assesses, and corrects deficiencies if any. Where the entity is identifying, assessing, and correcting deficiencies, the entity is satisfactorily performing the requirement. Make similar changes to R4. R3 as posted requires implementing a deficiency process, which puts the focus of R3 on a deficiency process and not on implementing R1. The proposed language changes focus the requirement to implement R1 and does not require a specific process for deficiencies. This is consistent with CIP standards Version 5 draft 3 and Generally Accepted Government Auditing standard strategies (the yellow book or GAGAS). The proposed second sentence provides clarity on satisfactory performance expectations in the requirement.

Individual

Agree

We agree with and support the comments submitted by NPCC, the SRC, and ERCOT.

Individual
Yes
Yes
Yes
Yes
Yes
Puget Sound Energy appreciates the opportunity to submit comments on the proposed standard, as well as the work of the standards drafting team in developing a workable approach to the implementation of operating communication protocols. The purpose statement in the proposed standard uses the term "System Operators". As defined in the NERC Glossary, System Operators include individuals who work for Balancing Authorities, Transmission Operators, Generator Operators and Reliability Coordinators. However, the standard also applies to Distribution Providers, an entity not covered by the term System Operator. As a result, I recommend that the standard drafting team expand the purpose statement to accurately reflect the applicability of the standard. Perhaps the statement could be revised to begin "To provide individuals who may issue or receive Operating Instructions with uniform communications protocols...".
Group
APPA, LPPC and TAPS
Allen Mosher
American Public Power Association
Yes
Yes
Yes
In response to comments received during the last comment period and in an effort to draft a standard that focuses on risk control rather than zero tolerance metrics, the drafting team has taken a new approach to COM-003-1. This version requires responsible entities to establish communication protocols and then implement a process for identifying, assessing, and correcting deficiencies with adherence to those communication protocols. This new standard is drafted such that the entity is to ensure that its process is working, rather than requiring the demonstration of absolute compliance with communication protocols at all times and identifying each deficiency as a possible violation. In addition, this version of the standard was drafted in conjunction with the development of the Reliability Standard Audit Worksheet (RSAW). The parallel development of the standard and the RSAW provided the opportunity for the drafting team to consider the compliance implications of the language in the standard and to offer input into the language of the RSAW. APPA staff, LPPC and TAPS have reviewed the proposed standard and have not identified any material concerns and support the drafting team's new approach. We of course urge the drafting team to give full consideration to all substantive comments on the proposed standard and RSAW. We do anticipate that commenters will identify editorial changes that will clarify the proposed standard. Such changes are unlikely to affect our support for the standard.
Group
FirstEnergy
Sam Ciccone
FirstEnergy Corp.

No
Although we believe the definition is on the right track, the wording may inadvertently cover many conversations between operators and personnel that do not impact the reliable operation of the BES. We ask the team to consider clarification, examples, or inclusions/exclusions much like the new definition of BES. For instance, tasks that may involved transmission lines associated with IROLs or SOLs, and other critical tasks.
No
We support many of the protocols as a minimum to standardize communications across the industry. However, we believe some of the sub-parts of R1 contain language which may be too prescriptive and in some cases language is missing for special situations. ♣ 1.2 – We understand the importance of knowing the time of day but an operator can specify “am” or “pm” instead of using the 24 clock format. The requirement should be less prescriptive to allow this. ♣ 1.3 – This requirement as written may confuse the parties communicating. We suggest it be reworded in a simple fashion as follows: “Assure both parties understand the correct time being used in the communication.” ♣ When the receiver of an operating instruction is unable to comply they should be allowed to notify the operator of the restriction (e.g. based on safety, loss of life, or damage to equipment) so that the operator is able to implement other actions to perform the desired operation. This should be added in the language requiring three-part communication in requirements R1 and R2.
Yes
FirstEnergy supports this new concept being introduced by NERC. It allows entities to sharpen their internal controls while not being penalized for minor non-compliance situations that do not impact the BES. The only question we raise is how this will be implemented in the CEAP. The draft RSAW for COM-003-1 is silent on this issue and we ask that NERC give more guidance on it as this paradigm develops.
Yes
♣ To have clear communication protocols NERC must develop clear and concise standards that include non-prescriptive language that provides entities with the latitude to operate their systems as they are accustomed to while requiring a heightened awareness of the importance of clear communications while operating those systems. From discussions in various industry forums, there seems to be much confusion as to the intent of COM-003 versus COM-002. For instance, is a Reliability Directive as defined by the Project 2006-06 team in COM-002-3 a subset of an Operating Instruction as defined in COM-003-1? If so, then we recommend the retirement of COM-002-3 as a standard since COM-003-1 covers all communications. One standard that requires 3-part communication is sufficient and no reliability gap would exist if COM-002-3 is retired. FE and the industry want to contribute to effective reliability and believe tight standardized communication protocols are critical. But if confusion and needlessly burdensome requirements result from the development of these COM standards, we believe this could have an adverse affect on reliability. In COM-002-3, requiring an operator to pause to determine if he or she should utter the phrase “this is a Reliability Directive” can escalate an emergency situation and not help alleviate it. Regardless of the situation, when the Operator issues a command it must be carried out by the receiver with confirmation that the receiver has understood what needs to be done and when it needs to be done. COM-003-1, with some wording adjustments, accomplishes this reliability goal. We support COM-003-1 Draft 3, on its own without COM-002-3, along with some adjustment to requirement language to relieve prescriptiveness and needless language while adding some clearer guidance on the internal control requirements detailed in R3 and R4. ♣ The measures as proposed simply reiterate the requirement and provide no useful information. We suggest they either be removed or be elaborated to include useful examples of evidence and possibly incorporate some of the information found in the RSAW.
Individual

Nowhere in the Blackout Report, Order 693, nor the SAR does it indicate that communication protocols used during normal and emergency operations need to be identical - only that there are standardized communications for normal operations and standardized protocols for emergency communications. The term Operating Instruction as included in the requirements of the draft standard does not take into consideration that communications during alert or emergency conditions have a heightened need to be effective (Blackout Report Recommendation 26). A much better approach is to rely on operating personnel to determine when an Alert or Emergency condition exists to change from standardized communication used for normal operation to a different standard protocol for emergency operation. Operating personnel have substantial training requirements, including explicit requirements for training on emergency operations, which provide the basis for allowing operating personnel to make this determination. A standard phrase to identify that protocols for Alert or Emergency conditions are to be used (such as "I am issuing a Reliability Directive") would trigger the need to switch from protocols for normal operation to protocols for emergency conditions. This approach also addresses concerns that complacency will set in if identical protocols are used for normal and emergency communications. Active listening is much more likely when using a protocol that is used only for emergency conditions which occur much less frequently than normal operations.

Individual

Yes

Yes

No

The current wording necessitates creating a process to evaluate a process that evaluates protocols. We believe this is unnecessarily cumbersome and confusing. The addition of extra controls from the last version to this version lends nothing to improving reliability or improving the function of the standard. Accordingly, the NERC SC recently approved the SAR for the Paragraph 81 initiative to eliminate certain requirements from the Reliability Standards with little effect on reliability. The SAR identifies criteria to be used to identify those requirements that could easily be identified for removal. It would seem that the draft R3 and R4 would meet the criteria identified for P81. GTC recommends the deletion of R3 and R4. Alternatively, at a minimum, we suggest improvements to requirements R3 and R4 as currently drafted. We suggest changing all instances of the word "process" to "protocols" in both part 4s and also removing "found external to Part 4.1" from both part 4s. Finally we suggest removing parts 2 and 3 simply to keep the requirements from becoming redundant with the changes made to their respective part 4s.

No

The VSLs for requirements R3 and R4 are too severe. We understand that they were designated as binary, which led them to automatically be designated as severe VSLs. However, it is our position that these requirements are no more binary than requirements R1 or R2 and that their VSLs should be rewritten. We propose: Moderate VSL: The responsible entity did not include one (1) of the four (4) parts of Requirement R3 in its implementation of a process for identifying deficiencies with adherence to documented communication protocols specified in Requirement R1. High VSL: The responsible entity did not include two (2) of the four (4) parts of Requirement R3 in its implementation of a process for identifying deficiencies with adherence to documented communication protocols specified in Requirement R1. Severe VSL: The responsible entity did not include three (3) or more of the four (4) parts of Requirement R3 in its implementation of a process for identifying deficiencies with adherence to documented communication protocols specified in Requirement R1 or did not have such a process.

Individual

Agree

please see FMPA's formal comments.

Group

PPL Corporation NERC Registered Affiliates

Brent Ingebrigtsen
LG&E and KU Services
No
<p>The PPL Companies do not agree with the proposed definition of Operating Instruction as the standard appears to be focused on imposing three part communications on the industry for all normal / routine operating communications. Imposing requirements for three part communication for Operating Instructions may have the effect of elevating all communications to the state of Reliability Directive (as defined in COM-002-3). Splitting communications requirements across different standards introduces the potential of unnecessary confusion. Communications involving the changing of the state, status, output, or input of a facility, occur very frequently and potentially even more frequently on preserving the state of the system. Many of these communicated changes, in and of themselves, would not have an impact on reliability. However, there are times (examples could be during a DCS event, an SOL, or an IROL) when even seemingly insignificant changes to the system must be made promptly, although the system has not reached the level of emergency or instability. It is at these times, "when action must be taken", which the miscommunication of the action or inaction could lead to amplifying the risk to the system. Further, the focus of the standard is on operations and therefore the communications subject to the requirement should be those requiring action in the Real-time Operations Time Horizon. The definition of which is included in the NERC document located at <a href="http://www.nerc.com/files/Time_Horizons.pdf">http://www.nerc.com/files/Time_Horizons.pdf</a>. Suggest modifying the proposed definition as follows: Operating Instruction – Command, other than a Reliability Directive, from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System in which action must be taken in the Real-time Operations Time Horizon.</p>
No
<p>The PPL Companies do not agree with the proposed requirements as they are administrative in nature. Should the requirements remain, we suggest the following be considered: R.1. Each Responsible Entity shall implement, in a manner that identifies, assesses and corrects deficiencies, one or more documented communication protocols that address each of the following Requirements R1.1 through R1.3 applicable to such Responsible Entity: R1.1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed pursuant to an Operating Instruction, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the communication as an Operating Instruction to the recipient. R1.2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of an Operating Instruction shall repeat, restate, rephrase or recapitulate the Operating Instruction. R1.3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues an Operating Instruction shall either: • Confirm that the response from the recipient of the Operating Instruction (in accordance with Requirement R1.2) was accurate, or • Reissue the Operating Instruction to resolve any misunderstandings. For purposes of clarity, the term "implement" in Requirement R1 does not mean that there were no failures to follow the protocol in specific cases. The following language is suggested for the measures related the proposed R1.1 through R1.3: Measures The Responsible Entity shall have documented communications protocols developed for Requirements R1.1 through R1.3. Additional examples of evidence may include, but are not limited to, the Responsible Entity: • trained or otherwise educated the affected personnel about the protocols • established controls to identify failures to follow the protocols • assessed identified failures to follow the protocols • took appropriate actions to correct the identified failures</p>
No
<p>The PPL Companies agree with the concept of internal controls and/or the elimination of zero defect requirements. However, the concept of internal controls to identify, assess, and correct deficiencies related to documented communications protocols should be imbedded in R1 as proposed in our response to question 2. We do not agree with the specific details in the internal controls/elimination of zero defect language that is currently included in R3.1 – R3.4 and R4.1 – R4.4. Incorporating the new language proposed by the PPL Companies in R1 makes COM-003 more consistent with the approach being followed in the NERC CIP Version 5 standards. The added language proposed by the SDT in R3 and R4 creates uncertainty as to whether COM-003 is imposing greater requirements than CIP Version 5 regarding identifying, assessing, and correcting deficiencies and the documentary evidence</p>



that is required.

It appears the SDT may be basing the perceived need for communication protocols during normal operations on a misunderstanding of the findings in an EPRI report. The SDT responded to multiple comments questioning the need for communication requirements during normal operations by quoting a paper (Bilke, T., Cause and prevention of human error in electric utility operations, Colorado State University, 1998) that cited an EPRI study. The SDT stated, "[w]e believe the more relevant and significant conclusion to be that, of 400 switching mishaps, 19% were caused [by] communication failures." It is concerning that the SDT may be basing their conclusions on erroneous data. The EPRI report in fact indicates only 14.5% were "cited" as "faulty communication", not necessarily "due to" or "caused" as the SDT response would indicate. Nearly half of those 58 (14.5%) of the 399 incidents reviewed resulted from most commonly not communicating "critical information", i.e. failing to "call in" or communicate in the first place. The EPRI report reads as follows: "Faulty communications were cited [emphasis on "cited"] in 58 (14.5%) of the 399 incidents reviewed. The most common kind of communication error was failure to communicate critical information, which occurred in 22 (39%) of the 58 cases. Examples are: failure to conduct a thorough pre-job briefing, failure to call in before operating a switch, failure to communicate about equipment problems, or failure to question some unusual aspect of an order. " Mandating "how" communications occur will not address the failure of "what" critical information needs to be communicated. Furthermore, it is concerning that the SDT "believes that the potential for risk" necessitates requirements applicable to all operating communications as stated in their response to comments during draft 2. It is impossible to eliminate the potential for risk in all circumstances. What is important is that the SDT assess risk to the BES as a result of certain actions or inactions and that the Reliability Standard reduce that risk in an efficient and cost effective manner.

Group

Florida Municipal Power Agency

Frank Gaffney

Florida Municipal Power Agency

Yes

Yes

Yes

we commend the SDT for doing a good job of writing a difficult standard and avoiding the "zero-defect" problem (the problem of just having just one violation in tens of thousands be punishable by fines) and we support the approach taken. If we think of managing operations, we think of the process: Step 1 - Vision, goals, policies - what do we want to accomplish? Step 2 - Protocols, plans, procedures, programs, processes, methodologies - how will we do it and who will do what? Step 3 - Do it Step 4 - Measure, monitor - did we accomplish what we set out to do? Step 5 - Learn, adjust, back to 1. The problem with the prior draft of COM-003, before this latest draft, is that the standard essentially micromanaged industry by causing auditors to monitor actual communications, e.g., the auditors would be doing step 4, which ends up with the zero-defect problem. We have seen other standards that have this zero defect problem, e.g., PRC-005 has a requirement for step 2 of the process above, to have a program, and then for step 3 of the process, to do it in accordance with the program, which results in the zero-defect problem. We've seen still other standards avoid the zero defect problem by only requiring step 2, but with no requirement to actually do it, e.g., the currently enforceable CIP-001 has requirements for step 2 of the process above for sabotage reporting procedures, but, has no requirement to actually follow those procedures if a sabotage event occurs, which leaves questions of accountability. The SDT for COM-003 is doing the appropriate thing and backing up one level to measure how effectively we are managing our own operations, and this is the first time I've seen a standard developed in this clever fashion of developing requirements for Step 2 (protocols) and Steps 4 & 5 (measure, monitor, learn, adjust) of the process above, but not Step 3 of the process. However, Step 3 would need to be performed for the entity to comply with Steps 4&5, meaning we are still accountable for "doing it". The method that the SDT is using to ensure we have

the appropriate operations management mechanisms in place seems a clever and pragmatic approach. We have one suggestion to improve R3. R3 requires entities to "implement" a process for identifying deficiencies. Use of the word "implement" implies that all deficiencies must be identified, which means that the auditors would need to independently identify deficiencies and compare notes, which reintroduces the "zero-defect" problem. FMPA recommends replacing "implement" with "institute".

The RSAW seems to re-introduce the "zero-defect" problem by directing auditors to sample actual recordings of communications to see if the entity identified all deficiencies. The RSAW ought to be changed to get away from sampling actual voice communications altogether and simply review the evidence of the entity doing its own internal monitoring. For instance, the entity might decide to randomly sample a few hours a month itself and identify deficiencies in those hours, that should be the only voice recorded evidence required and not any other hours that the entity did not randomly sample. In addition, the evidence for correction of deficiencies is not more voice recordings, but rather evidence of revised protocols, processes, procedures, or evidence of disciplinary action. So, FMPA believes the RSAW needs a lot of work.

Individual

No

We believe this is a standard that requires procedures or documents but has nothing to do with performance. These types of standards lead to auditors making a wide range of interpretations.

This is an attempt to make a requirement for 3 way communication for all operating communications. Not all operating conversations avail themselves to that format. The concept is good but allowances must be made for other situations.

Individual

No

See comments under question # 5.

Yes

Yes

Xcel Energy feels this new draft of COM-003-1 is greatly improved than prior versions. We are especially in favor of the internal controls approach the team has taken. However, while we have identified several areas of concern with this latest draft, our issue with R1.5 is the single item that is preventing us from voting affirmative. As indicated in our previous comments, our issue is that we do not believe alpha-numeric identifiers should be required for all oral Operating Instructions. Instead, we feel this should be an optional tool that the operator may use where clarity in the Operating Instruction is needed or anticipated. (For example, the operator may use alpha-numeric clarifiers to restate the original Operating Instruction, when it was apparent from the receiver's repeat back that the details of the Operating Instruction were not accurately understood.) Below are additional issues and modifications Xcel Energy would like to see addressed: 1) Since a Distribution Provider may issue Operating Instructions that would impact the BES, we feel they should be added to the applicability under R1 and R3. 2) We recommend that the term "functional entities" be capitalized in R1.1, and a reference added to Section A4 of the standard. This way it is clear that the term includes all entities under the standard (Section 4) and not just the entities under R1.

Individual

No

The definition of "System Operator" includes BA, RC, TOP, and GOP. Because GOP is included the definition, "System Operator" should be replaced by "Balancing Authority, Reliability Coordinator, or Transmission Operator." See also Project 2010-16: Definition of System Operator.

No

There should not be a requirement for entities in R1 and R2 to have documented communications protocols. The subparts specify the protocol requirements. R1 should merely state: "Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall use the following communication protocols for Operating Instructions:" R2 should be similar involving DP and GOP functions

No

These questions apply equally to R3 and R4. In R4.1, what is a "potential" deficiency? In R4.3, how can one correct a deficiency since that happened in the past? In R4.4, how does one evaluate the process based on deficiencies identified that are "external to Part 4.1"? (Part 4.1 is the process for identifying deficiencies.) We are also concerned about the draft RSAW for R3 and R4. The RSAW has two bullets for R3 and R4. One states "Where the auditor can verify that the entity is identifying, assessing, and correcting its own deficiencies, the auditor will not have a finding of non-compliance." The second bullet states "If an auditor cannot verify that the entity is adequately identifying, assessing, and correcting its own deficiencies due to limitations in its process, the auditor will not have a finding of non-compliance." The auditor will provide the entity with recommendations as necessary." Per the RSAW for R3 or R4, how will an auditor verify that an entity is not "adequately identifying, assessing, and correcting its own deficiencies due to limitations in its process"? In other words, what evidence will be required by the auditor, and how many months of communications records should be kept? Because of the volume of communications, sampling may be required. Unless one listens to 100% of communications recording, one cannot be sure one is identifying all deficiencies. Is 100% deficiency detection the goal? Furthermore, M3 or M4, which only require the entity to provide the results of its process in R3 and R4, are not mentioned in the RSAW. Measures are supposed to represent one acceptable form of compliance and should be acceptable in the RSAW. Finally, if R1 and R2 are changed as recommended in #2 above (i.e., remove the requirement for an entity to have documented communications protocols and just require it to adhere to protocols in R1 and R2), incidents of non-compliance with the protocols will be detected via R3 and R4. We first recommend that M1 and M3 have the same measures – M1 and M2 would both read "Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide the results of its process developed for Requirement R3." The same would apply for M2 and M4, which would both read "Each Distribution Provider and Generator Operator shall provide the results of its process developed for Requirement R4." If this were done, the draft RSAWs two bullets discussed should have these phrases modified for R3 and R4, with the modification shown in capital letters: • In R3, modify "the auditor will not have a finding of non-compliance FOR EITHER R1 OR R3" in two bullets. • In R4, modify "the auditor will not have a finding of non-compliance FOR EITHER R2 OR R4" in two bullets.

We did not evaluate these.

PSEG fully supports the use of 3-part communications. In our previous comments, we stated "This standard (COM-003-1) should be combined with COM-002-3 and issued as one standard to require ONE 3-part communications protocol for both Reliability Directives and non-Reliability Directives." We reiterate that request and believe that the SDTs should be combined into a single SDT and develop one standard. COM-002-3 addresses Reliability Directive communications, while COM-003-1 addresses Operating Instructions communications. The same Registered Entities are subject to both standards. Both require 3-part communications (a "protocol"), but COM-003-1 has more extensive requirements. Having two standards is harmful for these reasons: • The lack of a common protocol would result in communications confusion among these entities for this reason: some Operating Instructions are Reliability Directives, but not all Reliability Directives are Operating Instructions. • Finally, without a common communications protocol, entities would need to be concerned about what protocol they are using for compliance purposes; this would hinder the efficiency of communications and therefore reliability. The single SDT should be charged with the following tasks: 1. Both draft standards have pluses and minuses listed below, and the SDT shall consider these and take the best from each to develop a single standard with a common protocol. a. Both standards require 3-part communications (a "protocol"), but COM-003-1 has more extensive requirements, such as the use of alpha-numeric clarifiers and a 24-hour clock format. [PSEG prefers the COM-002-1 simplified protocol.] b. Reliability Directive communications need to be identified as such by the sender as part of its protocol; Operating Instructions do not contain a similar requirement. [PSEG prefers that both

Reliability Directives and Operating Instructions be identified by the sender.] c. The protocol for Operating Instructions explicitly addresses both written and oral communications; the protocol for Reliability Directives is not specific. [If identified as such by the sender, PSEG does not object to written and oral communications being addressed in a single standard; however, only oral communications should require the use of 3-part communications.] d. The protocol for Operating Instructions exempts "one-way burst messaging" from a requirement for 3-part communications with one practical exception – the receivers must request clarification from the sender if the communication is not understood; the protocol for Reliability Directives does not address explicitly exempt such communications, implying that 3-part communications is required for them. [PSEG prefers the "one-way burst" language in COM-003-1 for both Reliability Directives and Operating Instructions.] e. The Operating Instructions protocol must be separately documented by each entity; no such documentation is required for Reliability Directives. If documentation is required in a posted standard developed by the SDT, the SDT shall explain the reliability benefits of documentation and why the protocols in the standard, which are themselves communications performance requirements, are insufficient as "documentation." [PSEG prefers no documentation of protocols since they are performance requirements in the standard.] 2. COM-003-1 requires a process for identifying and correcting deficiencies." COM-002-3 does not. [Instead of the COM-003-1 language, PSEG prefers a requirement that adopts the CIP version 5 language: "R#. Each applicable entity shall have a process that identifies, assesses, and corrects deficiencies in the use of communication protocol." ] 3. The SDT shall describe the potential measure or criteria for success for determining the successful implementation of the single standard. 4. "Generator Operator" is included the Glossary definition of "System Operator," which in turn is used in the Operating Instruction definition. "System Operator" shall be replaced by "Balancing Authority, Reliability Coordinator, or Transmission Operator" in the Operating Instruction definition. Generator Operators receive Operating Instructions but do not issue them. See also Project 2010-16: Definition of System Operator – the goal of this project is to remove Generator Operator from the definition of System Operator. (The Standards Committee should consider increasing the priority of this project so that this problem is addressed systematically in the System Operator definition.)

Individual

Yes

No

This requirement will be burdensome to small Distribution Providers where communications from a System Operator will not ever occur. Requiring entities to prepare for nonexistent reliability gaps is not acceptable. DPs should be allowed to document via RC, TO, and BA letters of agreement that establishes System Operator communication protocol is not required. These small DPs can only shed load in a reliability emergency, and in some cases would need to do so manually. Further, such load would be more effectively dropped by the TOP functioning as the DP's Transmission Service Provider.

No

See response to question two.

Individual

No

We can accept the definition but want to bring to the attention of the Drafting Team that the description of OI in the Background section of the Comment form, "Operating Instructions more accurately define the broad class of communications that deal with changing or altering the state of the BES", does not agree with the Definition being balloted. The inclusion of the phrase "or preserve" changes the definition. Nowhere in the discussion of the need for Operating Instructions or communication protocols is there discussion of or justification for including the "or preserve" statement. Exelon can support the modified definition but we believe it will cause entities to oppose this standard at ballot and create confusion when implementing controls and auditing to the modified definition.

No
Exelon agrees with all requirements except R1.1.3 and R1.1.4. We disagree that R1.1.3, "include time zones" when issuing operating instructions is necessary. Operating instructions are typically issued in real time; an instruction to do something "now" or at the "top of the hour" does not require the use of time zones. R1.1.4 has the effect of requiring verbatim use of a specified name; this should not be a requirement as long as the transmitter and receiver use three way communications effectively to assure understanding of the element to be operated. Additionally, TOP-002-R18 already requires use of "uniform line identifiers when referring to transmission facilities of an interconnected network". The statement to use the TO specified name or a mutually agreed to name is not necessary in light of TOP-002.
Yes
Exelon agrees with the proposed requirement but thinks it could be improved before final adoption. The Requirement as written is confusing. For example, R3 is to identify deficiencies with respect to the entities protocols. R3.1 addresses "potential" deficiencies. It is unclear what a potential deficiency is. We suggest using deviations from the entities protocol in place of deficiencies or potential deficiencies. Similarly we question how an entity will demonstrate that modifications to their program are not required in light of the assessment being done in response to deviations from the protocol. We believe R3.4 should be clarified. We believe its purpose is to direct an entity to take action if an external entity (auditor) identifies a deviation from the entity protocol. We do not think the response to identifying a deviation / deficiency should vary based on how it was identified. Once identified (R3.1), a deviation / deficiency should be assessed (3.2) Corrected (3.3) and when necessary (3.4) the program should be modified to account for the deficiency. Since a similar effort to utilize an internal controls approach is underway in the CIP Version 5 drafting, it may be valuable for COM-003 to also utilize the same language of "in a manner that identifies, assesses, and corrects deficiencies." Exelon supports the effort to utilize an internal controls approach but remains concerned compliance auditing and the potential for interpretations related to the requirement. We urge NERC, in collaboration with the Regional Entities to develop a clear roll out plan prior to implementation of COM-003 so that stakeholders and auditors understand the compliance obligations for this new approach.
We would like to point out that the OI definition includes another defined term, "System Operator". In the Glossary, this is defined as is an individual at a control center, including a Generator Operator. Control center is not currently defined but has a proposed definition in CIP version 5 that puts limits on which generator operators (# of units) work in "control centers". If approved as part of CIP version 5, this definition of Control Center is likely to cause confusion when applying this and other standards. Will OI apply to all Generator Operators or just those working in "Control Centers" as defined by CIP ver 5. In spite of our concerns with the current draft, Exelon intends to vote affirmative on this ballot for COM-003. Significant improvements have been made but there is opportunity to make additional changes before the final ballot.
Group
SPP Standards Review Group
Robert Rhodes
Southwest Power Pool
No
We suggest changing 'command' to 'order'. The definition would then read 'An order from a System Operator...'
No
The wording in R2.1 is awkward, we suggest the following: When receiving an oral two party, person-to-person Operating Instruction, the recipient is required to repeat, restate, rephrase, or recapitulate the Operating Instruction. The one-way burst messaging in R1.9 and R2.2 is confusing to us in that we don't understand how you request clarification over a one-way messaging system. As written there is no 'out' for an entity that cannot perform the Operating Instruction as given. An entity has the option of not performing a Reliability Directive if that directive violates regulatory, safety, equipment, or statutory requirements (TOP-001, R3). A similar exemption needs to be incorporated

into COM-003.
No
Delete 'potential' in R3.1 and R4.1.
No
The Severe VSL for R2 contains a typo and should be reworded to read: 'The responsible entity did not include Parts 2.1 to 2.2 of Requirement 2...' We would suggest that the VRFs for R3 and R4 be reduced to Low. The VRFs for R1 and R2 are Low. R3 and R4 are processes that monitor R1 and R2; therefore, they should not be treated more severely than R1 and R2.
The processes outlined in R3 and R4 would be sufficient in themselves but with the requirements of PER-005 regarding identifying gaps and training to eliminate those gaps, it would appear that R3 and R4 add unnecessary duplication. Why do we need to have the same requirements in two different standards? Do some of the issues that are being addressed in the Paragraph 81 project come into play here? Given the approval of COM-002-3 which places requirements on the DP and GOP when receiving a Reliability Directive, there appears to be the possibility of confusion regarding specific requirements on the DP and GOP in COM-003. During the COM-003 webinar, the comment was made that if COM-003 is approved, there may be a new project that would attempt to more efficiently coordinate the two standards. We would be supportive of that effort. The papers referenced in the Rationale and Technical Justification document supporting the need for this standard should be made available for review if the drafting team is using them as support for the justification for COM-003.
Individual
No
NERC defines the term "System Operator" as "an individual at a control center (Balancing Authority, Transmission Operator, Generator Operator, Reliability Coordinator) whose responsibility it is to monitor and control that electric system in real time." NERC does NOT define a "control center" which could be problematic when it comes to how an entity views a control center and how an auditor defines a control center. IMPA believes that there is too much ambiguity when using the words "to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System." IMPA recommends that the entity giving the Operating Instruction declares it to be one which eliminates many potential problems of applying a definition of an Operating Instruction. The receiver of the Operating Instruction immediately knows what the following instructions will be and will know to apply the proper communication protocol instead of trying to figure out if the definition of Operation Instruction applies to what the entity just said.
No
IMPA believes it should be made clear that Operating Instructions and the use of documented communication protocols are required by these two requirements for when Operating Instructions are given by a Balancing Authority, Reliability Coordinator, or Transmission Operator to a Distribution Provider or Generator Operator. The current requirements could apply to a generator station (Generator Operator) who receives Operating Instructions from its Market Operations (also the same Generator Operator entity). The Market Operations would not need to follow the communication protocol since it is issuing the Operating Instructions, but the generator station would have to follow the communication protocol since it is receiving the Operating Instruction. IMPA does not believe that the SDT intended to include communications between a Generator Operator's Market Operations and its remote power plant.
No
IMPA recommends adding clarification to the words "deficiencies found external to Part 3.1 (4.1)" so that entities and auditors know that these requirements allow deficiencies found outside of the entity's process including deficiencies that had previously passed the entity's process) will be able to go through the entity's process of assessing and correcting without the auditor giving a finding of non-compliance, since the entity itself failed to identify the potential deficiency in R3.1. or R4.1. The clarity can be added in the standard itself or in the RSAW- it currently is not stated in the standard and it is especially absent in the RSAW under Section 2 on page 4 of 5 or Section 2 page 5 of 5. It is also not clear how many times an entity will be allowed to identify, assess, and correct the same deficiency or similar deficiencies before an auditor can find an entity in non-compliance with R3 and R4 (including subrequirements of each). It appears that the SDT is saying that as long as an entity is

making the changes provided in the feedback by the CEA to its process to identify, assess and correct that it will not be found non-compliant for all same or similar deficiencies that continue to occur – there is no set number as long as the entity is trying to improve its process or communication protocols, is this correct? If so, IMPA supports this practice and would like to see clarity added.

no comment

IMPA believes the best quality of evidence for proving compliance to most of the sub-requirements under R1 and for requirement 2.1 will be voice recordings. IMPA agrees with keeping this evidence for 90 days, but to keep these voice recordings for potential 6 years (back to our last audit date) will be very costly when it comes to storage. We understand that other evidence can be used to show compliance back to our last audit date, but what other quality evidence besides voice recordings will be acceptable to prove compliance to these requirements? IMPA recommends making the data retention of this standard just 90 days regardless of the last audit date. Performance should be focused on the short past time of 90 days and not what the entity did five or six years ago, which is irrelevant when one is forward looking or wanting to improve.

Individual

No

MISO believes that the proposed definition of “Operating Instruction” is overly broad and ambiguous. System Operators engage in thousands of communications each year. Many of these are geared toward confirming system conditions, data, or information and/or gathering information in anticipation of responding to conditions observed on the Bulk Electric System. The definition’s breadth and ambiguity are likely to give System Operators pause before they engage in necessary communications to determine whether or not such communications would be Operating Instructions. This would delay necessary information and data gathering by System Operators, which delay would likely be detrimental to the reliability of the BES. Conversely, to avoid confusion regarding which communications are Operating Instructions and to avoid potential delays, System Operators may opt to treat, as Operating Instructions, all or many communications that should not fall within the scope of this definition, resulting in every communication being subject to this standard. Under either scenario, because of the System Operators’ caution and desire to avoid possible penalization by NERC and FERC, the net effect of this definition is detrimental to the reliability of the BES. Further, because of delays in issuing or initiating communications, there is significant potential that penalty exposure from other NERC Reliability Standards (in addition to that identified in the COM-003-1 Reliability Standard, e.g., resulting from a deficiency in implementing or failing to implement specified protocols and/or three-way communication, a deficiency in the review process, which is now significantly expanded beyond that envisioned during the drafting of this standard) could be increased. Accordingly, System Operators are likely to apply the protocols applicable to Operating Instructions under R1 of COM-003 to all communications, whether or not they qualify as Operating Instructions. This result would be overly burdensome, and its inefficiency could hamper System Operators’ ability to perform their necessary reliability functions. As a result, MISO does not support the proposed definition of Operating Instruction at this time.

No

MISO does not agree with the proposed requirements of COM-003-1, R1 and R2. Although MISO agrees that clear communications are important to system reliability, it respectfully submits that any requirement for System Operators to have a communication protocol should allow the subject System Operators to define when and how the protocol would apply. In addition, MISO respectfully submits that System Operators should retain greater flexibility in deciding which elements to include in their respective protocols. For instance, the protocols should allow the System Operator to outline how and when to use blast calls and messaging systems. Thus, despite its conceptual support for a communication protocol for System Operators, MISO is concerned that the requirements currently set forth in COM-003-1 are, in many cases, overly-prescriptive, and, rather than enhancing system reliability, could actually undermine it. As explained above, because the definition of the term “Operating Instruction” is overly broad and ambiguous, System Operators may treat most, if not all, communications as Operating Instructions. Applying the required elements of the communication protocols for Operating Instructions to most communications would be inefficient and could adversely affect the ability of System Operators to perform their reliability functions. Indeed, while MISO agrees that clear communications in system operations are important, an excessive reliance on the three-

way communications protocols detailed in the proposed standard can be an unnecessary distraction for personnel operating the Bulk Electric System, hampering as opposed to enhancing overall system reliability. MISO's primary point of disagreement with the current Standard is therefore one of scope. MISO recommends that the SDT replace "Operating Instruction" with the existing proposed definition for the term "Reliability Directive" in Project 2006-06, Reliability Coordination. Limiting the scope of applicability for utilization of the communication protocol required by COM-003-1, R1 and R2 would prevent System Operators from applying the communication protocol to virtually all communications out of an abundance of caution and, unlike the current draft of COM-003-1, would not be an undue distraction from the reliability functions performed by these operators. Further, as explained in its comments on Draft 2 of COM-003, MISO does not support including certain of the proposed required elements in the communication protocol for Operating Instructions and does not believe these issues have been sufficiently addressed by Draft 3. First, MISO does not agree with the proposed requirement to indicate time zone and Standard or Daylight Saving Time when issuing an oral or written Operating Instruction between functional entities in different time zones. This requirement would result in the expenditure of significant time, resources and attention by System Operators for a minimal benefit to reliability. Accordingly, this modification appears to place upon operators an unjustified, onerous requirement. MISO respectfully requests that the SDT reconsider this requirement. Second, MISO continues to believe that the requirement to use alpha-numeric clarifiers when issuing Operating Instructions to or Facilities and Elements in instances where the nomenclature of Facilities or Elements is in alpha-numeric format is ambiguous and could lead to unintended compliance burdens. MISO respectfully submits that if alpha-numeric clarifiers are to be required, NERC should adopt a uniform set of clarifiers to ensure that all System Operators communicate efficiently and effectively. However, MISO reiterates its belief that mandating the use of alpha-numeric clarifiers will have, at most, a minimally beneficial impact on reliability while requiring Registered Entities to expend substantial additional resources. Finally, MISO disagrees with the proposed requirement that Operating Instructions reference the name specified by the owner for a Transmission interface Element or Transmission interface Facility. To date, System Operators have identified equipment by to/from station and voltage level. Such identification has been sufficient to ensure the accurate identification of Transmission interface Elements and Facilities. Additionally, MISO notes that internal identifiers utilized by owners may result from internal coding or naming conventions that would not be known by or comprehensible to external entities. Hence, MISO cannot support this requirement, based on the potential adverse impacts to reliability that could result.

No

MISO respectfully submits that COM-003-1, R3 and R4 require clarification in two regards. MISO first notes that requirements R3.4 and R4.4, which require Registered Entities to evaluate "the process based on deficiencies found external to [R3.1/R4.1]," are written in a confusing manner. More specifically, it is not clear what the phrase "found external to" means and, therefore, Registered Entities cannot know or understand when their compliance obligations under these requirements are applicable. In addition, MISO respectfully submits that the SDT must add clarifying language to COM-003-1 to clarify that an individual failure to execute elements of a System Operator's communication protocol is not, on its own, a compliance violation, provided that the System Operator evaluates adherence to its protocol as required by Requirements R3 and R4. MISO is concerned that the current draft of COM-003-1 could give rise to double penalties for individual failures to execute one of the elements of a communication protocol. Without clarifying language in the Reliability Standard itself, any Registered Entity that fails to adhere to its communication protocol required by COM-003-1, R1 and R2 would likely self-report this failure, and would subsequently complete a mitigation plan that addresses -- and implements new processes to prevent the repetition of -- the failure. An additional requirement to evaluate adherence to the communication protocol would be redundant and would not increase or bolster reliability -- and, further, would only increase the potential for Registered Entities to violate yet another requirement of a Reliability Standard. Thus, unless COM-003-1 is revised to clarify that a Registered Entity's failure to implement an element of its communication protocol for Operating Instructions is not a compliance violation in and of itself and, therefore, is not subject to self-reporting under NERC and Regional Entities Compliance Monitoring and Enforcement Program ("CMEP"), MISO cannot support proposed Requirements R3 and R4 at this time.

No

MISO appreciates the changes that the SDT has made to the VRFs and VSLs in response to comments and to ensure that the VRFs and VSLs are consistent with FERC and NERC guidelines. However, MISO



cannot support either the VRF or the VSLs for R3 and R4 as it does not agree: (1) that there is a direct impact on reliability that results from an entity's internal self-assessment and (2) with the expressed rationale. Further, MISO notes that COM-003-1, R3 and R4, primarily require internal administrative processes or documentation thereof. MISO respectfully submits that internal administrative processes have not previously been linked to direct impacts on the reliability of the BES.

The RSAW states that the applicable entity could be found non-compliant if the entity did not follow an auditor's suggested changes to remedy those deficiencies. This requirement is not found in COM-003-1 itself, and the RSAW therefore includes requirements that are beyond the scope of the Standard it supports. The draft RSAW also introduces subjective concepts that place uncontrolled discretion in the hands of auditors. For instance, the RSAW states that the size of the sample of the entity's communication activities reviewed to verify whether the entity is identifying, assessing, communicating and correcting deficiencies "will be based on the auditor's confidence in the entity's ability to identify, assess, and correct its deficiencies." MISO submits that sample size should be determined mathematically and in a manner that can itself be audited. Indeed, NERC's own Sampling Methodology Guidelines and Criteria states that "Statistical sampling helps ensure a high confidence level of compliance for the larger population of documents when a smaller population is statistically sampled . . . Statistical sampling should be employed when auditing all processes, procedures and any documentation-related evidence (documents, logs, voice recordings, etc.) when a sample is required because the entire population cannot be audited." Allowing an auditor to determine sample size based on an abstract concept such as confidence is contrary to NERC's own sampling methodology; would prevent Registered Entities from challenging such sample sizes; and could allow auditors to make such decisions punitively.

Group

Bonneville Power Administration

Jamison Dye

Transmission Reliability Program

Yes

No

In R1.5, BPA disagrees with the mandatory use of alpha numeric communication protocols for internal communications. BPA believes that these communication protocols should apply only to external communications between system operators for the TOP, GOP, and BA. BPA suggests that the drafting team update R1.5 to specify that "Transmission Operators and Balancing Authorities may adopt methods other than alpha-numeric clarifiers to ensure accurate communication of Operating Instructions for internal operations." BPA suggests that R1.1 should be modified to make clear that the use of English should be mandated for communications between entities in separate regions where the common language in one of the regions may not be English. In response to Draft 2, Essential Power LLC commented that "The use of English should be mandated for communications between entities in separate regions where the common language in one of the regions may not be English. Allowing an entity to use a language other than English when communicating with regions where English is the required language is counter to the purpose of the Standard and could in fact jeopardize reliability through miscommunication." The SDT stated that it "agreed with (Essential Power, LLC's) comments (shown below) and clarifies that is the intent of the requirement", but this intent is not clear in the requirement as written because it does not specify that the language mandate needs to apply to both entities. Additionally, there is no expressed limitation that the language(s) acceptable in these circumstances be limited to only the language(s) specified by such law or regulation. To resolve these issues, we propose that COM-003-1 R1.1 be modified to read as follows: Use of the English language when issuing an oral or written Operating Instruction between functional entities, unless another language is mandated by law or regulation FOR BOTH ENTITIES; IN WHICH CASE, ACCCEPTIBLE USE IS EXPANDED TO INCLUDE THOSE SPECIFIED LANGUAGES. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.

No

BPA supports the move to the identify, assess, and correct deficiencies approach that eliminates the

need for the entity to report each deficiency as a potential violation. BPA believes that based on the current R1 and R2, it is not reasonable to expect entities to review all communications in order to be compliant with R3 and R4. BPA suggests that the drafting team update R3.1 and R4.1 to state that entities shall implement a process that "identifies potential deficiencies through sampling".

No

BPA does not agree with the VRFs and VSLs. R3 & R4 should include a range of VSLs. A documentation error such as a failure to record that modification of a process was not necessary would not merit a severe VSL if training was implemented as an appropriate solution to an identified deficiency.

Individual

No

No

Operating Instructions are issued in real time and are expected to be implemented promptly. Including the "time zone" in oral communications is not necessary. COM-003 and COM-002 need to fully coordinate.

Individual

No

ERCOT agrees with the SRC comments, and has these additional comments: As proposed, the term "Operating Instruction" could include communications that have nothing to do with reliability – e.g. communications that are market related and have no impact on system reliability. That outcome is inconsistent with FERC’s direction in Order No. 693. FERC’s discussion of this issue in Order 693 focuses on alerts and emergencies - "We adopt our proposal to require the ERO to establish tightened communication protocols, especially for communications during alerts and emergencies..." (693 at P 531) "Accordingly, we direct the ERO to either modify COM-002-2 or develop a new Reliability Standard that requires tightened communications protocols, especially for communications during alerts and emergencies." (693 at P 535) In addition, the scope of FERC’s concerns is limited to communications that impact the reliability of the BPS – "We note that the ERO’s response to the Staff Preliminary Assessment supports the need to develop additional Reliability Standards addressing consistent communications protocols among personnel responsible for the reliability of the Bulk-Power System." (693 at P 531) "...we believe, and the ERO agrees, that the communications protocols need to be tightened to ensure Reliable Operation of the Bulk-Power System." (693 at P 532) Simply because FERC noted the benefits to communications during normal conditions does not mean the standard has to apply to those circumstances. All FERC said was that implementing consistent protocols will likely provide benefits across all operating conditions. The focus of the concern was clearly alerts and emergencies, and limiting the application of the standard to those conditions will provide benefits to relevant communications during normal conditions. However, as written, the standard is overbroad and inconsistent with the Commission’s directives in Order 693. Consistent with this discussion, the IRC believes the most effective way to remedy this issue is to eliminate the proposed term and focus the standard on conditions that actually have a reliability impact. This can be achieved focusing the requirements on Reliability Directives.

No

The overarching premise of NERC standards is that they typically establish the "what" and not the "how" (Order 672 at P 260). The proposal to mandate specific communication protocols contravenes that approach and undermines the value inherent therein. Allowing entities to establish their own protocols to meet a desired end result facilitates means that best suit particular entities and also allows for improvements based on experience. Prescribing specific protocols would preclude such benefits. The proposed requirements are better suited as non-binding illustrative approaches / best

practices. These could be presented as suggested approaches, for example, in an attachment to a standard that establishes a general requirement to have communication protocols in place, but they should not be mandated. FERC did state that in some cases it may be appropriate to prescribe specific implementation rules in the standards if the how is inextricably linked to the standard and may need to be specified by the ERO to ensure the enforcement of the Reliability Standard. The Commission went on to note that for some standards leaving out implementation features could: (1) sacrifice necessary uniformity in implementation of the Reliability Standard; (2) create uncertainty for the entity that has to follow the Reliability Standard; (3) make enforcement difficult; and (4) increase the complexity of the Commission's oversight and review process. None of these conditions apply to communication protocols. For this matter, a general requirement relative to reliability directives is adequate with implementation left to the functional entities. This is already addressed in COM-002 R2, and, therefore, COM-003 is not needed. Communication protocols are more appropriately addressed by an entity's internal controls rather than a Reliability Standard, because this approach provides the benefits described above (i.e. 1) application of suitable protocols based on an entity's structure and relationships and other relevant rules and 2) flexibility for improvement of such protocols over time). The proposed standard eliminates these benefits by prescribing specific items for inclusion in the protocols. Again, the scope of the proposed standard is askew relative to the reliability concern at issue. The proposed standard is unresponsive to the issues raised in the Blackout and by FERC. By not addressing the core reliability issues raised by the very report that drove this Project, the SDT is jeopardizing the reliability of the power system. Accordingly, the focus of the proposed standard is misplaced and, if approved, will do nothing to address the reliability concerns identified in the blackout report and Order 693, but rather will do nothing but impose ineffective and inappropriate obligations that will create liability risk with no corresponding reliability benefit. ERCOT strongly urges the SDT to reconsider this posting and to either rescind the Project and accept that IRO-016 has adequately responded to the Blackout Report, or to revise its proposal to directly address the issues noted above. If R1 is not rescinded as suggested above then the prescriptive subparts 1.1 thru and including 1.6 should be removed, and R1 should be revised to include "applicable communication protocols".

No

ERCOT agrees with the SRC comments, and has these additional comments: ERCOT fully supports the concept that functional entities' internal controls be used to monitor the effectiveness of their own protocols. However, these matters are not suitable for reliability standards. Imposition of mandatory controls applicable to all functional entities is inappropriate because of the wide variety of organizational structures that necessarily requires flexibility with respect to developing appropriate controls for each entity's specific circumstances. Furthermore, entities' internal controls are beyond the scope of the Section 215 reliability purview generally, and they are inconsistent with the risk based initiative being pursued by NERC because they do not impact/are not related to actual reliability impacts. Furthermore, this deficiency review process is ambiguous and, accordingly, lends itself to inefficient and ineffective CMEP results. As an initial matter, what constitutes a deficiency will be an issue that is vulnerable to subjective disagreements. Even assuming there is agreement on that issue, what constitutes an appropriate remedy for a deficiency in terms of assessment and correction will similarly be susceptible to subjective disagreements. Finally, with respect to the obligation to evaluate the deficiency identification process itself, again, the potential for the introduction of subjective compliance review will be problematic in practice in terms of reviewing whether the decision whether to implement a modification or not, and, if a modification is implemented, whether the revision is adequate.

No

ERCOT agrees with the SRC comments.

As discussed above, the proposed standard is not consistent with the reliability issue/concern raised in the blackout report, and, therefore, in Order 693, given that the 693 discussion was relative to the concern raised in the blackout report. The mandates in the proposed standard do not provide reliability value. COM-002 and other standards that address situations that pose actual reliability risks already requires appropriate entities to communicate with each other during emergencies, which is the real focus of the blackout report and Order 693. In those circumstances 3-part communications are required in a clear, concise and definitive manner. This effectively ensures that the recipient understands the communication, which practically obviates the need for specific, mandatory terminology, practices and protocols. Accordingly, for these reasons and the reasons discussed above,

the need for COM-003 is suspect. In fact, it is arguable that it provides marginal to nil reliability value, but yet presents potential liability exposure to the relevant functional entities. The SDT should consider another approach to addressing the concerns in the blackout report and Order 693. Specifically, any responsive effort should focus on ensuring communications occur relative to specific system conditions that truly reflect reliability concerns, and any such communications should be appropriately distributed to ensure dissemination is only to appropriate entities that may be impacted and/or can assist in remedying the situation. In the alternative, the proposed standard should be revised consistent with these comments, and in accordance with the principle that a reliability standard should establish the what, not the how. In addition, the ERCOT offers the following specific comments. As noted above, as drafted the term Operating Instruction is overly broad relative to the scope intended by FERC and the Blackout Report, and, in fact, could include purely market related discussions that have no reliability impact. Yet, the proposed standard requires 3-part communication for all such interactions. There is no reliability value to 3-part communications for such interactions. Accordingly, this requirement should be removed. The proposed standard also requires entities issuing an all-call, or similar multiple party communication, to receive confirmation, electronic or verbal, from at least one of the recipients that the message was received. The nature of all calls provides a structural means to distribute messages to a host of recipients. The mediums used for this purpose ensure that the messages are delivered. There is no need to require confirmation as proposed in the standard. Furthermore, there is little reliability benefit. Accordingly, for these types of communications confirmation should not be required. Finally, 1.9 requires recipients of multi-party communications to ask for clarification if they do not understand the message. It is difficult to understand how compliance with this requirement will be reviewed, and what value it will have. For example, if an entity never asks for clarification but an audit determines the entity failed to follow a directive, the CEA staff may question whether the entity complied with the obligation to request clarification, but the entity may believe that clarification was not necessary and failure to follow the instruction was due to some other reason. As with other aspects of the proposed standard, this lends itself to subjective disagreements in practice. Furthermore, it is unnecessary, because an entity that does not understand a directive will ask for clarification.

Individual

No

Oncor offers instead a new glossary term called "Operating Communication" in order to support alternate language proposed for R1 and R2: Operating Communication – Communication from a System Operator that when executed results in the change or preserves the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System

No

According to the 2003 Black Out Report, "Ineffective communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade. Consistent application of effective communication protocols, particularly during alerts and emergencies, is essential to reliability" Oncor is not aware of any evidence to support the position that lack of communication protocols contributed to the NE Black Out of 2003, the 2008 Florida Black Out or the more recent SW Black Out. Oncor also takes the position that many of the ideas prescribed within the standard are already being effectively implemented as industry Best Practice. Oncor is concerned that implementing the specific elements as prescribed in the standard will result in confusion, and could compromise personnel safety. Oncor offers the following alternative language. R1 "When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as an Operating Communication, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as an Operating Communication to the recipient. " Oncor also offer the following alternative language for R2 "R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of an Operating Communication shall repeat, restate, rephrase or recapitulate the Operating Communication."

No

Oncor also takes the position that all of the ideas prescribed within these requirements including the implementation, assessment, evaluation and correction of communication protocols, are already being effectively implemented as industry Best Practice. In addition, Oncor requests that NERC substitute the CIP v.5 'zero defects' (Each Responsible Entity shall implement, in a manner that identifies,

assesses, and corrects deficiencies, one or more documented processes) language in COM-003 in order to minimize potential confusion. Oncor offers the following substitute language for R3 and R4. R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues an Operating Communication shall either: • Confirm that the response from the recipient of the Operating Communication (in accordance with Requirement R2) was accurate, or • Reissue the Operating Communication to resolve any misunderstandings.

No

#### **Additional Comments Received:**

#### **AESO Successive Ballot for Project 2007-02 (COM-003-1)**

AESO has issues with some of the content of this reliability standard as follows:

1. The AESO does not support mandating the use of alpha-numeric identifiers as included in requirement R1.5. We deem that this may be part of good operating practices, but does not support this to be a mandatory obligation enforceable by law.
2. The AESO does not support requirement R3 to implement a process for identifying deficiencies with adherence to the communication protocols in requirement R1. It is the opinion of the AESO that if the failure to fully implement an operating instruction results in a reliability issue that it should be caught through routine event analysis, including the analysis used in EOP-004 when determining whether a disturbance report is required. The AESO does not support a separate process to be developed to identify deficiencies with adherence to the specified communication protocols.

#### **Grant Count PUD**

Grant fully supports the intent of the proposed language for COM-003 and recognizes the significant effort towards emphasizing identification, assessment and corrective actions that promote reliability. However, we believe that the language contained under R1.5 will hinder normal operations. If R1.5 could be altered to include language such as "alpha-numeric clarifiers shall be used when necessary to clearly communicate Operational Instructions", then we would cast an affirmative vote. The acknowledgement portion of three way communications will allow either the recipient or issuer of the Operational Instructions the ability to confirm that the message was received accurately or not. If not, then the use of clarifiers is appropriate. But the use of alpha-numeric clarifiers in ALL Operational Instructions is burdensome and unnecessary.

#### **Edison Electric Institute**

EEl generally supports the proposed COM-003 structure and content. We believe that COM-003 will provide a good response to both FERC Order No. 693 (P. 540) and Blackout Recommendation #26 in the U.S./Canada joint Blackout Report. EEl commends the drafting team for its work and for laying out a pragmatic framework for tightened communications protocols.

Since the new proposed draft marks a significant change from the previous direction, EEl understands that some issues need to be considered. Some can be addressed by the drafting

team and others are likely beyond the scope of the team. In general, companies seek to ensure that mandatory requirements when applied in the future will avoid causing confusion in real-time. For example, the definition of “Operating Instruction” in draft COM-003-1<sup>(1)</sup> may need some clarification to make sure that it sufficiently differentiates such communications from a “Reliability Directive” issued under COM-002-3.<sup>(2)</sup>

Clarification may be needed to synchronize the COM-003 process requirements with protocols in already-approved COM-002-3<sup>(3)</sup>. We view these as relatively minor changes that would not require substantial changes to the draft COM-003 language.

In addition, companies also have questions regarding language referred to as ‘internal controls’ or ‘zero defects’ language, and how NERC and the regions will apply various judgments on potential violations under this new and untested concept. While both CIP v.5 and draft COM-003 take aim at certain symptoms, it is difficult for companies to see how NERC will actually perform these tasks since no field experience has been tested or broadly communicated with stakeholders. Instead of this piecemeal approach, EEI has strongly believed for several years that NERC should address this issue as a strategic matter and develop a comprehensive plan that would set both compliance and enforcement on a more sustainable foundation. The resources being applied to compliance and enforcement across the electric industry need to be efficiently applied. EEI continues to urge NERC to make commitments to develop a comprehensive framework that will redesign the program.

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<sup>1</sup> Proposed COM-003-1: [http://www.nerc.com/docs/standards/sar/COM-003-1\\_20120821\\_Clean.pdf](http://www.nerc.com/docs/standards/sar/COM-003-1_20120821_Clean.pdf)

“**Operating Instruction** — Command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”

<sup>2</sup> Pending COM-002-3: [http://www.nerc.com/docs/standards/sar/COM-002-3\\_Standard\\_20120607\\_Clean.pdf](http://www.nerc.com/docs/standards/sar/COM-002-3_Standard_20120607_Clean.pdf)

“**Reliability Directive:** A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.”

# Consideration of Comments

## Operating Personnel Communications Protocols Project 2007-02

The Operating Personnel Communications Protocols Drafting Team thanks all commenters who submitted comments on the proposed draft COM-003-1 Operating Personnel Communications Protocols standard. This standard was posted for a 45-day public comment period from August 22, 2012 through September 20, 2012. Stakeholders were asked to provide feedback on the standard and associated documents through a special electronic comment form. There were 80 sets of comments, including comments from approximately 232 different people from approximately 141 companies representing all 10 Industry Segments as shown in the table on the following pages.

All comments submitted may be reviewed in their original format on the standard's [project page](#).

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Mark Lauby, at 404-446-2560 or at [mark.lauby@nerc.net](mailto:mark.lauby@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

### Summary Consideration:

**The SDT agreed with the commenters from draft 2 and modified its approach to closely align COM-003-1 draft 3 with the proposal by the NERC Operating Committee that applicable entities should be required to:**

- a) **develop written communication protocols that address the elements in draft 2 of COM-003-1,**
- b) **train on those protocols, and**
- c) **develop internal controls to find and correct deviances from those protocols.**

**In addition, the SDT developed the RSAW for this standard in conjunction with NERC Compliance staff, and posted it for comment along with draft 3 of COM-003-1. Most Draft 3 commenters supported this approach and many requested additional clarification and confirmation that the majority of communication protocol deficiencies will be addressed in a non-zero defect environment; and that the documented communication protocols would permit flexibility to reflect the operating environment and circumstances that an entity experiences when operating the BES.**

<sup>1</sup> The appeals process is in the Standard Processes Manual: [http://www.nerc.com/files/Appendix\\_3A\\_StandardsProcessesManual\\_20120131.pdf](http://www.nerc.com/files/Appendix_3A_StandardsProcessesManual_20120131.pdf)

A prevalent theme in draft 3 was questioning the necessity of the standard, specifically one that requires three part communication for routine operations. This was also a continuation of similar comments from draft 2.

**During its discussion of the approval of the Interpretation of COM-002-2 R2, the NERC BOT stipulated in its approval the expedited development of a comprehensive communications program, which would address necessary communication protocols for use in the operation of the Bulk Electric System. The SDT determined that protocols concerning three part communication (when it is necessary and what is required) during normal operations was a necessary step in addressing the BOT's concern. The SDT remains resolute in its position to require three part communication in documented communication protocols.**

Another theme that was repeated in draft 3 comments from draft 2 was the concern that the work of the SDT was not addressing the intentions of the SAR, related directives and orders.

**The SDT disagrees and cites language from those documents. The purpose of the SAR for this project is "Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time." Additionally, the SAR is very specific in that it also includes the term "normal" operating conditions under Applicability: "*Clear and mutually established communications protocols used during real time operations under normal and emergency conditions ensure universal understanding of terms and reduce errors.*"**

Another repetitive theme was that the use of three part communications should be limited to Reliability Directives only.

**A Reliability Directive, by definition, is limited to instances where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact. The SDT believes that it is necessary to specify 3 part communication as a necessary communications protocol for all Operating Instructions, not just emergency situations. The OPCSDT believes that the potential for risk to the reliability of the BES exists for all Operating Instructions.**

Still others expressed a desire to combine COM-002-3 and COM-003-1 into a single standard.

**The SDT does not disagree, but that is outside the scope of the SAR for this project. The purpose of the SAR for this project is "Require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time." This is a broader scope for communications than that for Project 2006-06.**

#### **Definitions: (Question 1)**

About half of the draft 3 commenters disagreed with the new proposed term Operating Instructions, introduced in Draft 3 and defined as: "*Command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.*"



**Commenters stated:**

- The proposed term Operating Instruction is confusing and the large extent of operations to which it potentially applies could create an overwhelming compliance exposure due to the large number of communications described in the definition.
- The term would include general discussions and discussions on options and alternatives that take place to determine courses of action to address BES operating concerns.
- The term, Operating Instruction, and its relation to the proposed term “Reliability Directive” from COM-002-3 is unclear.

**To eliminate the confusion expressed by commenters; and to clarify the scope and intent of an Operating Instruction, the SDT has revised the definition to read:**

*“Operating Instruction — A ~~c~~Command ~~from~~ by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions. “*

**Requirements: Question 2**

***Requirement R1 (Issuers and receivers of Operating Instructions, RCs, BAs and TOPs) and R2(receivers only - of Operating Instructions, DPs and GOPs) (requires entities to have documented communication protocols to use the English Language, 24 Hour Clock, and Time Zone reference, Common interface identifiers, and alpha-numeric clarifiers, three part communication, and all call communication during oral and written Operating Communication):***

- In response to Question 2 dealing with the English language, 24 hour clock and time zone reference, common interface identifiers, and alpha-numeric clarifiers, a large majority of the commenters still believe that all of subparts are too prescriptive. **The SDT acknowledges this and has defended it as necessary for this standard in drafts 1, 2 and 3. When developing common communication protocols to be used for communication between entities, it is necessary to have a standard structure to build the protocols. Absent such structure it would be unlikely that protocols would be developed in a manner that would be recognizable among the communicating entities leading to greater confusion. While the Parts of R1 and R2 call for specific content, draft 3 and draft 4 Requirements permit greater latitude to create protocols that fit the environment in which an entity must operate.**
- There was a lack of agreement on requiring the use of the English language as part of a communication protocol. Some commenters support requiring the use of English, and indicated

that communicating in a language other than English would cause confusion, while others contested requiring English exclusively, stating in some areas the use of other languages in a localized environment may be effective. **The SDT believes that English should prevail in almost all cases and those situations where another language would be required by law would be a rare exception. Furthermore, this requirement only applies to communication initiated by a System Operator at one functional entity to another functional entity.**

- Commenters were also divided on the use the 24 hour clock and time zone references as part of a communication protocol. Those who indicated support stated they felt it added clarity to communications. Other commenters stated that the 24 hour clock and time zone references are too prescriptive and should be eliminated. **The SDT believes use of the 24 hour clock and time zone references, when a clock time is used, clarifies the time element of communications, which will enhance reliability by avoiding time related mistakes that could affect the reliability of the BES. The SDT points out in this response that these protocols are to be used only when a specific clock time is cited. The SDT accepts relative time such as: “ in the next 10 minutes, on the hour or half hour” as clear and unambiguous and not requiring the use of the 24 hour clock and time zone references.**
- Commenters in draft 3 indicated that “alpha-numeric clarifiers” are of no value and would only lead to confusion and delays by System Operators. **The SDT has chosen to retain the inclusion of alpha-numeric clarifiers as a means of clarifying Operating Instructions. The use of such clarifiers, which an entity can develop to suit their preferences, eliminates the ambiguity of similar sounding letters and numbers. Their use, based on the experience of other organizations that use them, becomes a natural part of communication language.**
- Many commenters stated that Requirement R1 Part 1.4 is not necessary, stating that it is covered by standard TOP-002 R18. “Project 2007-03 chose to eliminate TOP-002-2a Requirement R18. Entities have existing processes that handle this issue. This is an administrative item. The bottom line is that this situation is handled by the operators as part of their normal responsibilities, and no one is aware of a switching error caused by confusion over line identifiers.” **The SDT is aware that Requirement R18 is being eliminated by the RTOSDT as part of project 2007-03. P COM-003-1, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are readily familiar with each other’s interface Elements and Facilities eliminating hesitation and confusion when referring to equipment for the Operating Instruction. This shortens response time and improves situational awareness. Additionally the SDT has added the commenters’ recommended language “....., unless otherwise mutually agreed,”- to permit entities to develop mutually acceptable nomenclature.**
- Many commenters indicated that the scope of Operating Instructions and the associated requirements were too broad and that the sheer numbers of Operating Instructions would

overwhelm the entities in terms of monitoring and evidence retention. They also are concerned that under these Requirements, operators would be distracted to focus more on complying with the specifications for three part communication rather than effectively responding to incidents, thereby reducing reliability. **The SDT believes universal communication protocols are critical to avoid mistakes that would result in reduced reliability on the BES, which is within the scope of the SDT's SAR. After consideration of comments in these questions, as well as question 10, the SDT modified its approach in COM-003-1, draft 3 to a control based standard where such deficiencies are corrected generally without a finding of non compliance. While there may be many such deficiencies or deviations the entity has the ability to improve performance and compliance without a potential violation for each incident. This is an equivalent approach to the one provided in the CIP version 5 standards, which was recently approved by industry.**

- Several stakeholders continue to identify potential conflicts between COM-003-1 and the recently approved COM-002-3 standard, which also addresses the use of three-part communications. Some stated that the applicability of the two standards was confusing and called for one communication standard to reduce the confusion. A few commenters continue to stress this should be limited to COM-002-3. In COM-002-3 the proposed requirements focus on the use of three part communication when issuing and receiving "Reliability Directives." As proposed in COM-002-3, a Reliability Directive is a directive issued to address an Emergency or an Adverse Reliability Impact. **The OPCP SDT believes the scope of their SAR extends during and beyond communications during emergency situations, thereby necessitating a new standard such as the proposed COM-003-1. The OPCP SDT proposes use of three-part communication for all Operating Instructions, under normal and emergency conditions, and has worked with the RCSDT to ensure that COM-002-3 and COM-003-1 are complementary to achieve this objective.**

#### **Requirements: Question 3**

**Requirement R3 (Issuers and receivers of Operating Instructions: RCs, BAs and TOPs) and R4 (receivers only of Operating Instructions: DPs and GOPs) (requires entities to implement a process to identify, assess and correct deficiencies and to review and improve the process.)**

- Many commenters, even those who voted no on Question 3 supported the SDT's decision to incorporate internal controls. Some of their concerns were if regional CEAs are "onboard" with the SDT's approach. **The SDT has collaborated with NERC compliance and jointly developed the RSAW for COM-003-1. NERC Compliance and NERC executives have been speaking to industry, Regional Entities and regulators to advocate for control based standards citing the absolute need for this approach to address burdensome and unreasonable requirements and to promote a more efficient use of resources.**
- A large number of commenters, for various reasons recommended that the SDT consider using a similar format and language to emulate the CIP v.5 standards which are also nascent control based standards and to address concerns over their understanding of R3 and R4. The commenters stated that it would be more consistent and less confusing. **The SDT discussed the**

commenters' concerns and concluded that adopting the same general format for COM-003-1 would add value by improving consistency and remaining effective as a standard to improve communication and reliability on the BES.

**"R1 (and R2-DP and GOP). Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:"**

**R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity's implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW, VSLs, VRFs and Measures have been updated to reflect this change.**

#### **VRFs and VSLs**

The SDT acknowledges there were many comments on draft 3 regarding VSLs and VRFs and we appreciate the contributions. **The SDT has dramatically changed draft 4 and all of the VRFs and VSLs have been adjusted to reflect those changes. The adoption of the language similar to CIP v.5 and the subsequent elimination of R3 and R4 will require another set of industry comments.**

#### **Additional Issues addressed by the SDT:**

Small numbers of commenters raised issues around:

- Some commenters questioned why the standard addressed "all call" types of communications (Requirement 1, Part 1.9 and Requirement 2, Part 2.2). ***The SDT added language to (Requirement 1, Part 1.9 and Requirement 2, Part 2.2) to clarify how these Requirements apply when all calls are used to communicate based on requests from many commenters in COM-003-1, draft 2.***

#### **Outstanding Unresolved Issues:**

Whether "read" receipts for written Operating Instructions should be addressed in the Measures. - **This is in reference to the parts of R1 and R2 which are applicable only to oral Operating Communication, so the SDT made no change,**

- Exclusion for Face to Face Operating Instructions in a control room, - **The SDT clarified that COM-003-1 only applies to communication between functional entities. For example, if a TOP System Operator is issuing an Operating Instruction to an individual that is internal to that TOP, three part communication is not required by this standard. If a TOP System Operator is issuing an Operating Instruction to an individual in another TOP or another functional entity (e.g. Distribution Provider, Generator Operator), then three part communication is required by this standard. If a TOP System Operator is issuing an Operating Instruction to an individual**

**that is not in a functional entity, then three part communication is not required by this standard.**

**Index to Questions, Comments, and Responses**

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- 1. Do you agree with the changes made to the proposed definition “Operating Instruction” (now proposed as a “Command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System?”) to be added as a term for the NERC Glossary? If not, please explain in the comment area.....25
- 2. The SDT has proposed that the applicable entities have documented communication protocols that incorporate elements listed in COM-003-1, R1 and R2. Do you agree with these proposed requirements ? If not, please explain in the comment area.....51
- 3. The SDT has proposed requirements (COM-003-1, R3 and R4) for applicable entities to implement a process to identify, assess and correct deficiencies related to the entity’s documented communication protocols; and to evaluate that process based on deficiencies found externally from the process. Do you agree with the proposed requirements? If not, please explain in the comment area of the last question.....96
- 4. Do you agree with the VRFs and VSLs for Requirements R1, R2, R3 and R4?..... 131
- 5. Do you have any other comments or suggestions to improve the draft standard?..... 147

**The Industry Segments are:**

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Guy Zito	Northeast Power Coordinating Council										X
Additional Member		Additional Organization	Region	Segment Selection									
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10									
2.	Carmen Agavriloi	Independent Electricity System Operator	NPCC	2									
3.	Greg Campoli	New York Independent System Operator	NPCC	2									
4.	Sylvain Clermont	Hydro-Quebec Transenergi	NPCC	1									
5.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1									
6.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10									
7.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5									
8.	Kathleen Goodman	ISO - New England	NPCC	2									
9.	Michael Jones	National Grid	NPCC	1									
10.	David Kiguel	Hydro One Networks Inc.	NPCC	1									

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
			1	2	3	4	5	6	7	8	9	10								
11. Michael R. Lombardi	Northeast Utilities	NPCC	1																	
12. Randy MacDonald	New Brunswick Power Transmission	NPCC	9																	
13. Bruce Metruck	New York Power Authority	NPCC	6																	
14. Silvia Parada Mitchell	NextEra Energy, Inc.	NPCC	5																	
15. Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10																	
16. Robert Pellegrini	The United Illuminating Company	NPCC	1																	
17. Si-Truc Phan	Hydro-Quebec TransEnergie	NPCC	1																	
18. David Ramkalawan	Ontario Power Generation, Inc.	NPCC	5																	
19. Brian Robinson	Utility Services	NPCC	8																	
20. Michael Schiavone	National Grid	NPCC	1																	
21. Wayne Sipperly	New York Power Authority	NPCC	5																	
22. Donald Weaver	New Brunswick System Operator	NPCC	2																	
23. Ben Wu	Orange and Rockland Utilities	NPCC	1																	
24. Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3																	
2.	Group	Ben Engelby	ACES Power Marketing Standards Collaborators									X								
	<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>																
1.	Ashley Gonyer	East Kentucky Power Cooperative	SERC	1, 3, 5																
2.	Shari Heino	Brazos Electric Power Cooperative, Inc.	ERCOT	1, 5																
3.	Scott Brame	North Carolina Electric Membership Corporation	RFC	1, 3, 4, 5																
4.	Megan Wagner	Sunflower Electric Power Corporation	SPP	1																
5.	Susan Sosbe	Wabash Valley Power Association	RFC	3																
6.	Robert Thomasson	Big Rivers Electric Corporation	SERC																	
7.	John Shaver	Arizona Electric Power Cooperative/Southwest Transmission Cooperative, Inc.	WECC	1, 4, 5																
3.	Group	Kent Kujala	Detroit Edison				X	X	X											
	<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>																
1.	Christie Wicke		RFC	3, 4, 5																
2.	Al Eizans		RFC	3, 4, 5																
3.	Jeffery DePriest		RFC	3, 4, 5																

Group/Individual	Commenter	Organization	Registered Ballot Body Segment											
			1	2	3	4	5	6	7	8	9	10		
4. Dan Herring	RFC	3, 4, 5												
4. Group	Ron Sporseen	PNGC Comment Group	X		X	X					X			
<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>											
1. Joe Jarvis	Blachly-Lane Electric Cooperative	WECC	3											
2. Dave Markham	Central Electric Cooperative	WECC	3											
3. Dave Hagen	Clearwater Power Company	WECC	3											
4. Roman Gillen	Consumers Power Inc.	WECC	1, 3											
5. Roger Meader	Coos-Curry Electric Cooperative	WECC	3											
6. Bryan Case	Fall River Electric Cooperative	WECC	3											
7. Rick Crinklaw	Lane Electric Cooperative	WECC	3											
8. Annie Terracciano	Northern Lights Inc.	WECC	3											
9. Aleka Scott	PNGC Power	WECC	4											
10. Heber Carpenter	Raft River Rural Electric Cooperative	WECC	3											
11. Steve Eldrige	Umatilla Electric Cooperative	WECC	1, 3											
12. Marc Farmer	West Oregon Electric Cooperative	WECC	4											
13. Margaret Ryan	PNGC Power	WECC	8											
14. Rick Paschall	PNGC Power	WECC	3											
5. Group	Gerry Beckerle	SERC OC Standards Review Group	X		X									
<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>											
1. Jeff Harrison	AECI	SERC	1, 3, 5, 6											
2. Robert Thomasson	Big Rivers	SERC	1											
3. Dan Roethemeyer	Dynegy	SERC	5											
4. Jim Case	Entergy	SERC	1, 3, 6											
5. Mark Thomas	Entergy	SERC	1, 3, 6											
6. Phil Whitmer	Georgia Power	SERC	3											
7. Brad Young	LGE-KU	SERC	1											
8. Terry Bilke	MISO	SERC	2											
9. Scott Brame	NCEMC	SERC	1, 3, 4, 5											
10. William Berry	OMU	SERC	3, 5											
11. Tim Hattaway	PowerSouth	SERC	1, 5											
12. Troy Blalock	SCANA	SERC	1, 3, 5, 6											



Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
			1	2	3	4	5	6	7	8	9	10								
13. John Rembold	SIPC	SERC	1																	
14. Marc Butts	Southern Co. Services	SERC	1, 5																	
15. Randy Hubbert	Southern Co. Services	SERC	1, 5																	
16. Todd Lucas	Southern Co. Services	SERC	1, 5																	
17. Joel Wise	TVA	SERC	1, 3, 5, 6																	
18. Sam Austin	TVA	SERC	1, 3, 5, 6																	
19. Stuart Goza	TVA	SERC	1, 3, 5, 6																	
20. Steve Corbin	SERC	SERC	10																	
6.	Group	Greg Rowland	Duke Energy	X		X		X	X											
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Doug Hils	Duke Energy	RFC	1																
2.	Lee Schuster	Duke Energy	FRCC	3																
3.	Dale Goodwine	Duke Energy	SERC	5																
4.	Greg Cecil	Duke Energy	SERC	6																
7.	Group	Chang Choi	Tacoma Public Utilities	X		X	X		X											
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Travis Metcalfe	Tacoma Public Utilities	WECC	3																
2.	Keith Morisette	Tacoma Public Utilities	WECC	4																
3.	Chris Mattson	Tacoma Power	WECC	5																
4.	Michael Hill	Tacoma Public Utilities	WECC	6																
8.	Group	Thomas McElhinney	JEA	X		X		X												
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Ted Hobson		FRCC	1																
2.	Garry Baker		FRCC	3																
3.	John Babik		FRCC	5																
9.	Group	James R. Keller	Wisconsin Electric Power Co.			X	X	X												
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Linda Horn	Wisconsin Electric Power Co.	RFC	5																
2.	Tony Jankowski	Wisconsin Electric Power Co.	RFC	4																
10.	Group	Connie Lowe	Dominion	X		X		X	X											

Group/Individual	Commenter	Organization	Registered Ballot Body Segment											
			1	2	3	4	5	6	7	8	9	10		
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	Louis Slade	RFC	5, 6											
2.	Randi Heise	MRO	5, 6											
3.	Mike Garton	NPCC	5, 6											
4.	Michael Crowley	SERC	1, 3, 5, 6											
11.	Group	WILL SMITH	MRO NSRF	X	X	X	X	X	X					
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	MAHMOOD SAFI	OPPD	MRO	1, 3, 5, 6										
2.	CHUCK LAWRENCE	ATC	MRO	1										
3.	TOM BREENE	WPS	MRO	3, 4, 5, 6										
4.	JODI JENSON	WAPA	MRO	1, 6										
5.	KEN GOLDSMITH	ALTW	MRO	4										
6.	DAVE RUDOLPH	BEPC	MRO	1, 3, 5, 6										
7.	ERIC RUSKAMP	LES	MRO	1, 3, 5, 6										
8.	JOE DEPOORTER	MGE	MRO	3, 4, 5, 6										
9.	SCOTT NICKELS	RPU	MRO	4										
10.	TERRY HARBOUR	MEC	MRO	1, 3, 5, 6										
11.	MARIE KNOX	MISO	MRO	2										
12.	LEE KITTELSON	OTP	MRO	1, 3, 5										
13.	SCOTT BOS	MPW	MRO	1, 3, 5, 6										
14.	TONY EDDLEMAN	NPPD	MRO	1, 3, 5										
15.	MIKE BRYTOWSKI	GRE	MRO	1, 3, 5, 6										
16.	DAN INMAN	MPC	MRO	1, 3, 5, 6										
12.	Group	Sasa Maljukan	Hydro One	X										
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	David Kiguel	Hydro One Networks Inc.	NPCC	1										
13.	Group	David Dockery - NERC Reliability Compliance Coordinator	Associated Electric Cooperative Inc - JRO00088	X		X		X	X					
<b>Additional Member Additional Organization Region Segment Selection</b>														

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
			1	2	3	4	5	6	7	8	9	10								
1. Central Electric Power Cooperative		SERC	1, 3																	
2. KAMO Electric Cooperative		SERC	1, 3																	
3. M & A Electric Power Cooperative		SERC	1, 3																	
4. Northeast Missouri Electric Power Cooperative		SERC	1, 3																	
5. N.W. Electric Power Cooperative, Inc.		SERC	1, 3																	
6. Sho-Me Power Electric Cooperative		SERC	1, 3																	
14. Group	Albert DiCaprio	ISO/RTO Standards Review Committee		X																
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1. Terry Bilke	MISO	RFC	2																	
2. Greg Campoli	NYISO	NPCC	2																	
3. Kathleen Goodman	ISO NE	NPCC	2																	
4. Ben Li	IESO	NPCC	2																	
5. Ali Miremadi	CAISO	WECC	2																	
6. Stephanie Monzon	PJM	RFC	2																	
7. Steve Myers	ERCOT	ERCOT	2																	
8. Charles Yeung	SPP	SPP																		
15. Group	Allen Mosher	APPA, LPPC and TAPS		X		X	X	X	X											
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1. Joseph Tarantino	SMUD (on behalf of LPPC)		1, 3, 4, 5, 6																	
2. William Gallagher	TAPS	NA - Not Applicable	1, 3, 4, 5, 6																	
16. Group	Sam Ciccone	FirstEnergy		X		X	X	X	X											
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1. D. Hohlbaugh	FE	RFC																		
2. L. Raczkowski	FE	RFC																		
3. J. Reed	FE	RFC																		
4. G. Pleiss	FE	RFC																		
5. B. Duge	FE	RFC																		
17. Group	Brent ingebriجتson	PPL Corporation NERC Registered Affiliates				X														
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1. Elizabeth Davis	PPL EnergyPlus LLC	WECC	6																	

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
			1	2	3	4	5	6	7	8	9	10								
2.	Annette Bannon	PPL Generation LLC	RFC	5																
3.	Brenda Truhe	PPL Electric Utilities Corporation	RFC	1																
18.	Group	Frank Gaffney	Florida Municipal Power Agency		X		X	X	X	X										
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Timothy Beyrle	City of New Smyrna Beach	FRCC	4																
2.	Jim Howard	Lakeland Electric	FRCC	3																
3.	Greg Woessner	Kissimmee Utility Authority	FRCC	3																
4.	Lynne Mila	City of Clewiston	FRCC	3																
5.	Joe Stonecipher	Beaches Energy Services	FRCC	1																
6.	Cairo Vanegas	Fort Pierce Utility Authority	FRCC	4																
7.	Randy Hahn	Ocala Utility Services	FRCC	3																
19.	Group	Robert Rhodes	SPP Standards Review Group			X														
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Rick Brenneman	Xcel Energy	SPP	1, 3, 5, 6																
2.	Michelle Corley	Cleco Power	SPP	1, 3, 5																
3.	Denney Fales	Kansas City Power & Light	SPP	1, 3, 5, 6																
4.	Greg Froehling	Rayburn Country Electric Cooperative	SPP	3																
5.	Ron Gunderson	Nebraska Public Power District	MRO	1, 3, 5																
6.	Jonathan Hayes	Southwest Power Pool	SPP	2																
7.	Bo Jones	Westar Energy	SPP	1, 3, 5, 6																
8.	Allen Klassen	Westar Energy	SPP	1, 3, 5, 6																
9.	Tiffany Lake	Westar Energy	SPP	1, 3, 5, 6																
10.	Greg McAuley	Oklahoma Gas & Electric	SPP	1, 3, 5																
11.	Terri Pyle	Oklahoma Gas & Electric	SPP	1, 3, 5																
12.	Jamie Strickland	Oklahoma Gas & Electric	SPP	1, 3, 5																
13.	Bryan Taggart	Westar Energy	SPP	1, 3, 5																
20.	Group	Jamison Dye	Bonneville Power Administration		X		X		X	X										
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Timothy	Loepker	WECC	1																
2.	Theodore	Snodgrass	WECC	1																

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
3.	Rodney	Krauss	WECC	1									
4.	Erika	Doot	WECC	3, 5, 6									
5.	Deanna	Phillips	WECC	1, 3, 5, 6									
6.	James	Burns	WECC	1									
7.	Alfredo	Bocanegra	WECC	1									
21.	Group	David Dworzak	Edison Electric Institute										
Additional members can be found at <a href="http://www.eei.org">www.eei.org</a>													
22.	Individual	Janet Smith, Regulatory Affairs Supervisor	Arizona Public Service Company	X		X		X	X				
23.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X				
24.	Individual	Antonio Grayson	Southern Company	X		X		X	X				
25.	Individual	Scott McGough	Georgia System Operations			X	X						
26.	Individual	Daniel Duff	Liberty Electric Power, LLC					X					
27.	Individual	Robert W. Kenyon	NERC - Investigations Group										
28.	Individual	Gary Cox	Southwestern Power Administration	X								X	
29.	Individual	Martin Bauer	US Bureau of Reclamation					X					
30.	Individual	Nazra Gladu	Manitoba Hydro	X		X		X	X				
31.	Individual	Joe O'Brien	NIPSCO	X		X		X	X				
32.	Individual	Steve Alexanderson P.E.	Central Lincoln			X	X					X	
33.	Individual	Andrew Gallo	City of Austin dba Austin Energy	X		X	X	X					
34.	Individual	Chantal Mazza	Hydro-Quebec TransEnergie	X									
35.	Individual	Michelle R. D'Antuono	Occidental Energy Ventures Corp.					X		X			
36.	Individual	Greg Travis	Idaho Power Co.	X									
37.	Individual	Cristina Papuc	TransAlta Centralia Generation LLC					X					
38.	Individual	Terri Pyle	Oklahoma Gas & Electric	X		X		X					

Group/Individual		Commenter	Organization	Registered Ballot Body Segment										
				1	2	3	4	5	6	7	8	9	10	
39.	Individual	Jonathan Appelbaum	The United Illuminating Company	X										
40.	Individual	Anthony Jablonski	ReliabilityFirst											X
41.	Individual	Michael Falvo	Independent Electricity System Operator		X									
42.	Individual	RoLynda Shumpert	South Carolina Electric and Gas	X		X		X	X					
43.	Individual	Dale Wadding	Dairyland Power Cooperative	X		X		X						
44.	Individual	John D. Brockhan	CenterPoint Energy Houston Electric, LLC.	X										
45.	Individual	Daniel McGuire	Salt River Project	X		X		X	X					
46.	Individual	Jose H Escamilla	CPS Energy	X		X		X						
47.	Individual	Kayleigh Wilkerson	Lincoln Electric System	X		X		X	X					
48.	Individual	Brian Murphy	NextEra Energy Inc.	X		X		X	X					
49.	Individual	Laurie Williams	Public Service Company of New Mexico	X		X								
50.	Individual	Wryan Feil	Northeast Utilities	X										
51.	Individual	Kenneth A Goldsmith	Alliant Energy				X							
52.	Individual	Russ Schneider	Flathead Electric Cooperative, Inc.				X							
53.	Individual	Fred Meyer	The Empire District Electric Company	X		X		X						
54.	Individual	Melissa Kurtz	US Army Corps of Engineers					X						
55.	Individual	Bob Thomas	Illinois Municipal Electric Agency				X							
56.	Individual	Thad Ness	American Electric Power	X		X		X	X					
57.	Individual	Karen Webb	City of Tallahassee					X						
58.	Individual	Don Schmit	Nebraska Public Power District	X		X		X						
59.	Individual	Shari Heino	Brazos Electric Power Cooperative, Inc.	X				X						
60.	Individual	David Burke	Orange and Rockland Utilities	X		X								
61.	Individual	Andrew Z. Pusztai	American Transmission company	X										
62.	Individual	Kirit Shah	Ameren	X		X		X	X					
63.	Individual	Patrick Brown	Essential Power, LLC					X						

Group/Individual		Commenter	Organization	Registered Ballot Body Segment											
				1	2	3	4	5	6	7	8	9	10		
64.	Individual	Don Jones	Texas Reliability Entity												X
65.	Individual	Terry Harbour	MidAmerican Energy	X		X		X	X						
66.	Individual	Kathleen Goodman	ISO New England Inc.		X										
67.	Individual	Denise M. Lietz	Puget Sound Energy Inc.	X		X		X							
68.	Individual	Michael Moltane	ITC Holdings	X											
69.	Individual	Kevin Luke	GTC	X											
70.	Individual	Lynne Mila	City of Clewiston	X											
71.	Individual	Eric Salsbury	Consumers Energy			X	X	X							
72.	Individual	Alice Ireland	Xcel Energy	X		X		X	X						
73.	Individual	John Seelke	Public Service Enterprise Group	X		X	X	X							
74.	Individual	Russell A. Noble	Cowlitz County PUD			X	X	X							
75.	Individual	Chris Scanlon	Exelon	X		X	X	X							
76.	Individual	Scott Berry	Indiana Municipal Power Agency				X								
77.	Individual	Rebecca Moore Darrah	MISO		X										
78.	Individual	David Thorne	Pepco Holdings Inc	X		X									
79.	Individual	Cheryl Moseley	ERCOT		X										
80.	Individual	Darryl Curtis	Oncor Electric Delivery Company LLC	X											

If you support the comments submitted by another entity and would like to indicate you agree with their comments, please select "agree" below and enter the entity's name in the comment section (please provide the name of the organization, trade association, group, or committee, rather than the name of the individual submitter).

**Summary Consideration:**

The OPCPSDT has reviewed the section and responded to Oklahoma Gas & Electric’s comments. They are absorbed in the question 5 summary.

Organization	Agree	Supporting Comments of “Entity Name”
American Transmission company	Agree	ATC endorses and supports those comments submitted by the Edison Electric Institute(EEI)on behalf of ATC and other REAC members.
City of Clewiston	Agree	please see FMPA's formal comments.
Dairyland Power Cooperative	Agree	MRO NSRF and MISO
Flathead Electric Cooperative, Inc.	Agree	Central Lincoln
Illinois Municipal Electric Agency	Agree	Florida Municipal Power Agency and Indiana Municipal Power Agency
ISO New England Inc.	Agree	We agree with and support the comments submitted by NPCC, the SRC, and ERCOT.
Nebraska Public Power District	Agree	Midwest Reliability Organization (MRO) NERC Standards Review Forum (NSRF); ANDSouthwest



Organization	Agree	Supporting Comments of "Entity Name"
		Power Pool (SPP) RTO
Orange and Rockland Utilities	Agree	Consolidated Edison and Northeast Power Coordinating Council
US Army Corps of Engineers	Agree	US Bureau of Reclamation
Brazos Electric Power Cooperative, Inc.		ACES Power Marketing
MidAmerican Energy		MidAmerican Energy supports MRO NSRF comments
Oklahoma Gas & Electric		<p>OG&amp;E is in support of Southwest Power Pool Comments. OG&amp;E also had individual comments (though I am now not allowed to submit via the questionnaire; therefore, will submit here).</p> <p>Q1: No We prefer the use of the word "Instruction" vs "Command", though we understand that word is already part of the term being defined. Could be open to using the term "Request" or "Order" or "Direction".</p> <p><b>Response: The SDT received many comments on draft 2 (previous version) that the word "instruction" in the body of the definition was unclear as what type of communication was covered by the definition. The word "command" is absolute and strong; leaving no doubt as to the type of communication the definition is</b></p>

Organization	Agree	Supporting Comments of "Entity Name"
		<p><b>describing.</b></p> <p>Q2: No R2.1 does not read well. We would recommend changing to ""When receiving an oral two party, person-to-person Operating Instruction, the recipient is required to repeat, restate, rephrase, or recapitulate the Operating Instruction."</p> <p><b>Response: The SDT understands your recommendation, but used this type of grammatical structure to specify to the entity that they must require the recipient to respond as specified.</b></p> <p>Regarding R2.2, we are struggling to identify what would be considered a "one-way burst messaging system". Perhaps examples could be provided to clarify what the SDT is trying to address.</p> <p><b>Response: These are systems several entities use to convey Operating Instructions to groups of entities for such things as requesting VARs , increases or decreases of input or output. They employ many forms of technology. The most common is a group telephone call that has an option for a receiver of an issued Operating Instruction to select a "number" to acknowledge receipt. The technologies are many and vary in functionality. Each entity would be able to customize their Communication protocols in R1 and R2 to reflect the capabilities of their system.</b></p>

Organization	Agree	Supporting Comments of "Entity Name"
		<p>Consider adding similar language that is currently provided in TOP-001-1a R3 "...shall comply with reliability directives issued by the Transmission Operator, unless such actions would violate safety, equipment, regulatory or statutory requirements. Under these circumstances the Transmission Operator, Balancing Authority or Generator Operator shall immediately inform the Reliability Coordinator or Transmission Operator of the inability to perform the directive so that the Reliability Coordinator or Transmission Operator can implement alternate remedial actions." to allow for those circumstances in which a Distribution Provider or Generator Operator may not be able to respond to the Operating Instruction.</p> <p><b>Response: The SDT does not want to add repetitive language that could possibly create a double jeopardy situation. We would prefer the TOP-001-1a R3 requirement to govern this type of scenario. COM-003-1 deals with operating communication protocols, not the actions themselves.</b></p> <p>Q3: The word "potential" in R3.1. and R4.1. could be subjective. Please remove this word such that both R3.1. and R4.1. state "Identifies deficiencies,".</p> <p><b>Response: This language has been eliminated in the latest draft of the standard.</b></p>

Organization	Agree	Supporting Comments of "Entity Name"
		<p>Q4: No</p> <p>We believe R3 and R4 should be considered Low VRF as they are establishing the process that supports R1 and R2 which are already designated as Low VRF. We do not think the subsequent process should have a higher VRF than the original requirement.</p> <p><b>Response: The SDT believes the R3 and R4 process provides an entity great opportunity strengthen and improve their communication protocols. The Medium VRF is appropriate because a process that is dysfunctional and yields growing numbers of deficiencies is creating the atmosphere for miscommunication and undesirable impacts on the BES. The team has incorporated R3 and R4 into R1 and R2, and has assigned a medium VRF for these requirements.</b></p> <p>Other Comments: OG&amp;E continues to believe that the COM-003 standard, while obviously the result of significant effort and good intentions, is unnecessary. Even though we believe that three-part communication is a best practice, and we utilize it for switching and reliability-related instructions, we do not believe that it should be mandated through an enforceable standard. COM-002 addresses three-part communications during emergency conditions and we believe that is sufficient. With respect to the Paragraph 81 project, NERC should be focused on retiring</p>

Organization	Agree	Supporting Comments of "Entity Name"
		<p>standard requirements that meet the following criteria:</p> <ul style="list-style-type: none"> <li>(a) have little or no impact on reliability,</li> <li>(b) administrative, purely documentation, redundant, or hinders protection of the BES, and</li> <li>(c) Lower VRF/VSL, lower tier Actively Monitored Standard, etc. The industry has yet to be provided sufficient evidence that the lack of three-part communication during normal operations has been the direct cause, or even a contributing cause, to reliability failures. While a good idea in concept, the COM-003 standard is likely to take significant effort to interpret, understand and implement, at a time when industry is already overburdened with real reliability issues that we already know to be problematic.</li> </ul> <p>The documents referenced in the Rationale and Technical Justification document supporting the need for this standard should be made available for review if the drafting team is using them as support for the justification for COM-003.</p> <p><b>Response: The SDT respectfully disagrees with your comment. COM-003-1 does address the human factor in communication. Human beings can and will make mistakes during verbal exchanges . These mistakes have the potential to create risk for BES operations. FERC Order 693, the Blackout Report and the SAR call for "tighter"</b></p>

Organization	Agree	Supporting Comments of "Entity Name"
		<p>communications and that is exactly what COM-003-1 provides.</p> <p>The SDT cited those references from the "OC white Paper" authored by Terry Bilke which was appended to the Response to Comment for COM-003-1, draft 2 by a commenter.</p>
<p>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</p>		
PNGC Comment Group		<p>The PNGC Comment Group is fully in support of Central Lincoln PUD's comments.</p>
Wisconsin Electric Power Co.		<p>Midwest ISO</p>

1. Do you agree with the changes made to the proposed definition “Operating Instruction” (now proposed as a “Command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System?”) to be added as a term for the NERC Glossary? If not, please explain in the comment area.

#### Summary Consideration:

Many commenters state the proposed definition of “Operating Instruction” is overly broad and ambiguous. System Operators engage in thousands of communications each year. Many of these are geared toward confirming system conditions, data, or information and/or gathering information in anticipation of responding to conditions observed on the Bulk Electric System. The definition’s breadth and ambiguity are likely to give System Operators pause before they engage in necessary communications to determine whether or not such communications would be Operating Instructions. *The SDT believes the draft 4 language changes, many recommended by commenters, will reduce the perceived ambiguity. The OPCSDT has added clarifying language to the definition for draft 4 which is now:*

***Operating Instruction — “A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.”***

Other commenters cite this would delay necessary information and data gathering by System Operators, which would be detrimental to the reliability of the BES. “System Operators may opt to treat, as Operating Instructions, all or many communications that should not fall within the scope of this definition, resulting in every communication being subject to this standard. That because of the System Operators’ caution and desire to avoid possible penalization by NERC and FERC, the net effect of this definition is detrimental to the reliability of the BES. Further, because of delays in issuing or initiating communications, there is significant potential that penalty exposure from other NERC Reliability Standards (in addition to that identified in the COM-003-1 Reliability Standard, e.g., resulting from a deficiency in implementing or failing to implement specified protocols). This result would be overly burdensome, and its inefficiency could hamper System Operators’ ability to perform their necessary reliability functions.” *The SDT believes that entities should be aware that under COM-003-1, draft 3 and now draft 4 they must identify, assess and correct deficiencies with adherence to communication protocols, not absolute adherence to the protocols, with potential non-compliance for each deficiency. The emphasis is on monitoring and correction.*

*The use of communication protocols, based on its history in other industries, becomes a second nature routine. The SDT believes the general level of professionalism in the ranks of BES System Operators support a routine transition to these communication protocols.*

Finally there were many recommendations to change for language and terms in the definition by commenters. *The SDT used many of the recommendations provided by commenters. The suggestions added clarity and in other cases streamlined the flow of the standard. The team responded to commenters whose suggestions were not used with explanations as to why not.*

Organization	Yes or No	Question 1 Comment
ACES Power Marketing Standards Collaborators	No	The current definition of Operating Instruction, particularly “command from a System Operator” sounds like a Reliability Directive. We recommend revising the SAR of COM-003-1 to retire the definition of Reliability Directive and COM-002-3. There is no delineation between when COM-003-1 and COM-002-3 would apply, which could potentially subject registered entities to double jeopardy. For example, an Operating Instruction that occurs during an Emergency could open up the potential for a finding of non-compliance under both COM-002-3 and COM-003-1. We suggest that the SDT work with the RC SDT to clearly define when COM-002-3 and COM-003-1 would apply. A single communication should not result in multiple penalties.
<p><b>Response:</b> The OPCPSDT thanks you for your comments. There is no violation of COM-003-1 in the example provided. The requirements of COM-003-1 call for documented communication protocols implemented in a manner to identify, assess and correct deficiencies.</p>		
SERC OC Standards Review Group	No	We do not see a significant difference between Operating Instructions and Operating Communications, and we believe neither definition is necessary.
<p><b>Response:</b> The OPCPSDT thanks you for your comments. The SDT disagrees and has used “Operating Instructions” to narrow the definition to preclude general discussion communications. The SDT believes that a definition is necessary to identify direct</p>		



Organization	Yes or No	Question 1 Comment
<b>commands by a System Operator that alter the configuration of the BES.</b>		
Duke Energy	No	Duke Energy is very encouraged by the changes made by the Standard Drafting Team in the current version of COM-003-1. The shift to requiring a communications protocol and a process for identifying and correcting deficiencies is a major step in the right direction. Our concern with the definition is that additional clarity is needed to distinguish the definition of Operating Instruction from the definition of Reliability Directive so that entities know which communications COM-003-1 applies to. This could be accomplished by changing the definition of Operating Instruction; replacing the word “Command” with “Normal communication”, and replacing the word “preserve” with the word “maintain”. The revised definition would read as follows: “Normal communication from a System Operator to change or maintain the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System”.
<b>Response: The OPCPSDT thanks you for your comments. The SDT addressed the relationship between the definition of Operating Instruction and the definition of Reliability Directive in draft 2. The SDT believes a Reliability Directive, during an Adverse Reliability Impact or an Emergency that that requires a change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System, is a subset or a type of an Operating Instruction.</b>		
Dominion	No	Dominion requests clarification of “Command” verses “Directive”. Neither “Command” nor “Directive” is defined in the NERC Glossary of Terms - some guidance/reference is needed. The word “command” seems more forceful, how does a command differ from a directive?
<b>Response: The OPCPSDT thanks you for your comments. Neither term is a definition and the two words are synonyms. The word command is forceful and more clearly underscores what an Operating Instruction is and what it is not. The SDT does not see a need to add it to the NERC Glossary because of the clear dictionary meaning of the term.</b>		

Organization	Yes or No	Question 1 Comment
Associated Electric Cooperative Inc - JRO00088	No	<p>The Operating Instruction definition is no help beyond the “existing” Operating Command definition, as the later exists neither within the NERC Glossary downloaded this morning, 9/20/2012, nor within the Clean COM-003-1 copy downloaded for final review. The proposed Operating Instruction definition would add value, were the BES Definition itself properly scoped to only those assets and functions that undoubtedly affect the reliable Operation of bulk power system. However the BES Definition is, by NERC and FERC desire and design, too broad, and so our industry must now attempt containment of compliance scope and risk within multiple standards, including COM-003-1. As a result, AECl determines this Operation Instruction definition to insufficient to responsibly exclude conversations that have little to no effect upon the BES reliability.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT is not clear on the intent of your comment. The “BES definition” is out of the scope of this question and does not have a bearing on the “Operating Instruction” definition. The definition of “Operating Instruction” is a proposed definition that will not appear in the NERC Glossary until the standard is filed and approved by FERC. The SDT has not created a term named “Operating Command” and is not aware of its existence in the NERC glossary. The SDT has stated many times that general conversation or discussion of options is not an “Operating Instruction.” The OPCPSDT has added clarifying language to the definition for draft 4 which is now:</b></p> <p><b>Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.</b></p>		
ISO/RTO Standards Review Committee	No	<p>The proposal to standardize the meaning of "Operating Instruction" will likely cause more problems than it solves. The concept of “to change or preserve the state, status...” is ambiguous enough for CEAs to still apply the requirement to virtually all verbal conversations.</p> <p><b>Response: The SDT disagrees. The language is very specific and is related</b></p>

Organization	Yes or No	Question 1 Comment
		<p>to “commands from system operators” rather than any verbal conversations. The OPCPSDT has added clarifying language to the definition for draft 4 which is now:</p> <p><i>Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.</i></p> <p>Such a proposed definition may help clarify what the SDT intends to address, however, by making such a common word a Glossary term potentially will result in the Industry having to redefine their own manuals and procedures in which they use the phrase "Operating Instruction". For years, system operators have dealt with operating instructions on a daily if not minute basis. To them, operating instructions are necessarily a communication to alter or preserve the state and status of the BES condition or BES Element/Facility.</p> <p>Having a defined term, and calling such communication a “Command” is totally unnecessary, and can confuse operators from what they understand to be the meaning of operating instructions. Any proposed standard must clearly limit the application of the communication protocol requirements to communications that impact reliability. As proposed, the standard does not do this. Based on the existing language and the proposed Defined term Operating Instruction, the scope could readily be interpreted to include numerous communications that have nothing to do with system reliability. To remedy this, the SDT should either revise the proposed term in accordance with Order 693’s limited scope, or delete this term and focus</p>

Organization	Yes or No	Question 1 Comment
		<p>the standard on reliability directives, which is in line with Order 693.</p> <p><b>Response: The SDT believes the definition is clear and the word “command” does convey an order to take an action, rather than to carry on a general conversation.</b></p> <p><b>The word command is not defined. The capital letter is there because it was the first word in the definition. The SDT rewrote the sentence in draft 4 to read “A command.”</b></p> <p><b>The SDT is also confident the definition is within the scope of FERC Order 693.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
FirstEnergy	No	<p>Although we believe the definition is on the right track, the wording may inadvertently cover many conversations between operators and personnel that do not impact the reliable operation of the BES. We ask the team to consider clarification, examples, or inclusions/exclusions much like the new definition of BES. For instance, tasks that may involved transmission lines associated with IROLs or SOLs, and other critical tasks.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT believes the definition is focused on reconfiguration of the BES and a command from to System Operator to initiate such a reconfiguration. The SDT believes there is a reliability risk from a mishap if the communication of a command if it is ambiguous or misunderstood. The OPCPSDT has added clarifying language to the definition for draft 4 which is now:</b></p> <p><b>Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.</b></p>		

Organization	Yes or No	Question 1 Comment
PPL Corporation NERC Registered Affiliates	No	<p>The PPL Companies do not agree with the proposed definition of Operating Instruction as the standard appears to be focused on imposing three part communications on the industry for all normal / routine operating communications. Imposing requirements for three part communication for Operating Instructions may have the effect of elevating all communications to the state of Reliability Directive (as defined in COM-002-3).</p> <p><b>Response: The SDT believes that communications protocols for all normal / routine operating communications as well as emergency operating communication mitigate the same risks. An unintended reconfiguration of the BES due a miscommunication can be damaging under any operating condition. Three part communication is a proven and effective protocol that reduces that risk.</b></p> <p>Splitting communications requirements across different standards introduces the potential of unnecessary confusion. Communications involving the changing of the state, status, output, or input of a facility, occur very frequently and potentially even more frequently on preserving the state of the system. Many of these communicated changes, in and of themselves, would not have an impact on reliability. However, there are times (examples could be during a DCS event, an SOL, or an IROL) when even seemingly insignificant changes to the system must be made promptly, although the system has not reached the level of emergency or instability. It is at these times, “when action must be taken”, which the miscommunication of the action or inaction could lead to amplifying the risk to the system.</p> <p><b>Response: The SDT agrees. Miscommunication transcends operating states. Universal and consistently applied protocols are proven instruments that mitigate that risk.</b></p> <p>Further, the focus of the standard is on operations and therefore the</p>

Organization	Yes or No	Question 1 Comment
		<p>communications subject to the requirement should be those requiring action in the Real-time Operations Time Horizon. The definition of which is included in the NERC document located at <a href="http://www.nerc.com/files/Time_Horizons.pdf">http://www.nerc.com/files/Time_Horizons.pdf</a> .Suggest modifying the proposed definition as follows: Operating Instruction - Command, other than a Reliability Directive, from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System in which action must be taken in the Real-time Operations Time Horizon.</p> <p><b>Response: The SDT believes the suggested language would narrow the intended focus of the definition. The OPCPSDT has added clarifying language to the definition for draft 4 which is now:</b></p> <p><b>Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
SPP Standards Review Group	No	We suggest changing ‘command’ to ‘order’. The definition would then read ‘An order from a System Operator...’
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT acknowledges that the term order adds clarity, but the term command is even more distinct.</b></p>		
Southern Company	No	Southern does not agree with the definition of “Operating Instruction” as it continues to be too broad and encompass routine communications

Organization	Yes or No	Question 1 Comment
		<p>between System Operators and other system personnel and other functional entities. While Southern agrees that 3-part communications is a good utility practice that has been used by operating entities for many years, Southern disagrees with the broadness of “Operating Instructions” as in some of these cases, 3-part communications are not required to protect the reliability of the system. In fact, this prescriptive requirement, if used on all communications that could fall under “Operating Instructions” (i.e. very general information at times), would take System Operators time from other tasks that are more critical to maintaining reliability. Please note that there are numerous (i.e. in the millions) of conversations between operating entities each year and some important tasks could be missed or delayed if required to follow a standard script for everything.</p> <p><b>Response: The SDT believes the definition is clear and that the word command conveys an order to take an action rather than to carry on a general conversation. The SDT believes the communication protocols in COM-003-1 would not take any additional time and would become a natural part of operators’ communications as they do within other industries that employ communication protocols.</b></p> <p>If the SDT agrees with Southern’s comments related to Requirements 1 and 2, then the definition of “Operating Instruction” would be unnecessary as each operating entity would define the times when 3-part are necessary, which in Southern’s case, would be broader than emergency communications and reliability directives, but not so broad that it would cover general exchange of information between operating entities.</p> <p><b>Response: The SDT is not advocating the use of three part communication to convey general information. The SDT agrees their use should be addressed in R1 and R2 in the required documented communication protocols.</b></p>

Organization	Yes or No	Question 1 Comment
<p>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</p>		
<p>Liberty Electric Power, LLC</p>	<p>No</p>	<p>The definition of the new term, “Operating Instruction,” uses the NERC Glossary term “System Operator,” which is defined as “An individual at a control center...whose responsibility it is to monitor and control that electric system in real time.” The lack of clarity regarding what constitutes a control center leaves doubt as to which instructions would be covered by the standard.</p>
<p>Response: The OPCPSDT thanks you for your comments. The SDT sees no reason to define “control center” as it is a very commonly used and understood term in the industry. The OPCPSDT has added clarifying language to the definition for draft 4 which is now:</p> <p><i>“Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.”</i></p>		
<p>TransAlta Centralia Generation LLC</p>	<p>No</p>	<p>The definition of the new term, “Operating Instruction,” uses the NERC Glossary term “System Operator,” which is defined as “An individual at a control center...whose responsibility it is to monitor and control that electric system in real time.” The lack of clarity regarding what constitutes a control center leaves doubt as to which instructions would be covered by the standard.</p> <p>Response: The SDT sees no reason to define “control center” as it is a very commonly used and understood term in the industry. The SDT has made several changes to the definition in draft 4 that add additional clarification.</p> <p>Another disagreement with the proposed definition of “Operating</p>



Organization	Yes or No	Question 1 Comment
		<p>Instruction” is that it inappropriately imposes three-part communication for routine communications of changes of generation output. Common operating communications to and from generation plants should not be considered compliance events requiring the use of alphanumeric clarifiers. Such a requirement may shift operators’ focus from providing proper information under critical situations to using the specified terms for every minor communication, distracting them rather than sharpening their concentration.</p> <p>The standard should specify the classes of TO/TOP-to-GOP communications that constitute compliance events, the formal designations by which such communications can be recognized, and the parties authorized to issue such commands.</p> <p><b>Response: The SDT believes the use of three part communications is a proven communication protocol that has wide spread use and is an effective means of eliminating miscommunication of commands on the BES. The SDT believes it will help sharpen the operator’s concentration rather than distracting them.</b></p>
<p><b>Response: The OPCSDT thanks you for your comments. Please see our responses above.</b></p>		
ReliabilityFirst	No	<p>ReliabilityFirst does not agree with the changes made to the proposed definition “Operating Instruction”. The definition of Operating Instruction begins with the word “Command”. ReliabilityFirst is unsure what the word “command” means and believes it could be mistaken as a directive. ReliabilityFirst requests further clarification on the meaning of the word “command”. ReliabilityFirst recommends the following for consideration: “Communication of instruction from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.</p>

Organization	Yes or No	Question 1 Comment
<p>Response: The OPCPSDT thanks you for your comments. A command is an order given by someone in authority. The SDT believes the definition is clear and that the word command means to take an action that conveys an order rather than to carry on a general conversation. The language suggested above was featured in draft 2 where commenters stated it was not clear. The word command is more focused and direct.</p>		
<p>Independent Electricity System Operator</p>	<p>No</p>	<p>We do not see the need to define the term “Operating Instructions” for a number of reasons: For years, system operators deal with operating instructions on a daily if not minute basis. Having a defined term, and calling such communication as “Command” is totally unnecessary, and can confuse operators from what they understand to be the meaning of operating instructions. The main intent of this standard is to ensure no miscommunication between operating personnel, a part of which is proposed to be fulfilled by exercising 3-part communication for operating instructions. Notwithstanding our disagreement to having such a requirement in this standard, such a requirement can be developed without having to define a term that adds nothing to the universal understanding of the term but which can confuse operators. For example, Requirement R1 can be revised to:</p> <p>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented protocols for communicating operating instructions that will change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System, which incorporate the following: 1.11.2....</p>
<p>Response: The OPCPSDT thanks you for your comments. The SDT believes the definition is clear and that the word “command” conveys an order to take an action rather than to carry on a general conversation. The OPCPSDT has added clarifying language to the definition for draft 4 which is now:</p>		

Organization	Yes or No	Question 1 Comment
<p><i>“Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.”</i></p>		
<p>NextEra Energy Inc.</p>	<p>No</p>	<p>Although NextEra Energy, Inc. (NextEra) is encouraged by the refinements made to draft COM-003-1, NextEra believes additional refinements are necessary for COM-003-1 to promote reliability, and in no way hinder reliability. Next Era’s perspective is heavily influenced by the years of experience of its system operators in their role as a large Transmission Operator, Reliability Coordinator agent and Balancing Authority. Specifically with respect to the definition of Operating Instruction, NextEra recommends that the definition more closely track the syntax of the definition of Reliability Directive in COM-002-3, and, thus, read as follows: Operating Instruction - a command from a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to change or preserve the state, status, output of an Element or Facility of the Bulk Electric System.</p>
<p><b>Response:</b> The OPCPSDT thanks you for your comments. The SDT has incorporated much of your recommended language into draft 4 of COM-003-1. The OPCPSDT has added clarifying language to the definition for draft 4 which is now:</p> <p><i>Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.</i></p>		
<p>Northeast Utilities</p>	<p>No</p>	<p>Operating Instruction Definition is too broad; this essentially imposes on affected entities the need to use 3-part communication all the time. Additionally the broadness of the definition may cause compliance</p>

Organization	Yes or No	Question 1 Comment
		difficulties between COM-003-1 and COM-002 if the requirements are not looked at holistically between the two. A recommendation would be to combine the requirements into one standard.
<p><b>Response: The OPCSDT thanks you for your comments. The SDT notes your recommendation, but that is outside the scope of the SAR for this project. This Issue has been discussed at the Standards Committee.</b></p>		
American Electric Power	No	<p>While AEP would not argue against the definition of “Operating Instruction” as proposed, we object to its inclusion as we disagree with the concept of requiring three part communications for more routine operations. Our efforts in this regard should first be focused solely on Reliability Directives before expanding this work, and creating similar requirements for all other Operating Communications. Requiring three part communications for every scenario might be considered a best practice by some, but making it a mandatory practice for routine operations emphasizes the manner of communications rather than the operations themselves. In addition, requiring three part communication in such a broader scope could actually diminish the perceived urgency during more urgent situations where such communications are more appropriate. In any event, requiring three part communications for Reliability Directives will likely result in more widespread usage for more routine operating communications, without making it a requirement.</p> <p><b>Response: The SDT believes that communications protocols for all normal / routine operating communications as well as emergency operating communication mitigate the same risks. An unintended reconfiguration of the BES due a miscommunication can be damaging under any operating condition. Three part communication is a proven protocol that is effective in preventing misunderstandings. FERC Order 693, P 532 supports communication protocols for normal as well as emergency BES</b></p>

Organization	Yes or No	Question 1 Comment
		<p><b>communication.</b></p> <p>AEP believes that there should not be multiple project teams proposing concurrent changes to COM-001, COM-002, and COM-003. Unless there are overwhelming reasons for not doing so, these efforts should be consolidated and managed by a single project team. In addition, current efforts on COM-003 need to be co-located with the proposed changes to COM-002 within a single standard. Having multiple project teams proposing concurrent changes results in problems such as this, where</p> <ul style="list-style-type: none"> <li>a) changes are proposed to the same standard or</li> <li>b) similar changes are proposed to separate standards.</li> </ul> <p>AEP cannot support revisions on these matters until they are managed by a single project team. If the team believes it should still proceed in their current efforts, then there probably is no need for requiring three part communications for Reliability Directives (COM-002 R2). As a result, COM-002 R2 should be retired and this definition should include emergency situations as well.</p> <p><b>Response: The SDT notes your recommendation, but that is outside the scope of the SAR for this project. This Issue has been discussed at the Standards Committee.</b></p>
<p><b>Response: The OPCSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Essential Power, LLC</p>	<p>No</p>	<p>The definition of the new term, “Operating Instruction,” uses the NERC Glossary term “System Operator,” which is defined as “An individual at a control center...whose responsibility it is to monitor and control that electric system in real time.” The lack of clarity regarding what constitutes a control center leaves doubt as to which instructions would be covered by the standard.</p>

Organization	Yes or No	Question 1 Comment
		<p>Response: The SDT sees no reason to define “control center” as it is a very commonly used and understood term in the industry. The OPCPSDT has added clarifying language to the definition for draft 4 which is now:</p> <p><i>“Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.”</i></p> <p>Another disagreement with the proposed definition of “Operating Instruction” is that it inappropriately imposes three-part communication for routine communications of changes of generation output. Common operating communications to and from generation plants should not be considered compliance events requiring the use of alphanumeric clarifiers. Such a requirement may shift operators’ focus from providing proper information under critical situations to using the specified terms for every minor communication, distracting them rather than sharpening their concentration. The standard should specify the classes of TO/TOP-to-GOP communications that constitute compliance events, the formal designations by which such communications can be recognized, and the parties authorized to issue such commands.</p> <p>Response: The SDT believes the use of three part communications is a proven communication protocol that has wide spread use and is an effective means of eliminating miscommunication of commands on the BES. The SDT believes it will help sharpen the operator’s concentration rather than distracting them.</p>

Organization	Yes or No	Question 1 Comment
		<p>“Operating Instructions” apply to applicable functional entities that issue and receive them to and from other applicable functional entities.</p>
<p>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</p>		
Texas Reliability Entity	No	<p>Previous version has a description regarding Reliability Directives. This version does not address Reliability Directives and the relationship to an Operating Instruction. Is a Reliability Directive a subset of Operating Instruction? Is a “directive,” as mentioned in several standards, an Operating Instruction?</p>
<p>Response: The OPCPSDT thanks you for your comments. The SDT advocates that a <i>Reliability Directive</i> and any other <i>directive</i> is a subset of Operating Instructions when it is a command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.</p>		
MidAmerican Energy	No	<p>MidAmerican has concerns that Operating Instructions as defined is too broad.</p>
<p>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has added clarifying language to the definition for draft 4 which is now:</p> <p>“Operating Instruction —A command by a System Operator of a <i>Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.</i>”</p>		
Public Service Enterprise Group	No	<p>The definition of “System Operator” includes BA, RC, TOP, and GOP. Because GOP is included the definition, “System Operator” should be replaced by “Balancing Authority, Reliability Coordinator, or Transmission Operator.” See also Project 2010-16: Definition of System Operator.</p>

Organization	Yes or No	Question 1 Comment
<p>Response: The OPCPSDT thanks you for your comments. The SDT has incorporated your recommended language into draft 4 of COM-003-1.</p> <p><i>“Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.”</i></p>		
<p>Exelon</p>	<p>No</p>	<p>We can accept the definition but want to bring to the attention of the Drafting Team that the description of OI in the Background section of the Comment form, "Operating Instructions more accurately define the broad class of communications that deal with changing or altering the state of the BES", does not agree with the Definition being balloted. The inclusion of the phrase "or preserve" changes the definition. Nowhere in the discussion of the need for Operating Instructions or communication protocols is there discussion of or justification for including the "or preserve" statement. Exelon can support the modified definition but we believe it will cause entities to oppose this standard at ballot and create confusion when implementing controls and auditing to the modified definition.</p>
<p>Response: The OPCPSDT thanks you for your comments. The word “preserve” is used to denote efforts to hold the current state or status of a BES Element or Facility; in other terms a command not to make any changes to the system to preserve the existing operating state. The SDT changed it from “maintain” because of confusion cited by draft 2 commenters stating it created a possible reference to maintenance and repair activities.</p>		
<p>Indiana Municipal Power Agency</p>	<p>No</p>	<p>NERC defines the term “System Operator” as “an individual at a control center (Balancing Authority, Transmission Operator, Generator Operator, Reliability Coordinator) whose responsibility it is to monitor and control that electric system in real time.” NERC does NOT define a “control center”</p>



Organization	Yes or No	Question 1 Comment
		<p>which could be problematic when it comes to how an entity views a control center and how an auditor defines a control center.</p> <p><b>Response: The SDT sees no reason to define “control center” as it is a very commonly used and understood term in the industry.</b></p> <p>IMPA believes that there is too much ambiguity when using the words “to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.” IMPA recommends that the entity giving the Operating Instruction declares it to be one which eliminates many potential problems of applying a definition of an Operating Instruction. The receiver of the Operating Instruction immediately knows what the following instructions will be and will know to apply the proper communication protocol instead of trying to figure out if the definition of Operation Instruction applies to what the entity just said.</p> <p><b>Response: The SDT points out the beginning of this definition sentence is “Command from a System Operator ..... “ which we believe eliminates that ambiguity. The OPCSDT has added clarifying language to the definition for draft 4 which is now:</b></p> <p><b><i>“Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.”</i></b></p> <p><b>The SDT also believes an entity is permitted to address the declaration option by creating it in the documented communication protocols in R1</b></p>

Organization	Yes or No	Question 1 Comment
		and R2.
Response: The OPCPSDT thanks you for your comments.		
MISO	No	<p>MISO believes that the proposed definition of “Operating Instruction” is overly broad and ambiguous. System Operators engage in thousands of communications each year. Many of these are geared toward confirming system conditions, data, or information and/or gathering information in anticipation of responding to conditions observed on the Bulk Electric System. The definition’s breadth and ambiguity are likely to give System Operators pause before they engage in necessary communications to determine whether or not such communications would be Operating Instructions. This would delay necessary information and data gathering by System Operators, which delay would likely be detrimental to the reliability of the BES. Conversely, to avoid confusion regarding which communications are Operating Instructions and to avoid potential delays, System Operators may opt to treat, as Operating Instructions, all or many communications that should not fall within the scope of this definition, resulting in every communication being subject to this standard.</p> <p>Under either scenario, because of the System Operators’ caution and desire to avoid possible penalization by NERC and FERC, the net effect of this definition is detrimental to the reliability of the BES. Further, because of delays in issuing or initiating communications, there is significant potential that penalty exposure from other NERC Reliability Standards (in addition to that identified in the COM-003-1 Reliability Standard, e.g., resulting from a deficiency in implementing or failing to implement specified protocols and/or three-way communication, a deficiency in the review process, which is now significantly expanded beyond that envisioned during the drafting of this standard) could be increased. Accordingly, System Operators are likely</p>

Organization	Yes or No	Question 1 Comment
		<p>to apply the protocols applicable to Operating Instructions under R1 of COM-003 to all communications, whether or not they qualify as Operating Instructions. This result would be overly burdensome, and its inefficiency could hamper System Operators’ ability to perform their necessary reliability functions.</p> <p><b>Response:</b> The SDT believes the draft 3 language for the definition of an Operating Instruction is clear. A “command” should never be confused with or interpreted as casual or informational conversation. A command is a very distinct and forceful word where generally the only response expected is compliance. The OPCPSDT has added clarifying language to the definition for draft 4 which is now:</p> <p><i>“Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.”</i></p> <p>Previous commenters have cited the professionalism of the majority of System Operators. Based on those comments and the experience of the OPCPSDT as operators we are confident System Operators will be able to easily manage all of the protocols.</p> <p>The SDT also requests that MISO look at this draft standard in the context of its identify, assess and correct features that permit the entity to improve reliability by correcting deficiencies without being subject to a finding of non compliance.</p> <p>As a result, MISO does not support the proposed definition of Operating</p>

Organization	Yes or No	Question 1 Comment
		Instruction at this time.
<p>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</p>		
ERCOT	No	<p>ERCOT agrees with the SRC comments, and has these additional comments: As proposed, the term “Operating Instruction” could include communications that have nothing to do with reliability - e.g. communications that are market related and have no impact on system reliability. That outcome is inconsistent with FERC’s direction in Order No. 693. FERC’s discussion of this issue in Order 693 focuses on alerts and emergencies - “We adopt our proposal to require the ERO to establish tightened communication protocols, especially for communications during alerts and emergencies...” (693 at P 531)”Accordingly, we direct the ERO to either modify COM-002-2 or develop a new Reliability Standard that requires tightened communications protocols, especially for communications during alerts and emergencies.” (693 at P 535)In addition, the scope of FERC’s concerns is limited to communications that impact the reliability of the BPS - “We note that the ERO’s response to the Staff Preliminary Assessment supports the need to develop additional Reliability Standards addressing consistent communications protocols among personnel responsible for the reliability of the Bulk-Power System.” (693 at P 531)”...we believe, and the ERO agrees, that the communications protocols need to be tightened to ensure Reliable Operation of the Bulk-Power System.” (693 at P 532)Simply because FERC noted the benefits to communications during normal conditions does not mean the standard has to apply to those circumstances. All FERC said was that implementing consistent protocols will likely provide benefits across all operating conditions. The focus of the concern was clearly alerts and emergencies, and limiting the application of the standard to those conditions will provide benefits to relevant communications during normal conditions.</p>

Organization	Yes or No	Question 1 Comment
		<p><b>Response: The SDT continues to believe the very documents you cite as not supporting any drafts of COM-003-1 do indeed support and sanction the requirements developed by the SDT. The SDT remains properly focused on the guidance provided by the Blackout Report, FERC order 693 and the SAR and from the agencies that developed those documents. The SDT summarizes by quoting “communications protocols need to be tightened to ensure Reliable Operation of the Bulk-Power System.” The SDT has developed a standard that effectively and fairly “tightens communication”.</b></p> <p>However, as written, the standard is overbroad and inconsistent with the Commission’s directives in Order 693. Consistent with this discussion, the IRC believes the most effective way to remedy this issue is to eliminate the proposed term and focus the standard on conditions that actually have a reliability impact. This can be achieved focusing the requirements on Reliability Directives.</p> <p><b>Response: The SDT will continue to develop COM-003-1 consistent with the directives and guidance contained in FERC Order 693.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Oncor Electric Delivery Company LLC</p>	<p>No</p>	<p>Oncor offers instead a new glossary term called “Operating Communication” in order to support alternate language proposed for R1 and R2:Operating Communication - Communication from a System Operator that when executed results in the change or preserves the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System</p>
<p><b>Response: The OPCPSDT thanks you for your comments. “Operating Communication” was the original term the SDT presented in draft 2. Commenters stated it was too ambiguous. The SDT has added the phrase “that when executed” to draft 4.</b></p>		

Organization	Yes or No	Question 1 Comment
Brazos Electric Power Cooperative, Inc.	No	See ACES comments.
<b>Response: The OPCPSDT thanks you for your comments. Please see our responses to ACES comments.</b>		
Ameren	No	See response to question 5.
<b>Response: The OPCPSDT thanks you for your comments. Please see our responses to question 5.</b>		
MRO NSRF	No	
Central Lincoln	Yes	Thank you for making this change. Central Lincoln believes the SDT is on the right track to limit the scope of the standard to communications originating from System Operators. This will be less burdensome for many registered entities as well as the Compliance Enforcement Authorities.
<b>Response: The OPCPSDT thanks you for your comments.</b>		
Occidental Energy Ventures Corp.	Yes	Occidental Energy Ventures Corp. ("OEV") agrees that it is important to specify that the command came from a System Operator. This allows us to leverage existing recording and monitoring systems to capture the event. The previous definition was open ended - which would have required us to expend an unknowable dollar amount in an attempt to capture every conversation related to a BES Facility or Element.
<b>Response: The OPCPSDT thanks you for your comments.</b>		
Northeast Power Coordinating Council	Yes	
Detroit Edison	Yes	

Organization	Yes or No	Question 1 Comment
Tacoma Public Utilities	Yes	
Hydro One	Yes	
APPA, LPPC and TAPS	Yes	
Florida Municipal Power Agency	Yes	
Bonneville Power Administration	Yes	
Arizona Public Service Company	Yes	
PacifiCorp	Yes	
Georgia System Operations	Yes	
Southwestern Power Administration	Yes	
US Bureau of Reclamation	Yes	
Manitoba Hydro	Yes	
NIPSCO	Yes	
City of Austin dba Austin Energy	Yes	
Hydro Québec TransÉnergie	Yes	
Idaho Power Co.	Yes	
The United Illuminating Company	Yes	

Organization	Yes or No	Question 1 Comment
South Carolina Electric and Gas	Yes	
CenterPoint Energy Houston Electric, LLC.	Yes	
Salt River Project	Yes	
CPS Energy	Yes	
Lincoln Electric System	Yes	
Public Service Company of New Mexico	Yes	
Alliant Energy	Yes	
The Empire District Electric Company	Yes	
City of Tallahassee	Yes	
Puget Sound Energy Inc.	Yes	
GTC	Yes	
Cowlitz County PUD	Yes	



2. The SDT has proposed that the applicable entities have documented communication protocols that incorporate elements listed in COM-003-1, R1 and R2. Do you agree with these proposed requirements ? If not, please explain in the comment area.

#### Summary Consideration:

Commenters state that it must be made clear in the requirements that functional entities can incorporate exceptions (to address emergencies for example) in the protocols that are developed. **The SDT believes that there is enough flexibility in the development of the documented communication protocol documents for the entity to account for exceptions to deal with emergencies or exceptional circumstances that may exist among communicating entities.**

Other commenters note these requirements are too prescriptive. The sub-requirements drill down too deeply into the communications needed to conduct system operations. sub-parts of R1 and R2 and allow registered entities to define their own communications protocols based on internal policies and procedures; not from overly-prescriptive reliability standards. They state the registered entity should have the freedom to decide what elements are to be included in its communication protocols. R1 and R2 are administrative in nature and unnecessary. There is no need to include 9 sub-parts on how to achieve proper communications. **The SAR and 2003 Blackout Report specified consistent and uniform communication protocols. The parts to the requirements serve as a frame to sustain a basis for standardizing the type of protocol the entity should develop. Beyond the framework specified in the parts, an entity has the flexibility to develop the protocols to fit their particular situation.**

**There were many other comments on each of the Parts for R1 and R2. Most cited the individual need for each. The SDT responded to each comment by demonstrating the contribution each protocol makes to communication clarity, which in turn increases the level of reliability.**

Some commenters disagree that the Distribution Provider is listed as an Applicable Entity. The Distribution Provider load is not considered part of a BES Element or Facility. "The SDT response to an earlier comment on this issue was that the SDT is aware of some DPs that operate BES equipment. If that is the case, then the standard should be applicable to only those DPs that operate BES Elements or Facilities - not the numerous DPs who do not."

**If a DP has never or will never receive an Operating Instruction it would not be an applicable entity. If the DP has or could receive Operating Instruction it must comply with the standard. The DP would have to confirm their situation with the CEA.**

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	It must be made clear in the requirements that functional entities can incorporate exceptions (to address emergencies for example) in the protocols that are developed. Both of these requirements are too prescriptive. The sub-requirements drill down too deeply into the communications needed to conduct system operations.
<p><b>Response: The OPCSDT thanks you for your comments. The SDT believes the language of the requirement R1 and R2 permits the entity to assess whether variations from the required protocol were valid. The exceptions referenced in your comments are TOP-001-2, R1 and IRO-001-3, R2.</b></p>		
ACES Power Marketing Standards Collaborators	No	<p>(1) The SDT should strike all sub-parts of R1 and R2 and allow registered entities to define their own communications protocols based on internal policies and procedures; not from overly-prescriptive reliability standards. The SDT stated that COM-003-1 is shifting paradigms and putting the responsibility on the registered entity to monitor, assess and correct its own deficiencies. If that is true, then the registered entity should have the freedom to decide what elements are to be included in its communication protocols. R1 and R2 are administrative in nature and unnecessary. There is no need to include 9 sub-parts on how to achieve proper communications.</p> <p><b>Response: The SAR and 2003 Blackout Report specified consistent and uniform communication protocols. The parts to the requirement serve as a frame to sustain a basis for standardizing the type of protocol the entity should develop.</b></p> <p>(2) The standard, as currently written, does not allow a registered entity to implement superior practices, such as multi-modal communication (multiple mediums of communicating) or other superior communication methods and technologies. There are other ways to achieve efficient and accurate operating communications and the drafting team should modify the requirements to allow the registered entity to determine the best method of communication. There will be a disincentive for registered entities to seek out new technologies to improve</p>

Organization	Yes or No	Question 2 Comment
		<p>communication if the standard remains with the current sub-parts. More discussion on each sub-part below.</p> <p><b>Response: The SDT believes there is nothing in the standard that precludes an entity from embracing technology or incorporating best practices. The language of R1 and R2 states [an entity] “shall have documented communication protocols for Operating Instructions that incorporate the following.” If technology supplants or improves communication accuracy it can be incorporated in the documented communication protocol.</b></p> <p>(3) R1, part 1.1, use of the English language. The SDT should not require use of the English language because the vast majority registered entities in North America speak English, except for a small number of entities in Canada and Mexico. If anything, the requirement should be modified to state that, “If the English language is not used by System Operators, there must be a legal justification, such as another language is mandated by law or regulation.” Not using the English language is a much greater risk to reliability. The majority of companies that speak English should not have to maintain compliance policies to reaffirm something that everyone knows that they are doing. The real issue here is if an entity does not use English language, auditors should verify how they communicate internally and what controls are in place when the non-English speaking entity communicates with English-speaking neighbors. The SDT should not put the burden of compliance on English speakers. The team should focus on the entities that pose a risk to the BES by not using the English language and the increased potential for miscommunications from translation errors.</p> <p><b>Response: The SDT believes the language of the requirement requires the use of the English language among functional entities which is consistent with COM-001-1.1, R4, which will be replaced by COM-003-1.</b></p> <p>(4) R1, part 1.2, the 24-hour clock, daylight/standard time. This sub-part does not take into account real time, such as “perform an action in 5 minutes.” The purpose statement of the SAR is to provide System Operators with uniform communications</p>

Organization	Yes or No	Question 2 Comment
		<p>protocols that reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the BES. Requiring an operator to use the 24-hour clock for an action that is about to occur could cause more confusion and increase the possibility of miscommunication. The SDT should consider either inserting exceptions for the 24-hour clock for real time activities, or strike the 24-hour clock from the requirements.</p> <p><b>Response: The SDT believes the language of the requirement allows the entity to determine the use of the 24 hour clock time only if they state an <i>actual clock time</i> or to use relative time periods if they chose to use relative time consistent with your example.</b></p> <p>(5) R1, part 1.3, Standard or Daylight Savings. This sub-part also poses a risk for actions performed during real time operations and could increase the likelihood for error. For example, if WECC RC (daylight) was trying to communicate to a registered entity located in Arizona (no daylight savings time) to open a breaker. What is more effective, asking the entity to open a breaker in 5 minutes or at 11:05? In that scenario, 11:05 may be an hour difference because WECC RC is on daylight and Arizona is not, and the operators would be focusing on whether they accounted for the time changes and could potentially lose focus of the task at hand - opening the correct breaker. The SDT should consider either inserting exceptions for daylight savings/standard time for real time activities, or strike daylight savings/standard time from the requirements.</p> <p><b>Response: The SDT believes the language of the requirement allows the entity to determine the use of a time zone <i>if you use a clock time</i> or to use relative time periods if they chose to use relative time as your example demonstrates. The SDT does not want to dictate the “how” under this format. The protocol should be uniform, clear and must increase reliability.</b></p> <p>(6) R1, part 1.4, Transmission interface Element or Facility. As discussed above, this sub-part is unnecessary and should be struck from the standard. A registered entity</p>

Organization	Yes or No	Question 2 Comment
		<p>should be able to define its own communication protocol and the associated internal controls to ensure effective operating communications. Further, the Real-time Transmission Operations SDT (Project 2007-03) eliminated TOP-002 R18 which referred to the same concept as part 1.4, “uniform line identifiers when referring to transmission facilities.” The reason the Real-time TOP SDT removed the language from the new standard was because the “requirement adds no reliability benefit. ...There has never been a documented case of the lack of uniform line identifiers contributing to a System reliability issue.” Project 2007-03 was approved by the NERC Board of Trustees on May 9, 2012. Why is the OPCP SDT introducing language that the NERC Board has approved to remove from the requirements? There needs to be more awareness of the other projects and actions by the NERC Board. To be consistent, we recommend striking this sub-part in its entirety.</p> <p><b>Response: The OPCPSDT is aware of the disposition of TOP-002 R18. The OPCPSDT, in the context of communication clarity and to tighten communications, believes that a common naming convention for interface BES Facilities and Elements of neighboring entities reduces response time and enhances situational awareness.</b></p> <p>(7) R1, part 1.5, Alpha-numeric Clarifiers. As discussed above, this sub-part is unnecessary and should be struck from the standard. A registered entity should be able to define its own communication protocol and the associated internal controls to ensure effective operating communications.</p> <p><b>Response: The requirement does allow an entity to develop its own protocol around alpha numeric clarifiers. The protocol should be uniform, clear and must increase reliability.</b></p> <p>(8) R1, part 1.6 and 1.7, Three-part Communication. As discussed above, these sub-parts are unnecessary and should be struck from the standard. There are more effective methods of communicating besides using three-part communication. Multi-modal communication utilizes several mediums (verbal, visual and other sensory cues) to enhance communication and may include three-part, but could also include</p>

Organization	Yes or No	Question 2 Comment
		<p>other equally efficient and effective methods to communicate, such as through interactive smart phones and other remote communication devices. Different strategies may be needed for different utilities and their communication objectives. For instance, strategies and tools may be combined to meet a wide variety of communication functions to meet the needs of system operations, including utilizing new technologies to improve human performance when performing day-to-day operations. Three-part communications could be a part of the protocol, but three-part should not be in the requirements because it limits utilities from employing other methodologies are equally effective or superior to three-part communications. A registered entity should be able to define its own communication protocol and the associated internal controls to ensure effective operating communications.</p> <p><b>Response: There is flexibility in R1 and R2 to incorporate technology that will enhance human performance. The SDT believes that until technology that can absolutely ensure that communications are clear and accurate proliferate throughout the BES; most Operating Instructions will be exchanged human to human. Three part communication is an effective tool that is used to increase the accuracy of verbal communication.</b></p> <p>(9) R1, part 1.8 and 1.9, One-way Burst Messaging. As discussed above, these sub-parts are unnecessary and should be struck from the standard. An all call communication that is incorrect has just a big of an impact on reliability than one that is not understood. Also, the SDT does not take into account all the various technologies that exist in the marketplace; what does an entity do for an “all call conference call” where there are numerous humans on the line? R1, part 1.6 refers to “two party, person to person” and part 1.8 is limited to “one-way” communication. There is a gap here - does the SDT intend to exclude the “all call conference call” from the requirements?</p> <p><b>Response: The “all call conference call” would not be subject to the requirements if it only deals with general information. If the “all call conference call” results in “Operating Instructions” those “Operating Instructions” would be subject to an</b></p>

Organization	Yes or No	Question 2 Comment
		<p><b>entity's communication protocols.</b></p> <p>What happens if there are errors in the sent message? Would internal controls be the remedy?</p> <p>If the all call communication is not understood and there was no request for clarification, would an internal control resolve this issue or would the auditor find a PV? Also, sub-part 1.8 only requires confirmation from one party, even though the burst message could have been a request for eight parties to reply. There is a gap in reliability if all parties do not reply in that example. These sub-parts need additional information for clarity. Same comment for DP/GOP below.</p> <p><b>Response: The standard only addresses communication protocols not human performance errors. Managing human performance is the responsibility of the entity's organization. The protocols exist to prevent the error.</b></p> <p><b>The reason to have one recipient reply is to confirm to the issuer that the Operating Instruction was sent. There are many diverse technologies over many communication medias that the entity can reflect their in their own documented communication protocols.</b></p> <p>(10) R2 should allow DPs and GOPs to define their own communications protocols based on internal policies and procedures and there should not be a requirement to include sub-parts 2.1 and 2.2.</p> <p><b>Response: Our responses above address this comment.</b></p> <p>(11) R2, part 2.1, Receiving a Three-part Communication. As discussed above, this sub-part is unnecessary and should be struck from the standard. There are more effective methods of communicating besides using three-part communication. Multi-modal communication utilizes several mediums (verbal, visual and other sensory cues) to enhance communication and may include three-part, but could also include other equally efficient and effective methods to communicate, such as through interactive smart phones and other remote communication devices. Different</p>

Organization	Yes or No	Question 2 Comment
		<p>strategies may be needed for different utilities and their communication objectives. For instance, strategies and tools may be combined to meet a wide variety of communication functions to meet the needs of system operations, including utilizing new technologies to improve human performance when performing day-to-day operations. Three-part communications could be a part of the protocol, but three-part should not be in the requirements because it limits utilities from employing other methodologies are equally effective or superior to three-part communications. A registered entity should be able to define its own communication protocol and the associated internal controls to ensure effective operating communications.</p> <p><b>Response: If those technologies exist and are acquired and provide absolute clarity among Functional Entities, the entity can employ them and redraft their protocol to reflect more effective functionality of the system.</b></p> <p>(12) R2, part 2.2, One-way burst messaging for DP and GOP. As discussed above, this sub-part is unnecessary and should be struck from the standard. Please see (9) above for more discussion of one way burst messaging.</p> <p><b>Response: The SDTs response to (9) covers the SDTs position. The SDT thanks you for a very comprehensive review.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>SERC OC Standards Review Group</p>	<p>No</p>	<p>We support having a documented communications protocol, but do not support prescriptive elements. Below is an example of language we could support. All the subparts of R1 and R2 need to be rewritten along these lines.</p> <p>”R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented communication protocols for Operating Instructions that address the following:</p> <p>....1.6. The conditions under which an issuer is expected to:</p> <ul style="list-style-type: none"> <li>o Confirm that the response from the recipient of the Operating Instruction was</li> </ul>



Organization	Yes or No	Question 2 Comment
		accurate, or o Reissue the Operating Instruction to resolve a misunderstanding.”
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT replaced the word incorporate” with “include” which we believe is consistent with your suggestion.</b></p>		
Duke Energy	No	<p>1) In Requirements R1 and R2, the word “incorporate” should be changed to “address”. This change will align the language of the requirements with the language of the RSAW, providing flexibility to entities in how their communications protocols will be structured. This change will also help to alleviate some of the following concerns.</p> <p><b>Response: The SDT replaced the word incorporate” with “include” which we believe is consistent with your suggestion.</b></p> <p>2) In R1.1, 1.3 and 1.4 clarify the meaning of the phrase “between functional entities”. Do these sub-requirements apply to Operating Instructions between individuals located in the same functional entity?</p> <p><b>Response: As stated in the sub requirements they apply to Operating Instructions between functional entities. They do not apply to individuals in the same functional entity. The SDT recommends that they should, but will leave that to the entity.</b></p> <p>3) In R1.7, the phrase “repeat, restate, rephrase, or recapitulate” seems excessive. Suggest changing to just “repeat or rephrase”.</p> <p><b>Response: The SDT used the same language as COM-002-3 because the industry believes the different language of the requirements originally used in each standard was confusing.</b></p> <p>4) R1.6 and 1.7 are describing 3-part communication. Suggest combining 1.6 and 1.75) R1.8 and 1.9 address “one-way burst messaging”, but it’s not clear whether, or to what extent, 3-part communication is required.</p>

Organization	Yes or No	Question 2 Comment
		<p>Response: Part 1.6 and 1.7 are separate in order to fairly divide the requirements for the issuer and for the receiver.</p> <p>“All calls” or “one-way burst messaging” are not subject to three part communication because the SDT believes that it would be impractical for many receiving parties to acknowledge receipt and repeat the message. The acknowledgement by one or more receiving entity is a confirmation to the issuer that the all call message went out.</p>
<p>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</p>		
<p>Dominion</p>	<p>No</p>	<p>We appreciate the SDT’s response to stakeholder comments in the previous draft, but still find sub-requirements R1.1, R1.2, R1.3 to be too prescriptive. We agree that these entities should mutually agree on</p> <ul style="list-style-type: none"> <li>(1) the language they will use to communicate and</li> <li>(2) the manner in which they will communicate time (24 hour, zone, zulu, etc).</li> </ul> <p>Response: The SAR and 2003 Blackout Report specified consistent and uniform communication protocols. The parts to the requirement serve as a frame to sustain a basis for standardizing the type of protocol the entity should develop.</p> <p>Below are some additional suggestions;</p> <p>Dominion also disagrees that Distribution Provider is listed as an Applicable Entity. Distribution Provider load is not considered part of a BES Element or Facility. The SDT response to an earlier comment on this issue was that the SDT is aware of some DPs that operate BES equipment. If that is the case, then the standard should be applicable to only those DPs that operate BES Elements or Facilities - not the numerous DPs who do not.</p> <p>Response: The SDT also is aware that many DPs are receivers of load shedding instructions which are Operating Instructions. They are subject to communication</p>

Organization	Yes or No	Question 2 Comment
		<p><b>protocols on that basis.</b></p> <p>R2 should be clarified to read as follows: “For Distribution Providers, and Generator Operators that operate BES Elements shall have documented communication protocols for Operating Instructions that incorporate the following:</p> <p>R1.1 - In lieu of the English language requirement, Dominion recommends defining the use of a common language for verbal or written communications for Operation Instruction(s). English shall be the default language unless otherwise mandated by the entity’s document or mandated by law, regulation, or mutual agreement.</p> <p><b>Response: The SDT believes that the language of the requirement allows the entity to develop the communication protocol in terms that are more effective for reliability in the entity’s own operating environment.</b></p> <p>Under R.1.2 and R1.1.3, It doesn’t matter (and may not be exactly clear) in what time zone the action will occur. A transmission line can cross time zone boundaries. What is important is that all operators involved have the same understanding of what is going to happen, when, and who is to do it. If a TOP that operates in two different time zones already has a protocol that establishes one zone or the other as their time standard, will they have to revise their protocol and use two different zones?</p> <p><b>Response: No, as long as they include that time zone in the Operating Instruction.</b></p> <p>Dominion would recommend the following language to read as follows: Clock-time communications shall be precise and include the following:</p> <p>Use of a 24-hour format or 12-hour format with AM/PM designation</p> <p>Specification of the applicable Time-Zone when multiple Time-Zones are covered</p> <p>Specification of Standard Time or Daylight Saving Time for Operating Instructions that will be implemented beyond the present/current day</p> <p><b>Response: The SDT believes that the standard permits an entity to develop the</b></p>

Organization	Yes or No	Question 2 Comment
		<p>language you suggested above in the entity’s protocols required in R1 and R2.</p> <p>The only concern the SDT has with what you suggest is the use of a 12-hour format with AM/PM designation. The SDT believes this can easily be misunderstood creating increased potential for a miscommunication The SDT knows of no entity that uses an ‘am – pm’ term for critical communications.</p> <p>R1.4 - This requirement is overly redundant as it is also covered by TOP-002 R18.</p> <p><b>Response: The SDT believes neighboring entities should have a clear understanding of each other’s BES Elements and BES Facilities to increase situational awareness and to shorten response time. TOP-002 R18 will be eliminated by the RTOSDT.</b></p> <p>Under R.1.8 and R.1.9, Dominion feels this would create an unnecessary burden to document routine notifications that rely on a burst messaging system and do not have any effect on the Bulk Power System. A one-way burst messaging system is typically used to quickly inform/advise. It is designed as one-way to provide efficiency and should not be used for Operating Instructions. It would be much simpler to state that, “for the communications of Operating Instructions (regardless of the technology employed)( apply above comments), the message must be repeated or confirmed by the recipient, and validated by the sender.” This approach focuses on “Operating Instructions” and not the technology employed. The requirement as currently written does not allow for exceptions due to routine or informative communications. (Example: NERC Alerts to the Industry based are based on severity level and do not always require receipt of message by the Registered Entity).</p> <p><b>Response: The SDT does not want to document routine notifications. The requirement requires develop communication protocols for “Operating Instructions.”</b></p> <p><b>It would be unwieldy for a large number of all call recipients to all respond to an all call “Operating Instruction” which is why the SDT called for confirmation from at</b></p>

Organization	Yes or No	Question 2 Comment
		<p>least one (if an entity wants more it can request it) recipient to ensure transmission of the “Operating Instruction.”</p> <p>R2 - Why not simply include DP and GOP in R1?</p> <p>R4 - Why not simply include DP and GOP in R3?</p> <p><b>Response: The SDT points out that R1 and R3 are applicable to entities that issue and receive Operating Instructions, while R2 and R4 are applicable to entities that only receive Operating Instructions. The SDT did not want to stipulate that entities that do not issue Operating Instructions must have protocols that only apply to issuance.</b></p> <p>Dominion also recommends defining 3 Part Communication in the NERC glossary as a result of this standard to help eliminate confusion. We need to have the System Operator maintain a focus on reliability through precise communications without unduly adding unnecessary requirements that create a burden without adding value. The mandatory use of Time-Zones for parties communicating within the same Time-Zone, or the use of Standard/Daylight Savings Time for current day activities adds an administrative burden with no value to reliability.</p> <p><b>Response: The SDT defined three part communication in draft 1 of the standard. Industry comment was universally against the definition.</b></p> <p><b>The addition of accurate time information is not administrative. The time element of an Operating Instruction is critical and should be clearly conveyed and understood so it does not result in a compromised system due to an unexpected operation at the wrong time.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
Hydro One	No	<p>ï€ We request clarification on the rationale for limiting communication protocol requirements for DPs and GOPs. We believe that the communication protocol should contain essentially the same elements regardless of the function an entity performs.</p>

Organization	Yes or No	Question 2 Comment
		<p>Consequently, we recommend combining R1 and R2 to state: “Each responsible entity (BA, RC, TOP, DP, and GOP) shall have documented communication protocols for the communication of Operating Instructions. This protocol should contain following elements: ...”</p> <p><b>Response: R1 and R3 are applicable to entities that issue and receive Operating Instructions, while R2 and R4 are applicable to entities that only receive Operating Instructions. Combining the requirements would cause the DP and GOPs to develop protocols they would never use.</b></p> <p>ï€ In order to improve readability we recommend that the Sub-Requirements R1.1 through R1.9 be re-arranged and grouped. For example, R1.7 and R1.9 deal with information receiving. They should be combined into one with two sub-requirements or bullets. The same can be done with R1.3, R1.6 and 1.8 which deal with issuing Operating Instructions.</p> <p><b>Response: The SDT respectfully prefers the order it created in draft 3 keeping three part communication and all call together.</b></p> <p>ï€ Requirement 1.6: We suggest that for clarity purposes the SDT rewords the first bullet as follows: “Confirm that the recipient’s response of the Operating Instruction as per R1.7 was accurate, or”</p> <p><b>Response: The SDT adopted the language for 1.6 and 1.7 from COM-002-3 due to comments from industry on draft 2 of the standard that expressed confusion over different language for three part communication requirements.</b></p> <p>ï€ Requirement 1.9: The requirement asks the recipient to request clarification when the communication is not understood. We believe that the requirement is not measurable and as such it should be deleted. Additionally, it represents common sense because in any type of communication if one party does not understand all or part of the conversation, it is natural that he/she will ask for clarification.</p> <p><b>Response: The SDT believes it is measureable and agrees that it is common sense to</b></p>

Organization	Yes or No	Question 2 Comment
		<p><b>ask for clarification.</b></p> <p>ï€ Requirement 2.2: Hydro One recommends deleting this section for the same reasons mentioned in our comment for Requirement 1.9 (measurability).</p> <p><b>Response: Please refer to our response to 1.9</b></p> <p>ï€ It must be made clear in the requirements that functional entities can incorporate exceptions in their protocols, for example, to address emergencies. As proposed, both of these requirements are too prescriptive. The sub-requirements drill down too deeply into the communications needed to conduct system operations.</p> <p><b>Response: The SDT believes the language of the requirement allows the entity to address exceptions.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Associated Electric Cooperative Inc - JRO00088</p>	<p>No</p>	<p>AECI believes the sub-parts of this requirement to be overly prescriptive, whereas communication clarity should be the stated requirement. The sub-parts should appear only as examples of elements to be considered for improving clarity. Less is better, as evidenced by additional qualifiers already necessary to sub-requirement R1.1. (see suggested language in comment 5 below.)</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SAR and 2003 Blackout Report specified consistent and uniform communication protocols. The parts to the requirement serve as a frame to sustain a basis for standardizing the type of protocol the entity should develop.</b></p>		
<p>ISO/RTO Standards Review Committee</p>	<p>No</p>	<p>The SRC fully supports the concept that certain aspects of our business are better viewed based on the internal controls used by the entity. The SRC recognizes that the intention of the SDT is to be flexible. However, the nature of a standard is to eliminate that flexibility by not addressing how compliance will be monitored in the</p>

Organization	Yes or No	Question 2 Comment
		<p>controls approach and by prescribing specific items for inclusion in the protocols.</p> <p><b>Response: The SDT simultaneously considered and changed the RSAW for COM-003-1 as it developed draft 3 and believes the two documents do address how compliance will be monitored. The SAR and 2003 Blackout Report specified consistent and uniform communication protocols. The parts to the requirement serve as a frame to sustain a basis for standardizing the type of protocol the entity should develop.</b></p> <p>An entity is less likely to create a highly sophisticated best practice protocol if the RSAW subjects that entity to penalties for implementing that protocol. While presenters at the COM-003 Webinar presentation stated that violations are not based on implementing the steps of the protocols, the draft RSAW (dated July 2012) states: If the CEA finds in subsequent, follow up audits or other compliance monitoring activities that the same or similar deficiencies continue to occur after the entity was provided the feedback by the CEA, the CEA will seek to understand what changes the entity made to their process based on prior recommendations. If changes to the entity’s process are not implemented to identify, assess and correct deficiencies, the Auditors may make a determination of possible non “ compliance with Requirement 3, Part 3.4.</p> <p><b>Response: The Webinar also addressed the RSAW language you reference. An entity that does not improve a deficient process, (R3.4 or R4.4) after a considerable amount of opportunity in a non PV environment, and chooses to ignore modification which would be required to improve that process; or does not provide justification to why the entity decided not to modify the process may and should be subject to a finding of non compliance.</b></p> <p>(The proposed requirements R1 and R2) are a significant improvement from the previous postings. Requirement R1 is still too prescriptive. The elements within R1 make the requirement a checklist of rules and do not add to the reliability of the power system and do not address the reliability needs requested in Recommendation</p>



Organization	Yes or No	Question 2 Comment
		<p>26 and Order 693. The reliability need for clear protocols was in reference to “situational awareness” issues (i.e. when is the system in jeopardy and who makes that decision to respond - See references provided below). The reliability need was not related to common verbal mistakes. The proposed requirements do not address those needs. The SRC believes that IRO-016-1 does address those issues and needs.</p> <p><b>Response: The SDT has read IRO-016-1 (To ensure that each Reliability Coordinator’s operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations) and view it as a requirement for RCs to work together to preserve system stability. COM-003-1 is being developed to tighten communications. The SDT does not discern the linkage.</b></p> <p><i>2003 Blackout Report Section:</i></p> <p><i>Data Exchanged for Operational Reliability (pages 50-51)</i></p> <p><i>Voice Communications: Voice communication between control area operators and reliability is an essential part of exchanging operational data. When telemetry or electronic communications fail; some essential data values have to be manually entered into SCADA systems, state estimators, energy scheduling and accounting software, and contingency analysis systems. Direct voice contact between operators enables them to replace key data with readings from other systems’ telemetry, or surmise what an appropriate value for manual replacement should be. Also when operators see spurious readings or suspicious flows, direct discussions with neighboring control centers can help avert problems like those experienced on August 14, 2003.</i></p> <p>SRC COMMENT - This is clearly focused on establishing communications where they potentially may not occur. It is not focused on prescribing particular terminology or protocols based on the belief that existing practices are inadequate.</p> <p><b>Response: The SDT interprets this as data entry under contingency operations and</b></p>

Organization	Yes or No	Question 2 Comment
		<p><b>does not discern linkage to Communication protocols.</b></p> <p><i>Page 109 Effectiveness of Communications Under NORMAL conditions, parties with reliability responsibility NEED TO COMMUNICATE important and prioritized information to each other in a timely way, to help preserve the integrity of the grid. This is especially important in emergencies. During emergencies, operators should be relieved of duties unrelated to preserving the grid. A common factor in several of the events described above was that information about outages occurring in one system was not provided to neighboring systems.</i></p> <p>SRC COMMENT - The above discussion is not related to terminology or repeating information. The concern focuses on the failure to provide appropriate information, which, as discussed above, as well as in Order 693, is focused on “important” and “prioritized” information. This is a limited set of communications that the proposed standard’s new term Operating Instruction exceeds in scope.</p> <p><b>Response: The SDT agrees with the remarks from page 109, but fails to discern the linkage to Operating Personnel Communications Protocols. The SDT believes the important and prioritized information in an Operating Instruction is critical and must be addressed.</b></p> <p><i>Pages 161-16226. Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate. NERC should work with reliability coordinators and control area operators to improve the EFFECTIVENESS of internal and external communications during alerts, emergencies, or other critical situations, and ENSURE that all key PARTIES, including state and local officials, RECEIVE timely and accurate information. NERC should task the regional councils to work together to develop communications protocols by December 31, 2004, and to assess and report on the adequacy of emergency communications systems within their regions against the protocols by that date.</i></p> <p><i>On August 14, 2003, reliability coordinator and control area communications</i></p>

Organization	Yes or No	Question 2 Comment
		<p><i>REGARDING CONDITIONS in northeastern Ohio were in some cases ineffective, unprofessional, and confusing. INEFFECTIVE COMMUNICATIONS contributed to a LACK OF SITUATIONAL AWARENESS and PRECLUDED EFFECTIVE ACTIONS to prevent the cascade. Consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability. Standing hotline networks, or a functional equivalent, should be established for use in alerts and emergencies (as opposed to one-on-one phone calls) to ensure that all key parties are able to give and receive timely and accurate information.[</i></p> <p>SRC COMMENT: Recommendation 26 is clearly about communicating information about “conditions” and not about communicating the commands to a particular “asset”. The proposed standard is unresponsive to the issues raised in the Blackout and by FERC. By not addressing the core reliability issues raised by the very report that drove this Project, the SDT is jeopardizing the reliability of the power system. The SRC strongly urges the SDT to reconsider this posting and to either rescind the Project and accept that IRO-016-1 has adequately responded to the Blackout Report, or to revise its proposal to directly address the issues noted above. If R1 is not rescinded as suggested above, then the prescriptive subparts 1.1 thru and including 1.6 should be removed.</p> <p><b>Response: The SDT believes Recommendation 26 is about tightening communications by consistent application of effective communication protocols. This is further amplified by FERC order 693 and is memorialized in the SAR. The project was initiated with the approval of the Standards Committee.</b></p> <p><b>The SDT, respectfully, will not reconsider this posting and will not rescind the Project and will not accept that IRO-016-1 has adequately responded to the Blackout Report. The SDT does not have the authority or the inclination to do either. The SDT requests that you consider our positions and assist us in making this an effective and fair standard.</b></p>

Organization	Yes or No	Question 2 Comment
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>FirstEnergy</p>	<p>No</p>	<p>We support many of the protocols as a minimum to standardize communications across the industry. However, we believe some of the sub-parts of R1 contain language which may be too prescriptive and in some cases language is missing for special situations.</p> <p>ï,§ 1.2 - We understand the importance of knowing the time of day but an operator can specify “am” or “pm” instead of using the 24 clock format. The requirement should be less prescriptive to allow this.</p> <p>ï,§ 1.3 - This requirement as written may confuse the parties communicating. We suggest it be reworded in a simple fashion as follows: “Assure both parties understand the correct time being used in the communication.”</p> <p>ï,§ When the receiver of an operating instruction is unable to comply they should be allowed to notify the operator of the restriction (e.g. based on safety, loss of life, or damage to equipment) so that the operator is able to implement other actions to perform the desired operation. This should be added in the language requiring three-part communication in requirements R1 and R2.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The only concern the SDT has with what you suggest is the use of a 12-hour format with AM/PM designation. The SDT believes this can easily be misunderstood, creating increased potential for a miscommunication The SDT knows of no entity that uses an ‘am – pm’ term for critical communications. The SDT, based on the revised format of draft 3 of the standard, believes an entity would have the flexibility to incorporate your suggestions for emergency situations into the entity’s documented communication protocols (R1 and R2).</b></p>		
<p>PPL Corporation NERC Registered Affiliates</p>	<p>No</p>	<p>The PPL Companies do not agree with the proposed requirements as they are administrative in nature.</p> <p><b>Response: The SDT notes having documented communication protocols (R1 and R2) may appear to be administrative in nature, but they represent a preliminary</b></p>

Organization	Yes or No	Question 2 Comment
		<p><b>element for the process to identify, assess and correct deficiencies for adherence to documented communication protocols.</b></p> <p>Should the requirements remain, we suggest the following be considered:</p> <p>R.1. Each Responsible Entity shall implement, in a manner that identifies, assesses and corrects deficiencies, one or more documented communication protocols that address each of the following Requirements.</p> <p>R1.1 through R1.3 applicable to such Responsible Entity:</p> <p>R1.1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed pursuant to an Operating Instruction, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the communication as an Operating Instruction to the recipient.</p> <p>R1.2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of an Operating Instruction shall repeat, restate, rephrase or recapitulate the Operating Instruction.</p> <p>R1.3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues an Operating Instruction shall either:</p> <ul style="list-style-type: none"> <li>o Confirm that the response from the recipient of the Operating Instruction (in accordance with Requirement R1.2) was accurate, or</li> <li>o Reissue the Operating Instruction to resolve any misunderstandings.</li> </ul> <p>For purposes of clarity, the term “implement” in Requirement R1 does not mean that there were no failures to follow the protocol in specific cases.</p> <p>The following language is suggested for the measures related the proposed R1.1 through R1.3:</p> <p>Measures: The Responsible Entity shall have documented communications protocols developed for Requirements R1.1 through R1.3. Additional examples of evidence may</p>

Organization	Yes or No	Question 2 Comment
		<p>include, but are not limited to, the Responsible Entity:</p> <ul style="list-style-type: none"> <li>o trained or otherwise educated the affected personnel about the protocols</li> <li>o established controls to identify failures to follow the protocols</li> <li>o assessed identified failures to follow the protocols</li> <li>o took appropriate actions to correct the identified failures</li> </ul> <p><b>Response: The SDT has considered your recommendations but believes the draft 3 language more comprehensively covers communication protocols.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
SPP Standards Review Group	No	<p>The wording in R2.1 is awkward, we suggest the following:</p> <p>When receiving an oral two party, person-to-person Operating Instruction, the recipient is required to repeat, restate, rephrase, or recapitulate the Operating Instruction.</p> <p><b>Response: The wording is the same language as the requirements in COM-002-3. The OPCPSDT incorporated this language into the standard based on industry comment on draft 2 stating that the different language for the two standards caused confusion.</b></p> <p>The one-way burst messaging in R1.9 and R2.2 is confusing to us in that we don't understand how you request clarification over a one-way messaging system.</p> <p><b>Response: It the obligation of the recipient to contact the issuer if the recipient does not understand the Operating Instruction.</b></p> <p>As written there is no 'out' for an entity that cannot perform the Operating Instruction as given. An entity has the option of not performing a Reliability Directive if that directive violates regulatory, safety, equipment, or statutory requirements (TOP-001, R3). A similar exemption needs to be incorporated into COM-003.</p>

Organization	Yes or No	Question 2 Comment
		<p><b>Response: COM-003-1 covers communication protocols not the action required. TOP-001-1, R3 and IRO-001 R1 govern the obligation to act.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Bonneville Power Administration</p>	<p>No</p>	<p>In R1.5, BPA disagrees with the mandatory use of alpha numeric communication protocols for internal communications. BPA believes that these communication protocols should apply only to external communications between system operators for the TOP, GOP, and BA.</p> <p>BPA suggests that the drafting team update R1.5 to specify that “Transmission Operators and Balancing Authorities may adopt methods other than alpha-numeric clarifiers to ensure accurate communication of Operating Instructions for internal operations.”</p> <p><b>Response: The SDT agrees that these communication protocols apply only to external communications between system operators for the TOP, GOP, and BA. It would only make sense to have them apply internally but that is the entity’s option. Most entities use all or some of these communication protocols already.</b></p> <p><b>The SAR and 2003 Blackout Report specified consistent and uniform communication protocols. The parts to the requirement serve as a frame to sustain a basis for standardizing the type of protocol the entity should develop.</b></p> <p>BPA suggests that R1.1 should be modified to make clear that the use of English should be mandated for communications between entities in separate regions where the common language in one of the regions may not be English. In response to Draft 2, Essential Power LLC commented that “The use of English should be mandated for communications between entities in separate regions where the common language in one of the regions may not be English. Allowing an entity to use a language other than English when communicating with regions where English is the required language is counter to the purpose of the Standard and could in fact jeopardize</p>

Organization	Yes or No	Question 2 Comment
		<p>reliability through miscommunication.” The SDT stated that it “agreed with (Essential Power, LLC’s) comments (shown below) and clarifies that is the intent of the requirement”, but this intent is not clear in the requirement as written because it does not specify that the language mandate needs to apply to both entities. Additionally, there is no expressed limitation that the language(s) acceptable in these circumstances be limited to only the language(s) specified by such law or regulation. To resolve these issues, we propose that COM-003-1 R1.1 be modified to read as follows:</p> <p>Use of the English language when issuing an oral or written Operating Instruction between functional entities, unless another language is mandated by law or regulation FOR BOTH ENTITIES; IN WHICH CASE, ACCEPTABLE USE IS EXPANDED TO INCLUDE THOSE SPECIFIED LANGUAGES. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.</p> <p><b>Response: The SDT appreciate your proposed recommendation but believes the language in draft 3 is clear and unambiguous. The English language is required with appropriate exceptions.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
PacifiCorp	No	<p>PacifiCorp does not feel that the requirements listed in R1.5 regarding the use of alpha-numeric clarifiers when issuing an oral Operating Instruction is warranted. The requirements listed in R1.6, and R1.7 requiring the strict used of three-way communication should alleviate any possibility of miscommunication, which PacifiCorp understands to be the drafting team’s intent in the development of separate Requirement R1.5. Also, implementing the use of alpha-numeric clarifiers poses additional risk due to the introduction of ambiguous language.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT believes alpha-numeric clarifiers are important tools for entities conveying information that contains alpha-numeric identifiers. The SDT also believes they reduce ambiguity.</b></p>		



Organization	Yes or No	Question 2 Comment
Southern Company	No	Southern supports having a documented communications protocol, but we do not support the prescriptive elements of this version of the standard. The protocols should give the entity the flexibility to define the conditions where they expect 3-part communications and the verbal cues they use to tell the recipient they expect 3-part communication or that action is required. Southern suggest the following changes to R1 and R2 and could support these changes in future drafts of this new standard.
<p><b>Response: The OPCSDT thanks you for your comments. The SAR and 2003 Blackout Report specified consistent and uniform communication protocols. The parts to the requirement serve as a frame to sustain a basis for standardizing the type of protocol the entity should develop. Beyond the frame specified in the parts an entity has the flexibility to develop the protocols to fit their particular situation.</b></p>		
Liberty Electric Power, LLC	No	The SDT shift from a zero-tolerance standard to a procedure required standard is admirable. Thank you for the open-mindedness and willingness to change direction after much hard work went into the original proposal. However, the requirements for specific content in the required procedure still goes beyond the proper role of the standard. Suggested revision - eliminate R1 and R2, replace with new R1:"Each (covered entity) shall have documented procedure(s) for communications with other users of the Bulk Power System. Such procedure(s) shall have provisions which, in the judgment of the registered entity, reduce the opportunity for miscommunications."This lowers the chances of miscommunications without dictating the content of business practices.
<p><b>Response: The OPCSDT thanks you for your comments. The SAR and 2003 Blackout Report specified consistent and uniform communication protocols. The parts to the requirement serve as a frame to sustain a basis for standardizing the type of protocol the entity should develop.</b></p>		
NERC - Investigations Group	No	Requirement R1.6 provides inadequate protection against a misunderstanding when directives are issued. Granted, the Requirement does obligate the party receiving the directive to repeat back the directive. However, if the recipient repeats the directive

Organization	Yes or No	Question 2 Comment
		<p>back to the person issuing the directive, and the "repeat back" indicates the recipient has misunderstood the directive, this Requirement merely obligates the person issuing the directive to state the directive again. The Requirement places no obligation on the person issuing the directive, who knows he has been misunderstood, to explicitly and clearly bring to the attention of the recipient that the recipient has misunderstood. All the party issuing the directive has to do is repeat what he has already said. The party issuing the directive is under no obligation to make it clear that there has been a misunderstanding. With respect, I suggest having the person issuing the directive merely repeat it if he's been misunderstood, with no explicit statement that there has been a mistake, leaves open the potential for the recipient to be unaware he has misunderstood and to execute a misunderstood directive. As an example, consider the following exchange. Transmission Operator to Field Operator: "Jim, open Breaker 104-696". Field Operator repeats back "I understand open Breaker 104-699". Transmission Operator, noting the error, states "Open Breaker 104-696". The field operator, having not been explicitly made aware there has been an error, opens Breaker 104-699. (Presumably, he would not do so had the Transmission Operator made him aware of the misunderstanding with an explicit statement that there has been an error.) Suggestion: Add verbiage to R1.6 obligating the person issuing the directive to make an explicit statement to the recipient that there has been an error if the recipient repeats the order back incorrectly. Presently, the standard imposes no such obligation on the person issuing the directive. One possible way to re-word the standard might be: "...shall ensure the recipient of the directive repeats the information back correctly; and, if the repeat back is correct, shall acknowledge the response as correct. If the repeat back is incorrect, the person issuing the directive will state "You are wrong and have misunderstood the directive". The person issuing the directive will then repeat the directive correctly. This process will continue until the recipient repeats the directive back correctly.</p>
<p><b>Response: The OPCSDT thanks you for your comments. The SDT has used the same three part communication requirement language as contained in COM-002-3 because of industry comments on draft 2 citing confusion between the two standards caused</b></p>		

Organization	Yes or No	Question 2 Comment
<p>by different language for the same requirement. The SDT refers you to R1.1.7- it requires the repetitive process until the correct information is communicated. The entity could account for this in their documented communication protocols (R1 and R2).</p>		
<p>Hydro Quebec TransÉnergie</p>	<p>No</p>	<p>It must be made clear in the requirements that functional entities can incorporate exceptions (to address emergencies for example) in the protocols that are developed. Both of these requirements are too prescriptive. The sub-requirements drill down too deeply into the communications needed to conduct system operations.</p>
<p><b>Response:</b> The OPCPSDT thanks you for your comments. The SDT believes the language of the requirement R1 and R2 permits the entity to assess whether variations from the required protocol are valid.</p>		
<p>TransAlta Centralia Generation LLC</p>	<p>No</p>	<p>Clarification is needed regarding what GOP procedures are to cover, ref. our comments to question #1 above.</p>
<p><b>Response:</b> The OPCPSDT thanks you for your comments. The GOP is a receiver of Operating Instructions and is subject to R2 and R4 which are focused on the requirements for entities who only receive Operating Instructions.</p>		
<p>ReliabilityFirst</p>	<p>No</p>	<p>Requirements R1 and R2 require the responsible entities to have documented communication protocols for Operating Instructions, but does not require the responsible entity to implement the protocols. Absent implementation of the protocols, there is no need for the protocols themselves if the responsible entity is not required to follow them. ReliabilityFirst recommends the following wording as an example for Requirement R1: “Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have and implement a documented communication protocols for Operating Instructions...”</p>
<p><b>Response:</b> The OPCPSDT thanks you for your comments. The SDT has changed the standard. The SDT believes the language changes to draft 4 will address your concern.</p> <p>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities</p>		

Organization	Yes or No	Question 2 Comment
<p>that include the following:"</p> <p>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</p> <p>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity's implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p>		
<p>Independent Electricity System Operator</p>	<p>No</p>	<p>We disagree with the need to repeat and confirm operating instructions (Part 1.6 to 1.9 and R2) meant to be used for normal operating system conditions. As indicated in our previous comment, the term Reliability Directives and the recently approved COM-002-3 cover instructions not only emergency conditions but also conditions that can result in Adverse Reliability Impact. Requiring operating entities to exercise 3-part communications (repeating and confirming) for routine operating instructions that maintain the states or do not change the status of the BES Facilities, or simple actions such as removing a transmission line which has no impact on the BES, or simple switching, or adjusting a small amount of generation output, is totally unnecessary, and can in fact overburden System Operators and harm reliability. And we respectfully disagree with the SDT's response to our previous comment regarding the applicability of the term "Reliability Directive" in which the SDT claims that the term "Reliability Directive" in the approved version of COM-002-3, "...in the context of COM-002-3, is specifically for Emergency operating conditions" and "...covers a very narrow band of low frequency, high impact events. The definition covers not only emergency, but also Adverse Reliability Impacts" Further, the definition does not explicitly indicate, nor is it implied, that such conditions are "of low frequency, high impact events."To address the BoT's concerns expressed when approving the interpretation of COM-002-2, the term Reliability Directive now defined in COM-002-3 together with the NERC Operating Committee's guideline on System Operator Verbal Communication fully cover the condition under which 3-part communication need to be (to address Adverse Reliability Impacts) or should be (where deemed</p>

Organization	Yes or No	Question 2 Comment
		<p>appropriate) exercised. We do not see the need for having a standard requirement for 3-part communication for conditions other than when Reliability Directives are issued. Regarding the other parts in Requirement R1, i.e. 1.1 to 1.5, these are good operating practices but are not absolutely necessary the “must follow” protocols that rise up to a continent-wide reliability standard level.</p>
<p><b>Response: The OPCSDT thanks you for your comments. The SDT respectfully disagrees that COM-003-1, based on your comments, is not needed. The interpretation of COM-002-2a, 2R combined with COM-002-3 as a replacement leave a gap that was covered by COM-002-2a, R2 before the Interpretation. COM-003-1 will cover the gap. Three part communication is an effective protocol that reduces miscommunication. Removing the wrong transmission line at the wrong time because of a miscommunication reduces reliability under any operating condition.</b></p>		
Lincoln Electric System	No	<p>LES requests the drafting team provide additional clarification regarding R2.1 as it relates to “oral two party, person-to-person” communication occurring between the System Operators and field crews. Does the drafting team intend for the communication protocols to be used for all communications between the System Operators and field crews (such as for normal day-to-day switching of distribution elements) or only as it occurs between defined functional entities? Within the Draft 2 consideration of comments under “Outstanding Unresolved Issues”, the drafting team states that “The SDT clarified that COM-003-1 only applies to communication between functional entities. For example, if a TOP System Operator is issuing an Operating Instruction to an individual that is internal to that TOP, three part communication is not required by this standard”. Although LES supports this clarification, it’s incorporation into the requirement is not obvious. Recommend the drafting team modify R2.1 as follows to ensure this clarification remains evident within the standard going forward:</p> <p>R2.1. When receiving an oral two party, person-to-person Operating Instruction between functional entities, the recipient is required to repeat, restate, rephrase, or recapitulate the Operating Instruction.</p>

Organization	Yes or No	Question 2 Comment
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT has added language to R1 and R2 clarify that they are applicable to Operating Instructions between Functional Entities.</b></p>		
<p>NextEra Energy Inc.</p>	<p>No</p>	<p>NextEra opposes any communication protocol in COM-003-1 that is not mirrored in COM-002-3. NextEra views the implementation of two different communication protocols -- one for Reliability Directives and one for Operating Instructions as problematic and not consistent with the promotion of a reliable Bulk Electric System. This concern is heightened by the fact that there are more specific protocols for Operating Instructions which are lower in the communication hierarchy when compared to Reliability Directives. Such a model is counterintuitive. If implemented, this model will also likely be counterproductive, increase confusion among System Operators and may unnecessarily cause a risk to the Bulk Electric System. The inherent risk caused by the lack of synergy and consistency between COM-003-1 and COM-002-3 could be resolved by combing the Standard Development projects and having the SDTs work together to produce one uniform work product. Therefore, NextEra urges the COM-003-1 SDT to request that the Standards Committee join the COM-002-3 and COM-003-1 efforts, so that one uniform three-way communication protocol can be developed and implemented that promotes reliability.</p> <p><b>Response: The SDT does not disagree, but that is outside the scope of the SAR for this project The OPCPSDT has adopted the exact language for three part communication for COM-003-1 as COM-002-3 to reduce confusion. The documented communication protocols apply to Reliability Directives that change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.</b></p> <p>Further, in addition to comments that NextEra has previously submitted, it asks that the following changes be made:</p> <p>R1.1 Delete “between functional entity” as unnecessary and delete the second sentence altogether (or clarify it), because it is unclear and may add confusion. In the</p>

Organization	Yes or No	Question 2 Comment
		<p>context of an Operating Instruction, it is best that English be used between Transmission Operators and Balancing Authorities for external and internal communications related to Operating Instruction. To allow for alternative languages to be used internally when an Operating Instruction is given will likely result in difficult transitions between internal and external conversations which may unintentionally result in a risk to the Bulk Electric System via an external miscommunication using a language other than English. Thus, NextEra prefers that English be promoted and used for internal and external communications related to Operating Instructions.</p> <p><b>Response: The SDT believes if an entity is externally communicating to you in a language other than English that entity would be deficient. The receiving entity should request the issuer use the English language, based on requirement R2. The SDT added “between functional entities” to the body of both requirements.</b></p> <p>R1.4 Add a comma after “Facility” in the fourth line. The</p> <p>R1.8 Use the term “entities” instead of “parties” in the second line. Entities is a more widely recognized term than parties in the context of the Reliability Standards. Also, for clarity, re-write the end of 1.8 to read “. . . confirm receipt from each entity.” The current wording states “confirmed receipt from one or more receiving parties” seems to miss the point that what the sender needs is confirmation from each entity that was sent the message.R1.9 Similarly, replace the term “parties” in line two with “entities”.</p> <p><b>Response: The SDT added the comma and will retain the term “parties” as some addressees may not be functional entities.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
Northeast Utilities	No	<p>R1.2 Prescribed use of a 24 hour clock format seems over-bearing</p> <p><b>Response: The SDT believe it provides clarity to the time element.</b></p>

Organization	Yes or No	Question 2 Comment
		<p>R1.3 The use of “functional entities”- includes more entities than the applicability section and uses terms from the functional model which goes beyond registered entities, may be some confusion here.</p> <p><b>Response: The SDT has deleted the term “functional entities” from R1.3 and has incorporated it in R1 and R2.</b></p> <p>R1.4 Transmission interface Element Transmission interface Facility These terms may need to be defined. They may be ambiguous to some entities as to what is intended</p> <p><b>Response: The SDT believes these are commonly used terms in the electric utility industry.</b></p> <p>R1.5 Use of alpha-numeric clarifiers in some instances inhibit efficient communication, without increasing the effectiveness of the communication or reducing the risk to the BES. In keeping with the requirement of entities to document its protocols, it should be left to the entities of regions to define this.</p> <p><b>Response: The SDT believes alpha-numeric clarifiers are important tools for entities conveying information that contains alpha-numeric identifiers. The SDT also believes they reduce ambiguity.</b></p> <p>R2 Is missing a sub-requirement that requires a clarification of two party communications that is not understood.</p> <p><b>Response: R2.2 contains the clarification language you have referenced.</b></p>
<p><b>Response: The OPCSDT thanks you for your comments. Please see our responses above.</b></p>		
American Electric Power	No	<p>AEP disagrees with the concept of requiring three part communications for more routine operations, and as a result, also disagrees with requiring that entities have documented communication protocols as proposed.</p>
<p><b>Response: The OPCSDT thanks you for your comments. The SDT believes three part communication is a proven, effective tool</b></p>		



Organization	Yes or No	Question 2 Comment
<b>that prevents mistakes caused by miscommunication.</b>		
Brazos Electric Power Cooperative, Inc.	No	See ACES comments. Additionally, if it is determined that all of the elements need to be kept in the standard, the list of elements needs to be improved. Some of the elements are noun phrases (e.g., 1.1 and 1.2) and some are instruction statements. All elements should be noun phrases. It is grammatically improper for a list to have more than one type of phrase and, more significantly, may lead to confusion about compliance obligations. Instruction statements could be construed to require perfect performance of those elements, but that does appear to be the intent of the SDT.
<b>Response: The OPCPSDT thanks you for your comments. The SDT agrees and has changed the wording of the subparts.</b>		
Ameren	No	See response to question 5.
<b>Response: The OPCPSDT thanks you for your comments. Please see our responses to question 5.</b>		
Essential Power, LLC	No	Clarification is needed regarding what GOP procedures are to cover, ref. our comments to question #1 above.
<b>Response: The OPCPSDT thanks you for your comments. Please see our response to your comments in question one.</b>		
Texas Reliability Entity	No	<p>This Standard does not address electronic Operating Instructions, thus creating a possible gap. For example, ERCOT (acting as the BA) uses ICCP links to issue electronic dispatch instructions to generators (ERCOT Protocol 6.5.7.4). The recipient of the electronic dispatch instruction must acknowledge receipt of the dispatch instruction to ERCOT electronically, within one minute and must include the receiving operator’s identification with the electronic acknowledgement (ERCOT Protocol 6.5.7.8(5)).</p> <p>ERCOT regional rules have similar language as current NERC standards regarding compliance with dispatch instructions, which include electronic dispatch instructions (ERCOT Protocol 6.5.7.9). Consider adding “Reliability Coordinator” or “Functional</p>

Organization	Yes or No	Question 2 Comment
		Entities” in 1.1 statement where TOPs and BAs are singled out: "Transmission Operators and Balancing Authorities may use an alternate language for internal operations."
<p><b>Response: The OPCPSDT thanks you for your comments. COM-003-1 deals with people to people not people to machine or machine to machine communication.</b></p>		
Consumers Energy	No	We believe this is a standard that requires procedures or documents but has nothing to do with performance. These types of standards lead to auditors making a wide range of interpretations.
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT disagrees; it has to do with establishing a process to correct deficiencies and to improve the effectiveness of an entity’s communications to improve reliability. It permits an entity to correct deficiencies in an environment without a finding of non compliance for every deficiency.</b></p>		
Xcel Energy	No	See comments under question # 5.
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses to question 5.</b></p>		
Public Service Enterprise Group	No	There should not be a requirement for entities in R1 and R2 to have documented communications protocols. The subparts specify the protocol requirements. R1 should merely state: “Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall use the following communication protocols for Operating Instructions:” R2 should be similar involving DP and GOP functions
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT believes the language changes to draft 4 accomplishes this.</b></p> <p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as</b></p>		

Organization	Yes or No	Question 2 Comment
<p>developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency. R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity's implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p>		
Cowlitz County PUD	No	<p>This requirement will be burdensome to small Distribution Providers where communications from a System Operator will not ever occur. Requiring entities to prepare for nonexistent reliability gaps is not acceptable. DPs should be allowed to document via RC, TO, and BA letters of agreement that establishes System Operator communication protocol is not required. These small DPs can only shed load in a reliability emergency, and in some cases would need to do so manually. Further, such load would be more effectively dropped by the TOP functioning as the DP's Transmission Service Provider.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. If a DP has never or will never receive an Operating Instruction it would not be an applicable entity. If the DP has or could receive Operating Instruction it must comply with the standard. The DP would have to confirm their situation with the CEA.</b></p>		
Exelon	No	<p>Exelon agrees with all requirements except R1.1.3 and R1.1.4. We disagree that R1.1.3, "include time zones" when issuing operating instructions is necessary. Operating instructions are typically issued in real time; an instruction to do something "now" or at the "top of the hour" does not require the use of time zones. 1.1.4 has the effect of requiring verbatim use of a specified name; this should not be a requirement as long as the transmitter and receiver use three way communications effectively to assure understanding of the element to be operated. Additionally, TOP-002-R18 already requires use of "uniform line identifiers when referring to transmission facilities of an interconnected network". The statement to use the TO specified name or a mutually agreed to name is not necessary in light of TOP-002.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT believes that if an entity uses a clock time a time zone reference</b></p>		

Organization	Yes or No	Question 2 Comment
<p>must be included if entities are in different time zones. Times designated on a relative basis (execute in five minutes) would not require a time zone.</p> <p>TOP-002 R18 is being eliminated by another project. The SDT believes neighboring entities should have a clear understanding of each other's BES Elements and BES Facilities to increase situational awareness and to shorten response time.</p>		
<p>Indiana Municipal Power Agency</p>	<p>No</p>	<p>IMPA believes it should be made clear that Operating Instructions and the use of documented communication protocols are required by these two requirements for when Operating Instructions are given by a Balancing Authority, Reliability Coordinator, or Transmission Operator to a Distribution Provider or Generator Operator. The current requirements could apply to a generator station (Generator Operator) who receives Operating Instructions from its Market Operations (also the same Generator Operator entity). The Market Operations would not need to follow the communication protocol since it is issuing the Operating Instructions, but the generator station would have to follow the communication protocol since it is receiving the Operating Instruction. IMPA does not believe that the SDT intended to include communications between a Generator Operator's Market Operations and its remote power plant.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The GOP is subject to the standard and must comply with applicable requirements. The SDT believes that is specified in the standard. Market Operations that are not acting as a GOP are not an applicable entity so communications with its Market Operations is not subject to standard.</b></p>		
<p>MISO</p>	<p>No</p>	<p>MISO does not agree with the proposed requirements of COM-003-1, R1 and R2. Although MISO agrees that clear communications are important to system reliability, it respectfully submits that any requirement for System Operators to have a communication protocol should allow the subject System Operators to define when and how the protocol would apply. In addition, MISO respectfully submits that System Operators should retain greater flexibility in deciding which elements to include in their respective protocols. For instance, the protocols should allow the System Operator to outline how and when to use blast calls and messaging systems.</p>

Organization	Yes or No	Question 2 Comment
		<p>Thus, despite its conceptual support for a communication protocol for System Operators, MISO is concerned that the requirements currently set forth in COM-003-1 are, in many cases, overly-prescriptive, and, rather than enhancing system reliability, could actually undermine it. As explained above, because the definition of the term “Operating Instruction” is overly broad and ambiguous, System Operators may treat most, if not all, communications as Operating Instructions. Applying the required elements of the communication protocols for Operating Instructions to most communications would be inefficient and could adversely affect the ability of System Operators to perform their reliability functions. Indeed, while MISO agrees that clear communications in system operations are important, an excessive reliance on the three-way communications protocols detailed in the proposed standard can be an unnecessary distraction for personnel operating the Bulk Electric System, hampering as opposed to enhancing overall system reliability.</p> <p><b>Response: The SAR and 2003 Blackout Report specified consistent and uniform communication protocols. The parts to the requirement serve as a frame to sustain a basis for standardizing the type of protocol the entity should develop.</b></p> <p><b>The SDT believes an entity has great flexibility with creating the documented communication protocols in R1 and R2 to address its own particular situation. The SDT believes use of the protocols will become natural for System Operators and will result in consistent, universal communication protocols that will promote reliability on the BES. The new language in draft 4 addresses your concerns.</b></p> <p>MISO’s primary point of disagreement with the current Standard is therefore one of scope. MISO recommends that the SDT replace “Operating Instruction” with the existing proposed definition for the term “Reliability Directive” in Project 2006-06, Reliability Coordination. Limiting the scope of applicability for utilization of the communication protocol required by COM-003-1, R1 and R2 would prevent System Operators from applying the communication protocol to virtually all communications out of an abundance of caution and, unlike the current draft of COM-003-1, would not be an undue distraction from the reliability functions performed by these</p>

Organization	Yes or No	Question 2 Comment
		<p>operators.</p> <p><b>Response: The SDT’s intention is for entities to develop these protocols for all communications that command changes on the BES. The command to change BES configuration carries some risk no matter what operating state exists. The SDT believes such protocols will become routine for operators as they are for pilots, the military and air traffic controllers.</b></p> <p>Further, as explained in its comments on Draft 2 of COM-003, MISO does not support including certain of the proposed required elements in the communication protocol for Operating Instructions and does not believe these issues have been sufficiently addressed by Draft 3. First, MISO does not agree with the proposed requirement to indicate time zone and Standard or Daylight Saving Time when issuing an oral or written Operating Instruction between functional entities in different time zones. This requirement would result in the expenditure of significant time, resources and attention by System Operators for a minimal benefit to reliability. Accordingly, this modification appears to place upon operators an unjustified, onerous requirement. MISO respectfully requests that the SDT reconsider this requirement.</p> <p><b>Response: The SDT believes the time element of an Operating Instruction is a critical component. Switching at the wrong time could create a disastrous event. The SDT believes such protocols will become routine for operators as they are for pilots, the military and air traffic controllers.</b></p> <p>Second, MISO continues to believe that the requirement to use alpha-numeric clarifiers when issuing Operating Instructions to or Facilities and Elements in instances where the nomenclature of Facilities or Elements is in alpha-numeric format is ambiguous and could lead to unintended compliance burdens. MISO respectfully submits that if alpha-numeric clarifiers are to be required, NERC should adopt a uniform set of clarifiers to ensure that all System Operators communicate efficiently and effectively. However, MISO reiterates its belief that mandating the use of alpha-numeric clarifiers will have, at most, a minimally beneficial impact on</p>

Organization	Yes or No	Question 2 Comment
		<p>reliability while requiring Registered Entities to expend substantial additional resources.</p> <p><b>Response: The SDT believes the use of clarifiers is important because of human voice differentiation such as acuity, accents, volumes, pitch and others. Also communication equipment often has degraded performance that creates misunderstandings. The SDT originally proposed the NATO radiotelephony phonetic alphabet which was widely disapproved as too prescriptive by draft 1 commenters.</b></p> <p>Finally, MISO disagrees with the proposed requirement that Operating Instructions reference the name specified by the owner for a Transmission interface Element or Transmission interface Facility. To date, System Operators have identified equipment by to/from station and voltage level. Such identification has been sufficient to ensure the accurate identification of Transmission interface Elements and Facilities. Additionally, MISO notes that internal identifiers utilized by owners may result from internal coding or naming conventions that would not be known by or comprehensible to external entities. Hence, MISO cannot support this requirement, based on the potential adverse impacts to reliability that could result.</p> <p><b>Response: A provision for a separate mutual agreement is contained in R1.1.4.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
ERCOT	No	<p>The overarching premise of NERC standards is that they typically establish the “what” and not the “how” (Order 672 at P 260). The proposal to mandate specific communication protocols contravenes that approach and undermines the value inherent therein. Allowing entities to establish their own protocols to meet a desired end result facilitates means that best suit particular entities and also allows for improvements based on experience. Prescribing specific protocols would preclude such benefits. The proposed requirements are better suited as non-binding illustrative approaches / best practices. These could be presented as suggested approaches, for example, in an attachment to a standard that establishes a general</p>

Organization	Yes or No	Question 2 Comment
		<p>requirement to have communication protocols in place, but they should not be mandated. FERC did state that in some cases it may be appropriate to prescribe specific implementation rules in the standards if the how is inextricably linked to the standard and may need to be specified by the ERO to ensure the enforcement of the Reliability Standard. The Commission went on to note that for some standards leaving out implementation features could:</p> <ul style="list-style-type: none"> <li>(1) sacrifice necessary uniformity in implementation of the Reliability Standard;</li> <li>(2) create uncertainty for the entity that has to follow the Reliability Standard;</li> <li>(3) make enforcement difficult; and</li> <li>(4) increase the complexity of the Commission's oversight and review process.</li> </ul> <p>None of these conditions apply to communication protocols. For this matter, a general requirement relative to reliability directives is adequate with implementation left to the functional entities. This is already addressed in COM-002 R2, and, therefore, COM-003 is not needed. Communication protocols are more appropriately addressed by an entity's internal controls rather than a Reliability Standard, because this approach provides the benefits described above (i.e. 1) application of suitable protocols based on an entity's structure and relationships and other relevant rules and 2) flexibility for improvement of such protocols over time). The proposed standard eliminates these benefits by prescribing specific items for inclusion in the protocols. Again, the scope of the proposed standard is askew relative to the reliability concern at issue. The proposed standard is unresponsive to the issues raised in the Blackout and by FERC. By not addressing the core reliability issues raised by the very report that drove this Project, the SDT is jeopardizing the reliability of the power system.</p> <p><b>Response: The SDT believes the 4 criteria ERCOT has listed above justify the inclusion of the elements in R1 and R2. There must be a high degree of communication uniformity and consistency among applicable entities for</b></p>



Organization	Yes or No	Question 2 Comment
		<p>communication to be effective. The standard’s draft 3 format permits great flexibility in developing those protocols and to add more content to accommodate their own particular circumstance, if entity chooses.</p> <p><b>Response: The SAR and 2003 Blackout Report specified consistent and uniform communication protocols. The parts to the requirement serve as a frame to sustain a basis for standardizing the type of protocol the entity should develop.</b></p> <p>Accordingly, the focus of the proposed standard is misplaced and, if approved, will do nothing to address the reliability concerns identified in the blackout report and Order 693, but rather will do nothing but impose ineffective and inappropriate obligations that will create liability risk with no corresponding reliability benefit. ERCOT strongly urges the SDT to reconsider this posting and to either rescind the Project and accept that IRO-016 has adequately responded to the Blackout Report, or to revise its proposal to directly address the issues noted above. If R1 is not rescinded as suggested above then the prescriptive subparts 1.1 thru and including 1.6 should be removed, and R1 should be revised to include "applicable communication protocols".</p> <p><b>Response: The SDT believes it is addressing reliability concerns raised by the Blackout Report, Recommendation 26 and is tightening communications by consistent application of effective communication protocols. This is further amplified by FERC order 693 and is memorialized in the SAR. The project was initiated with the approval of the Standards Committee.</b></p> <p><b>The SDT, respectfully, will not reconsider this posting and will not rescind the Project and will not accept that IRO-016-1 has adequately responded to the Blackout Report. The SDT does not have the authority or the inclination to do either. The SDT requests that you consider the importance of the standard and assist us in making this an effective and fair standard.</b></p>
<p><b>Response: The OPCSDT thanks you for your comments. Please see our responses above.</b></p>		

Organization	Yes or No	Question 2 Comment
<p>Oncor Electric Delivery Company LLC</p>	<p>No</p>	<p>According to the 2003 Black Out Report, “Ineffective communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade. Consistent application of effective communication protocols, particularly during alerts and emergencies, is essential to reliability” Oncor is not aware of any evidence to support the position that lack of communication protocols contributed to the NE Black Out of 2003, the 2008 Florida Black Out or the more recent SW Black Out. Oncor also takes the position that many of the ideas prescribed within the standard are already being effectively implemented as industry Best Practice. Oncor is concerned that implementing the specific elements as prescribed in the standard will result in confusion, and could compromise personnel safety. Oncor offers the following alternative language.</p> <p>R1 “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as an Operating Communication, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as an Operating Communication to the recipient. “</p> <p>Oncor also offer the following alternative language for R2”</p> <p>R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of an Operating Communication shall repeat, restate, rephrase or recapitulate the Operating Communication.”</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT believes the excerpt you cite from the 2003 Black Out Report regarding “Ineffective communications” indicates there is a major concern over communications that requires a higher degree of communication discipline.</b></p> <p><b>The SDT believes the standard encourages the use of best practices and the entity has the flexibility to include them in its documented communication protocols.</b></p> <p><b>The SDT believes that communication protocols will eliminate confusion and mistakes.</b></p> <p><b>Thank you for the suggested language, but the OPCPSDT has added clarifying language to the definition for draft 4 which is now:</b></p>		

Organization	Yes or No	Question 2 Comment
<p><i>Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.</i></p>		
City of Austin dba Austin Energy	No	
CenterPoint Energy Houston Electric, LLC.	No	
Pepco Holdings Inc	No	
Central Lincoln	Yes	We appreciate the work the SDT has done to ensure the standard is not about having zero communication defects, and is more about process.
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
Occidental Energy Ventures Corp.	Yes	Although in general, OEVC does not believe that process documents should be the primary reliability consideration, it is the appropriate strategy in this case. Clearly, all of us want to eliminate Operator miscommunications - which make up nearly 20% of all BES mishaps - but it is impossible to assure 100% compliance over the course of thousands of System Operator communications. Furthermore, the effort required to capture the evidence needed by audit teams would overwhelm our resources, as well as those of the Regional compliance organizations. In our view, the path chosen by the drafting team is consistent with NERC’s Risk-based Compliance program. It drives attention in areas that reliability data shows to be deficient, but recognizes that the benefit of COM-003-1 must outweigh the costs and resources required to implement it.

Organization	Yes or No	Question 2 Comment
<b>Response: The OPCPSDT thanks you for your comments.</b>		
Idaho Power Co.	Yes	It will require us to write a communications protocol.
<b>Response: The OPCPSDT thanks you for your comments.</b>		
The United Illuminating Company	Yes	R1.3 should allow the use of prevailing time in addition to Daylight Savings and Standard time. Prevailing time eliminates the need to differentiate between daylight savings or standard time in notices and reduces confusion since the clocks are changed at a scheduled time by the US Government.
<b>Response: The OPCPSDT thanks you for your comments.</b>		
Detroit Edison	Yes	
Tacoma Public Utilities	Yes	
MRO NSRF	Yes	
APPA, LPPC and TAPS	Yes	
Florida Municipal Power Agency	Yes	
Arizona Public Service Company	Yes	
Georgia System Operations	Yes	
Southwestern Power	Yes	

Organization	Yes or No	Question 2 Comment
Administration		
US Bureau of Reclamation	Yes	
Manitoba Hydro	Yes	
NIPSCO	Yes	
South Carolina Electric and Gas	Yes	
Salt River Project	Yes	
CPS Energy	Yes	
Public Service Company of New Mexico	Yes	
Alliant Energy	Yes	
The Empire District Electric Company	Yes	
City of Tallahassee	Yes	
MidAmerican Energy	Yes	
Puget Sound Energy Inc.	Yes	
GTC	Yes	

3. The SDT has proposed requirements (COM-003-1, R3 and R4) for applicable entities to implement a process to identify, assess and correct deficiencies related to the entity's documented communication protocols; and to evaluate that process based on deficiencies found externally from the process. Do you agree with the proposed requirements? If not, please explain in the comment area of the last question.

#### Summary Consideration:

Many commenters, even those who voted no on Question 3 supported the SDT's decision to incorporate internal controls. Some of their concerns were if regional CEAs are "onboard" with the SDT's approach. **The SDT has collaborated with NERC compliance and jointly developed the RSAW for COM-003-1. NERC compliance and NERC executives have been speaking to industry, Regional Entities and regulators to advocate for control based standards citing the absolute need for this approach to address burdensome and unreasonable requirements and to promote a more efficient use of resources.**

A large number of commenters, for various reasons recommended that the SDT consider using a similar format and language to emulate the CIP v.5 standards and to address concerns over their understanding of R3 and R4. The commenters stated that it would be more consistent and less confusing. **The SDT discussed the commenters' concerns and concluded that adopting the same general format for COM-003-1 would add value by improving consistency and remaining effective as a standard to improve communication and reliability on the BES.**

**"R1 (and R2-DP and GOP). Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:"**

**R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity's implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.**

Organization	Yes or No	Question 3 Comment
Northeast Power Coordinating Council	No	It is unclear what identified reliability gap this Standard's development project is intending to fulfill given the recent adoption of the new COM-002-3 along with the OC white paper on communications protocols.
<p><b>Response: The OPCSDT thanks you for your comments. The reliability gap is the coverage of communication protocols that cover Operating Instructions during normal operating levels. COM-002-3 is only applicable to Adverse Reliability Impacts and Emergencies. The OC White Paper cites studies that put communication mistakes as a significant contributor to BES mishaps.</b></p>		
ACES Power Marketing Standards Collaborators	No	<p>(1) We support the concept of internal controls that the SDT has proposed. We agree that finding a violation for each instance is burdensome and unreasonable and evaluating internal controls is a more efficient use of resources. However, we are concerned about the evaluation of internal controls from Regional audit staff. How is NERC planning to train the Regional auditors to ensure consistency during compliance audits? There is too much room for auditor subjectivity, especially when evaluating whether a single communication was deficient. There are so many communications that could occur on a daily basis and there is not clear guidance when the Regions will find or not find a possible violation in an audit.</p> <p><b>Response: During the September 6, 2012 Webinar representatives of the EROs Compliance group cited ERO's hiring of career auditors, increased training and reaching out to industry with the development of the RSAW and the standard simultaneously.</b></p> <p>(2) In the webinar, SDT chair stated that a registered entity that catches a high percentage of deficiencies, then their process is working, but if the entity is only catching 50% then the entity needs to correct the process. There is currently no percentage or other guideline or metric to determine if an entity's process is sufficient. If this is the SDT's intent, please provide further detail.</p> <p><b>Response: The SDT did not address the degree of disparity. The auditor does have some subjectivity. The SDT points out there is not generally a finding of non</b></p>

Organization	Yes or No	Question 3 Comment
		<p><b>compliance even when the number of deficiencies is deemed excessive by a CEA. The entity then must evaluate its process for effectiveness and make modifications or demonstrate why no modification is necessary.</b></p> <p>(3) We recommend the SDT provide additional information in the Rationale and Technical Justification document to include a guideline to show how the Regional auditors would assess compliance with a control-based standard. It seems that the trend in both COM-003-1 and CIP v5 is to find the errors and fix them without the need to self-report. How are the Regions going to determine when a PV is to be issued? The Technical Justification and the RSAW do not provide enough information when a communication deficiency crosses the threshold of becoming a violation. How does a registered entity know when to self-report?</p> <p><b>Response: The SDT believes there is enough information in the standard and the RSAW to demonstrate when a PV would be issued. A finding of non compliance will generally occur when an entity fails to implement the modifications it developed during the evaluation of its process or has not provided a compelling reasoning why they determined modification was not required.</b></p> <p>(4) We recommend adding more detail, perhaps including an application guidelines section as other risk-based standards, for acceptable remediation of deficient communications. For example, if an operator failed to use the 24-hour clock during an Operating Instruction, would a simple reminder be sufficient or would the operator need to attend a full-blown training session? What documentation would be required? It seems that a reminder would remedy the deficiency, but then that would have to be documented. The internal controls used to remedy deficiencies could turn into another documentation exercise instead of focusing on effective communication. We recommend the SDT consider ways of satisfying remediation without creating an unnecessary administrative burden for maintaining compliance.</p> <p><b>Response: The SDT leaves this up to the entity as it develops its process. If a simple reminder to use the 24 hour clock proves effective in eliminating or reducing the</b></p>



Organization	Yes or No	Question 3 Comment
		<p>deficiency that is acceptable. It would have to be documented but generally most contemporary performance and training programs have the necessary elements to determine what internal remedies are required to train individuals to improve individual performance.</p> <p>(5) Please clarify R3, part 3.4, “deficiencies found external to Part 3.1.” Does the SDT mean that there would be deficiencies found in an audit? Who is the external entity finding these deficiencies? Does the SDT intend for registered entities to hire external consultants? Is this the RC notifying the DP that it has not communicated appropriately? Would these externally found deficiencies result in audit report recommendations?</p> <p><b>Response: Generally CEA would be the source of externally found deficiencies. Neither the SDT nor the standard specify a requirement to hire outside auditors. Many entities hire outside auditors to provide a third party review of its processes and for compliance issues. Other entities have separate specialized internal audit groups that survey a wide range of corporate and operational processes and activities on behalf of the executive leadership or their board. These would all be sources external to the entity’s internal processes. The standard requires the entity to evaluate its process if external deficiencies are found outside the process. The discovery of externally found deficiencies could possibly result in audit report recommendations.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
Detroit Edison	No	<p>All actions that result in a potential violation must be reviewed and analysed to identify and correct deficiencies. Communication issues are no different. Requirements 3 and 4 are not required.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT points out in COM-003-1 that the deficiencies that are identified, assessed and corrected by the entity are not potential violations.</b></p>		

Organization	Yes or No	Question 3 Comment
		<p>The SDT believes the language changes to draft 4 will address your concern.</p> <p>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</p> <p>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</p> <p>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p>
<p>SERC OC Standards Review Group</p>	<p>No</p>	<p>We would suggest changing R3 and R4 to align with our suggestions for R1 and R2: “R3. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement a process for identifying deficiencies with adherence to their documented communication protocols that each entity developed in accordance with Requirement R1 that:”</p>
		<p>Response: The OPCPSDT thanks you for your comments. The SDT believes the language changes to draft 4 will address your concern.</p> <p>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</p> <p>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</p> <p>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p>

Organization	Yes or No	Question 3 Comment
Dominion	No	<p>No, Dominion does not agree that these requirements are needed. As part of any certification to R1 and R2, we would expect the entity to perform some sort of analysis to determine whether its communication protocols meet the intent of the purpose stated for this standard. We do not believe imposing a mandatory requirement to perform this analysis inherently increases reliability.</p>
<p><b>Response:</b> The OPCSDT thanks you for your comments. The SDT believes the language changes to draft 4 will address your concern.</p> <p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</p> <p>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p>		
Hydro One	No	<p>ï€ It is unclear what identified reliability gap this Standard development project is intending to address, given the recent adoption of the new COM-002-3 along with the OC white paper on communications protocols.</p> <p>ï€ Hydro One believes that, as written, the requirements are too prescriptive. We think that the SDT should concentrate and focus on specifying WHAT is required to achieve the reliability objective of the standard rather than on HOW to go about achieving such objective. With this in mind, we recommend deleting R3.1 through R3.4 and R4.1 through R4.4.</p> <p><b>Response:</b> The reliability gap is the coverage of communication protocols that cover Operating Instructions during normal operating levels. COM-002-3 is only applicable to Adverse Reliability Impacts and Emergencies. The OC White Paper cites studies</p>

Organization	Yes or No	Question 3 Comment
		<p>that put communication mistakes as a significant contributor to BES mishaps.</p> <p>The SDT believes the language changes to draft 4 will address your concern.</p> <p>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</p> <p>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</p> <p>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p> <p>Additionally, in line with our comment regarding R1 and R2 we believe that these two requirements should be combined as well. We would like to propose following wording: “Each responsible entity shall develop and implement a process for identifying and addressing deficiencies found in the adherence to the documented communication protocol specified in Requirements R1 and R2.”</p> <p><b>Response: The SDT believes that the separated requirements are necessary because it is the only manner in which to clearly define requirements R1 and R2 for issuer-receivers and for receivers only. It also reduces the opportunity for double jeopardy if one entity cannot or is not able to comply with the requirement they are responsible for executing.</b></p>
<p><b>Response: The OPCSDT thanks you for your comments. Please see our responses above.</b></p>		

Organization	Yes or No	Question 3 Comment
ISO/RTO Standards Review Committee	No	<p>The SRC fully supports the concept that functional entities’ internal controls be used to monitor the effectiveness of their own protocols. The SRC suggests that any requirement to implement a plan may significantly reduce the incentives to create more effective protocols because of the Compliance uncertainty related to measuring effective internal controls. Requirement 3 requires entities to implement their process and to identify deficiencies with adherence to the protocol. The less complex a plan is the lower the number of deficiencies and therefore the lower the number of reports. Moreover, the RSAW states that the applicable entity could be found non-compliant if the entity did not follow an auditors suggested changes to remedy those deficiencies. Thus this standard would incent writing simple protocols.</p>
<p><b>Response: The OPCSDT thanks you for your comments. The entity has full discretion on how to develop the process required in R3 and R4. The CEA will gauge effectiveness based on results of the process.</b></p> <p><b>The finding of non compliance can only exist if the entity totally disregards improving its process. The SDT anticipates entities collectively possess a high level of professionalism and will develop a robust process and strive to continually improve it.</b></p>		
PPL Corporation NERC Registered Affiliates	No	<p>The PPL Companies agree with the concept of internal controls and/or the elimination of zero defect requirements. However, the concept of internal controls to identify, assess, and correct deficiencies related to documented communications protocols should be imbedded in R1 as proposed in our response to question 2. We do not agree with the specific details in the internal controls/elimination of zero defect language that is currently included in R3.1 - R3.4 and R4.1 - R4.4. Incorporating the new language proposed by the PPL Companies in R1 makes COM-003 more consistent with the approach being followed in the NERC CIP Version 5 standards. The added language proposed by the SDT in R3 and R4 creates uncertainty as to whether COM-003 is imposing greater requirements than CIP Version 5 regarding identifying, assessing, and correcting deficiencies and the documentary evidence that is required.</p>

Organization	Yes or No	Question 3 Comment
		<p>Response: The OPCPSDT thanks you for your comments. The SDT believes the language changes to draft 4 will address your concern.</p> <p>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</p> <p>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</p> <p>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p>
SPP Standards Review Group	No	Delete ‘potential’ in R3.1 and R4.1.
		<p>Response: The OPCPSDT thanks you for your comments. The SDT believes the language changes to draft 4 will address your concern.</p> <p>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</p> <p>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</p> <p>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p>
Bonneville Power Administration	No	BPA supports the move to the identify, assess, and correct deficiencies approach that eliminates the need for the entity to report each deficiency as a potential violation. BPA believes that based on the current R1 and R2, it is not reasonable to expect

Organization	Yes or No	Question 3 Comment
		<p>entities to review all communications in order to be compliant with R3 and R4. BPA suggests that the drafting team update R3.1 and R4.1 to state that entities shall implement a process that “identifies potential deficiencies through sampling”.</p>
<p><b>Response:</b> The OPCPSDT thanks you for your comments. R1 and R2 do not stipulate that entities review all communications in order to be compliant with R3 and R4. The SDT developed the standard with the intention of sampling and for the entity to determine the sample size as a means of identifying potential deficiencies.</p> <p>The SDT believes the language changes to draft 4 will address your concern.</p> <p>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</p> <p>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</p> <p>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p>		
PacifiCorp	No	<p>PacifiCorp supports the addition of non-zero defect language which follows the CIP model. [model PacifiCorp suggests that the language in Requirement R3 be modified and simplified as follows: “R3. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement R1 in a manner that identifies potential deficiencies, assesses deficiencies found, and corrects those deficiencies.”</p>
<p><b>Response:</b> The OPCPSDT thanks you for your comments. The SDT believes the language changes to draft 4 will address your concern.</p> <p>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities</p>		

Organization	Yes or No	Question 3 Comment
<p>that include the following:"</p> <p>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency. R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity's implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p>		
<p>Liberty Electric Power, LLC</p>	<p>No</p>	<p>There is no statement of periodicity in R4, leaving entities guessing until the time of audit regarding the criteria for sufficient review. R4 also would appear to require a great deal of review of communications in order to satisfy the requirement to identify potential defects. One of the suggestions on the NERC Webinar for COM-003 was to review a "half-hour of communications" every week. This is especially intrusive on smaller entities with a single compliance individual, as more than an hour of that person's work-week would be spent randomizing, retrieving and listening to routine communications. This effort would reduce the reliability of the bulk power system as efforts with greater effect are reduced to comply with this requirement. Suggest requiring an annual review of communications procedures with staff instead.</p>
<p>Response: The OPCPSDT thanks you for your comments. The SDT in draft 3, believes the entity should determine the frequency, sample size and methodology. The SDT believes the entities should create robust controls to reduce deficiencies and reduce miscommunication on the BES.</p>		
<p>Hydro Quebec Trans Energie</p>	<p>No</p>	<p>It is unclear what identified reliability gap this Standard's development project is intending to fulfill given the recent adoption of the new COM-002-3 along with the OC white paper on communications protocols.</p>
<p>Response: The OPCPSDT thanks you for your comments. The gap is a need to tighten communication protocols in all operating levels. COM-002-3 is only applicable to Adverse Reliability Impacts and Emergencies. The OC White Paper cites studies that put communication mistakes as a significant contributor to BES mishaps.</p>		



Organization	Yes or No	Question 3 Comment
Occidental Energy Ventures Corp.	No	<p>OEVC supports the concept underlying R3 and R4, but believe that far more detail must be provided in the measures and/or the RSAW. In general, we read these requirements as pertaining to System Operator monitoring and feedback processes that take place either in real-time or after the fact through the review of recordings. However, there may be other suitable options such as comprehensive Operator logging or even regular awareness training. Our concern is that without further clarification, auditors may choose to interpret these requirements to mean that 100% of all conversations must be monitored and assessed. This would result in a cost-prohibitive situation, with little incremental improvement in reliability. Every effective quality program relies on statistically significant sample assessments - and there must be an acceptable sample size defined.</p> <p><b>Response: The CEA, by direction in the RSAW is supposed to understand the process, but is limited to the results of the process and testing the effectiveness of the process. This is all accomplished in a non zero defect environment.</b></p> <p><b>The SDT does not believe it has stipulated that 100% of all conversations must monitored and assessed. It is not stated as such in the standard and the webinar on September 6, 2012 where the need for suitable sampling models were discussed.</b></p> <p>Furthermore, OEVC would like to see the Cost Effective Analysis Process (CEAP) used in this initiative. Our initial assessment is that at least one resource will need to be added at our four generation facilities in order to supplement our Operator quality monitoring program to accommodate COM-003-1. However, this is based upon our assumptions of a statistical monitoring method - which is very sensitive to the number of samples required. If other industry stakeholders come to the same conclusion, the result could drive upward pressure on electricity rates - and should be compared to the expected benefits of the initiative.</p> <p><b>Response: The SDT does not contemplate applying CEAP to this standard. The SDT also believes the entity has much license to develop the Identify, Assess and Correct process including sample sizes based on statistical modeling. Based on the</b></p>

Organization	Yes or No	Question 3 Comment
		resources most entities have for training and auditing the SDT believes the incremental costs to be minimal.
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
TransAlta Centralia Generation LLC	No	<p>There is no statement of periodicity in R4, leaving entities guessing until the time of audit regarding the criteria for sufficient review.</p> <p><b>Response: The entity is to determine the sample size and frequency of review. The auditor will understand the entity’s process, but will only validate the results, not the entities controls.</b></p> <p>R4 is also open-ended regarding scope, potentially requiring review of every voice communication for every plant for the audit period. Everyday communications do not merit such scrutiny, which would reduce rather than improve the attention that can be given to matters of significance. All standards (not just COM-003-1) should clearly specify pass/fail criteria and the associated evidence requirements.</p> <p><b>Response: The SDT disagrees. It is up to the entity to develop the process. The CEA will audit against the results, not the process.</b></p> <p>R4 should be split into DP and GOP sections, with the GOP requirement being:</p> <p>R4. Each Generator Operator shall conduct in each calendar year a review session with the operations function for registered entities, regarding the documented communication protocols specified in Requirement</p> <p>2. Corrective action shall be implemented and documented for any potential deficiencies coming to light as a result of this review.</p> <p><b>Response: The SDT believes the DP and GOP are properly classified under the same requirements. They are both receivers of Operating Instructions and are subject to the same communication protocols.</b></p> <p><b>The SDT believes the entity will determine the frequency and sample size under</b></p>

Organization	Yes or No	Question 3 Comment
		draft 3 of the requirement. More robust controls will reduce deficiencies.
Response: The OPCPSDT thanks you for your comments. Please see our responses above.		
ReliabilityFirst	No	ReliabilityFirst believes the words “identifying deficiencies” (within R3 and R4) is ambiguous and could be open to interpretation. ReliabilityFirst believes the drafting team should further clarify the deficiencies in which will be required to be identified in Requirement R3 and R4.
Response: The OPCPSDT thanks you for your comments. Deficiencies are instances where System Operators do not adhere to the entities documented communication protocols specified in R1 and R2.		
Independent Electricity System Operator	No	We do not see the need for these two requirements at all. Assuming Requirements R1 and R2 were to stay (which we disagree), Responsible Entities need to comply with these requirements to develop documented communication protocols for Operating Instructions that incorporate all parts in R1 and R2. Any deficiencies with adherence to the documented communication protocols specified in R1 and R2 will be assessed non-compliance, and sanction and remedial actions will be imposed to correct such deficiencies. Having two requirements to obligate entities that already violated the standard is totally unnecessary, and redundant and may result in double jeopardy.
<p>Response: The OPCPSDT thanks you for your comments. No, you are incorrect. There is no finding of non compliance if the entity identifies, assesses and corrects the deficiency.</p> <p>The SDT believes the language changes to draft 4 will address your concern.</p> <p>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</p> <p>This change was made to use standard language and methodology for control based standards. It is the same language as</p>		

Organization	Yes or No	Question 3 Comment
<p>developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency. R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity's implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p>		
<p>NextEra Energy Inc.</p>	<p>No</p>	<p>Although NextEra supports Reliability Standards that are more risk and result based and provide for a corrective bandwidth or prosecutory discretion for possible violations, as drafted, R3 and R4 need refinement to meaningfully and clearly implement any of the above concepts. Therefore, NextEra recommends that R3 and R4 both be re-written to read as follows:</p> <p>R3 Absent a possible violation that resulted in (or could have resulted in) a significant risk to the Bulk Electric System, no violation of R1 and its subrequirements shall be found, provided that the Balancing Authority, Reliability Coordinator, and Transmission Operator has implemented a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R1 that: . . .</p> <p>R4 Absent a possible violation that resulted in (or could have resulted in) a significant risk to the Bulk Electric System, no violation of R2 and its subrequirements shall be found, provided that the Distribution Provider and Generator Operator shall implement a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R2 that: . . .</p>
<p>Response: The OPCSDT thanks you for your comments.</p> <p>The SDT believes the language changes to draft 4 will address your concern.</p> <p>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</p> <p>This change was made to use standard language and methodology for control based standards. It is the same language as</p>		

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<p>developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency. R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity's implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p>		
<p>Northeast Utilities</p>	<p>No</p>	<p>R3 &amp; R4 As written are confusing and do not convey the intent of the SDT. Below is recommended re-write:</p> <p>Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement a process that assesses conformance and performance to the R1 documented protocols. This process shall include identifying deficiencies, assessing the deficiencies and correcting the deficiencies when feasible.</p> <p>R3.4 &amp; R4.4 This should be removed as a sub-requirement and made its own requirement. Below is recommended re-write:</p> <p>Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall [insert time period] evaluate its process required by R3 (R4) for deficiencies. Identified deficiencies shall be assessed and corrected when feasible. If no deficiencies found this is to be documented.</p>
<p>Response: The OPCPSDT thanks you for your comments. The SDT appreciates your recommended language. The SDT believes the language changes to draft 4 will address your concern.</p> <p>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</p> <p>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency. R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity's implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1</p>		

Organization	Yes or No	Question 3 Comment
<p>RSAW has been updated to reflect this change.</p>		
<p>Alliant Energy</p>	<p>No</p>	<p>COM-003 cannot be a zero defect standard. We propose rewording R3 to state: "Each Reliability Coordinator, Transmission Operator and Balancing Authority shall implement the requirements in R1 in a manner that identifies, assesses, and corrects deficiencies, if any. Where the entity is identifying, assessing and correcting deficiencies, the entity is satisfactorily meeting the requirements or COM-003."If there is no leeway given, requirement 1 of this standard will generate a very large number of violations and in our opinion it would become one of the most violated standards very quickly.</p>
<p>Response: The OPCPSDT thanks you for your comments. The SDT believes the language changes to draft 4 will address your concern.</p> <p>"R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:"</p> <p>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</p> <p>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity's implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p>		
<p>The Empire District Electric Company</p>	<p>No</p>	<p>This is redundant with the continual improvement methodologies that the NERC process already has in place. If a company finds, through a self assessment or NERC audit, that they are not meeting a requirement in a standard, then the NERC process is to either self report, or be found in violation. In either case the entity must complete their deficiency in the standard in order for the mitigation to be approved by their regional entity. To have to have written process for this in order to meet R3 and R4 is redundant with the requirements on how NERC views the elements of a</p>

Organization	Yes or No	Question 3 Comment
		<p>successful compliance program. Smaller entities do not have the man power for redundancies such as this. I would rather see R3 and R4 dropped from the standard for the reasons above. Most if not all companies will correct issues through the self report process and mitigation plan approval process.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. This is different from the program you described. This is a new approach to reliability standards that requires entities to develop a process that identifies, assesses and corrects deficiencies in a non zero defect environment.</b></p> <p>The SDT believes the language changes to draft 4 will address your concern.</p> <p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</p> <p>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p>		
American Electric Power	No	<p>AEP disagrees with the concept of requiring three part communications for more routine operations, and as a result, also disagrees with R3 and R4 which require that the entity shall implement a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R1 and R2.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT believes three part communications is a proven, effective protocol that prevents grave operations errors that could compromise the reliability of the BES.</b></p>		
Brazos Electric Power Cooperative, Inc.	No	<p>See ACES comments.</p>

Organization	Yes or No	Question 3 Comment
<p>Response: The OPCPSDT thanks you for your comments. Please see our responses to ACES comments.</p>		
Ameren	No	See response to question 5.
<p>Response: The OPCPSDT thanks you for your comments. Please see our responses to question 5.</p>		
Essential Power, LLC	No	<p>There is no statement of periodicity in R4, leaving entities guessing until the time of audit regarding the criteria for sufficient review.</p> <p><b>Response: The entity is to determine the sample size and frequency of review. The auditor will understand the entity’s process, but will only validate the results, not the entities controls.</b></p> <p>R4 is also open-ended regarding scope, potentially requiring review of every voice communication for every plant for the audit period. Everyday communications do not merit such scrutiny, which would reduce rather than improve the attention that can be given to matters of significance. All standards (not just COM-003-1) should clearly specify pass/fail criteria and the associated evidence requirements.</p> <p><b>Response: The SDT disagrees. It is up to the entity to develop the process. The CEA will audit against the results, not the process.</b></p> <p>R4 should be split into DP and GOP sections, with the GOP requirement being:</p> <p>R4. Each Generator Operator shall conduct in each calendar year a review session with the operations function for registered entities, regarding the documented communication protocols specified in Requirement R2. Corrective action shall be implemented and documented for any potential deficiencies coming to light as a result of this review.</p> <p><b>Response: The SDT believes the DP and GOP are properly classified under the same requirements. They are both receivers of Operating Instructions and are subject to the same communication protocols.</b></p>



Organization	Yes or No	Question 3 Comment
		<p>The SDT believes the entity has the discretion to set the frequency and sample size under draft 3 of the requirement. More robust controls will reduce deficiencies.</p>
<p>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</p>		
Texas Reliability Entity	No	<p>If a deficiency is identified and then training is provided to attempt to correct it, what happens if the same deficiency is identified again? Is the entity considered to have failed to correct its identified deficiency? Does the entity need to file a self report when the second deficiency occurs? Texas RE agrees with the premise of having a process for identifying issues, but at some point if a pattern of deficiencies continues, when does a violation occur?</p>
<p>Response: The OPCPSDT thanks you for your comments. As long as the entity is identifying assessing and correcting the deficiency there is no need to self report. If the deficiency continues as a result of the entity not evaluating its process or not making modifications it has identified; or not providing documented justification why modifications are not required, a finding of non compliance may be awarded, based on specific circumstances.</p>		
GTC	No	<p>The current wording necessitates creating a process to evaluate a process that evaluates protocols. We believe this is unnecessarily cumbersome and confusing. The addition of extra controls from the last version to this version lends nothing to improving reliability or improving the function of the standard. Accordingly, the NERC SC recently approved the SAR for the Paragraph 81 initiative to eliminate certain requirements from the Reliability Standards with little effect on reliability. The SAR identifies criteria to be used to identify those requirements that could easily be identified for removal. It would seem that the draft R3 and R4 would meet the criteria identified for P81. GTC recommends the deletion of R3 and R4.</p> <p>Response: The SDT believes the protocols and the required process improve reliability by creating universal and consistent communication protocols that prevent miscommunication of Operating Instructions on the BES. The SDT believes the requirements of COM-003-1 are not trivial or administrative.</p>

Organization	Yes or No	Question 3 Comment
		<p>Alternatively, at a minimum, we suggest improvements to requirements R3 and R4 as currently drafted. We suggest changing all instances of the word “process” to “protocols” in both part 4s and also removing “found external to Part 4.1” from both part 4s. Finally we suggest removing parts 2 and 3 simply to keep the requirements from becoming redundant with the changes made to their respective part 4s.</p> <p><b>Response: The SDT appreciates the alternative language but implementing it would preclude the standard from being able to improve communication protocols outside of a zero defect environment.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Public Service Enterprise Group</p>	<p>No</p>	<p>These questions apply equally to R3 and R4. In R4.1, what is a “potential” deficiency?</p> <p><b>Response: The SDT believes the initial designation of “potential” should describe the deficiency until the “assessment” confirmed it.</b></p> <p>In R4.3, how can one correct a deficiency since that happened in the past?</p> <p><b>Response: The SDT intends for the entity to assess and correct the deficiency. The SDT believes to correct a deficiency means to take measures to correct the cause of the deficiency in a manner that it is not repetitive. Examples of which are, but not limited to, training, process change, performance documentation evaluation, counseling and other measures that would prevent future occurrences.</b></p> <p>In R4.4, how does one evaluate the process based on deficiencies identified that are “external to Part 4.1”? (Part 4.1 is the process for identifying deficiencies.)</p> <p><b>Response: The entity compares the deficiencies found externally to determine why they were not identified by the entities internal process. The entity then makes proper modifications to its process to improve its performance for finding deficiencies.</b></p> <p>We are also concerned about the draft RSAW for R3 and R4. The RSAW has two</p>

Organization	Yes or No	Question 3 Comment
		<p>bullets for R3 and R4. One states</p> <p><i>“Where the auditor can verify that the entity is identifying, assessing, and correcting its own deficiencies, the auditor will not have a finding of non-compliance.”</i> The second bullet states <i>“If an auditor cannot verify that the entity is adequately identifying, assessing, and correcting its own deficiencies due to limitations in its process, the auditor will not have a finding of non-compliance.”</i> The auditor will provide the entity with recommendations as necessary.”</p> <p>Per the RSAW for R3 or R4, how will an auditor verify that an entity is not “adequately identifying, assessing, and correcting its own deficiencies due to limitations in its process”? In other words, what evidence will be required by the auditor, and how many months of communications records should be kept?</p> <p><b>Response: the auditor for draft 3, R3 and R4 will require the results of the process and the evidence requirement is 90 days. This is articulated in draft 3 of COM-003-1. The RSAW was posted and comments for the RSAW were to be entered there.</b></p> <p>Because of the volume of communications, sampling may be required. Unless one listens to 100% of communications recording, one cannot be sure one is identifying all deficiencies. Is 100% deficiency detection the goal?</p> <p>Furthermore, M3 or M4, which only require the entity to provide the results of its process in R3 and R4, are not mentioned in the RSAW. Measures are supposed to represent one acceptable from of compliance and should be acceptable in the RSAW.</p> <p><b>Response: The standard does not specify a goal. The goal should be a function of the entities desire to eliminate mistakes caused by miscommunication.</b></p> <p><b>The Measures, M3 or M4, are the results of the process as stated in the standard.</b></p> <p>Finally, if R1 and R2 are changed as recommended in #2 above (i.e., remove the requirement for an entity to have documented communications protocols and just require it to adhere to protocols n R1 and R2), incidents of non-compliance with the</p>

Organization	Yes or No	Question 3 Comment
		<p>protocols will be detected via R3 and R4.</p> <p>We first recommend that M1 and M3 have the same measures - M1 and M2 would both read “Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide the results of its process developed for Requirement R3.” The same would apply for M2 and M4, which would both read “Each Distribution Provider and Generator Operator shall provide the results of its process developed for Requirement R4.” If this were done, the draft RSAWs two bullets discussed should have these phrases modified for R3 and R4, with the modification shown in capital letters:</p> <ul style="list-style-type: none"> <li>o In R3, modify “the auditor will not have a finding of non-compliance FOR EITHER R1 OR R3” in two bullets.</li> <li>o In R4, modify “the auditor will not have a finding of non-compliance FOR EITHER R2 OR R4” in two bullets.</li> </ul> <p><b>Response: The SDT believes the language changes to draft 4 may address your concern.</b></p> <p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</b></p> <p><b>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</b></p>

Organization	Yes or No	Question 3 Comment
<p>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</p>		
Cowlitz County PUD	No	See response to question two.
<p>Response: The OPCPSDT thanks you for your comments. Please see our responses to question 2.</p>		
Indiana Municipal Power Agency	No	<p>IMPA recommends adding clarification to the words “deficiencies found external to Part 3.1 (4.1)” so that entities and auditors know that these requirements allow deficiencies found outside of the entitie’s process including deficiencies that had previously passed the entity’s process) will be able to go through the entity’s process of assessing and correcting without the auditor giving a finding of non-compliance, since the entity itself failed to identify the potential deficiency in R3.1. or R4.1. The clarity can be added in the standard itself or in the RSAW- it currently is not stated in the standard and it is especially absent in the RSAW under Section 2 on page 4 of 5 or Section 2 page 5 of 5.It is also not clear how many times an entity will be allowed to identify, assess, and correct the same deficiency or similar deficiencies before an auditor can find an entiy in non-compliance with R3 and R4 (including subrequirments of each). It appears that the SDT is saying that as long as an entity is making the changes provided in the feedback by the CEA to its process to identify, assess and correct that it will not be found non-compliant for all same or similar deficiencies that continue to occur - there is no set number as long as the entity is trying to improve its process or communication protocols, is this correct? If so, IMPA supports this practice and would like to see clarity added.</p>
<p>Response: The OPCPSDT thanks you for your comments. Your comments referring to 3.1 to 3.3 and 4.1 to 4.3 are correct. R3.4 and R4.4 require the entity to evaluate its process if deficiencies are discovered externally. The entity must implement modifications if the entity determines modifications are required or justify why the entity determines no modification is required. If the entity does not comply with these subrequirements it may be subject to a finding of non compliance. The SDT believes the standard draft3 and the RSAW convey this.</p>		

Organization	Yes or No	Question 3 Comment
MISO	No	<p>MISO respectfully submits that COM-003-1, R3 and R4 require clarification in two regards. MISO first notes that requirements R3.4 and R4.4, which require Registered Entities to evaluate “the process based on deficiencies found external to [R3.1/R4.1],” are written in a confusing manner. More specifically, it is not clear what the phrase “found external to” means and, therefore, Registered Entities cannot know or understand when their compliance obligations under these requirements are applicable.</p> <p><b>Response: The SDT has changed the language changes to draft 4.</b></p> <p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</b></p> <p><b>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</b></p> <p>In addition, MISO respectfully submits that the SDT must add clarifying language to COM-003-1 to clarify that an individual failure to execute elements of a System Operator’s communication protocol is not, on its own, a compliance violation, provided that the System Operator evaluates adherence to its protocol as required by Requirements R3 and R4.</p> <p><b>Response: The SDT believes that is stated in the standard and supported in the RSAW.</b></p>

Organization	Yes or No	Question 3 Comment
		<p>MISO is concerned that the current draft of COM-003-1 could give rise to double penalties for individual failures to execute one of the elements of a communication protocol. Without clarifying language in the Reliability Standard itself, any Registered Entity that fails to adhere to its communication protocol required by COM-003-1, R1 and R2 would likely self-report this failure, and would subsequently complete a mitigation plan that addresses -- and implements new processes to prevent the repetition of -- the failure. An additional requirement to evaluate adherence to the communication protocol would be redundant and would not increase or bolster reliability - and, further, would only increase the potential for Registered Entities to violate yet another requirement of a Reliability Standard. Thus, unless COM-003-1 is revised to clarify that a Registered Entity's failure to implement an element of its communication protocol for Operating Instructions is not a compliance violation in and of itself and, therefore, is not subject to self-reporting under NERC and Regional Entities Compliance Monitoring and Enforcement Program ("CMEP"), MISO cannot support proposed Requirements R3 and R4 at this time.</p> <p><b>Response: The SDT believes the language changes to draft 4 may address your concern.</b></p> <p><b>"R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:"</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</b></p> <p><b>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity's implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-</b></p>

Organization	Yes or No	Question 3 Comment
		003-1 RSAW has been updated to reflect this change.
Response: The OPCSDT thanks you for your comments. Please see our responses above.		
ERCOT	No	<p>ERCOT agrees with the SRC comments, and has these additional comments: ERCOT fully supports the concept that functional entities’ internal controls be used to monitor the effectiveness of their own protocols. However, these matters are not suitable for reliability standards. Imposition of mandatory controls applicable to all functional entities is inappropriate because of the wide variety of organizational structures that necessarily requires flexibility with respect to developing appropriate controls for each entity’s specific circumstances.</p> <p><b>Response: The SDT believes the draft standard provides great flexibility to all of the applicable entities and believes that the standard focuses on the results of an entity’s process for identifying, assessing and correcting deficiencies all in the interests of improving reliability.</b></p> <p>Furthermore, entities’ internal controls are beyond the scope of the Section 215 reliability purview generally, and they are inconsistent with the risk based initiative being pursued by NERC because they do not impact/are not related to actual reliability impacts.</p> <p><b>Response: The SDT disagrees and does not discern the linkage to Section 215 and points out the standard is not focused on internal controls, but on improving communication clarity to avoid problems on the BES which has a dramatic impact on reliability.</b></p> <p>Furthermore, this deficiency review process is ambiguous and, accordingly, lends itself to inefficient and ineffective CMEP results. As an initial matter, what constitutes a deficiency will be an issue that is vulnerable to subjective disagreements. Even assuming there is agreement on that issue, what constitutes an appropriate remedy for a deficiency in terms of assessment and correction will</p>



Organization	Yes or No	Question 3 Comment
		<p>similarly be susceptible to subjective disagreements.</p> <p><b>Response: The SDT does not believe the evaluation process is ambiguous and believes the implementation of this standards approach to standard development will enhance the effectiveness of NERC’s CMEP program.</b></p> <p>Finally, with respect to the obligation to evaluate the deficiency identification process itself, again, the potential for the introduction of subjective compliance review will be problematic in practice in terms of reviewing whether the decision whether to implement a modification or not, and, if a modification is implemented, whether the revision is adequate.</p> <p><b>Response: The SDT believes there has to be a level of accountability for an entity that cannot or will not take measures to improve its process. The SDT believes the requirements that require the evaluation are clear and fair. The entity can make any decision to modify or not to modify; the later requires documented justification.</b></p>
<p><b>Response: The OPCSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Oncor Electric Delivery Company LLC</p>	<p>No</p>	<p>Oncor also takes the position that all of the ideas prescribed within these requirements including the implementation, assessment, evaluation and correction of communication protocols, are already being effectively implemented as industry Best Practice. In addition, Oncor requests that NERC substitute the CIP v.5 'zero defects' (Each Responsible Entity shall implement, in a manner that identifies, assesses, and corrects deficiencies, one or more documented processes) language in COM-003 in order to minimize potential confusion.</p> <p><b>Response: The SDT believes the language changes to draft 4 will address your concern.</b></p> <p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies,</b></p>

Organization	Yes or No	Question 3 Comment
		<p>documented communication protocols for Operating Instructions between Functional Entities that include the following:"</p> <p>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</p> <p>Oncor offers the following substitute language for R3 and R4.</p> <p>R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues an Operating Communication shall either:</p> <ul style="list-style-type: none"> <li>o Confirm that the response from the recipient of the Operating Communication (in accordance with Requirement R2) was accurate, or               <ul style="list-style-type: none"> <li>• Reissue the Operating Communication to resolve any misunderstandings.</li> </ul> </li> </ul> <p>Response: R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p>
<p>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</p>		
Georgia System Operations	No	
Center Point Energy Houston Electric, LLC.	No	
Associated Electric Cooperative Inc - JRO00088	Yes	<p>This could work, were wording per concepts already suggested per questions 1 &amp; 2 and question 5, such that the documented evidence of an effective program, precludes violations of any individual requirement. In interest of providing our industry with greater consistency in wording and format throughout future standards, AECEI strongly suggests that this SDT review the current draft release of CIP</p>

Organization	Yes or No	Question 3 Comment
		Version 5's draft (for ballot), and similarly format these requirements. However please see AECI's general observations concerning COM-003-1 in comment 5 below.
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT will respond to AECI's comments and observations in 5 below.</b></p>		
FirstEnergy	Yes	FirstEnergy supports this new concept being introduced by NERC. It allows entities to sharpen their internal controls while not being penalized for minor non-compliance situations that do not impact the BES. The only question we raise is how this will be implemented in the CEAP. The draft RSAW for COM-003-1 is silent on this issue and we ask that NERC give more guidance on it as this paradigm develops.
<p><b>Response: The OPCPSDT thanks you for your comments. CEAP at this writing is still under development and to the best of the SDT's knowledge is not deployable yet.</b></p>		
Florida Municipal Power Agency	Yes	<p>we commend the SDT for doing a good job of writing a difficult standard and avoiding the "zero-defect" problem (the problem of just having just one violation in tens of thousands be punishable by fines) and we support the approach taken. If we think of managing operations, we think of the process:</p> <p>Step 1 - Vision, goals, policies - what do we want to accomplish?</p> <p>Step 2 - Protocols, plans, procedures, programs, processes, methodologies - how will we do it and who will do what?</p> <p>Step 3 - Do it</p> <p>Step 4 - Measure, monitor - did we accomplish what we set out to do?</p> <p>Step 5 - Learn, adjust, back to 1.</p> <p>The problem with the prior draft of COM-003, before this latest draft, is that the standard essentially micromanaged industry by causing auditors to monitor actual communications, e.g., the auditors would be doing step 4, which ends up with the zero-defect problem. We have seen other standards that have this zero defect</p>

Organization	Yes or No	Question 3 Comment
		<p>problem, e.g., PRC-005 has a requirement for step 2 of the process above, to have a program, and then for step 3 of the process, to do it in accordance with the program, which results in the zero-defect problem. We've seen still other standards avoid the zero defect problem by only requiring step 2, but with no requirement to actually do it, e.g., the currently enforceable CIP-001 has requirements for step 2 of the process above for sabotage reporting procedures, but, has no requirement to actually follow those procedures if a sabotage event occurs, which leaves questions of accountability. The SDT for COM-003 is doing the appropriate thing and backing up one level to measure how effectively we are managing our own operations, and this is the first time I've seen a standard developed in this clever fashion of developing requirements for Step 2 (protocols) and Steps 4 &amp; 5 (measure, monitor, learn, adjust) of the process above, but not Step 3 of the process. However, Step 3 would need to be performed for the entity to comply with Steps 4&amp;5, meaning we are still accountable for "doing it".</p> <p>The method that the SDT is using to ensure we have the appropriate operations management mechanisms in place seems a clever and pragmatic approach. We have one suggestion to improve R3. R3 requires entities to “implement” a process for identifying deficiencies. Use of the word “implement” implies that all deficiencies must be identified, which means that the auditors would need to independently identify deficiencies and compare notes, which reintroduces the "zero-defect" problem. FMPA recommends replacing "implement" with “institute”.</p>
<p><b>Response: The OPCSDT thanks you for your comments. The SDT believes the word implement means to develop and initiate the process. The “how to” of that process will be determined by the entity. We believe R3 provides latitude to determine the means and methodologies to develop how it will identify, assess and correct deficiencies and does not specify or even imply a 100% identification of deficiencies. A robust sampling of Operating Instructions based on statistical modeling would be a more efficient and effective means of developing controls for identifying deficiencies.</b></p>		
Southern Company	Yes	Provided that the SDT incorporate the changes suggested for R1 and R2, Southern generally agrees with the concept of implementing a process to identify and correct

Organization	Yes or No	Question 3 Comment
		deficiencies without compliance exposure for each deficiency. However, this is a new concept and we do have questions as to how it will be implemented. For example, how many discrepancies would it take for an entity to identify before requiring a self report rather than waiting to present the log of deficiencies found and corrected during an audit?
<p><b>Response: The OPCPSDT thanks you for your comments. As long as the entity is identifying, assessing and correcting deficiencies and evaluating its process (R3.4 and R4.4) and improving it to reduce deficiencies there is generally not a finding of non compliance. The entity must evaluate its process if deficiencies are discovered externally. The entity must implement modifications if the entity determines modifications are required or justify why the entity determines no modification is required. If the entity does not comply with these sub requirements it may be subject to a finding of non compliance. The SDT believes the standard draft3 and the RSAW convey this.</b></p>		
NIPSCO	Yes	These appear to be Internal Controls and they look good.
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
The United Illuminating Company	Yes	United Illuminating supports the language in COM-003 R3 and R4. Since the quantity of Operating Instructions will be very large it is more important to have a process to monitor the communication protocols and correct deficiencies.
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
CPS Energy	Yes	The proposed requirements (COM-003-1, R3 and R4) are in line with Risk-Based Reliability Compliance Monitoring.
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
Exelon	Yes	Exelon agrees with the proposed requiremnt but thinks it could be improved before final adoption. The Requirement as written is confusing. For example, R3 is to identify deficiencies with respect to the entities protocols. R3.1 addresses “potential”

Organization	Yes or No	Question 3 Comment
		<p>deficiencies. It is unclear what a potential deficiency is. We suggest using deviations from the entities protocol in place of deficiencies or potential deficiencies. Similarly we question how an entity will demonstrate that modifications to their program are not required in light of the assessment being done in response to deviations from the protocol. We believe R3.4 should be clarified. We believe its purpose is to direct an entity to take action if an external entity (auditor) identifies a deviation from the entity protocol. We do not think the response to identifying a deviation / deficiency should vary based on how it was identified. Once identified (R3.1), a deviation / deficiency should be assessed (3.2) Corrected (3.3) and when necessary (3.4) the program should be modified to account for the deficiency. Since a similar effort to utilize an internal controls approach is underway in the CIP Version 5 drafting, it may be valuable for COM-003 to also utilize the same language of “in a manner that identifies, assesses, and corrects deficiencies.” Exelon supports the effort to utilize an internal controls approach but remains concerned compliance auditing and the potential for interpretations related to the requirement. We urge NERC, in collaboration with the Regional Entities to develop a clear roll out plan prior to implementation of COM-003 so that stakeholders and auditors understand the compliance obligations for this new approach.</p>
<p><b>Response:</b> The OPCSDT thanks you for your comments. The SDT believes the language changes to draft 4 may address your concern.</p> <p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</b></p> <p><b>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1</b></p>		

Organization	Yes or No	Question 3 Comment
<b>RSAW has been updated to reflect this change.</b>		
Duke Energy	Yes	
Tacoma Public Utilities	Yes	
MRO NSRF	Yes	
APPA, LPPC and TAPS	Yes	
Arizona Public Service Company	Yes	
Southwestern Power Administration	Yes	
US Bureau of Reclamation	Yes	
Manitoba Hydro	Yes	
Central Lincoln	Yes	
City of Austin dba Austin Energy	Yes	
Idaho Power Co.	Yes	
South Carolina Electric and Gas	Yes	
Salt River Project	Yes	

Organization	Yes or No	Question 3 Comment
Lincoln Electric System	Yes	
Public Service Company of New Mexico	Yes	
City of Tallahassee	Yes	
MidAmerican Energy	Yes	
Puget Sound Energy Inc.	Yes	
Xcel Energy	Yes	



4. Do you agree with the VRFs and VSLs for Requirements R1, R2, R3 and R4?

**Summary Consideration:** The Structure of COM-003-1, draft 4 has changed dramatically. There are now two requirements and the scope of each is different enough to warrant significant changes to the VRFs and VSLs in draft 4. The SDT will post draft 4 and request new comments on the VRFs and VSLs. The SDT appreciates industry input on this question for draft 3.

The new draft 4 language is:

“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”

R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.

Organization	Yes or No	Question 4 Comment
ACES Power Marketing Standards Collaborators	No	<p>(1) We agree with the VRF classifications.</p> <p>(2) We agree with the VSLs for R1 and R2. We note that there is a typo in Severe VSL for R2 - there is no part 2.3 in the standard.</p> <p><b>Response: Thank you, the SDT has corrected the error.</b></p> <p>(3) We disagree with the Time Horizons for R1 and R2. Developing documented communications protocols are not long term planning, these activities are operations planning.</p> <p><b>Response: The SDT believes Long Term Planning is the proper Time Horizon based</b></p>

Organization	Yes or No	Question 4 Comment
		<p><b>on the NERC guidance document.</b></p> <p>(4) We disagree with the VSLs for R3 and R4. In particular, the binary nature of implementing communication protocols needs to be reconsidered. During the September 6 webinar, both Gerry Cauley and Mike Moon stated that internal controls should focus on fixing deficiencies and auditors were not to find PVs for single instances of noncompliance. Based on these statements, the VSLs should not be binary if the auditors are not to find PVs for single instances. Also during the webinar, Mike Moon stated that the auditors are to make recommendations in their audit reports to improve their processes, and not to be an “enforcement hammer” for each individual deficiency. The way the VSLs are drafted, each instance will be severe. We recommend that the SDT revise the VSLs to allow for auditors to make recommendations instead of findings of potential noncompliance.</p> <p><b>Response: The SDT believes that the Standard language supports the correction of deficiencies rather than finding PVs. The entire identify, assess and correct process is the core emphasis of the standard.</b></p> <p><b>The finding of non compliance and the commensurate Severe VSLs only occur after an entity that does not improve its process when it has demonstrated that improvement is required. This sets the stage for creating a risk for miscommunication to cause errors on the BES. The SDT believes this will be an unlikely exception because it would occur only if the entity disregards the poor performance of their process and their own findings to improve it. To reach this point would be the result of a long chain of failures and a near complete disregard of the requirement on the part of the entity.</b></p> <p>(5) R3 VSL, “The Responsible Entity did not demonstrate that no modification to the process was necessary to address the deficiencies found external to Part 3.1.” This is a documentation issue and should not result in a severe VSL classification.</p>

Organization	Yes or No	Question 4 Comment
		<p><b>Response: The SDT does not believe it is a documentation issue. An entity, which does not improve its process when the process is unable to identify deficiencies, is creating a risk for miscommunication that will cause errors on the BES. If the entity disregards or refuses without justification to make those modifications the CEA must have the authority to elevate level of compliance.</b></p> <p>(6) There was a lot of discussion in the webinar about Regional auditors not finding a violation, but there needs to be clear guidelines describing when an auditor will find a PV. The VSLs currently describe a violation when a deficiency is not remediated, but that same instance could result in no finding at all, depending on how the individual auditor interprets the situation. This level of subjectivity is too high; the SDT needs to revise the VSL table to reflect a more reasonable approach, perhaps by including more information and examples of situations that might be viewed as non-compliance (communication breakdown) but because of internal controls, there should be no finding of non-compliance. In the alternative, the SDT could develop a guidance document outlining when an auditor is to find a PV and include examples to ensure consistency. The RSAW does not provide any additional clarity.</p> <p><b>Response: The SDT refers to its responses to 4 and 5 above. The SDT does not believe the level of subjectivity is high. The identify, assess and correct aspect of the requirement is at the core of the standard. If an entity does this and has a strong process and controls that capture deficiencies in a manner that can be verified by external agents, there are generally no findings of non compliance. If an entity does not make modifications to their process that they have identified or do not make modifications and do not justify why they believe modifications are not required they have approached a status where they could be subject to a finding of non-compliance. This is an area where an entity with a compromised internal process which the entity is not improving and, therefore, is not realistically managing the risk of miscommunication that could impact the BES.</b></p> <p>(7) In the webinar, there were several references to “systemic or chronic” communication deficiencies. The VSLs do not reference any types of trends, but that</p>

Organization	Yes or No	Question 4 Comment
		<p>seems to be the focus of compliance. We suggest revising the VSLs to focus on broader issues, such as systemic deficiencies that remain unresolved.</p> <p><b>Response: The SDT believes Requirements R part 3.4 and R part 4.4 will be instrumental in revealing systemic or chronic communication deficiencies. To the extent an entity modifies the process and strengthens their controls, improvements to the process and corrections of deficiencies can be generally be accomplished without a finding of non compliance.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. The Structure of COM-003-1, draft 4 has changed dramatically there are only two requirements and the scope of each is different enough to warrant significant changes to the VRFs and VSLs in draft 4. The SDT will post draft 4 and request new comments on the VRFs and VSLs. The SDT appreciates your input on this question for draft 3.</b></p>		
Detroit Edison	No	<p>Analysis during Annual Review of work procedure for R1 and R2 automatically includes an analysis of the process and development of corrective actions.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The Structure of COM-003-1, draft 4 has changed dramatically there are only two requirements and the scope of each is different enough to warrant significant changes to the VRFs and VSLs in draft 4. The SDT will post draft 4 and request new comments on the VRFs and VSLs. The SDT appreciates your input on this question for draft 3.</b></p>		
Duke Energy	No	<p>1) Consistent with our comment to Question 2 above regarding changing the word “incorporate” to “address” in Requirements R1 and R2, this change should also be made in the VSLs for R1 and R2, changing the word “include” to “address”.2) The Severe VSL for R2 incorrectly references a Part 2.3, whereas it should just refer to both Parts 2.1 and 2.2</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT changed the word to “include” in all cases. There has to be a level of uniformity of communication protocols among functional entities to create universal communication protocols.</b></p> <p><b>The SDT has corrected the error you indicated. (R2 incorrectly references a Part 2.3, whereas it should just refer to both Parts 2.1 and</b></p>		

Organization	Yes or No	Question 4 Comment
<p>2.2)                      The Structure of COM-003-1, draft 4 has changed dramatically there are only two requirements and the scope of each is different enough to warrant significant changes to the VRFs and VSLs in draft 4. The SDT will post draft 4 and request new comments on the VRFs and VSLs. The SDT appreciates your input on this question for draft 3.</p>		
Dominion	No	For the reasons cited in the comments above
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
Associated Electric Cooperative Inc - JRO00088	No	It could be appropriate, were the expectations properly bounded similar to the wording outlined for Question 5 below.
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
ISO/RTO Standards Review Committee	No	The SRC does not agree with the VSLs of R3 and R4 . The SRC feels that it is not binary and actually fits the Requirements with Parts that Contribute Unequally to the Requirement in the VSL guideline document. While part 3.3 is the most critical, an entity would certainly not get any reliability benefit if you don't do parts 3.1 - 3.3 or 3.3 in itself, which could be a severe VSL. But if an entity performs parts 3.1 - 3.3 and does not perform part 3.4, it should not be a severe VSL because you are getting a substantial amount and majority of the reliability benefit from performing 3.1-3.3. Failure to do part 3.4 should be a high VSL perhaps, but it is not all binary. If an entity fails to do 3.2, it may be a medium only.
<p><b>Response: The OPCPSDT thanks you for your comments. The Structure of COM-003-1, draft 4 has changed dramatically there are only two requirements and the scope of each is different enough to warrant significant changes to the VRFs and VSLs in draft 4. The SDT will post draft 4 and request new comments on the VRFs and VSLs. The SDT appreciates your input on this question for draft 3.</b></p>		
SPP Standards Review Group	No	The Severe VSL for R2 contains a typo and should be reworded to read: 'The

Organization	Yes or No	Question 4 Comment
		<p>responsible entity did not include Parts 2.1 to 2.2 of Requirement 2...’We would suggest that the VRFs for R3 and R4 be reduced to Low. The VRFs for R1 and R2 are Low. R3 and R4 are processes that monitor R1 and R2; therefore, they should not be treated more severely than R1 and R2.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. Thank you for pointing out the error. We have corrected it.</b></p> <p><b>The Structure of COM-003-1, draft 4 has changed dramatically there are only two requirements and the scope of each is different enough to warrant significant changes to the VRFs and VSLs in draft 4. The SDT will post draft 4 and request new comments on the VRFs and VSLs. The SDT appreciates your input on this question for draft 3.</b></p>		
<p>Bonneville Power Administration</p>	<p>No</p>	<p>BPA does not agree with the VRFs and VSLs. R3 &amp; R4 should include a range of VSLs. A documentation error such as a failure to record that modification of a process was not necessary would not merit a severe VSL if training was implemented as an appropriate solution to an identified deficiency.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT believes it is not just a documentation issue. An entity that does not improve its process when it has demonstrated that improvement is required is creating a risk for miscommunication that would contribute to errors on the BES.</b></p> <p><b>The Structure of COM-003-1, draft 4 has changed dramatically there are only two requirements and the scope of each is different enough to warrant significant changes to the VRFs and VSLs in draft 4. The SDT will post draft 4 and request new comments on the VRFs and VSLs. The SDT appreciates your input on this question for draft 3.</b></p>		
<p>PacifiCorp</p>	<p>No</p>	<p>It is not clear to PacifiCorp why the VSLs are so much higher for R2 when R1 applies to Balancing Authorities, Reliability Coordinators, and Transmission Operators, and thus has a potentially broader application than R2. R2 applies to Distribution Providers and Generator Operators.</p> <p><b>Response: There are more parts in R1 – nine, as opposed to two in R2.</b></p> <p>Also, it is not clear why the R2 VSL R2.3, as there is no R2.3 in the current draft.</p>

Organization	Yes or No	Question 4 Comment
		Response: Thank you for pointing out the error. We have corrected it.
Response: The OPCPSDT thanks you for your comments.		
Independent Electricity System Operator	No	We do not agree with the need for most if not all of these requirements, and therefore do not agree with the proposed VRFs and VSLs.
Response: The OPCPSDT thanks you for your comments. The SDT notes your comments. The Structure of COM-003-1, draft 4 has changed dramatically there are only two requirements and the scope of each is different enough to warrant significant changes to the VRFs and VSLs in draft 4. The SDT will post draft 4 and request new comments on the VRFs and VSLs. The SDT appreciates your input on this question for draft 3.		
NextEra Energy Inc.	No	NextEra does not support VSLs that are checklist or document related. Rather NextEra favors VSLs that balance results and performance against reliability risk. As drafted, the current VSLs are a checklist approach to measuring reliability risk and compliance, which is not particularly helpful or meaningful. Thus, NextEra suggests that VSLs be re-drafted to measure whether the entity posed an actual risk to the Bulk Electric System based on how it delivered or received an Operating Instruction.
Response: The OPCPSDT thanks you for your comments.  The Structure of COM-003-1, draft 4 has changed dramatically there are only two requirements and the scope of each is different enough to warrant significant changes to the VRFs and VSLs in draft 4. The SDT will post draft 4 and request new comments on the VRFs and VSLs. The SDT appreciates your input on this question for draft 3.		
Northeast Utilities	No	VRF R3 & R4 NERC VRF Discussion:  R3 (4) is a requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this

Organization	Yes or No	Question 4 Comment
		<p>requirement is “Medium” which is consistent with NERC guidelines.</p> <p>The violation of R3 (R4) does not result in informal communication; it results in not identifying it. It is not a failure to identify that poses the risk to the BES, but the actual communication. The process implemented in R3 (R4) identifies, assesses, and attempts to correct deficient communication practices in an attempt to make future communications better. The process in R3 (R4) has no real-time impact on the BES, it aims at having real-time impact on operators who have real-time impact on the BES. For these reasons the VRF should be “Low”</p> <p><b>Response: The SDT disagrees. The purpose of the process is not just to identify non adherence to protocols, but ultimately to correct it to reduce the opportunity for a miscommunication which can lead to unintended consequences in the operation of the BES. The SDT believes the process will have an ultimate effect on real time communication and elects to maintain the medium VRF.</b></p> <p>FERC VRF G1 Discussion:</p> <p>Discussion references wrong FERC Recommendation; should have referenced Recommendation 26 rather than 24.</p> <p><b>Response: The SDT has corrected the error. Thank you for bringing it to our attention.</b></p> <p>Additionally, the SDT wrongly implies that Recommendation 26 applies to COM-003-1. Recommendation 26 “Tighten communications protocols, especially for communications during alerts and emergencies...” applies to COM-002, thus removing it from FERC VRF G1 allowing for a VRF of “Low” to be assigned.</p> <p><b>Response: The SDT believes Recommendation 26 does apply to tightening communications and that is what COM-003-1 does – it tightens communications.</b></p> <p>FERC VRF G3 Discussion:</p> <p>Though analogous to R2 of COM-002-2 they are not the same. One can argue that</p>



Organization	Yes or No	Question 4 Comment
		<p>the importance of “directive” to the BES is greater than the importance of an “Operating Instruction” to the BES and thus the risk to the BES is less for R3 (R4) of COM-003-1, and accordingly should be assigned a lower VRF than R2 of COM-002-2 to promote consistency between the standards, while also elevating the importance of COM-002-2 over COM-003-2. Said another way (Though each requirement addresses communication protocol, the potential effects of the failure to follow the protocol are different in that one deals with Directives and Emergency conditions and the other with Normal operations. So the VRF's shouldn't necessarily be the same.)</p> <p><b>Response: The SDT disagrees. The risk of the same miscommunication either during an emergency (COM-002 family) or during normal operations can negatively impact BES reliability. If the issuer of a directive, “Reliability Directive” or “Operating Instruction” states: “Open switch RA50” and the receiver hears “Open switch RA15” because “50” and “15” sounded the same and no protocols were utilized, the resulting impact to the BES would be the similarly disastrous, no matter if the system was operating under normal, emergency or alert conditions.</b></p> <p>FERC VRF G4 Discussion: The violation of R3 (R4) does not result in informal communication; it results in not identifying it. It is not a failure to identify that poses the risk to the BES, but the actual communication. The process implemented in R3 (R4) identifies, assesses, and attempts to correct deficient communication practices in an attempt to make future communications better. The process in R3 (R4) has no real-time impact on the BES, it aims at having real-time impact on operators who have real-time impact on the BES. For these reasons the VRF should be “Low”</p> <p><b>Response: The COM-003 standard proposes to reduce the risk to the BES by ensuring operators use communication protocols that clarify important elements of an Operating Instruction. If operators are not conditioned to utilize the protocols properly they will not use them properly in a Real Time environment. The SDT has elected to maintain the medium VRF.</b></p> <p>FERC VRF G5 Discussion: The SDT has argued that R3 &amp; R4 each contain only one</p>

Organization	Yes or No	Question 4 Comment
		<p>objective (identification of deficiencies).An Alternative read suggests the R3 &amp; R4 as written each have six objectives:</p> <ol style="list-style-type: none"> <li>1. Identify deficiencies in 3-part communication as defined by protocols in R1</li> <li>2. Assess identified deficiencies in 3-part communication</li> <li>3. Correct identified deficiencies in 3-part communication</li> <li>4. Identify deficiencies in process implemented in R3 (R4)</li> <li>5. Assess identified deficiencies in process implemented in R3 (R4)</li> <li>6. Correct identified deficiencies in process implemented in R3 (R4)</li> </ol> <p>VSL Justification R3 (R4)</p> <p>The SDT has argued that R3 &amp; R4 each contain only one objective (identification of deficiencies).An Alternative read suggests the R3 &amp; R4 as written each have six objectives:1. Identify deficiencies in 3-part communication as defined by protocols in R12. Assess identified deficiencies in 3-part communication3. Correct identified deficiencies in 3-part communication4. Identify deficiencies in process implemented in R3 (R4)5. Assess identified deficiencies in process implemented in R3 (R4)6. Correct identified deficiencies in process implemented in R3 (R4)</p> <p>Because there are multiple objectives in R3 (R4) there is an opportunity for more granularities to the proposed VSL.</p> <p><b>Response: The SDT sees only the one objective of reducing communication errors on the BES.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p> <p><b>The Structure of COM-003-1, draft 4 has changed dramatically there are only two requirements and the scope of each is different enough to warrant significant changes to the VRFs and VSLs in draft 4. The SDT will post draft 4 and request new comments on the VRFs and VSLs. The SDT appreciates your input on this question for draft 3.</b></p>		

Organization	Yes or No	Question 4 Comment
The Empire District Electric Company	No	See comments from SPP
<b>Response: The OPCPSDT thanks you for your comments. Please see our responses to comments from SPP.</b>		
American Electric Power	No	AEP disagrees with the concept of requiring three part communications for more routine operations, and as a result, has no comment at this time on the proposed VRFs and VLSs.
<b>Response: The OPCPSDT thanks you for your comments.</b>		
Brazos Electric Power Cooperative, Inc.	No	See ACES comments.
<b>Response: The OPCPSDT thanks you for your comments. Please see our responses to ACES comments.</b>		
Ameren	No	See response to question 5.
<b>Response: The OPCPSDT thanks you for your comments. Please see our responses to question 5.</b>		
Essential Power, LLC	No	The VRFs and VSLs are divided into long-term planning and operation planning categories. These terms are not explained in the standard, so the difference between them is unclear. They do suggest however that, in accordance with our comment #1 above, this standard is not meant to apply to routine transmission system operator-to-plant communications.
<b>Response: The OPCPSDT thanks you for your comments. The terms are contained on the NERC website. The only way the standard could be made Real Time is in a zero defect environment. Please see our response to your comments on Question 1.</b>		
Texas Reliability Entity	No	R2 Severe VSL references “Parts 2.1 to 2.3 (3)” when a “2.3” does not exist (this issue is also in the VRF/VSL Justification document). The VSLs for R3 and R4 say nothing

Organization	Yes or No	Question 4 Comment
		about assessing and correcting identified deficiencies per 3.2, 3.3, 4.2 and 4.3.
<p>Response: The OPCPSDT thanks you for your comments. The SDT has corrected the error.</p> <p>The Structure of COM-003-1, draft 4 has changed dramatically there are only two requirements and the scope of each is different enough to warrant significant changes to the VRFs and VSLs in draft 4. The SDT will post draft 4 and request new comments on the VRFs and VSLs. The SDT appreciates your input on this question for draft 3.</p> <p>“R1 (and R2 – DP and GOP). Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</p> <p>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</p> <p>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p>		
GTC	No	<p>The VSLs for requirements R3 and R4 are too severe. We understand that they were designated as binary, which led them to automatically be designated as severe VSLs. However, it is our position that these requirements are no more binary than requirements R1 or R2 and that their VSLs should be rewritten.</p> <p>We propose:</p> <p>Moderate VSL: The responsible entity did not include one (1) of the four (4) parts of Requirement R3 in its implementation of a process for identifying deficiencies with adherence to documented communication protocols specified in Requirement R1.</p> <p>High VSL: The responsible entity did not include two (2) of the four (4) parts of Requirement R3 in its implementation of a process for identifying deficiencies with adherence to documented communication protocols specified in Requirement</p>

Organization	Yes or No	Question 4 Comment
		<p>R1.Severe VSL: The responsible entity did not include three (3) or more of the four (4) parts of Requirement R3 in its implementation of a process for identifying deficiencies with adherence to documented communication protocols specified in Requirement R1 or did not have such a process.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The Structure of COM-003-1, draft 4 has changed dramatically there are only two requirements and the scope of each is different enough to warrant significant changes to the VRFs and VSLs in draft 4. The SDT will post draft 4 and request new comments on the VRFs and VSLs. The SDT appreciates your input on this question for draft 3.</b></p>		
<p>MISO</p>	<p>No</p>	<p>MISO appreciates the changes that the SDT has made to the VRFs and VSLs in response to comments and to ensure that the VRFs and VSLs are consistent with FERC and NERC guidelines. However, MISO cannot support either the VRF or the VSLs for R3 and R4 as it does not agree:</p> <ul style="list-style-type: none"> <li>(1) that there is a direct impact on reliability that result from an entity’s internal self-assessment and</li> <li>(2) with the expressed rationale.</li> </ul> <p>Further, MISO notes that COM-003-1, R3 and R4, primarily require internal administrative processes or documentation thereof. MISO respectfully submits that internal administrative processes have not previously been linked to direct impacts on the reliability of the BES.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT believes there is a very direct impact on BES reliability from improved operating communication because there is a reduced opportunity for miscommunication that would harm the BES. The BES does not see COM-003-1 as simply an administrative process. It is a mechanism to condition and develop System Operators to a uniform and consistent level of communication discipline utilizing their documented communication protocols. The additional feature of this standard is that it can be managed normally in a “non-zero defect” environment. The SDT believes the process is pre-emptive in nature which means an entity develops measures that reduce the risk of mistakes that harm the BES.</b></p>		

Organization	Yes or No	Question 4 Comment
ERCOT	No	ERCOT agrees with the SRC comments.
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses to SRC comments.</b></p>		
Pepco Holdings Inc	No	
Georgia System Operations	No	
CenterPoint Energy Houston Electric, LLC.	No	
Liberty Electric Power, LLC	No	
Oncor Electric Delivery Company LLC	No	
SERC OC Standards Review Group	Yes	We could agree within the context of our comments listed above.
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses to your previous comments.</b></p>		
Manitoba Hydro	Yes	VSLs for R3 and R4: There is no contemplation of the entity failing to assess deficiencies (3.2 and 4.2) or failing to correct deficiencies (3.3, 4.3).
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT has changed the language of the R3 and R4 to mirror that of CIP v.5 and no longer uses parts 3.2, 3.3, 4.2 and 4.3 in draft 4.</b></p> <p><b>“R1 (and R2 – DP and GOP). Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as</b></p>		

Organization	Yes or No	Question 4 Comment
<p>developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency. R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity's implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p>		
Lincoln Electric System	Yes	The Severe VSL for R2 should be modified to instead state "The responsible entity did not include Parts 2.1 to 2.2 of Requirement R2, in their documented communication protocols". The current VSL incorrectly references Part 2.3 of R2 which does not exist.
<p><b>Response: The OPCSDT thanks you for your comments. The SDT has corrected the error.</b></p>		
Tacoma Public Utilities	Yes	
Hydro One	Yes	
FirstEnergy	Yes	
Arizona Public Service Company	Yes	
Southern Company	Yes	
Southwestern Power Administration	Yes	
US Bureau of Reclamation	Yes	
Central Lincoln	Yes	

Organization	Yes or No	Question 4 Comment
City of Austin dba Austin Energy	Yes	
Occidental Energy Ventures Corp.	Yes	
Idaho Power Co.	Yes	
The United Illuminating Company	Yes	
ReliabilityFirst	Yes	
South Carolina Electric and Gas	Yes	
Salt River Project	Yes	
CPS Energy	Yes	
Public Service Company of New Mexico	Yes	
Alliant Energy	Yes	
City of Tallahassee	Yes	
MidAmerican Energy	Yes	
Puget Sound Energy Inc.	Yes	



Organization	Yes or No	Question 4 Comment
Xcel Energy	Yes	
Public Service Enterprise Group		We did not evaluate these.
Indiana Municipal Power Agency		no comment

5. Do you have any other comments or suggestions to improve the draft standard?

**Summary Consideration:**

The SDT refers the reader to the consolidated summary where the key items to Question five covered.

Organization	Yes or No	Question 5 Comment
Texas Reliability Entity		<p>(1) Requirements R2 and R4 should also apply to Load-Serving Entities (TOP-001-2 R1, VAR-001-3 R5), Purchasing-Selling Entities (VAR-001-3 R5), and Generator Owners (VAR-001-3 R11, VAR-002-1.1b R5) so that all entities receiving Operating Instructions are covered. For M3 and M4 the process should be included as well as results.</p> <p><b>Response: The originating SAR did not include LSEs, GOs and PSEs. The SDT discussed their inclusion and could not justify applicability for them.</b></p> <p>(2) Capitalize “responsible entity” in VSL language for R1 and R2 as was done in R3 and R4.</p> <p><b>Response: Thank you for pointing that out. We have corrected the error.</b></p>

Organization	Yes or No	Question 5 Comment
		<p>(3) RELIABILITY GAP: We believe a reliability gap exists because no standard generally requires compliance with Operating Instructions, Reliability Directives and other valid instructions. We realize this issue may be considered to be outside of the scope of this project, but we are quite concerned that reliability is compromised because operating entities can elect to ignore valid instructions for economic or other reasons, and that much more attention is being given to the form of the instructions than to requiring that they be obeyed.</p> <p><b>Response: The SDT believes the standard language and the definition do make it mandatory for applicable entities to comply with Operating Instructions.</b></p> <p>VRF/VSL JUSTIFICATION:</p> <p>(4) In the VRF/VSL Justification document there is only reference to 3 requirements in the COM-003-1 Standard (page 5). There are 4 requirements.</p> <p><b>Response: The SDT has corrected the error. Thank you for finding it.</b></p> <p>(5) The “Low” VRF rating for R1 and R2 seems unjustified based on the following points:</p> <p>1) In the VRF/VSL Justification document there is the following statement at the top of page 5: “Requirements R1, R2 and R3 were assigned a “Medium” VRF.”</p> <p><b>Response: Thank you, that was part of the same error you indicated previously. The SDT has corrected the error. It now reads:</b></p> <p><i>“R1 and R2 are assigned a “Low” VRF, and R3 and R4 are assigned a “Medium” VRF.”</i></p> <p>2) In the Rationale and Technical Justification document there is the following statement: “Because Operating Instructions affect Facilities and Elements of the Bulk Electric System, the communication of those Operating Instructions must be understood by all involved parties,</p>

Organization	Yes or No	Question 5 Comment
		<p>especially when those communications occur between functional entities. An EPRI study reviewed nearly 400 switching mishaps by electric utilities and found that roughly 19% of errors (generally classified as loss of load, breach of safety, or equipment damage) were due to communication failures. This was nearly identical to another study of dispatchers from 18 utilities representing nearly 2000 years of operating experience that found that 18% of the operators' errors were due to communication problems."</p> <p>If there is not a process, would there not be more errors?</p> <p><b>Response: The SDT believes there would most likely be more errors without the process. The SDT believes that R1 and R2 should be assigned a "Low" VRF, and R3 and R4 should be assigned a "Medium" VRF based on NERC and FERC guidelines.</b></p> <p>3) In the VRF/VSL Justification document there is the following statement: "In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System" and "Communication protocol and facilities" is listed. R1 and R2 attempt to address this issue.</p> <p><b>Response: The SDT agrees that when integrated into the process, R1 and R2 attempt to address the issue. The SDT believes the low VRF is appropriate for R1 and R2 because it calls for having Response: The SDT has corrected the error. a document(s). R3 and R4 fit the criteria for a medium VRF based on NERC and FERC guidelines.</b></p> <p>(6) In the VRF and VSL Justification document, at page 15 and page 20, the FERC VRF Guideline 3 Discussion is inconsistent with R3 and R4 language respectively (R3 and R4 do not call for "use of formal three part communication").</p> <p><b>Response: The SDT has corrected the error. Thank you for bringing it our attention.</b></p>

Organization	Yes or No	Question 5 Comment
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>ACES Power Marketing Standards Collaborators</p>		<p>(1) If the Regional auditor is to make recommendations to registered entities on how to improve the COM-003-1 internal controls, would the Regions allow an initial safe harbor to assess the entity’s program? If Regional auditors find PVs on the initial audit, that practice would go against the spirit of self-correcting and would stifle the entity’s actions to monitor, assess, and correct deficiencies. The SDT should consider this sort of initial assessment in the implementation plan.</p> <p><b>Response: The SDT does not believe there will be a need for a safe harbor based on how the requirements are structured. It would be unlikely the CEA would find PVs on the initial audit if the entity is identifying, assessing and correcting deficiencies. If the process was weak the entity would still have an opportunity to evaluate it and improve it without a finding of non compliance.</b></p> <p>(2) If there is discussion of combining COM-002 and COM-003 in the future, why not combine them now? It would be a better use of the ERO’s resources to produce a single communication standard while both SDT projects are in development instead of going back through the entire process at some point in the future.</p> <p><b>Response: The SDT does not disagree with your comment, but that is outside the scope of the SAR for this project. Combining the two standards has been formally proposed at Standards Committee meetings.</b></p> <p>(3) A Reliability Directive appears to be a subset of the Operating Instruction definition, which is basically an Operating Instruction that occurs during an Emergency. We suggest collaborating with the RC SDT to clarify the bounds of each definition to avoid overlap. As discussed above, it would be appropriate to combine the COM-002 and COM-003 and associated definitions to avoid confusion.</p> <p><b>Response: The OPCPSDT has coordinated with the RCSDT and has defined those boundaries in two webinars and two postings.</b></p>

Organization	Yes or No	Question 5 Comment
		<p>(4) There is no requirement for data retention for R1 or R2. Again, we recommend striking these requirements.</p> <p><b>Response: The entity must have the documented communication protocols. The evidence is the entity's documented communication protocols.</b></p> <p>Thank you for the opportunity to comment.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Ameren</p>		<p>(1) We believe the drafting team has made some great strides to get this to be a useful standard for industry. The idea that we have a process for self-correction instead of self-reporting is a good concept. However, the reasons for our “No” vote is that the current wordings in the latest draft still need some changes to provide clarification. In this regard, we agree in principle with alternate language provided by NextEra (which we have modified slightly) and have also provided additional clarifying comments and recommendations.</p> <p>(R1) When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as an Operating Instruction, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as an Operating Instruction to the recipient.</p> <p>(R2) Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of an Operating Instruction shall repeat, restate, rephrase or recapitulate the Operating Instruction.</p> <p>(R3) Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues an Operating Instruction shall either:</p> <ul style="list-style-type: none"> <li>(a) Confirm that the response from the recipient of the Operating Instruction (in accordance with Requirement (R2)) was accurate, or</li> <li>(b) Reissue the Operating Instruction to resolve any misunderstandings.</li> </ul>

Organization	Yes or No	Question 5 Comment
		<p><b>Response: The SDT appreciates your recommendation but adopting it would dramatically alter the standard making it less effective as an opportunity for improving communication protocols.</b></p> <p>(2)Along with the revised language proposed above, we request the drafting team to clarify the concept of what constitutes an Operating Instruction (or command) because the current understanding is too broad. We strongly believe that it should focus only on instructions related directly to BES reliability and which are not considered Reliability Directives covered under COM-002, and that it should not include normal or routine dispatching instructions of generators.</p> <p><b>Response: The SDT believes Operating Instructions are very specific as defined. A command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System is very explicit. It is focused on actions that dictate changes to the BES that if misunderstood undermine the reliability of the BES. Also see our response to your comment below. We have changed the language to achieve more specificity.</b></p> <p>(3)Given the revised language proposed in comment (1) above, the definition of Operating Instruction should be revised to replace the term 'System Operator' with 'Reliability Coordinator, Transmission Operator, or Balancing Authority', since these functions are the ones who will initiate the Operating Instruction.</p> <p><b>Response: The SDT received many comments and Quality Review recommendations to include the defined term System Operator. The SDT changed the proposed wording as follows:</b></p> <p><i>“Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not</i></p>

Organization	Yes or No	Question 5 Comment
		<p><i>considered Operating Instructions.</i></p> <p>The italicized portion highlights the proposed changes which the SDT believes will address Ameren’s comments.</p> <p>(4)"Transmission interface Element" and "Transmission interface Facility" both are not in the NERC glossary as defined terms and they need to be added to the NERC glossary or clearly defined in the standard.</p> <p><b>Response: The SDT believes all of those terms, except for “interface,” are in the NERC glossary. The term “interface” describes the population of Transmission system Elements and Facilities that are immediately adjoining between neighboring functional entities and that both entities must refer to when issuing or receiving “Operating Instructions.” The SDT believes the dictionary definition for “interface” is clear and unambiguous.</b></p> <p>(5)We suggest a 24 month Implementation Plan upon approval of COM-003. This would allow Registered Entities time to develop their compliance processes.</p> <p><b>Response: The SDT has already extended it to 12 months. 24 months is too long.</b></p> <p>(6)We request that the drafting team consider the possibility of substituting the CIP v.5 'zero defects' language in COM-003 in order to minimize potential confusion.</p> <p><b>Response: The SDT did evaluate that and has made that change in order to create consistent language among standards.</b></p> <p>(7)We request that any of the "violations" shown in the VSL table on pages 7, 8, and 9 should not qualify for a high or severe level and at the most these should either be categorized as low or, but no more than, moderate level.</p> <p><b>Response: The SDT considered your recommendation but believes the binary nature of some of the requirements’ parts warrants a severe VSL. There would have to be a very high disregard by an entity to improve their process to achieve the “Severe” VSL.</b></p>

Organization	Yes or No	Question 5 Comment
		<p>(8)In the VSL table for R2, in the column under Severe VSL, it states that "The responsible entity did not include Parts 2.1 to 2.3 (3) of Requirement R2..." Requirement R2 does not have a Part 2.3, only 2.1 and 2.2.</p> <p><b>Response: Thank you for pointing this out. The SDT has corrected the error.</b></p> <p>(9)If the drafting team retains the current language we are concerned about the prescriptive language in R1 and R2. We request that the drafting team in both R1 and R2 have the word "incorporate" changed to "consider" or "address", thereby making the requirements less prescriptive.</p> <p><b>Response: The SDT considered your recommendation, but used the word include" to make it less prescriptive, and to also maintain uniformity. The SDT believes consistency to be a key element of effective communications</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
Central Lincoln		<p>1) We note that per the proposed definition of Operating Instruction, only commands regarding the states of BES Elements or Facilities are covered. We also note that per the Statement of Compliance Registry Criteria, Distribution Providers need not own or operate BES Elements or Facilities in order to be registered as DPs. This puts DPs without these facilities in the position of documenting protocols for and processes for finding deficiencies for communications that don't occur.</p> <p>We note the SDT stated in the last Consideration of Comments "DPs that operate BES Facilities or BES Elements and receive Operating Instructions are subject to the need for clear communication to avoid misunderstandings that could impact the BES", and we agree.</p> <p>We suggest: "4.1.2 Distribution Provider that operates Bulk Electric System Facilities or Elements and receives Operating Instructions"</p> <p><b>Response: The SDT considered your suggested language and has elected not to incorporate it. The SDT believes that DPs who shed load would also be subject to</b></p>



Organization	Yes or No	Question 5 Comment
		<p>the standard’s Requirements R2 and R4. Those DPs that do not own or operate BES facilities; do not shed load or would not receive an Operating Instruction would not be subject to COM-003-1.</p> <p>2) The references to Part 3.1 in Sub-requirement 3.4 and Part 4.1 in Sub-requirement 4.4 make no sense, since the standard has no such sections. We assume the SDT meant Sub-requirements 3.1 and 4.1 respectively, and suggest that “Part” be replaced by “Sub-requirement.”</p> <p><b>Response: The SDT believes the language changes to draft 4 will address your concern.</b></p> <p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</b></p> <p><b>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</b></p> <p>3) We agree with the SDT’s attempt to move away from zero defect compliance, and Requirements 1 and 2 and the RSAW all support this. We’re afraid the CEA may still be able to find non-compliance for a single defect based on the language of R3 or R4. For example a CEA finds a single OI that referred to a 12 hour clock time in violation of the entity’s protocol developed under R1.2. This is not a violation, but the CEA goes on to discover that the entity failed to identify the deficiency under R3.1. While</p>

Organization	Yes or No	Question 5 Comment
		<p>the entity can show they have a process that has in fact identified and corrected deficiencies, the CEA maintains they failed to implement the process for this one instance and finds a violation. When the entity points to the RSAW that states the CEA should make recommendation rather than finding a violation, the CEA states they audit to the language of the standard requirement as stated in Footnote 1 of the very same RSAW.</p> <p><b>Response: The SDT believes the language changes to draft 4 will address your concern.</b></p> <p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</b></p> <p><b>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
American Electric Power		<p>AEP does not agree with the perceived necessity of this standard, but does support the overall concept of the drafting team’s building controls into the standards as well as proposing RSAWs during the comment that perpetuate the ideas and concepts of the drafting team.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT believes COM-003-1 is an important element to improve BES</b></p>		

Organization	Yes or No	Question 5 Comment
reliability.		
Northeast Utilities		<p>Applicability Section: Functional Entities Section may not be broad enough to capture all entities participating in communication for example a TO may have a switchman receiving Operating Instructions from a TOP; the way the standard is written the TO would not be required to participate in 3-part communication making it difficult for the TOP to fully implement its Communication Protocols.</p> <p><b>Response: There is much flexibility in how entities may construct their documented communication protocols to account for arrangements with their own internal operations as well other entities they must work with to communicate BES operations. There is nothing to stop an entity from making the document communication protocols effective internally.</b></p> <p>M3 &amp; M4 impose more requirements on the registered entity than are required in R3 &amp; R4 respectively. For example R3 requires the implementation of a process, the measure looks for the results of the process, and the measure should be measuring the implementation not the result of the process.</p> <p><b>Response: The SDT believes the language changes to draft 4 will address your concern.</b></p> <p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</b></p> <p><b>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication</b></p>

Organization	Yes or No	Question 5 Comment
		<p>protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</p> <p>M3 and M4 have been eliminated.</p>
<p>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</p>		
<p>ERCOT</p>		<p>As discussed above, the proposed standard is not consistent with the reliability issue/concern raised in the blackout report, and, therefore, in Order 693, given that the 693 discussion was relative to the concern raised in the blackout report. The mandates in the proposed standard do not provide reliability value. COM-002 and other standards that address situations that pose actual reliability risks already requires appropriate entities to communicate with each other during emergencies, which is the real focus of the blackout report and Order 693. In those circumstances 3-part communications are required in a clear, concise and definitive manner. This effectively ensures that the recipient understands the communication, which practically obviates the need for specific, mandatory terminology, practices and protocols. Accordingly, for these reasons and the reasons discussed above, the need for COM-003 is suspect. In fact, it is arguable that it provides marginal to nil reliability value, but yet presents potential liability exposure to the relevant functional entities. The SDT should consider another approach to addressing the concerns in the blackout report and Order 693. Specifically, any responsive effort should focus on ensuring communications occur relative to specific system conditions that truly reflect reliability concerns, and any such communications should be appropriately distributed to ensure dissemination is only to appropriate entities that may be impacted and/or can assist in remedying the situation. In the alternative, the proposed standard should be revised consistent with these comments, and in accordance with the principle that a reliability standard should establish the what, not the how.</p> <p>Response: The SDT has addressed this comment in the last two postings. These</p>

Organization	Yes or No	Question 5 Comment
		<p>documents and the originating agencies that developed them actually sanction the development of COM-003-1. Additionally the ERO’s governing bodies (the Board of Trustees and the Standards Committee) have directed the OPCPSDT to proceed with COM-003-1. The SDT does not have the authority or the inclination to rescind the standard.</p> <p>In addition, the ERCOT offers the following specific comments. As noted above, as drafted the term Operating Instruction is overly broad relative to the scope intended by FERC and the Blackout Report, and, in fact, could include purely market related discussions that have no reliability impact. Yet, the proposed standard requires 3-part communication for all such interactions. There is no reliability value to 3-part communications for such interactions. Accordingly, this requirement should be removed.</p> <p><b>Response: The SDT believes the definition is not broad and that the Applicability section precludes market related discussions as the definition describes a command from a System Operator.</b></p> <p>The proposed standard also requires entities issuing an all-call, or similar multiple party communication, to receive confirmation, electronic or verbal, from at least one of the recipients that the message was received. The nature of all calls provides a structural means to distribute messages to a host of recipients. The mediums used for this purpose ensure that the messages are delivered. There is no need to require confirmation as proposed in the standard. Furthermore, there is little reliability benefit. Accordingly, for these types of communications confirmation should not be required.</p> <p><b>Response: All call messages feature diverse media and technology. The entity has the flexibility to develop and account for those differences with system functionality within its documented communication protocols described in COM-003-1, draft 3.</b></p> <p>Finally, 1.9 requires recipients of multi-party communications to ask for clarification if</p>

Organization	Yes or No	Question 5 Comment
		<p>they do not understand the message. It is difficult to understand how compliance with this requirement will be reviewed, and what value it will have. For example, if an entity never asks for clarification but an audit determines the entity failed to follow a directive, the CEA staff may question whether the entity complied with the obligation to request clarification, but the entity may believe that clarification was not necessary and failure to follow the instruction was due to some other reason. As with other aspects of the proposed standard, this lends itself to subjective disagreements in practice. Furthermore, it is unnecessary, because an entity that does not understand a directive will ask for clarification.</p> <p><b>Response: The SDT believes that whether the receiving entity did or did not request clarification the CEA at worst case would cite it as a deficiency found external to the process. If the entity identified, assessed and corrected the deficiency there would generally not be a finding of non compliance.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
The Empire District Electric Company		As stated drop requirements R3 and R4 as they seem redundant with the overall NERC program of reporting and mitigation plan approval.
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT believes the language changes to draft 4 will address your concern.</b></p> <p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</b></p> <p><b>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1</b></p>		

Organization	Yes or No	Question 5 Comment
<p>RSAW has been updated to reflect this change.</p>		
<p>CenterPoint Energy Houston Electric, LLC.</p>		<p>CenterPoint Energy appreciates the revisions made to the current draft of COM-003 based on stakeholder feedback; however, the company maintains a negative vote based on the following:</p> <p>Requirements 1.1 through 1.5 are overly prescriptive. We recommend deletion of stated sub requirements as an effort to move away from detailed micro requirements.</p> <p>Additionally, CenterPoint Energy recommends deletion of R3 and R4. The “internal controls” concept can be incorporated into the remaining requirements.</p> <p>CenterPoint Energy would vote affirmative if the SDT revised the proposed standard as indicated below:</p> <p>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses, and corrects deficiencies, documented communication protocols for Operating Instructions that incorporate the following:</p> <p>1.1 When issuing an oral two party, person-to-person Operating Instruction, require the issuer to:</p> <ul style="list-style-type: none"> <li>o Confirm that the response from the recipient of the Operating Instruction was accurate, or</li> <li>o Reissue the Operating Instruction to resolve a misunderstanding</li> </ul> <p>1.2. When receiving an oral two party, person-to-person Operating Instruction, require the recipient to repeat, restate, rephrase, or recapitulate the Operating Instruction.</p> <p>1.3. When issuing an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time</p>

Organization	Yes or No	Question 5 Comment
		<p>period (e.g. an all call system), verbally or electronically confirm receipt from one or more receiving parties.</p> <p>1.4. When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), request clarification from the initiator if the communication is not understood.</p> <p>R2. Each Distribution Provider and Generator Operator shall implement, in a manner that identifies, assesses, and corrects deficiencies, documented communication protocols for Operating Instructions that incorporate the following.[Violation Risk Factor: Low] [Time Horizon: Long-term Planning]</p> <p>2.1 When receiving an oral two party, person-to-person Operating Instruction, require the recipient to repeat, restate, rephrase, or recapitulate the Operating Instruction.</p> <p>2.2 When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), request clarification from the initiator if the communication is not understood.</p>
<p><b>Response: The OPCSDT thanks you for your comments. The SDT believes the language changes to draft 4 will address some of your recommendations.</b></p> <p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</b></p> <p><b>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1</b></p>		



Organization	Yes or No	Question 5 Comment
<p>RSAW has been updated to reflect this change.</p>		
<p>FirstEnergy</p>		<p>i,§ To have clear communication protocols NERC must develop clear and concise standards that include non-prescriptive language that provides entities with the latitude to operate their systems as they are accustomed to while requiring a heightened awareness of the importance of clear communications while operating those systems. From discussions in various industry forums, there seems to be much confusion as to the intent of COM-003 versus COM-002. For instance, is a Reliability Directive as defined by the Project 2006-06 team in COM-002-3 a subset of an Operating Instruction as defined in COM-003-1? If so, then we recommend the retirement of COM-002-3 as a standard since COM-003-1 covers all communications. One standard that requires 3-part communication is sufficient and no reliability gap would exist if COM-002-3 is retired. FE and the industry want to contribute to effective reliability and believe tight standardized communication protocols are critical. But if confusion and needlessly burdensome requirements result from the development of these COM standards, we believe this could have an adverse affect on reliability. In COM-002-3, requiring an operator to pause to determine if he or she should utter the phrase “this is a Reliability Directive” can escalate an emergency situation and not help alleviate it. Regardless of the situation, when the Operator issues a command it must be carried out by the receiver with confirmation that the receiver has understood what needs to be done and when it needs to be done. COM-003-1, with some wording adjustments, accomplishes this reliability goal. We support COM-003-1 Draft 3, on its own without COM-002-3, along with some adjustment to requirement language to relieve prescriptiveness and needless language while adding some clearer guidance on the internal control requirements detailed in R3 and R4.</p> <p><b>Response: The SDT does not disagree with your comments, but it is beyond the scope of the SAR for this project.</b></p> <p>ï,§ The measures as proposed simply reiterate the requirement and provide no useful information. We suggest they either be removed or be elaborated to include</p>

Organization	Yes or No	Question 5 Comment
		<p>useful examples of evidence and possibly incorporate some of the information found in the RSAW.</p> <p><b>Response: The SDT believes the Measures are suitable for each requirement and adequately support the requirements. Requirement R1 and R2 call for the entity's documented communication protocols.</b></p> <p><b>The SDT believes the language changes to draft 4 will address some of your concerns.</b></p> <p><b>"R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:"</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</b></p> <p><b>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity's implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change. M3 and M4 are eliminated.</b></p>
<p><b>Response: The OPCSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Indiana Municipal Power Agency</p>		<p>IMPA believes the best quality of evidence for proving compliance to most of the sub-requirements under R1 and for requirement 2.1 will be voice recordings. IMPA agrees with keeping this evidence for 90 days, but to keep these voice recordings for potential 6 years (back to our last audit date) will be very costly when it comes to storage. We understand that other evidence can be used to show compliance back to our last audit date, but what other quality evidence besides voice recordings will</p>

Organization	Yes or No	Question 5 Comment
		<p>be acceptable to prove compliance to these requirements? IMPA recommends making the data retention of this standard just 90 days regardless of the last audit date. Performance should be focused on the short past time of 90 days and not what the entity did five or six years ago, which is irrelevant when one is forward looking or wanting to improve.</p>
<p><b>Response: The OPCSDT thanks you for your comments. The SDT set the standard retention period for the most recent 90 days. The entity would always have its documented communication protocols required for M1 and M2. Training records, performance evaluations, disciplinary records, employee counseling records that address deficiencies and corrections would also provide evidence that would substantiate corrections.</b></p>		
<p>Dominion</p>		<p>Implementation plan - page 1; Revisions or Retirements to Approved Standard - Proposed Replacement Requirement(s), states; "COM-003-1 Requirement R1 Part 1.1.1 R1. Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, and Transmission Operator shall have documented communications protocols that incorporate the following:" Distribution Provider and Generator Operator needs to be removed, also after communications protocols, 'for Operating Instructions' needs to be added (to match the R1 Requirement, if accepted as written).</p> <p><b>Response: Thank you for pointing out the errors. The SDT has corrected them.</b></p> <p>Mapping document, Page 1; Comments, states: "R1 Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, Transmission Operator, and Transmission Owner shall have documented communications protocols that incorporate the following: [Violation Risk Factor: Low] [Time Horizon: Long-term Planning ]" Distribution Provider and Generator Operator needs to be removed. Also after communications protocols, 'for Operating Instructions' needs to be added (to match the R1 Requirement, if accepted as written).</p> <p><b>Response: Thank you for pointing out the errors. The SDT has corrected them.</b></p>

Organization	Yes or No	Question 5 Comment
<p>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</p>		
<p>Associated Electric Cooperative Inc - JRO00088</p>		<p>In general, AECI believes that NERC and FERC should completely reevaluate the necessity of COM-003-1. COM-003 still appears to overreach the cited 2003 blackout recommendation #26, whereas industry-approved changes to COM-002 do meet the expectation, pertaining to verbal communication protocols: "Tighten communications protocols, especially for communications during alerts and emergencies..."</p> <p><b>Response: The SDT has previously addressed this same comment in previous postings. The SDT disagrees with the comments and believes COM-003-1 will properly tighten communication protocols.</b></p> <p>However AECI also offers the following observations:</p> <p>1) Recommendation #26 is hardly top of the list. (Lessons-learned is that future industry recommendations really must be careful in what they recommend for improvements, because those can and will be extrapolated into future requirements.)</p> <p><b>Response: The SDT respectfully disagrees.</b></p> <p>2) Recommendation #26 "especially" highlights alerts and emergencies, not normal operational communications, yet the scope of COM-003 pertains to any normal communication that would alter the state of anything BES, including mundane operational conditions that have questionable effect upon the BES reliability.</p> <p><b>Response: The SDT believes there is nothing mundane about actions to reconfigure the BES. Miscommunication during normal BES operations can create an unintended risk to reliability.</b></p> <p>3) In AECI's opinion, there is greater risk of non-compliance with this standard for the industry, than non-compliance with the NERC BOT in their insistence to move it forward. The EEI suggested wording, recited below, helps to mitigate this risk, but still at cost of additional and often unnecessary communication overhead. Specific to the wording of COM-003-1 draft, AECI does believe the direction of EEI's wording,</p>

Organization	Yes or No	Question 5 Comment
		<p>submitted in comment response to this draft, could help the industry with mitigating some risk of non-compliance to the proposed standard. In lieu of our being able to view EEI's posted comments, we recite them below::</p> <p>=====Begin the EEI draft as circulated in emails earlier this week=====</p> <p>R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as an Operating Communication, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as an Operating Communication to the recipient.</p> <p>R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of an Operating Communication shall repeat, restate, rephrase or recapitulate the Operating Communication.</p> <p>R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues an Operating Communication shall either:</p> <ul style="list-style-type: none"> <li>o Confirm that the response from the recipient of the Operating Communication (in accordance with Requirement R2) was accurate, or</li> <li>o Reissue the Operating Communication to resolve any misunderstandings.</li> </ul> <p>R4 Absent a possible violation that resulted in (or could have resulted in) a significant risk to the Bulk Electric System, no violation of R1 or R3 and its sub requirements shall be found, provided that the Balancing Authority, Reliability Coordinator, and Transmission Operator has implemented a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R1 and R3 that:</p> <ul style="list-style-type: none"> <li>4.1. Identifies potential deficiencies,</li> <li>4.2. Assesses the deficiencies found,</li> <li>4.3. Corrects the deficiencies, and</li> <li>4.4. Evaluates the process based on deficiencies found external to Part 3.1 and either</li> </ul>

Organization	Yes or No	Question 5 Comment
		<p>â™™ implements modifications to the process when the evaluation determines that modification of the process is necessary to address the deficiencies found; or                      â™™ demonstrates that no modification to the process is necessary to address the deficiencies.</p> <p>R5 Absent a possible violation that resulted in (or could have resulted in) a significant risk to the Bulk Electric System, no violation of R2 and its subrequirements shall be found, no violation of R2 and its subrequirements shall be found, provided that the Distribution Provider and Generator Operator shall implement a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R2 that:</p> <p>5.1. Identifies potential deficiencies,                      5.2 Assesses the deficiencies found,                      5.3. Corrects the deficiencies, and                      5.4. Evaluates the process based on deficiencies found external to Part 3.1 and either</p> <p>râ™™ implements modifications to the process when the evaluation determines that modification of the process is necessary to address the deficiencies found; or                      â™™ demonstrates that no modification to the process is necessary to address the deficiencies.</p> <p>====End the EEI draft as circulated in emails earlier this week=====</p> <p><b>Response: The SDT believes many elements of the EEI draft mirror COM-003-1, draft3. Draft 3 has more parts that not only deal with three part communication but also deal with communication protocols that provide additional clarity and uniformity.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		

Organization	Yes or No	Question 5 Comment
APPA, LPPC and TAPS		<p>In response to comments received during the last comment period and in an effort to draft a standard that focuses on risk control rather than zero tolerance metrics, the drafting team has taken a new approach to COM-003-1. This version requires responsible entities to establish communication protocols and then implement a process for identifying, assessing, and correcting deficiencies with adherence to those communication protocols. This new standard is drafted such that the entity is to ensure that its process is working, rather than requiring the demonstration of absolute compliance with communication protocols at all times and identifying each deficiency as a possible violation. In addition, this version of the standard was drafted in conjunction with the development of the Reliability Standard Audit Worksheet (RSAW). The parallel development of the standard and the RSAW provided the opportunity for the drafting team to consider the compliance implications of the language in the standard and to offer input into the language of the RSAW. APPA staff, LPPC and TAPS have reviewed the proposed standard and have not identified any material concerns and support the drafting team's new approach. We of course urge the drafting team to give full consideration to all substantive comments on the proposed standard and RSAW. We do anticipate that commenters will identify editorial changes that will clarify the proposed standard. Such changes are unlikely to affect our support for the standard.</p>
<p><b>Response: The OPCSDT thanks you for your comments. The comments accurately frame the intent of the standard changes.</b></p>		
PPL Corporation NERC Registered Affiliates		<p>It appears the SDT may be basing the perceived need for communication protocols during normal operations on a misunderstanding of the findings in an EPRI report. The SDT responded to multiple comments questioning the need for communication requirements during normal operations by quoting a paper (Bilke, T., Cause and prevention of human error in electric utility operations, Colorado State University, 1998) that cited an EPRI study. The SDT stated, “[w]e believe the more relevant and significant conclusion to be that, of 400 switching mishaps, 19% were caused [by] communication failures.” It is concerning that the SDT may be basing their conclusions</p>

Organization	Yes or No	Question 5 Comment
		<p>on erroneous data. The EPRI report in fact indicates only 14.5% were “cited” as “faulty communication”, not necessarily “due to” or “caused” as the SDT response would indicate. Nearly half of those 58 (14.5%) of the 399 incidents reviewed resulted from most commonly not communicating “critical information”, i.e. failing to “call in” or communicate in the first place. The EPRI report reads as follows: “Faulty communications were cited [emphasis on “cited”] in 58 (14.5%) of the 399 incidents reviewed. The most common kind of communication error was failure to communicate critical information, which occurred in 22 (39%) of the 58 cases. Examples are: failure to conduct a thorough pre-job briefing, failure to call in before operating a switch, failure to communicate about equipment problems, or failure to question some unusual aspect of an order. “Mandating “how” communications occur will not address the failure of “what” critical information needs to be communicated. Furthermore, it is concerning that the SDT “believes that the potential for risk” necessitates requirements applicable to all operating communications as stated in their response to comments during draft 2. It is impossible to eliminate the potential for risk in all circumstances. What is important is that the SDT assess risk to the BES as a result of certain actions or inactions and that the Reliability Standard reduce that risk in an efficient and cost effective manner.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT cited those figures from a commenter who appended an Industry white paper (by the same author) to the draft comment form. The SDT responded after reading it. Even if the mishap rate for communication issues is 14.5% that is a significant impact on BES reliability that will be addressed by COM-003-1.</b></p>		
<p>The United Illuminating Company</p>		<p>It is not clear whether the protocols in COM-003 apply to Reliability Directives in Com-002. It can be reasoned that a Reliability Directive is a form of Operating Instruction. A double jeopardy situation is created.</p> <p><b>Response: the SDT included exclusionary language in draft 2 of COM-003-1 to separate the two terms. The SDT presented a Webinar that focused on the applicability and the relationship between the two terms and standards. The moment an RC declares a “Reliability Directive” the requirements of COM-002-3 are</b></p>



Organization	Yes or No	Question 5 Comment
		<p>applicable. The functional entity would at that time be subject to a zero tolerance set of requirements to be compliant with the protocols of COM-002-3. When the Emergency or ARI ceases COM-003-1 is applicable.</p> <p>Also the COM-003 R3 and R4 requirements would be inappropriately applied to Reliability Directives. UI believes there is a difference between Reliability Directives and Operating Instructions and the difference should be maintained.</p> <p>A Directive occurs during an Emergency and has a higher risk than an Operating Instruction. Directives should be limited in occurrences and therefore is not conducive to sampling or error correction as opposed to Operating Instructions which occur multiple times in a day and are numerous.</p> <p><b>Response: If R3 and R4 are applied to “Reliability Directives” because the entity created a documented communication protocol to manage the relationship between the two standards and specified circumstances when each would be used, consistent with the two standards, that would be acceptable.</b></p> <p><b>Is your use of the capitalized word “Directive” to be understood as “Reliability Directive?” There is no glossary term “Directive” nor is it referenced in a standard.</b></p> <p><b>It would also be acceptable to include Operating Instructions that happened to be a Reliability Directive in sampling for R3 and R4. For example, if an RC omitted three part communication as specified in COM-002-3 during a Reliability Directive with another functional entity they would likely be found to be non compliant under COM-002-3. There would be no double jeopardy with COM-003-1 because the same incident would be a deficiency that would be addressed (identify, assess, correct) by the process in R3.</b></p> <p>The data retention requirement of 90 days is reasonable. But UI is concerned with the approach to monitoring requiring an inventory of every conversation that occurred in that 90 day period to identify it as an Operating Instruction.</p> <p><b>Response: The entity can select its own sample size to identify deficiencies related</b></p>

Organization	Yes or No	Question 5 Comment
		<p>to Operating Instructions.</p> <p>Finally UI supports EEI's comment.</p> <p><b>Response: The SDT believes many elements of the EEI draft mirror COM-003-1, draft3. Draft 3 has more parts that not only deal with three part communication but also deal with communication protocols that provide additional clarity and uniformity.</b></p>
<p><b>Response: The OPCSDT thanks you for your comments. Please see our responses above.</b></p>		
Lincoln Electric System		<p>LES believes additional clarification is needed to more clearly delineate who is considered to be the Generator Operator (the power plant operator vs. system operator) responsible for compliance with COM-003-1. As currently drafted, the Generator Operator, as the recipient of Operating Instruction, must have and utilize documented communication protocols per R2. In the event generation re-dispatch were to be requested, is it the power plant operator performing the task or the system operator requesting the execution of the task responsible for using the documented communication protocols?</p>
<p><b>Response: The OPCSDT thanks you for your comments. The definition specifies a System Operator. R1 and R2 have added language to specify Operating Instructions between functional entities. The entity may reflect what communication protocols would be applicable internally.</b></p>		
MidAmerican Energy		<p>MidAmerican would recommend the following changes to R3 as a primary consideration to allow COM-003-1 to move forward. COM-003 is only acceptable as a non-zero defect standard.</p> <p>R3 should be rewritten as follows:</p> <p>Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement R1 in a manner that identifies, assesses, and corrects deficiencies if any. Where the entity is identifying, assessing, and correcting deficiencies, the entity is</p>

Organization	Yes or No	Question 5 Comment
		<p>satisfactorily performing the requirement.</p> <p>Make similar changes to R4.</p> <p><b>Response: The SDT believes the language changes to draft 4 will address your concern.</b></p> <p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</b></p> <p><b>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</b></p> <p>R3 as posted requires implementing a deficiency process, which puts the focus of R3 on a deficiency process and not on implementing R1. The proposed language changes focus the requirement to implement R1 and does not require a specific process for deficiencies. This is consistent with CIP standards Version 5 draft 3 and Generally Accepted Government Auditing standard strategies (the yellow book or GAGAS). The proposed second sentence provides clarity on satisfactory performance expectations in the requirement.</p> <p><b>Response: The process is similar, but the need to have protocols developed by the entity necessitates the difference in language with CIP v.5.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		

Organization	Yes or No	Question 5 Comment
Georgia System Operations		<p>Modify R1 accordingly...</p> <p>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have and follow documented communication protocols for Operating Instructions that incorporate the following:</p> <p>R3 &amp; R4 Delete R3 and R4 and M3 and M4 and associated VRFs and VSLs.</p> <p>Although R1 and R2 provide for better communications, R3 &amp; R4...</p> <ul style="list-style-type: none"> <li>o Have little or no impact to the protection or reliable operation of the BES in the event that no responsible entity performed the requirement</li> <li>o Have little, if any, value as a reliability requirement Are requirements for monitoring and enforcing Reliability Standards and do not provide for Reliable Operation...</li> <li>o Including without limiting the foregoing, requirements for the operation of existing Facilities</li> <li>o Including cyber security protection, and</li> <li>o Including the design of planned additions or modifications to such Facilities to the extent necessary for Reliable Operation</li> </ul> <p>M1 should read...</p> <p>o M1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator, shall provide its documented communications protocols developed for Requirement R1 and results of their internal compliance program’s processes which assure that deficiencies with adherence to the documented communication protocols are identified, assessed, and corrected.</p> <p>M2 should read</p> <ul style="list-style-type: none"> <li>o M2. Each Distribution Provider and Generator Operator shall provide its documented communications protocols developed for Requirement R2 and results of</li> </ul>

Organization	Yes or No	Question 5 Comment
		<p>their internal compliance program’s processes which assure that deficiencies with adherence to the documented communication protocols are identified, assessed, and corrected.</p> <p>In addition, we recommend revision to the RSAW to be reflective of the removal of both R3 and R4.</p> <p><b>Response: The SDT believes the language changes to draft 4 will address your concern.</b></p> <p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</b></p> <p><b>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
NextEra Energy Inc.		<p>NextEra proposes the following as an alternative approach that more closely mirrors COM-0002-3 and includes the internal controls language in R4 and R5.</p> <p>R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as an Operating Communication, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as</p>

Organization	Yes or No	Question 5 Comment
		<p>an Operating Instruction to the recipient.</p> <p>R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of an Operating Instruction shall repeat, restate, rephrase or recapitulate the Operating Instruction.</p> <p>R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues an Operating Instruction shall either:</p> <ul style="list-style-type: none"> <li>o Confirm that the response from the recipient of the Operating Instruction (in accordance with Requirement R2) was accurate, or</li> <li>o Reissue the Operating Instruction to resolve any misunderstandings.</li> </ul> <p>R4 Absent a possible violation that resulted in (or could have resulted in) a significant risk to the Bulk Electric System, no violation of R1 or R3 and its subrequirements shall be found, provided that the Balancing Authority, Reliability Coordinator, and Transmission Operator has implemented a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R1 and R3 that:</p> <ul style="list-style-type: none"> <li>4.1. Identifies potential deficiencies,</li> <li>4.2. Assesses the deficiencies found,</li> <li>4.3. Corrects the deficiencies, and</li> <li>4.4. Evaluates the process based on deficiencies found external to Part 3.1 and either             <ul style="list-style-type: none"> <li>o implements modifications to the process when the evaluation determines that modification of the process is necessary to address the deficiencies found; or</li> <li>o demonstrates that no modification to the process is necessary to address the deficiencies.</li> </ul> </li> </ul> <p>R5 Absent a possible violation that resulted in (or could have resulted in) a significant risk to the Bulk Electric System, no violation of R2 and its subrequirements shall be found, no violation of R2 and its subrequirements shall be found, provided that the Distribution Provider and Generator Operator shall implement a process for identifying deficiencies with adherence to the documented communication protocols specified in</p>

Organization	Yes or No	Question 5 Comment
		<p>Requirement R2 that:</p> <ul style="list-style-type: none"> <li>5.1. Identifies potential deficiencies,</li> <li>5.2. Assesses the deficiencies found,</li> <li>5.3. Corrects the deficiencies, and</li> <li>5.4. Evaluates the process based on deficiencies found external to Part 3.1 and either                             <ul style="list-style-type: none"> <li>o implements modifications to the process when the evaluation determines that modification of the process is necessary to address the deficiencies found; or</li> <li>o demonstrates that no modification to the process is necessary to address the deficiencies.</li> </ul> </li> </ul>
<p><b>Response: The OPCSDT thanks you for your comments. The SDT believes this is similar to a draft of language proposed by EEI. The SDT believes the language changes to draft 4 will address some of your concerns.</b></p> <p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</b></p> <p><b>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</b></p>		
ITC Holdings		<p>Nowhere in the Blackout Report, Order 693, nor the SAR does it indicate that communication protocols used during normal and emergency operations need to be identical - only that there are standardized communications for normal operations and standardized protocols for emergency communications.</p> <p><b>Response: The SDT believes all of those documents do support the SDT’s requirements in COM-003-1 for both normal and emergency operations.</b></p> <p>The term Operating Instruction as included in the requirements of the draft standard does not take into consideration that communications during alert or emergency</p>

Organization	Yes or No	Question 5 Comment
		<p>conditions have a heightened need to be effective (Blackout Report Recommendation 26). A much better approach is to rely on operating personnel to determine when an Alert or Emergency condition exists to change from standardized communication used for normal operation to a different standard protocol for emergency operation. Operating personnel have substantial training requirements, including explicit requirements for training on emergency operations, which provide the basis for allowing operating personnel to make this determination. A standard phrase to identify that protocols for Alert or Emergency conditions are to be used (such as "I am issuing a Reliability Directive") would trigger the need to switch from protocols for normal operation to protocols for emergency conditions. This approach also addresses concerns that complacency will set in if identical protocols are used for normal and emergency communications. Active listening is much more likely when using a protocol that is used only for emergency conditions which occur much less frequently than normal operations.</p> <p><b>Response: The SDT believes that the same communication protocols used during normal operations enable a focused transition to communications in an emergency. The comments on page 161 of the 2003 Blackout Report support this.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
Pepco Holdings Inc		<p>Operating Instructions are issued in real time and are expected to be implemented promptly. Including the "time zone" in oral communications is not necessary. COM-003 and COM-002 need to fully coordinate.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT contends that the time zone reference must be used when an actual clock time (e.g. 2255 or 0800) is referenced when the communicating functional entities are issuing or receiving Operating Instructions across two different time zones.</b></p>		
Public Service Enterprise Group		<p>PSEG fully supports the use of 3-part communications. In our previous comments, we stated "This standard (COM-003-1) should be combined with COM-002-3 and issued</p>



Organization	Yes or No	Question 5 Comment
		<p>as one standard to require ONE 3-part communications protocol for both Reliability Directives and non-Reliability Directives.” We reiterate that request and believe that the SDTs should be combined into a single SDT and develop one standard. COM-002-3 addresses Reliability Directive communications, while COM-003-1 addresses Operating Instructions communications. The same Registered Entities are subject to both standards. Both require 3-part communications (a “protocol”), but COM-003-1 has more extensive requirements.</p> <p>Having two standards is harmful for these reasons:</p> <ul style="list-style-type: none"> <li>o The lack of a common protocol would result in communications confusion among these entities for this reason: some Operating Instructions are Reliability Directives, but not all Reliability Directives are Operating Instructions.</li> <li>o Finally, without a common communications protocol, entities would need to be concerned about what protocol they are using for compliance purposes; this would hinder the efficiency of communications and therefore reliability.</li> </ul> <p>The single SDT should be charged with the following tasks:</p> <ol style="list-style-type: none"> <li>1. Both draft standards have pluses and minuses listed below, and the SDT shall consider these and take the best from each to develop a single standard with a common protocol.             <ol style="list-style-type: none"> <li>a. Both standards require 3-part communications (a “protocol”), but COM-003-1 has more extensive requirements, such as the use of alpha-numeric clarifiers and a 24-hour clock format. [PSEG prefers the COM-002-1 simplified protocol.]</li> <li>b. Reliability Directive communications need to be identified as such by the sender as part of its protocol; Operating Instructions do not contain a similar requirement. [PSEG prefers that both Reliability Directives and Operating Instructions be identified by the sender.]</li> <li>c. The protocol for Operating Instructions explicitly addresses both written and oral communications; the protocol for Reliability Directives is not specific. [If identified as</li> </ol> </li> </ol>

Organization	Yes or No	Question 5 Comment
		<p>such by the sender, PSEG does not object to written and oral communications being addressed in a single standard; however, only oral communications should require the use of 3-part communications.]</p> <p>d. The protocol for Operating Instructions exempts “one-way burst messaging” from a requirement for 3-part communications with one practical exception - the receivers must request clarification from the sender if the communication is not understood; the protocol for Reliability Directives does not address explicitly exempt such communications, implying that 3-part communications is required for them. [PSEG prefers the “one-way burst” language in COM-003-1 for both Reliability Directives and Operating Instructions.]</p> <p>e. The Operating Instructions protocol must be separately documented by each entity; no such documentation is required for Reliability Directives. If documentation is required in a posted standard developed by the SDT, the SDT shall explain the reliability benefits of documentation and why the protocols in the standard, which are themselves communications performance requirements, are insufficient as “documentation.” [PSEG prefers no documentation of protocols since they are performance requirements in the standard.]</p> <p><b>Response: The SDT does not disagree with PSEG that the standards should be combined. The SDT has collaborated and cooperated with the RCSdT. The OPCPSDT believes that both standards can coexist and be mutually supportive.</b></p> <p>2. COM-003-1 requires a process for identifying and correcting deficiencies.” COM-002-3 does not. [Instead of the COM-003-1 language, PSEG prefers a requirement that adopts the CIP version 5 language: “R#. Each applicable entity shall have a process that identifies, assesses, and corrects deficiencies in the use of communication protocol.”]</p> <p><b>Response: The SDT believes the language changes to draft 4 will address some of your concerns.</b></p>

Organization	Yes or No	Question 5 Comment
		<p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</b></p> <p><b>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</b></p> <p><b>3. The SDT shall describe the potential measure or criteria for success for determining the successful implementation of the single standard.</b></p> <p><b>Response: The SDT believes it does that presently.</b></p> <p><b>4. “Generator Operator” is included the Glossary definition of “System Operator,” which in turn is used in the Operating Instruction definition. “System Operator” shall be replaced by “Balancing Authority, Reliability Coordinator, or Transmission Operator” in the Operating Instruction definition. Generator Operators receive Operating Instructions but do not issue them. See also Project 2010-16: Definition of System Operator - the goal of this project is to remove Generator Operator from the definition of System Operator.</b></p> <p><b>Response: The SDT has changed the language of the definition to read:</b></p> <p><b>“Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status,</b></p>

Organization	Yes or No	Question 5 Comment
		<p>output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. <i>Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.</i>"</p> <p>The new language is italicized.</p> <p>This change is consistent with your recommendation.</p> <p>(The Standards Committee should consider increasing the priority of this project so that this problem is addressed systematically in the System Operator definition.)</p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Puget Sound Energy Inc.</p>		<p>Puget Sound Energy appreciates the opportunity to submit comments on the proposed standard, as well as the work of the standards drafting team in developing a workable approach to the implementation of operating communication protocols. The purpose statement in the proposed standard uses the term "System Operators". As defined in the NERC Glossary, System Operators include individuals who work for Balancing Authorities, Transmission Operators, Generator Operators and Reliability Coordinators. However, the standard also applies to Distribution Providers, an entity not covered by the term System Operator. As a result, I recommend that the standard drafting team expand the purpose statement to accurately reflect the applicability of the standard. Perhaps the statement could be revised to begin "To provide individuals who may issue or receive Operating Instructions with uniform communications protocols..."</p>
<p><b>Response: The OPCPSDT thanks you for your comments. Some Distribution Providers do own and operate BES Facilities and Elements and a significant number have load shedding obligations making them subject to Operating Instructions. The SDT has changed the language of the definition to read:</b></p> <p><i>"Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential</i></p>		

Organization	Yes or No	Question 5 Comment
<p><i>options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.”</i>                      The new language is italicized.                      This change is consistent with your recommendation. Note the reference to: “<i>where action must be taken by the recipient.</i>”</p>		
<p>City of Austin dba Austin Energy</p>		<p>Regarding Q2, Austin Energy (AE) believes that parts 1.1 through 1.5 of R1 are unnecessary. Three-part communication, as described in parts 1.6 through 1.9, is the preferred method for ensuring that both parties understand an Operating Instruction. It provides a sufficient mechanism for clear, concise and accurate communication. AE believes that creating a protocol that requires System Operators to essentially relearn the way to speak (specifically using alpha-numeric identifiers) will only create confusion as operators try to follow protocol and catch/correct themselves. Additionally, the constant use of alpha-numeric identifiers in transmission switching orders that contain many, many steps will become burdensome. AE believes that its current use of three-part communication during these switching orders is more effective.</p> <p><b>Response: The SDT agrees with your use of three part communication , but also believes other protocols that contribute to clarifying communications should be part of a comprehensive communication standard.</b></p> <p>Regarding Q4, the phrase “Parts 2.1 to 2.3 (3)” in the Severe VSL for R2 should be “Parts 2.1 and 2.2”</p> <p><b>Response: Thank you for pointing out the error. The SDT has corrected it.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>South Carolina Electric and Gas</p>		<p>Regarding R1.4, drafting team should clarify whether "interface" means interfaces between neighboring entities or between functional entities.</p> <p><b>Response: The SDT has added “between functional entities” to R1 and R2 to encompass Part 1.4.</b></p> <p>Regarding R1.8, does the drafting team have an appropriate response time-frame for</p>

Organization	Yes or No	Question 5 Comment
		<p>the confirmation to occur from recipients?</p> <p><b>Response: The SDT believes that would be too prescriptive. The entities can address that in their documented communication protocols.</b></p> <p>Regarding R1.9 and R2.2, these requirements seem unnecessary and unauditible. An audit team can evaluate whether the documented communications protocol contains language to address these requirements; however, evaluating the actual execution would be subjective. It is not possible to determine whether a recipient understood a message clearly and whether clarification was required.</p> <p><b>Response: The industry asked the OPCPSDT to address all calls in several postings of previous drafts. The SDT believes it is auditible.</b></p> <p>Further, it will be difficult for entities to identify deficiencies with this requirement, as required by R3, for the same reasons.</p> <p><b>Response: The SDT disagrees. Most entities to varying degrees are monitoring the performance of operators. There are operating guidelines developed by industry that can provide guidance and develop best practices that support reliability.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
ReliabilityFirst		<p>ReliabilityFirst thanks the SDT for their work but has a question related to the Implementation Plan. The SDT indicated in the consideration of comments report (from the draft 2 posting) the standard’s six calendar month implementation time frame has been extended 12 calendar months to provide an adequate amount of time for training and implementation. As noted above, there is a conflict since the draft standard does not require implementation of the protocols. ReliabilityFirst believes absent any implementation requirement, the six calendar month implementation time frame is adequate for an entity to have documented communication protocols for Operating Instructions.</p>

Organization	Yes or No	Question 5 Comment
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT agrees, but wanted to give the industry adequate time to implement the entire standard. Previous commenters stated that six months was not long enough.</b></p>		
CPS Energy		<p>Requirement R1.5 should be an optional step to assist in resolving any misunderstanding found in requirement R1.6. Alpha-numeric clarifiers, Requirement R1.5, in every three part communication of an operating instruction is an activity that adds little if anything to promote the protection of the BES and can hinder/distract from the reliable operation of the BES.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT believes identifying and accurately communicating nomenclature of the Facilities and Elements prevents mishaps that compromise the BES.</b></p>		
Manitoba Hydro		<p>Section C. Measures: The measures are unclear as to what exactly the requirement to ‘provide’ entails? Would this be upon request or periodically? Please clarify.</p> <p><b>Response: Normally, an entity would provide the results of its process during an audit, but it could be part of an investigation or a spot check.</b></p> <p>Section D. Compliance: Compliance Enforcement Authority is defined as CEA and then the full term Compliance Enforcement Authority is continually used throughout. The acronym or words should be used consistently.</p> <p><b>Response: The SDT acknowledges your comments.</b></p> <p>Section D. Compliance: There is no specification for R1 and R2 retention.</p> <p><b>Response: An entity would have to have documented communication protocols in force in perpetuity. Many entities have those in their existing operations procedure manuals.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
Wisconsin Electric Power Co.		<p>The definition of Operating Instruction introduces a “Command” as opposed to COM-</p>

Organization	Yes or No	Question 5 Comment
		<p>002 that defines and requires identification of a “Reliability Directive”, yet there is no obligation to follow a Command nor to identify the communication as containing a Command. Fatal flaw with the proposed definition.</p> <p><b>Response: The SDT believes when a definition stipulates a command that its context within a requirement means that a command must be obeyed.</b></p> <p><b>Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.</b></p> <p><b>Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.</b></p> <p>The requirement to have a protocol is likely an ok approach with an objective to achieve well understood communications and without the laundry list of things that must be in the document. Then given the RC-BA-TOP have stringent training requirements in PER-005, duplicating the requirements for good training and personnel proficiency evaluation lends itself to mandate a how to accomplish this for a specific task. In addition, the type of oversight implied in COM-003 is overreaching by NERC.</p> <p><b>Response: The parts of the requirement are stipulated in order to ensure entities have a frame to build protocols that address communications in a uniform and consistent manner.</b></p>
<p><b>Response: The OPCSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Public Service Company of New Mexico</p>		<p>The issuance of a draft RSAW in combination with the draft standard helped clarify the audit approach for some of the more subjective requirements such as R3 and R4 and how instances of deficiency will not be considered violations of the standard.</p>



Organization	Yes or No	Question 5 Comment
		<p>PNMR, Inc. and its two utility subsidiaries operating in TRE, SPP and WECC would like to encourage other SDTs to follow the lead of this SDT with respect to understanding that the RSAW is a critical piece of the Standards Development process.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT agrees with your comments.</b></p>		
<p>Liberty Electric Power, LLC</p>		<p>The need for a prescriptive standard remains in doubt. The SDT has responded to comments questioning this need with a cite of a single study. The applicability of this study to GOPs is unclear.</p> <p><b>Response: The SDT believes it has dramatically reduced the prescriptive nature of draft 2. The GOP receives Operating Instructions so it is an applicable entity.</b></p> <p>We do not know the details, and question the number of cited miscommunications which involved GOPs. Further, we are unclear as to the number of miscommunications which involved two entities, as opposed to an entity giving direction to their own field operator. Such single-entity communications would not be covered by the proposed standard. Lowering miscommunications is an admirable goal, and again the SDT deserves commendation for their willingness to rethink the direction of the proposed standard. However, the standard, if needed, should be limited to requiring an entity to have communications procedures, and to reinforce those procedures on a periodic basis. The content of those procedures should properly be left to the best judgement of the individual entity.</p> <p><b>Response: The SDT appreciates your encouragement and believes there is a need for a collective set of protocols for entities to communicate on the BES which has become and continues to become more tightly interwoven.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>MRO NSRF</p>		<p>The NSRF would like to thank the SDT for allowing entities to identify, assess, and correct deficiencies per R3 and R4. The proposed COM-003-1 uses the verb of</p>

Organization	Yes or No	Question 5 Comment
		<p>“issuing” in R1.1, 1.2, 1.3, 1.4, 1.5, 1.6, and 1.8, and uses the verb of “receiving” in R1.7, 1.9, 2.1, and 2.2. Since these are real-time actions and FERC Order 693, section 532 states in part, “This will eliminate ambiguities in communications during normal, alert, and emergency conditions”, The NSRF recommends that the proposed definition of Operating Instruction have the words “in Real-time” at the end of the definition. The definition of System Operator also uses the term in real time in its definition.</p> <p><b>Response: The SDT believes some “Operating Instructions” can be issued outside as well as in the Real Time horizon.</b></p> <p>The SDT has changed the language of the definition to read:  <i>“Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.”</i></p> <p>The new language is italicized.  This change is consistent with your recommendation.</p> <p>R1.3 Some entities already have an agreed upon time zone standard such as MISO. MISO operates on Eastern Standard Time (EST) and has a business practice manual stating that. Suggest the requirement be modified to state: “that unless the operating entities already have an agreed upon operating time zone” then operations occurring across time zone boundaries should include a time-zone designation.</p> <p><b>Response: The SDT believes an entity can accommodate these type of arrangements within its documented communication protocols.</b></p> <p>R1.5 Naming conventions for terminal equipment can be long. For example, switch,</p>

Organization	Yes or No	Question 5 Comment
		<p>P2ZDQEN. In a switching order, this switch name may be mentioned several times and with each communication there is a required echo. The Alpha-numeric requirement is a one-size fits all solution and is not needed in all situations. Recommend the following as an alternative to the above language; The risk of unclear communication is addressed by R1.6 and R1.7. R1.5 should be reworded to require alpha-numeric clarifiers when reissuing an Operating Instruction to resolve a misunderstanding (per R1.6).</p> <p><b>Response: The SDT believes the use of proper clarifiers leaves no doubt as to the content in an Operating Instruction. This would be especially true with switch Papa – two - Zulu-Delta-Quebec-Echo-November.</b></p> <p>R1.4 The SDT has not made the case for the reliability benefit of the requirement for standardized names. Again, this requirement is being retired from TOP-002. “TOP-002-2a Requirement R18 on the basis that “This requirement adds no reliability benefit. Entities have existing processes that handle this issue.” This requirement creates a compliance process where one is not needed. Each entity will be required to document and maintain each facility name and who is the responsible owner for the facility name. Suggest this requirement be removed. A list would be required for “every” element of the BES between entities to assure that the proper names are used in all Operating Instructions. The NSRF does not see the reliability benefit of using this naming convention since TOP-002 is already enforceable.</p> <p><b>Response: TOP-002, R18 is being eliminated by the RTOSDT. The OPCPSDT believes that an entity’ familiarity with its neighbor’s Facilities and Elements increases situational awareness and reduces response times.</b></p> <p>R.1.8 and R.1.9, The NSRF feels this would create an unnecessary burden to document routine notifications that rely on a burst messaging system and do not have any effect on the Bulk Power System. A one-way burst messaging system is typically used to quickly inform/advise. It is designed as one-way to provide efficiency and should not be used for Operating Instructions. It would be much</p>

Organization	Yes or No	Question 5 Comment
		<p>simpler to state that, “for the communications of Operating Instructions (regardless of the technology employed), the message must be repeated or confirmed by the recipient, and validated by the sender.” This approach focuses on “Operating Instructions” and not the technology employed. The requirement as currently written does not allow for exceptions due to routine or informative communications. (Example: NERC Alerts to the Industry based are based on severity level and do not always require receipt of message by the Registered Entity). R1.8 states in part, “When issuing an oral Operating Instruction through a one-way burst messaging system...”. The NSRF does not understand how an oral Operating Instruction can be made through a one-way messaging system? Unless, the Operating Instruction was captured on an answering machine or on an un-listened to voice mail message system. The NSRF views this as an electronic source to electronic source, as explained in the “note to auditor” within the proposed RSAW states, “Communication that is generated by an electronic source to another electronic source is not to be included as “oral or written Operating Instruction”. If the NSRF is correctly assuming this, then no verbal or electronic confirmation is required. Please clarify.</p> <p><b>Response: Many entities use all call for “Operating Instructions”. Protocols would not apply to casual notifications and helpful information. The fact that in some cases it would be difficult, if not detrimental, to wait for responses from multiple parties. Some all call systems are an automated telephone call that is “shot gunned” to receivers. Your comments about electronic to electronic (machine to machine) communication not being addressed in this standard are correct. COM-003-1 deals with human to human communication.</b></p> <p>R2. As stated in the Purpose statement, “To provide System Operators uniform communications protocols that reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of BES.” The NSRF concurs with this statement but questions why “all” DPs and GOPs are included in COM-003-1, Applicability section? The NSRF recommends that the Applicability section have</p>

Organization	Yes or No	Question 5 Comment
		<p>4.1.2 updated to read “For Distribution Providers, and Generator Operators that operate BES Elements shall have documented communication protocols for Operating Instructions that incorporate the following”.</p> <p><b>Response: GOPs and DPs are receivers of Operating Instructions and are applicable entities. If a DP or GOP do not have BES equipment or BES obligations such as load shedding the requirement would not apply.</b></p> <p>On page 7, under Severe VSL it states: “The responsible entity did not include Parts 2.1 to 2.3 (3) of Requirement R2, in their documented communication protocols”, part 2.3 does not exist; please clarify if this is to mean “part 2.2”?</p> <p><b>Response: Thank you for pointing this out. The SDT has corrected the error.</b></p> <p>The NSRF recommends R3 to be updated to state: “Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement R1 in a manner that identifies, assesses, and corrects deficiencies, if any. Where the entity is identifying, assessing, and correcting deficiencies, the entity is satisfactorily performing the requirement.</p> <p><b>Response: The SDT recognizes the language from CIP v.5. The SDT believes the language changes to draft 4 will address some of your concerns.</b></p> <p><b>“R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”</b></p> <p><b>This change was made to use standard language and methodology for control based standards. It is the same language as developed in the CIP v.5 standards. The SDT received many comments from industry requesting the CIP format for consistency.</b></p> <p><b>R3 and R4 are eliminated, but the CEA still follows the same guidance with regard to deficiencies and the quality of an entity’s implementation of the communication</b></p>

Organization	Yes or No	Question 5 Comment
		<p><b>protocols in a manner that identifies, assesses and corrects deficiencies. The COM-003-1 RSAW has been updated to reflect this change.</b></p> <p>Justification for R3. The above rewrite requires implementing a deficiency process, which puts the focus of R3 on a deficiency process and not on implementing R1. The proposed language changes says to implement R1 and does not require a specific process for deficiencies. This is consistent with CIP standards Version 5 draft 3 and Generally Accepted Government Auditing standard strategies (the yellow book or GAGAS). The proposed second sentence provides clarity on satisfactory performance expectations in the requirement. Note this proposed language should also be applied to R4.</p> <p><b>Response: The SDT intends that the entity needs to “have” communication protocols as directed in R1 and R2. The process to identify, assess and correct is the mechanism for adherence to those protocols. Also see the comment above.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
SPP Standards Review Group		<p>The processes outlined in R3 and R4 would be sufficient in themselves but with the requirements of PER-005 regarding identifying gaps and training to eliminate those gaps, it would appear that R3 and R4 add unnecessary duplication. Why do we need to have the same requirements in two different standards? Do some of the issues that are being addressed in the Paragraph 81 project come into play here?</p> <p><b>Response: The SDT does not believe the context of training gaps is synonymous with deficiencies based on adherence to communication protocols. The standard does not specify how the entity corrects the deficiency. This is where PER-005 may come into play.</b></p> <p><b>The Paragraph 81 Project is still a work in progress. The SDT believes COM-003-1 and its elements would be retained after any paragraph 81 review. The opportunities for mistakes on the BES due to miscommunication are tremendous. A</b></p>

Organization	Yes or No	Question 5 Comment
		<p>commenter on the COM-003-1, draft 2 posting calculated, after some assumptions that 35 million Operating Instructions per year occur on the BES. The exposure to risk should not be trivialized by suggesting these protocols and the process required in COM-003-1, draft 3 are only administrative and would be grist for elimination.</p> <p>Given the approval of COM-002-3 which places requirements on the DP and GOP when receiving a Reliability Directive, there appears to be the possibility of confusion regarding specific requirements on the DP and GOP in COM-003. During the COM-003 webinar, the comment was made that if COM-003 is approved, there may be a new project that would attempt to more efficiently coordinate the two standards. We would be supportive of that effort.</p> <p><b>Response: The SDT will not disagree that there is an opportunity to combine the two standards.</b></p> <p>The papers referenced in the Rationale and Technical Justification document supporting the need for this standard should be made available for review if the drafting team is using them as support for the justification for COM-003.</p> <p><b>Response: The reference the SDT used was contained in a industry white paper initiated by a member of the OC and was appended in its entirety to the COM-003-1, draft 2 comments which is posted on the NERC website for project 2007-02.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Florida Municipal Power Agency</p>		<p>The RSAW seems to re-introduce the “zero-defect” problem by directing auditors to sample actual recordings of communications to see if the entity identified all deficiencies. The RSAW ought to be changed to get away from sampling actual voice communications altogether and simply review the evidence of the entity doing its own internal monitoring. For instance, the entity might decide to randomly sample a few hours a month itself and identify deficiencies in those hours, that should be the only voice recorded evidence required and not any other hours that the entity did not</p>

Organization	Yes or No	Question 5 Comment
		<p>randomly sample. In addition, the evidence for correction of deficiencies is not more voice recordings, but rather evidence of revised protocols, processes, procedures, or evidence of disciplinary action. So, FMPA believes the RSAW needs a lot of work.</p>
<p><b>Response: The OPCSDT thanks you for your comments. The SDT believes that there has to be a test of the entity’s process to make sure it is functioning effectively. It makes perfectly good sense for the CEA to sample the evidence over the same period to see if similar results are obtained. If the CEA discovers many deficiencies are not identified the standard requires the entity to evaluate its process to improve it. Possible non compliance can only result if the entity does not implement its own identified modifications or cannot justify why no modifications are required.</b></p>		
<p>MISO</p>		<p>The RSAW states that the applicable entity could be found non-compliant if the entity did not follow an auditor’s suggested changes to remedy those deficiencies. This requirement is not found in COM-003-1 itself, and the RSAW therefore includes requirements that are beyond the scope of the Standard it supports.</p> <p><b>Response: Please reference 3.4 and 4.4. The entity can only be found non compliant when the entity does not implement its own identified modifications or cannot justify why no modifications are required. For an entity not to legitimately address these elements it would be a violation.</b></p> <p>The draft RSAW also introduces subjective concepts that place uncontrolled discretion in the hands of auditors. For instance, the RSAW states that the size of the sample of the entity’s communication activities reviewed to verify whether the entity is identifying, assessing, communicating and correcting deficiencies “will be based on the auditor’s confidence in the entity’s ability to identify, assess, and correct its deficiencies.” MISO submits that sample size should be determined mathematically and in a manner that can itself be audited. Indeed, NERC’s own Sampling Methodology Guidelines and Criteria states that "Statistical sampling helps ensure a high confidence level of compliance for the larger population of documents when a smaller population is statistically sampled . . . Statistical sampling should be employed when auditing all processes, procedures and any documentationâ€related evidence</p>



Organization	Yes or No	Question 5 Comment
		<p>(documents, logs, voice recordings, etc.) when a sample is required because the entire population cannot be audited." Allowing an auditor to determine sample size based on an abstract concept such as confidence is contrary to NERC's own sampling methodology; would prevent Registered Entities from challenging such sample sizes; and could allow auditors to make such decisions punitively.</p> <p><b>Response: A statistical modeling approach is what the SDT contemplated in developing these requirements. NERC compliance and auditing professionals understand and would welcome such an approach. The SDT does not want to dictate the process controls but believe the structure you propose is sensible and if it was found to be effective, could be developed as a best practice by the industry. The OC has developed operating guidelines that could serve as an incubator for best practices.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Essential Power, LLC</p>		<p>The SDT received many comments questioning the need for the standard. They are relying on a single EPRI study that claims 19% of 400 studied switching errors (76 events) resulted from miscommunication, but this statistic is meaningless without context. Specifically:-Did any of these 76 events involve GOPs? If not, is it appropriate to make COM-003-1 applicable to these entities at all, much less for routine communications of minor importance? -How many events involved oral communication, vs. written miscommunication? Of the oral miscommunications, how many involved miscommunication between separate entities, as opposed to internal entity miscommunication? After all, internal miscommunications, which may be the vast majority of the events, will not be covered by the standard.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. There were two studies cited by the SDT. Both studies were contained in the OC White Paper which a commenter appended to the COM-003-1, draft 2 industry comments. The passage discussing the studies did not go into the detail you request in your comments. The SDT believes any entity is susceptible to communication errors and that the general percentages over the cases study are clear indicators that communication is a significant factor</b></p>		

Organization	Yes or No	Question 5 Comment
<b>impacting reliability.</b>		
SERC OC Standards Review Group		<p>The SERC OC Standards Review Group does not agree that the mandatory/prescriptive procedure for three part communications in essentially all oral communications will improve reliability of the BES. The standard needs to be changed to better reflect industry comments from this comment period and the previous ballot. The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review Group only and should not be construed as the position of SERC Reliability Corporation, its board, or its officers.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT believes communication errors reduce reliability on the BES. The SDT has changed the standard dramatically to reflect industry comments.</b></p>		
ISO/RTO Standards Review Committee		<p>The SRC requests that the SDT include a milestone in the implementation plan that requires NERC and the industry to reach agreement on how internal controls will be monitored by the CEAs BEFORE this standard is effective.</p> <p><b>Response: The SDT has integrated the RSAW review to the process. This is a transparent outreach to industry to create a better standard.</b></p> <p>The SRC believes that this standard could be improved by modifying the subparts of R1 and R2 to include parts that are communication protocols directly relevant to the improving situational awareness and shortening response time.</p> <p><b>Response: The SDT believes most of the protocols do just that. The SDT would appreciate any recommendations for additional or supplementary protocols from the ISO/RTO Standards Review Committee.</b></p> <p>Requirements R1.1, 1.2 in theory shorten response time by providing a commonly understood language and clock format for Operating Instructions but are unnecessary in practice.</p>

Organization	Yes or No	Question 5 Comment
		<p><b>Response: These may be basic protocols but they are important. They should be relatively easy to implement.</b></p> <p>The modification includes the removal of:</p> <ul style="list-style-type: none"> <li>o R1.3 as it does not improve situational awareness or shorten response time. This is such a small population of Operating Instructions and any real time Operating Instructions will be immediate. This is overly prescriptive and provides little if any reliability benefit. This is not a documented reliability concern in any investigation, FERC Order, Blackout report, etc. that the SRC is aware of.</li> </ul> <p><b>Response: The SDT realizes the population may be small but the time element of an event is critical to an Operating Instruction.</b></p> <ul style="list-style-type: none"> <li>o R1.4 as it does not improve situational awareness or shorten response time. It may actually confuse entities that have established practices that may have to make changes to accommodate this requirement part. This is overly prescriptive and provides little if any reliability benefit. This is not a documented reliability concern in any investigation, FERC Order, Blackout report, etc. that the SRC is aware of.</li> </ul> <p><b>Response: The SDT believes familiarity with a neighboring entity’s Facilities and Elements shortens response time and improves situational awareness.</b></p> <ul style="list-style-type: none"> <li>o R1.5 as it does not improve situational awareness or shorten response time. It may actually confuse entities that have established practices that may have to make changes to accommodate this requirement part. This is overly prescriptive and provides little if any reliability benefit. This is not a documented reliability concern in any investigation, FERC Order, Blackout report, etc. that the SRC is aware of.</li> </ul> <p><b>Response: Clarifiers ensure an accurate issuance and reception of alpha-numeric information contained in an Operating Instruction. The benefit of which is reduced errors operating the BES.</b></p> <ul style="list-style-type: none"> <li>o R1.6 and R1.7, and 2.1 as it does not improve situational awareness or shorten response time. It actually lengthens response time and does not improve situational</li> </ul>

Organization	Yes or No	Question 5 Comment
		<p>awareness as it does not address the content of the communication. This is already addressed through COM-002-3 and will only add to confusion for entities to have a COM-003-1 requirement in the overlap it creates. This is not a documented reliability concern in any investigation, FERC Order, Blackout report, etc. that the SRC is aware of where lack of 3 part communication directly contributed to a adverse reliability impact on the BES. The NERC OC established guidelines that outline best practices for industry and are sufficient to communicate such best practices. As the drafting team has communicated in its previous white paper, a significant amount of industry already employs 3 part communication during normal and emergency situations.</p> <p><b>Response: The SDT believes three part communication is an effective and proven tool that ensures communications are clear and unambiguous.</b></p> <p>Requirements R1.8, 1.9, and 2.3 could shorten response time by providing a protocol for quickly disseminating information from one to multiple parties.</p> <p>The drafting team should craft the standard to address communication between functional entities and not within entities to properly address FERC Order and Blackout Recommendation that clearly speaks to communication protocols between entities. To not do so is expanding upon the scope of the SAR, creates confusion, and is not focusing on the reliability concerns cited in the FERC Order 693 and Blackout Report Recommendation #26.</p> <p><b>Response: The SDT has changed the language to Requirement R1 and R2 adding “to between functional entities” which is consistent with your comment.</b></p> <p>The draft RSAW introduces subjective concepts as well as a new requirement.</p> <p>An auditor is to:</p> <ul style="list-style-type: none"> <li>o The CEA is to ...</li> <li>o Understand the process ....</li> <li>o The CEA is to review a sample of the entity’s communication activities to verify</li> </ul>

Organization	Yes or No	Question 5 Comment
		<p>whether the entity is identifying, assessing, communicating and correcting deficiencies. If the entity had implemented corrections, the sample is to be pulled from activities conducted after any corrections to the entity’s process were implemented or, if the correction had been recently implemented, the CEA is to consider the impact the correction will have when reviewing the samples. This sample size will be based on the auditor’s confidence in the entity’s ability to identify, assess, and correct its deficiencies.</p> <p>o Where the auditor ... o If an auditor cannot verify that the entity is adequately identifying [SRC: suggest changing “is” to “is not”], assessing, and correcting its own deficiencies due to limitations in its process, the auditor will not have a finding of non-compliance. The auditor will provide the entity with recommendations as necessary. If the CEA finds in subsequent, follow up audits or other compliance monitoring activities that the same or similar deficiencies continue to occur after the entity was provided the feedback by the CEA, the CEA will seek to understand what changes the entity made to their process based on prior recommendations.[“same or similar deficiencies” is subjective and opens the compliance to CEA vision of what is “similar”.]</p> <p>New Requirement: If the CEA finds in subsequent, follow up audits or other compliance monitoring activities that the same or similar deficiencies continue to occur after the entity was provided the feedback by the CEA, the CEA will seek to understand what changes the entity made to their process based on prior recommendations. If changes to the entity’s process are not implemented to identify, assess and correct deficiencies, the Auditors may make a determination of possible non-compliance with Requirement 3, Part 3.4.</p> <p><b>Response: The SDT does not interpret this as a new Requirement. It is guidance for the CEA on how to professionally audit Requirement 3, Part 3.4. This RSAW was developed in collaboration with the SDT and both parties believe the guidance provides the auditor specific instructions that actually reduce subjectivity.</b></p>

Organization	Yes or No	Question 5 Comment
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
<p>Northeast Power Coordinating Council</p>		<p>The white paper written by the OC addressed the issues covered by this Standard.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT believes those documents, while relevant and well written do not carry the authority of an approved standard.</b></p>		
<p>Hydro One</p>		<p>The white paper written by the OC addressed the issues covered by this Standard.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT believes those documents, while relevant and well written do not carry the authority of an approved standard.</b></p>		
<p>Hydro Quebec TransEnergie</p>		<p>The white paper written by the OC addressed the issues covered by this Standard. Also the requirements 1.6, 1.7 and 2.1, 2.2 seem to be redundant with the requirement R2 of COM-002-2. Both touch on the issue of ensuring misunderstandings by requiring the parties to repeat, restate, rephrase or recapitulate the information transmitted/received. If adhering to the philosophy of Project 2013-02 Paragraph 81 of FERC, we should remove unnecessary requirements as part of NERC,s Find, Fix and Track Process</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT believes those documents, while relevant and well written do not carry the authority of an approved standard. COM-002-2a, 2R will be retired when COM-002-3 and COM003-1 are approved by FERC. Paragraph 81 is still under development and will likely not apply to COM-003-1.</b></p>		
<p>Consumers Energy</p>		<p>This is an attempt to make a requirement for 3 way communication for all operating communications. Not all operating conversations avail themselves to that format. The concept is good but allowances must be made for other situations.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT has pointed out that these protocols are targeted only for</b></p>		

Organization	Yes or No	Question 5 Comment
<b>Operating Instructions that command direct changes to the BES, not all operating communications and casual conversations.</b>		
JEA		We believe that three-part communications should only be necessary for directives. Also COM002 and COM003 should be merged into one standard.
<b>Response: The OPCPSDT thanks you for your comments. The term Operating Instruction is a directive in nature. Its definition uses the term “command” which is a strong form of a directive.</b>		
Independent Electricity System Operator		We do not see the need for this standard. We feel that Reliability Standards should have performance based objectives, rather than prescriptive requirements that outline “how” to meet an objective. This draft is not consistent with this approach. If the majority of the industry also express a similar view, we urge the SDT to bring this to the Standards Committee’s attention, and seek its advice on way forward, including stopping this project altogether.
<b>Response: The OPCPSDT thanks you for your comments. The SDT stands by this draft of the standard and has not received any disapproval from the Standards Committee. The Standards Committee has reaffirmed the present course of the standard at its October 10, 2012 meeting.</b>		
NIPSCO		We want to see COM-002 and COM-003 combined, therefore we voted Negative. The Internal Controls in R3 & R4 are workable.
<b>Response: The OPCPSDT thanks you for your comments. The SDT cannot disagree with combining the two standards, but it is outside the scope of the SAR for this project.</b>		
Exelon		We would like to point out that the OI definition includes another defined term, “System Operator”. In the Glossary, this is defined as is an individual at a control center, including a Generator Operator. Control center is not currently defined but has a proposed definition in CIP version 5 that puts limits on which generator operators (# of units) work in “control centers”. If approved as part of CIP version 5, this definition of Control Center is likely to cause confusion when applying this and

Organization	Yes or No	Question 5 Comment
		<p>other standards. Will OI apply to all Generator Operators or just those working in "Control Centers" as defined by CIP ver. 5. In spite of our concerns with the current draft, Exelon intends to vote affirmative on this ballot for COM-003. Significant improvements have been made but there is opportunity to make additional changes before the final ballot.</p>
<p><b>Response: The OPCSDT thanks you for your comments. GOPs that receive Operating instructions from other Functional Entities would be subject to the protocols .</b></p>		
<p>Southern Company</p>		<p>While Southern agrees that 3-part communications is a good utility practice that has been used by operating entities for many years, Southern disagrees with the broadness of the types of communications the SDT is suggesting for requiring 3-part communications. In some of these cases, 3-part communications are not required to protect the reliability of the system. In fact, this prescriptive requirement, if used on all communications that could fall under "Operating Instructions" (which can be very general information at times), would take System Operators time away from other tasks that are more critical to maintaining reliability.</p> <p><b>Response: Based on the definition of Operating Instructions the SDT cannot see any remote reference to general information. The SDT has responded to comments in the last 3 drafts that it applies to a command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. The term command is very clear and distinct in meaning and strength. A command is not a discussion of general information. The definition has been modified to add clarity.</b></p> <p>Please note that there are numerous (i.e. in the millions) of conversations between operating entities each year and some important tasks could be missed or delayed if required to follow a standard script for everything.</p> <p><b>Response: The SDT believes just the opposite will happen. Communications will be more structured and focused on a professional exchange of commands to operate</b></p>



Organization	Yes or No	Question 5 Comment
		the BES reliably.
<p>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</p>		
City of Tallahassee		<p>While TAL is voting affirmative, we still have some reservations that Compliance Enforcement will cite specific instances of non-3-way communications as violations. However, we are ready to codify the need for standardized communications as defined in the purpose of the standard and Blackout recommendation #26 and thank the drafting team for their hard work in avoiding a “zero-defect” standard.</p>
<p>Response: The OPCPSDT thanks you for your comments. The SDT believes that CEA is supportive of this form of standard and is confident it will be a superior alternative to zero defects.</p>		
Xcel Energy		<p>Xcel Energy feels this new draft of COM-003-1 is greatly improved than prior versions. We are especially in favor of the internal controls approach the team has taken. However, while we have identified several areas of concern with this latest draft, our issue with R1.5 is the single item that is preventing us from voting affirmative. As indicated in our previous comments, our issue is that we do not believe alpha-numeric identifiers should be required for all oral Operating Instructions. Instead, we feel this should be an optional tool that the operator may use where clarity in the Operating Instruction is needed or anticipated. (For example, the operator may use alpha-numeric clarifiers to restate the original Operating Instruction, when it was apparent from the receiver’s repeat back that the details of the Operating Instruction were not accurately understood.)</p> <p>Response: The SDT intends for alpha numeric clarifiers only to be used only when alpha-numeric information is contained in the “Operating Instruction.” The SDT believes that use of these clarifiers prevent miscommunication that would negatively impact the BES. e.g. switch 15 R vs.50 R, “15 and 50” sound alike and could easily be miscommunicated.</p> <p>Below are additional issues and modifications Xcel Energy would like to see</p>

Organization	Yes or No	Question 5 Comment
		<p>addressed:</p> <p>1) Since a Distribution Provider may issue Operating Instructions that would impact the BES, we feel they should be added to the applicability under R1 and R3.</p> <p>2) We recommend that the term “functional entities” be capitalized in R1.1, and a reference added to Section A4 of the standard. This way it is clear that the term includes all entities under the standard (Section 4) and not just the entities under R1.</p> <p><b>Response: The SDT believes the DP is a receiver of Operating Instructions. The SDT would appreciate if you could provide examples of issued Operating Instructions by a DP the SDT would like to consider the proposal.</b></p> <p><b>The SDT made corrections to R1.1. Thank you for bringing it to our attention.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		
Arizona Public Service Company		no
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
Southwestern Power Administration		No additional comments.
Brazos Electric Power Cooperative, Inc.		See ACES comments.
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses to ACES Comments.</b></p>		
Edison Electric Institute		EEI generally supports the proposed COM-003 structure and content. We believe that COM-003 will provide a good response to both FERC Order No. 693 (P. 540) and Blackout Recommendation #26 in the U.S./Canada joint Blackout Report. EEI

Organization	Yes or No	Question 5 Comment
		<p>commends the drafting team for its work and for laying out a pragmatic framework for tightened communications protocols.</p> <p>Since the new proposed draft marks a significant change from the previous direction, EEI understands that some issues need to be considered. Some can be addressed by the drafting team and others are likely beyond the scope of the team. In general, companies seek to ensure that mandatory requirements when applied in the future will avoid causing confusion in real-time. For example, the definition of “Operating Instruction” in draft COM-003-1<sup>(2)</sup> may need some clarification to make sure that it sufficiently differentiates such communications from a “Reliability Directive” issued under COM-002-3.<sup>(3)</sup></p> <p><b>Response: The SDT believes the requirements of COM-002-3 define the circumstances when a Reliability Directive becomes active. The Functional Entity announces it when an Emergency or Adverse Reliability Impact is occurring or has occurred. COM-003-1 is focused on having an entity having a process that it uses to ensure it adheres to its own documented communication protocols by identifying, assessing and correcting deficiencies.</b></p> <p>Clarification may be needed to synchronize the COM-003 process requirements with protocols in already-approved COM-002-3<sup>(4)</sup>. We view these as relatively minor changes that would not require substantial changes to the draft COM-003 language.</p> <p><b>Response: The OPCSDT has adopted the same language for three part communication as written in COM-002-3, R2 and R3 to be consistent and to avoid</b></p>

<sup>2</sup> Proposed COM-003-1: [http://www.nerc.com/docs/standards/sar/COM-003-1\\_20120821\\_Clean.pdf](http://www.nerc.com/docs/standards/sar/COM-003-1_20120821_Clean.pdf)

“**Operating Instruction** — Command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.”

<sup>3</sup> Pending COM-002-3: [http://www.nerc.com/docs/standards/sar/COM-002-3\\_Standard\\_20120607\\_Clean.pdf](http://www.nerc.com/docs/standards/sar/COM-002-3_Standard_20120607_Clean.pdf)

<sup>4</sup>“**Reliability Directive:** A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.”

Organization	Yes or No	Question 5 Comment
		<p><b>confusion.</b></p> <p>In addition, companies also have questions regarding language referred to as ‘internal controls’ or ‘zero defects’ language, and how NERC and the regions will apply various judgments on potential violations under this new and untested concept. While both CIP v.5 and draft COM-003 take aim at certain symptoms, it is difficult for companies to see how NERC will actually perform these tasks since no field experience has been tested or broadly communicated with stakeholders. Instead of this piecemeal approach, EEI has strongly believed for several years that NERC should address this issue as a strategic matter and develop a comprehensive plan that would set both compliance and enforcement on a more sustainable foundation. The resources being applied to compliance and enforcement across the electric industry need to be efficiently applied. EEI continues to urge NERC to make commitments to develop a comprehensive framework that will redesign the program.</p> <p><b>Response: NERC leadership has been communicating the need and intent of control based standards and is advocating it through CIP v.5 and COM-003-1. The SDT will pass your comments to NERC executive leadership for further action.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our responses above.</b></p>		

END OF REPORT

### **Standard Development Roadmap**

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

#### **Development Steps Completed:**

1. The Standards Committee (SC) approved the Standard Authorization Request (SAR) for posting on March 1, 2007.
2. The SAR was posted for comment from March 19 through April 17, 2007.
3. The SC sought SAR drafting team nominations April 18 through May 2, 2007.
4. The SAR drafting team posted reply comments to industry comments received on the first posting SAR on June 8, 2007
5. Standard drafting team appointed by SC Executive Committee on June 28, 2007
6. Version 1 draft of Standard posted November 2009 for Informal Comments closed January 15 2010.
7. Version 2 draft of Standard posted May 2012 for Formal Comments, Initial Ballot closed June 20 2012.
8. Version 3 draft of Standard posted August 2012 for Formal Comments, Initial Ballot closed September 20 2012.

#### **Description of Current Draft:**

This is the fourth draft of a new standard requiring the use of standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The drafting team requests posting for a 30-day concurrent Formal Comment period and Ballot.

#### **Future Development Plan:**

<b>Anticipated Actions</b>	<b>Anticipated Date</b>
1. Second Successive Ballot of Standards	November 2012
2. Recirculation ballot of standards.	January 2013
3. Board adopts standards.	February 2013

### **Definitions of Terms Used in Standard**

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

*When using terms or phrases contained in the Reliability Standards Glossary of Terms for communications it should be cited as the source. When used in written communications, terms or phrases contained in the Reliability Standards Glossary of Terms are capitalized.*

**Operating Instruction** —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.

**A. Introduction**

1. **Title:** Operating Personnel Communications Protocols
2. **Number:** COM-003-1
3. **Purpose:** To provide System Operators uniform communications protocols that reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of BES.

4. **Applicability:**

**4.1. Functional Entities**

- 4.1.1 Balancing Authority
- 4.1.2 Distribution Provider
- 4.1.3 Generator Operator
- 4.1.4 Reliability Coordinator
- 4.1.5 Transmission Operator

5. **(Proposed) Effective Date:** First day of first calendar quarter, twelve (12) calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter twelve (12) calendar months from the date of Board of Trustee adoption.

6. **Background:**

The SDT has incorporated within this standard a recognition that these requirements should not focus on individual instances of failure as a basis for violating the standard. In particular, the SDT has incorporated an approach to empower and enable the industry to identify, assess, and correct deficiencies in the implementation of certain requirements. The intent is to change the basis of a violation in those requirements so that they are not focused on whether there is a deficiency, but on identifying, assessing, and correcting deficiencies. It is presented in those requirements by modifying “implement” as follows:

Each ... shall implement, in a manner that identifies, assesses, and corrects deficiencies, . . .

The term *documented communication protocols* refers to a set of required protocols specific to the Functional Entity. This term does not imply any particular naming or approval structure beyond what is stated in the requirements. An entity should include as much as it believes necessary in their documented protocols, but they must address all of the applicable parts of the Requirement. The documented protocols themselves are not required to include the “. . . identifies, assesses, and corrects deficiencies, . . .” elements described in the preceding paragraph, as those aspects are related to the manner of implementation of the documented protocols and could be accomplished through other controls or compliance management activities.

## B. Requirements

- R1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following: [*Violation Risk Factor: Medium* [*Time Horizon: Long-term Planning* ]
- 1.1.** Use of the English language when issuing or responding to an oral or written Operating Instruction, unless another language is mandated by law or regulation.
  - 1.2.** Use of the 24-hour clock format when referring to clock times when issuing an oral or written Operating Instruction.
  - 1.3.** Use of the time, the time zone where the action will occur and indication of whether the time is daylight saving time or standard time when issuing an oral or written Operating Instruction that refers to clock times between Functional Entities in different time zones.
  - 1.4.** Use of the name specified by the owner(s) for each Transmission interface Element or Transmission interface Facility when referring to a Transmission interface Element or a Transmission interface Facility-in an oral or written Operating Instruction , unless another name is mutually agreed to by the Functional Entities.
  - 1.5.** Use of alpha-numeric clarifiers when issuing an oral Operating Instruction for Facilities and Elements in instances where the nomenclature of Facilities or Elements is in alpha-numeric format (. for example if an entity designated a circuit breaker “One twoBravo” (12B). One two Bravo would need alpha-numeric clarifiers if used in an oral Operating Instruction)
  - 1.6.** When issuing an oral two party, person-to-person Operating Instruction, require the issuer to:
    - Confirm that the response from the recipient of the Operating Instruction was accurate, or
    - Reissue the Operating Instruction to resolve a misunderstanding.
  - 1.7.** When receiving an oral two party, person-to-person Operating Instruction, require the recipient to repeat, restate, rephrase, or recapitulate the Operating Instruction.
  - 1.8.** When issuing an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (. for example an all call system), verbally or electronically confirm receipt from one or more receiving parties.
  - 1.9.** When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (. for example an all call system), request clarification from the initiator if the communication is not understood.



**R2.** Each Distribution Provider and Generator Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:  
[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning ]

- 2.1.** When receiving an oral two party, person-to-person Operating Instruction, require the recipient to repeat, restate, rephrase, or recapitulate the Operating Instruction.
- 2.2.** When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), request clarification from the initiator if the communication is not understood.

### **C. Measures**

- M1.** Evidence must include each applicable entity's documented communications protocols developed for Requirement R1 and must demonstrate that the protocols have been implemented in a manner that identifies, assesses and corrects deficiencies.
- M2.** Evidence must include each applicable entity's documented communications protocols developed for Requirement R2 and must demonstrate that the protocols have been implemented in a manner that identifies, assesses and corrects deficiencies.

### **D. Compliance**

#### **1. Compliance Monitoring Process**

##### **1.1. Compliance Enforcement Authority**

The Regional Entity shall serve as the Compliance Enforcement Authority (CEA) unless the applicable entity is owned, operated, or controlled by the Regional Entity. In such cases the ERO or a Regional Entity approved by FERC or other applicable governmental authority shall serve as the CEA.

##### **1.2. Data Retention**

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each Transmission Operator, Balancing Authority, Reliability Coordinator, Generator Operator, and Distribution Provider shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall retain evidence of its manner that identifies, assesses and corrects deficiencies for Requirement R1 Measure M1 for the most recent 90 days.

Each Distribution Provider and Generator Operator shall retain evidence of its manner that identifies, assesses and corrects deficiencies for Requirement R2 Measure M2 for the most recent 90 days.

If a Transmission Operator, Balancing Authority, Reliability Coordinator, Generator Operator or Distribution Provider is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

**Compliance Monitoring and Assessment Processes**

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

**1.3. Additional Compliance Information**

None

**COM-003-1 Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R1</b>	Long Term Planning	Medium	The Responsible Entity did not include one (1) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols	The Responsible Entity did not include two (2) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols	The Responsible Entity did not include three (3) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols	The Responsible Entity did not include four (4) or more of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols  OR  The Responsible Entity did not have documented communication protocols as required in Requirement R1  OR  The Responsible Entity did not implement, in a manner that identifies, assesses and corrects deficiencies, their documented communication protocols as required in Requirement R1

**COM-003-1 Operating Personnel Communications Protocols**

<b>R2</b>	Long Term Planning	Medium	N/A	N/A	The Responsible Entity did not include one (1) of the two (2) parts of Requirement R2, Parts 2.1 to 2.2 in their documented communication protocols	The Responsible Entity did not include Parts 2.1 to 2.2 of Requirement R2, in their documented communication protocols OR The responsible entity did not have documented communication protocols as required in Requirement R2 OR The Responsible Entity did not implement, in a manner that identifies, assesses and corrects deficiencies, their documented communication protocols as required in Requirement R2
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**E. Regional Variances**

None.

**Version History**

Version	Date	Action	Change Tracking

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### Standard Development Roadmap

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

#### Development Steps Completed:

1. The Standards Committee (SC) approved the Standard Authorization Request (SAR) for posting on March 1, 2007.
2. The SAR was posted for comment from March 19 through April 17, 2007.
3. The SC sought SAR drafting team nominations April 18 through May 2, 2007.
4. The SAR drafting team posted reply comments to industry comments received on the first posting SAR on June 8, 2007
5. Standard drafting team appointed by SC Executive Committee on June 28, 2007
6. Version 1 draft of Standard posted November 2009 for Informal Comments closed January 15 2010.
7. Version 2 draft of Standard posted May 2012 for Formal Comments, Initial Ballot closed June 20 2012.
8. Version 3 draft of Standard posted August 2012 for Formal Comments, Initial Ballot closed September 20 2012.
- 7.

#### Description of Current Draft:

This is the ~~third~~ fourth draft of a new standard requiring the use of standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The drafting team requests posting for a 30-day concurrent Formal Comment period and Ballot.

#### Future Development Plan:

Anticipated Actions	Anticipated Date
<del>1. Drafting team considers comments, makes conforming changes, and requests SC approval to proceed to pre-ballot comment period.</del>	<del>July 2012</del>
<del>2. Second Ballot of Standards.</del>	<del>August 2012</del>
<del>3. Successive Ballot of Standards</del>	<del>September 2012</del>
<u>1. Second Successive Ballot of Standards</u>	<u>October November 2012</u>

## COM-003-1 Operating Personnel Communications Protocols

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<u>4.2.</u> Recirculation ballot of standards.	<u>January</u> <del>October</del> <del>2012</del> <u>2013</u>
<u>5.3.</u> Board adopts standards.	<del>November</del> <u>February</u> <del>2012</del> <u>2013</u>

### Definitions of Terms Used in Standard

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

*When using terms or phrases contained in the Reliability Standards Glossary of Terms for communications it should be cited as the source. When used in written communications, terms or phrases contained in the Reliability Standards Glossary of Terms are capitalized.*

Operating Instruction — A Command ~~from~~ by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.



## A. Introduction

1. **Title:** Operating Personnel Communications Protocols
2. **Number:** COM-003-1
3. **Purpose:** To provide System Operators uniform communications protocols that reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of BES.

4. **Applicability:**

- 4.1. **Functional Entities**

- 4.1.1 Balancing Authority
    - 4.1.2 Distribution Provider
    - 4.1.3 Generator Operator
    - 4.1.4 Reliability Coordinator
    - 4.1.5 Transmission Operator

5. **(Proposed) Effective Date:** First day of first calendar quarter, twelve (12) calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter twelve (12) calendar months from the date of Board of Trustee adoption.

6. **Background:**

The SDT has incorporated within this standard a recognition that these requirements should not focus on individual instances of failure as a sole basis for violating the standard. In particular, the SDT has incorporated an approach to empower and enable the industry to identify, assess, and correct deficiencies in the implementation of certain requirements. The intent is to change the basis of a violation in those requirements so that they are not focused on whether there is a deficiency, but on identifying, assessing, and correcting deficiencies. It is presented in those requirements by modifying “implement” as follows:

Each ... shall implement, in a manner that identifies, assesses, and corrects deficiencies, . . .

The term *documented communication protocols* refers to a set of required protocols specific to the Functional Entity. This term does not imply any particular naming or approval structure beyond what is stated in the requirements. An entity should include as much as it believes necessary in their documented protocols, but they must address all of the applicable parts of the Requirement. The documented protocols themselves are not required to include the “. . . identifies, assesses, and corrects deficiencies, . . .” elements described in the preceding paragraph, as those aspects are related to the manner of implementation of the documented protocols and could be accomplished through other controls or compliance management activities.

## 5. \_\_\_\_\_

## B. Requirements

- R1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, have documented communication protocols for Operating Instructions between functional entities that ~~incorporate~~ include the following: [*Violation Risk Factor: Medium Low*] [*Time Horizon: Long-term Planning*]
- 1.1.** Use of the English language when issuing or responding to an oral or written Operating Instruction ~~between functional entities~~, unless another language is mandated by law or regulation. ~~Transmission Operators and Balancing Authorities may use an alternate language for internal operations.~~
  - 1.2.** Use of the 24-hour clock format when referring to clock times when issuing an oral or written Operating Instruction.
  - 1.3.** Use of the time, the time zone where the action will occur and indication of whether the time is daylight saving time or standard time When issuing an oral or written Operating Instruction that refers to clock times between ~~functional entities~~ Functional Entities in different time zones, ~~when referring to clock times include the time, the time zone where the action will occur and indicate whether the time is daylight saving time or standard time.~~
  - 1.4.** Use of the name specified by the owner(s) for each Transmission interface Element or Transmission interface Facility When referring to a Transmission interface Element or a Transmission interface Facility ~~(when issuing)~~ in an oral or written Operating Instruction ~~between functional entities, use the name specified by the owner(s) for that Transmission interface Element or Transmission interface Facility~~, unless another name is mutually agreed to by the functional Entities.
  - 1.5.** Use of alpha-numeric clarifiers when issuing an oral Operating Instruction for Facilities and Elements in instances where the nomenclature of Facilities or Elements is in alpha-numeric format (~~e.g. (for example)~~) if an entity designated a circuit breaker "One two(12)Bravo" (12B). ~~One two Bravo~~ would need alpha-numeric clarifiers if used in an oral Operating Instruction)
  - 1.6.** When issuing an oral two party, person-to-person Operating Instruction, require the issuer to:
    - Confirm that the response from the recipient of the Operating Instruction was accurate, or
    - Reissue the Operating Instruction to resolve a misunderstanding.
  - 1.7.** When receiving an oral two party, person-to-person Operating Instruction, require the recipient to repeat, restate, rephrase, or recapitulate the Operating Instruction.
  - 1.8.** When issuing an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time

period (e.g. ~~for example~~) an all call system), verbally or electronically confirm receipt from one or more receiving parties.

- 1.9. When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. ~~for example~~) an all call system), request clarification from the initiator if the communication is not understood.

**R2.** Each Distribution Provider and Generator Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, ~~have~~-documented communication protocols for Operating Instructions; ~~between Functional eEntities,~~ that ~~incorporate~~ include the following: [*Violation Risk Factor: ~~Low~~Medium*] [*Time Horizon: Long-term Planning* ]

- 2.1. When receiving an oral two party, person-to-person Operating Instruction, require the recipient to repeat, restate, rephrase, or recapitulate the Operating Instruction.
- 2.2. When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), request clarification from the initiator if the communication is not understood.

~~**R3.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R1 that: [*Violation Risk Factor: Medium*] [*Time Horizon: Operations Planning*]~~

~~3.1. Identifies potential deficiencies;~~

~~3.2. Assesses the deficiencies found;~~

~~3.3. Corrects the deficiencies, and~~

~~3.4. Evaluates the process based on deficiencies found external to Part 3.1 and either~~

~~• implements modifications to the process when the evaluation determines that modification of the process is necessary to address the deficiencies found; or~~

~~• demonstrates that no modification to the process is necessary to address the deficiencies.~~

~~**R4.** Each Distribution Provider and Generator Operator shall implement a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R2 that: [*Violation Risk Factor: Medium*] [*Time Horizon: Operations Planning*]~~

~~4.1. Identifies potential deficiencies;~~

~~4.2. Assesses the deficiencies found;~~

~~4.3. Corrects the deficiencies, and~~

~~4.4. Evaluates the process based on deficiencies found external to Part 4.1 and either~~

- ~~• implements modifications to the process when the evaluation determines that modification of the process is necessary to address the deficiencies found; or~~
- ~~• demonstrates that no modification to the process is necessary to address the deficiencies.~~

## C. Measures

~~**M1.** Evidence must include each applicable entity's documented communications protocols developed for Requirement R1 and must demonstrate that the protocols have been implemented in a manner that identifies, assesses and corrects deficiencies. Each Balancing Authority, Reliability Coordinator, and Transmission Operator, shall provide its documented communications protocols developed for Requirement R1.~~

~~**M1.M2.** Evidence must include each applicable entity's documented communications protocols developed for Requirement R2 and must demonstrate that the protocols have been implemented in a manner that identifies, assesses and corrects deficiencies.~~

~~**M2.** demonstrating Each Distribution Provider and Generator Operator, shall provide its documented communications protocols developed for Requirement R2.~~

~~**M3.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide the results of its process developed for Requirement R3.~~

~~**M4.** Each Distribution Provider and Generator Operator shall provide the results of its process developed for Requirement R4.~~

~~**M5.**~~

## D. Compliance

### 1. Compliance Monitoring Process

#### 1.1. Compliance Enforcement Authority

The Regional Entity shall serve as the Compliance Enforcement Authority (CEA) unless the applicable entity is owned, operated, or controlled by the Regional Entity. In such cases the ERO or a Regional Entity approved by FERC or other applicable governmental authority shall serve as the CEA.

#### 1.2. Data Retention

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each Transmission Operator, Balancing Authority, Reliability Coordinator, Generator Operator, and Distribution Provider shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement

Authority to retain specific evidence for a longer period of time as part of an investigation:

Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall retain evidence of its manner that identifies, assesses and corrects deficiencies for Requirement ~~R3-R1~~ Measure ~~M3-M1~~ for the most recent 90 days.

Each Distribution Provider and Generator Operator shall retain evidence of its manner that identifies, assesses and corrects deficiencies for~~for~~ Requirement ~~R4-R2~~ Measure ~~M4-M2~~ for the most recent 90 days.

If a Transmission Operator, Balancing Authority, Reliability Coordinator, Generator Operator or Distribution Provider is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

### **Compliance Monitoring and Assessment Processes**

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

### **1.3. Additional Compliance Information**

None

COM-003-1 Operating Personnel Communications Protocols

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long Term Planning	<del>Low</del> Medium	The <del>responsible</del> <u>Responsible entity-Entity</u> did not include one (1) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols	The <u>Responsible Entity</u> <del>responsible entity</del> did not include two (2) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols	The <u>Responsible Entity</u> <del>responsible</del> <u>entity</u> did not include three (3) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols	The <u>Responsible Entity</u> <del>responsible entity</del> did not include four (4) or more of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols OR The <u>Responsible Entity</u> <del>responsible entity</del> did not have documented communication protocols as required in Requirement R1 OR <u>The Responsible Entity did not implement, in a manner that identifies, assesses and corrects deficiencies, their documented communication protocols as required in Requirement R1</u>

COM-003-1 Operating Personnel Communications Protocols

R2	Long Term Planning	<del>Low</del> <u>Med</u> <u>ium</u>	N/A	N/A	The <u>Responsible Entity responsible entity</u> did not include one (1) of the two (2) parts of Requirement R2, Parts 2.1 to 2.2 in their documented communication protocols	The <u>Responsible Entity responsible entity</u> did not include Parts 2.1 to 2.3-2 ( <del>3</del> ) of Requirement R2, in their documented communication protocols  OR  The responsible entity did not have documented communication protocols as required in Requirement R2  <u>OR</u>  <u>The Responsible Entity did not implement, in a manner that identifies, assesses and corrects deficiencies, their documented communication protocols as required in Requirement R2</u>
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COM-003-1 Operating Personnel Communications Protocols

R3	Operations Planning	Medium	N/A	N/A	N/A	<p><del>The Responsible Entity does not have a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R1;</del></p> <p><del>Or</del></p> <p><del>The Responsible Entity did not evaluate their process based on deficiencies found external to Part 3.1 to determine whether modification of the process is necessary;</del></p> <p><del>Or</del></p> <p><del>The Responsible Entity did not implement modifications to the process when the evaluation determined that modification of the process was necessary to address the deficiencies found;</del></p> <p><del>Or</del></p> <p><del>The Responsible Entity did not demonstrate that no modification to the process was necessary to address the deficiencies found external to Part 3.1.</del></p>
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COM-003-1 Operating Personnel Communications Protocols

R4	Operations Planning	Medium	N/A	N/A	N/A	<p>The Responsible Entity does not have a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R2;</p> <p>Or</p> <p>The Responsible Entity did not evaluate their process based on deficiencies found external to Part 4.1 to determine whether modification of the process is necessary;</p> <p>Or</p> <p>The Responsible Entity did not implement modifications to the process when the evaluation determined that modification of the process was necessary to address the deficiencies found;</p> <p>Or</p> <p>The Responsible Entity did not demonstrate that no modification to the process was necessary to address the deficiencies found external to Part 4.1.</p>
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**E. Regional Variances**

None.

**Version History**

Version	Date	Action	Change Tracking

## Implementation Plan

Project 2007-02 - Operating Personnel Communications Protocols

### Implementation Plan for COM-003-1 – Operating Personnel Communications Protocols Standard

#### **Approvals Required**

COM-003-1 – Operating Personnel Communications Protocols Standard

#### **Prerequisite Approvals**

None

#### **Revisions to Glossary**

The following term is proposed for addition to the NERC Glossary of Terms:

#### **Operating Instruction —**

Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.

#### **Applicable Entities**

Balancing Authority  
Distribution Provider  
Generator Operator  
Reliability Coordinator  
Transmission Operator

#### **Revisions or Retirements to Approved Standards**

Approved Requirement to be Retired	Proposed Replacement Requirement(s)
<p>COM-001-1.1 Requirement R4</p> <p>R4.Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of</p>	<p>COM-003-1 Requirement R1 Part 1.1</p> <p><b>R1.</b> Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions</p>

<p>the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations</p>	<p>between Functional Entities that include the following: [<i>Violation Risk Factor: Medium</i>] [<i>Time Horizon: Long-term Planning</i> ]</p> <p>1.1. Use of the English language when issuing an oral or written Operating Instruction between functional entities, unless another language is mandated by law or regulation.</p>
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***Conforming Changes to Other Standards***

None

***Effective Dates***

COM-003-1 shall become effective the first day of first calendar quarter, twelve calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter twelve calendar months from the date of Board of Trustee adoption.

COM-001-1.1 Requirement R4 shall expire midnight of the day immediately prior to the Effective Date of COM-001-2 in the particular Jurisdiction in which COM-001-2 is becoming effective.

## Implementation Plan

Project 2007-02 - Operating Personnel Communications Protocols

### Implementation Plan for COM-003-1 – Operating Personnel Communications Protocols Standard

#### **Approvals Required**

COM-003-1 – Operating Personnel Communications Protocols Standard

#### **Prerequisite Approvals**

None

#### **Revisions to Glossary**

The following term is proposed for addition to the NERC Glossary of Terms:

#### **Operating Instruction —**

Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.

~~Command from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.~~

#### **Applicable Entities**

Balancing Authority  
Distribution Provider  
Generator Operator  
Reliability Coordinator  
Transmission Operator

#### **Revisions or Retirements to Approved Standards**

Approved Requirement to be Retired	Proposed Replacement Requirement(s)
COM-001-1.1 Requirement R4 R4.Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and	COM-003-1 Requirement R1 Part 1.1 <b><u>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects</u></b>

<p>among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations</p>	<p><u>deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following: [Violation Risk Factor: <del>Low</del> Medium] [Time Horizon: Long-term Planning]</u></p> <p><del>R1.— Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented communications protocols for Operating Instructions that incorporate the following:</del></p> <p>1.1. Use of the English language when issuing an oral or written Operating Instruction between functional entities, unless another language is mandated by law or regulation. <del>Transmission Operators and Balancing Authorities may use an alternate language for internal operations.</del></p>
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**Conforming Changes to Other Standards**

None

**Effective Dates**

COM-003-1 shall become effective the first day of first calendar quarter, twelve calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter twelve calendar months from the date of Board of Trustee adoption.

COM-001-1.1 Requirement R4 shall expire midnight of the day immediately prior to the Effective Date of COM-001-2 in the particular Jurisdiction in which COM-001-2 is becoming effective.

# Project 2007-02 Operating Personnel Communications Protocols

Unofficial Comment Form for Standard COM-003-1  
Operating Personnel Communications Protocols

Please **DO NOT** use this form to submit comments. Please use the [electronic comment form](#) to submit comments on the proposed draft COM-003-1 Operating Personnel Communications Protocols standard. Comments must be submitted by 8 p.m. ET **December 13, 2012**.

If you have questions please contact Joseph Kriasiak at [Joseph.Kriasiak@nerc.net](mailto:Joseph.Kriasiak@nerc.net) or by telephone at 609-651-0903.

[http://www.nerc.com/filez/standards/Op\\_Comm\\_Protocol\\_Project\\_2007-02.html](http://www.nerc.com/filez/standards/Op_Comm_Protocol_Project_2007-02.html)

## Background Information

Effective communication is critical for real time operations. Failure to successfully communicate clearly can create misunderstandings resulting in improper operations increasing the potential for failure of the Bulk Electric System (BES).

The Standard Authorization Request (SAR) for this project was initiated on March 1, 2007 and approved by the Standards Committee on June 8, 2007. It established the scope of work to be done for Project 2007-02 Operating Personnel Communications Protocols (OPCP). The scope described in the SAR is to establish essential elements of communications protocols and communications paths such that operators and users of the North American BES will efficiently convey information and ensure mutual understanding. The August 2003 Blackout Report, Recommendation Number 26, calls for a tightening of communications protocols. FERC Order 693 paragraph 532 amplifies this need and applies it to all Operating Instructions. This proposed standard's goal is to ensure that effective communication is practiced and delivered in clear language and standardized format via pre-established communications paths among pre-identified operating entities.

The SAR indicated that references to communication protocols in other NERC Reliability Standards may be moved to this new standard. The SAR instructed the standard drafting team to consider incorporating the use of Alert Level Guidelines and three-part communications in developing this new standard to achieve high level consistency across regions. The OPCS Standards Drafting Team (SDT) believes the Alert Level Guidelines, while valuable, belong in a separate standard and has petitioned the Standards Committee to approve the transfer to another standard or to start a separate project.

The upgrade of communication system hardware where appropriate is not included in this project (it is included in NERC Project 2007-08 Emergency Operations).

The standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators (GOPs), and Distribution Providers (DPs). These requirements ensure that communications include essential elements such that information is efficiently conveyed and mutually understood for communicating changes to real-time operating conditions and responding to directives, notifications, directions, instructions, orders, or other reliability related operating information.

The Purpose statement of COM 003-1 states: “To provide system operators uniform communications protocols that reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of BES.”

1. **New NERC Glossary terms:** The SDT has changed the definition of “Operating Instructions” proposed in the Standard version 3 and added *additional language to clarify its meaning and intent*.

Operating *Instructions* differentiates the broad class of communications that deal with changing or altering the state of the BES from general discussions of options or alternatives. Changes to the BES operating state with unclear communications create increased opportunities for events that could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures.

This term is proposed for addition to the NERC Glossary to establish meaning and usage within the electricity industry.

2. **R3 and R4 are eliminated, there is proposed new language for R1 and R2:** *“Implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”* The OPCP SDT is proposing this language change because of strong industry comment requesting it, because it is consistent with language in other control based standards and because it conveys the same approach to identifying, assessing and correcting deficiencies. The SDT would also note the reference to *“for Operating Instructions between Functional Entities”* for additional industry comment.
3. **Documented Communication Protocols:** The OPCP SDT has incorporated a requirement for an applicable entity to implement documented communication protocols that incorporate the following elements:
  - a) **English language:** Use of the English language when issuing an oral or written Operating Instruction between functional entities, unless another language is mandated by law or regulation.



- b) **24 hour clock R1 Part 1.2 and Time zone reference R1 Part 1.3:** Use the 24-hour clock format when referring to clock times when issuing an oral or written Operating Instruction.

Use of the time, the time zone where the action will occur and indication of whether the time is daylight saving time or standard time when issuing an oral or written Operating Instruction that refers to clock times between Functional Entities in different time zones.

The OPCP SDT proposed this change to address comments by industry while adhering to the recommendations of the August 14<sup>th</sup>, 2003 task force report.

- c) **Line and Equipment Identifiers:** Use of the name specified by the owner(s) for each Transmission interface Element or Transmission interface Facility when referring to a Transmission interface Element or a Transmission interface Facility (when issuing) in an oral or written Operating Instruction, unless another name is mutually agreed to by the Functional Entities.
- d) **Alpha-numeric clarifiers:** Use of alpha-numeric clarifiers when issuing an oral Operating Instruction for Facilities and Elements in instances where the nomenclature of Facilities or Elements are in alpha-numeric format (e.g. if an entity designated a circuit breaker “12B”, 12B – one two bravo – would need alpha-numeric clarifiers if used in an oral Operating Instruction).
- e) **Three-part Communication:**
- When issuing** an oral two party, person-to-person Operating Instruction, require the issuer to:
- Confirm that the response from the recipient of the Operating Instruction was accurate, or
  - Reissue the Operating Instruction to resolve a misunderstanding.
- When receiving** an oral two party, person-to-person Operating Instruction, require the recipient to repeat, restate, rephrase, or recapitulate the Operating Instruction.
- f) **One-way burst messaging system to multiple parties (all call):** When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), request clarification from the initiator if the communication is not understood.
- g) **Three-part Communication: For DPs and GOPs:** When receiving an oral two party, person-to-person Operating Instruction, require the recipient to repeat, restate, rephrase, or recapitulate the Operating Instruction.
- h) **One-way burst messaging system to multiple parties (all call): For DPs and GOPs:** When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), request clarification from the initiator if the communication is not understood.

4. **Violation Severity Level (VSL) and Violation Risk Factor (VRF) Changes from version three:** The OPCP SDT reviewed the VRFs and VSLs associated with R1, R2, and made changes to more closely conform to NERC and FERC guidelines.

**The SDT is proposing to retire Requirement R4** from COM-001 and incorporate it into Requirement R2 of this draft COM-003-1. Since Requirement R4 from COM-001-1 carries over essentially unchanged there is no specific question related to it in this Comment Form.

The choice of VRFs was made on the basis of the potential impact on the Bulk Electric System of a miscommunication during Operating Instructions. Requirements R1 and R2 are assigned a Medium Violation Risk due to their potential direct impact on BES reliability.

Time Horizons were selected to reflect the period within which the requirements applied. Requirements R1 and R2 must be implemented in long term planning operations and therefore were assigned a Time Horizon of Long Term Planning.

**Questions:**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a “check” mark in the appropriate boxes by double-clicking the gray areas.*

Please review the request for an interpretation, the associated standard, and the draft interpretation and then answer the following questions.

- 1. Do you agree with the changes made to the proposed definition “Operating Instruction” (now proposed as a “A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.”) to be added as a term for the NERC Glossary? If not, please explain in the comment area of the last question.**

Yes

No

Comments:

- 2. The SDT has proposed new language in COM-003-1, R1 and R2: “Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:” R3 and R4 from draft 3 are eliminated. Do you agree with these proposed requirement changes? If not, please explain in the comment area of the last question.**

Yes

No

Comments:

- 3. Do you agree with the VRFs and VSLs for Requirements R1 and R2?**

Yes

No

Comments:

- 4. Do you have any other comments or suggestions to improve the draft standard?**

Comments:

# Project 2007-02, COM-003-1 Operating Personnel Communication Protocols Rationale and Technical Justification

Justification for Requirements in Draft 4

## Rationale and Technical Justification

The Quality Review team for the draft 2 posting of COM-003-1 highly recommended that the OPCPSDT provide a justification or rationale document to aid reviewers in their examination of this draft of COM-003-1. The OPCPSDT agrees with the QR recommendation and has developed the following to support the standard and to help stakeholders understand the intent and scope of the standard. This version of the standard features a non traditional approach to standards that could alleviate concerns that surfaced in comments in drafts one, two and three.

### **Requirement R1**

Requirement R1 requires entities that can both issue and receive Operating Instructions to implement documented communication protocols in a manner that identifies, assesses, and corrects deficiencies. Because Operating Instructions affect Facilities and Elements of the Bulk Electric System, the communication of those Operating Instructions must be understood by all involved parties, especially when those communications occur between functional entities. An EPRI study reviewed nearly 400 switching mishaps by electric utilities and found that roughly 19% of errors (generally classified as loss of load, breach of safety, or equipment damage) were due to communication failures.<sup>1</sup> This was nearly identical to another study of dispatchers from 18 utilities representing nearly 2000 years of operating experience that found that 18% of the operators' errors were due to communication problems.<sup>2</sup> The necessary protocols include the use of the

<sup>1</sup> Beare, A., Taylor, J. *Field Operation Power Switching Safety*, WO2944-10, Electric Power Research Institute.

<sup>2</sup> Bilke, T., *Cause and prevention of human error in electric utility operations*, Colorado State University, 1998.

English language (from COM-001-1.1 R4), time formatting, mutually agreed nomenclature for Transmission interface Elements, alpha-numeric clarifiers, and three part communications.

### ***Requirement R2***

Requirement R2 requires entities that only receive Operating Instructions to implement documented communication protocols in a manner that identifies, assesses, and corrects deficiencies .

The two protocols (R2 , Parts 2.1 and 2.2) required are repeat back for three part communication and clarification if an “all call” communication is unclear.

### ***Rationale***

The SDT has incorporated within this standard a recognition that these requirements should not focus on individual instances of failure as a basis for violating the standard. In particular, the SDT has incorporated an approach to empower and enable the industry to identify, assess, and correct deficiencies in the implementation of certain requirements. The intent is to change the basis of a violation in those requirements so that they are not focused on whether there is a deficiency, but on identifying, assessing, and correcting deficiencies. It is presented in those requirements by modifying “implement” as follows:

Each ... shall implement, in a manner that identifies, assesses, and corrects deficiencies, . . .

The term *documented communication protocols* refers to a set of required protocols specific to the Functional Entity and the Functional Entities they must communicate with. This term does not imply any particular naming or approval structure beyond what is stated in the requirements. An entity should include as much as it believes necessary in their documented protocols, but they must address all of the applicable parts of the Requirement. The documented protocols themselves are not required to include the “. . . identifies, assesses, and corrects deficiencies, . . .” elements described in the preceding paragraph, as those aspects are related to the manner of implementation of the documented protocols and could be accomplished through other controls or compliance management activities.

## Project 2007-02: Operating Personnel Communication Protocols

Mapping Document

### 1. Mapping Document Showing Translation of COM-001-1, R4– Telecommunications into COM-003-1–Operating Personnel Communications Protocol

Requirement in Approved Standard	Translation to New Standard or Other Action	Comments
<p>R4.Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations</p>	<p>Moved into COM 003-1 R1.1</p>	<p>R1 Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following::</p> <p>1.1. Use of the English language when issuing an oral or written Operating Instruction between functional entities, unless another language is mandated by law or regulation.</p>

## Project 2007-02-02: Operating Personnel Communication Protocols

Mapping Document

### 1. Mapping Document Showing Translation of COM-001-1, R4– Telecommunications into COM-003-1–Operating Personnel Communications Protocol

Requirement in Approved Standard	Translation to New Standard or Other Action	Comments
<p>R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations</p>	<p>Moved into COM 003-1 R1.1</p>	<p>R1 <u>Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:</u> <del>Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, and Transmission Operator shall have documented communications protocols that incorporate the following:</del></p> <p>1.1. Use of the English language when issuing an oral or written Operating Instruction between functional entities, unless another language is mandated by law or regulation.</p>

Requirement in Approved Standard	Translation to New Standard or Other Action	Comments
		<del>Transmission Operators and Balancing Authorities may use an alternate language for internal operations.</del>



## **Project 2007-2 – Operating Personnel Communications Protocols**

### **VRF and VSL Justifications**

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in COM 003-1 Operating Personnel Communications Protocols.

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Operations Personnel Communications Protocol Standard Drafting Team applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSLs for the requirements under this project:

### **NERC Criteria - Violation Risk Factors**

#### **High Risk Requirement**

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a

cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

### **Medium Risk Requirement**

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

### **Lower Risk Requirement**

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

## **FERC Violation Risk Factor Guidelines**

### **Guideline (1) — Consistency with the Conclusions of the Final Blackout Report**

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief

**Guideline (2) — Consistency within a Reliability Standard**

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

**Guideline (3) — Consistency among Reliability Standards**

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

**Guideline (4) — Consistency with NERC's Definition of the Violation Risk Factor Level**

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC's definition of that risk level.

**Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation**

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC's VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC's Reliability Standards and implies that these requirements should be assigned a "High" VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

VRF for COM-003-1:

There are two requirements in COM-003-1, draft 4. Requirements R1 and R2 are assigned a “Medium” VRF. The elimination of draft 3 R3 and R4 and the language change to R1 and R2, which now reads: *“Each ..... shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following: ”*, warrants raising the VRF to “Medium” because it makes the requirement more than just administrative as it now features an evaluative process that would have a deeper impact on the reliability of the BES.

**NERC Criteria - Violation Severity Levels**

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
<p>Missing a minor element (or a small percentage) of the required performance The performance or product measured has significant value as it almost meets the full intent of the requirement.</p>	<p>Missing at least one significant element (or a moderate percentage) of the required performance. The performance or product measured still has significant value in meeting the intent of the requirement.</p>	<p>Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component. The performance or product has limited value in meeting the intent of the requirement.</p>	<p>Missing most or all of the significant elements (or a significant percentage) of the required performance. The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.</p>

## **FERC Order on Violation Severity Levels**

In its June 19, 2008 Order on Violation Severity Levels, FERC indicated it would use the following four guidelines for determining whether to approve VSLs:

### **Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance**

Compare the VSLs to any prior Levels of Non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when Levels of Non-compliance were used.

### **Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties**

Guideline 2a: A violation of a “binary” type requirement must be a “Severe” VSL.

Guideline 2b: Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

### **Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement**

VSLs should not expand on what is required in the requirement.

### **Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations**

. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

The drafting team will complete the following table, providing of analysis and justification for each VRF and VSL, for each requirement.

VRF and VSL Justifications – COM 003-1, R1	
<b>Proposed VRF</b>	Medium
NERC VRF Discussion	R1 is a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of this requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition. The VRF for this requirement is “Medium” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R1 falls under Recommendation 24 of the Blackout Report. The VRF for this requirement is “Medium” which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for the implementation of documented communication protocols that reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.

**VRF and VSL Justifications – COM 003-1, R1**

<p>FERC VRF G4 Discussion</p>	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b>                  Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “ Medium ” which is consistent with NERC guidelines</p>
<p>FERC VRF G5 Discussion</p>	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>                  COM-003-1, Requirement R1 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.</p>

**Proposed VSL**

<p><b>Lower</b></p>	<p><b>Moderate</b></p>	<p><b>High</b></p>	<p><b>Severe</b></p>
<p>The Responsible Entity did not include one (1) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols</p>	<p>The Responsible Entity did not include two (2) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols</p>	<p>The Responsible Entity did not include three (3) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols</p>	<p>The Responsible Entity did not include four (4) or more of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols</p> <p>OR</p> <p>The Responsible Entity did not have documented communication</p>



VRF and VSL Justifications – COM 003-1, R1

			<p>protocols as required in Requirement R1.  OR  The Responsible Entity did not implement, in a manner that identifies, assesses and corrects deficiencies, their documented communication protocols as required in Requirement R1</p>
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**VRF and VSL Justifications – COM 003-1, R1**

<b>VRF and VSL Justifications – COM 003-1, R1</b>	
<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of common communication protocols. If no communication protocols are used at all or if the number of required protocols falls below the listed thresholds, then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R1 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

**VRF and VSL Justifications – COM 003-1, R1**

VRF and VSL Justifications – COM 003-1, R1	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 003-1, R2

Proposed VRF	Low
NERC VRF Discussion	R2 is a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of this requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition. The VRF for this requirement is “Medium” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R2 falls under Recommendation 24 of the Blackout Report. The VRF for this requirement is “Medium” which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for the implementation of documented communication protocols that reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines

**VRF and VSL Justifications – COM 003-1, R2**

FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>                  COM-003-1, Requirement R2 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.</p>		
Proposed VSL			
Lower	Moderate	High	Severe
N/A	N/A	The Responsible Entity did not include one (1) of the two (2) parts of Requirement R2, Parts 2.1 to 2.2 in their documented communication protocols	The Responsible Entity did not include Parts 2.1 to 2.2 (2) of Requirement R2, in their documented communication protocols  OR  The responsible entity did not have documented communication protocols as required in Requirement R2.  OR  The Responsible Entity did not implement, in a manner that identifies, assesses and corrects deficiencies, their documented communication protocols as

**VRF and VSL Justifications – COM 003-1, R2**

			required in Requirement R1
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**VRF and VSL Justifications – COM 003-1, R2**

<b>VRF and VSL Justifications – COM 003-1, R2</b>	
<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed two VSLs based on misapplication or absence of common communication protocols. If no communication protocols are used at all or if the number of required protocols falls below the listed thresholds, then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R2 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

**VRF and VSL Justifications – COM 003-1, R2**

VRF and VSL Justifications – COM 003-1, R2	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP



## **Project 2007-2 – Operating Personnel Communications Protocol**

### **VRF and VSL Justifications**

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in COM 003-1 Operating Personnel Communications Protocols.

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Operations Personnel Communications Protocol Standard Drafting Team applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSLs for the requirements under this project:

### **NERC Criteria - Violation Risk Factors**

#### **High Risk Requirement**

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a

cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

### **Medium Risk Requirement**

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

### **Lower Risk Requirement**

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

## **FERC Violation Risk Factor Guidelines**

### **Guideline (1) — Consistency with the Conclusions of the Final Blackout Report**

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief

#### **Guideline (2) — Consistency within a Reliability Standard**

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

#### **Guideline (3) — Consistency among Reliability Standards**

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

#### **Guideline (4) — Consistency with NERC's Definition of the Violation Risk Factor Level**

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC's definition of that risk level.

**Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation**

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC's VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC's Reliability Standards and implies that these requirements should be assigned a "High" VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

VRF for COM-003-1:

There are ~~three~~ two requirements in COM-003-1, draft 41. Requirements R1, and R2 are assigned a "Medium" VRF, and R3 were assigned a "Medium" VRF.

The elimination of draft 3 R3 and R4 and the language change to R1 and R2 which now reads: "Each ..... shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following: " may-warrants raising the VRF to "Medium" because it makes the requirement more than just administrative as it now features an evaluative process that would have a deeper impact on the reliability of the BES.

**NERC Criteria - Violation Severity Levels**

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple "degrees" of noncompliant performance and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
Missing a minor element (or a small percentage) of the required performance The performance or product measured has significant value as it almost meets the full intent of the requirement.	Missing at least one significant element (or a moderate percentage) of the required performance. The performance or product measured still has significant value in meeting the intent of the requirement.	Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component. The performance or product has limited value in meeting the intent of the requirement.	Missing most or all of the significant elements (or a significant percentage) of the required performance. The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.

## **FERC Order on Violation Severity Levels**

In its June 19, 2008 Order on Violation Severity Levels, FERC indicated it would use the following four guidelines for determining whether to approve VSLs:

### **Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance**

Compare the VSLs to any prior Levels of Non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when Levels of Non-compliance were used.

### **Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties**

Guideline 2a: A violation of a “binary” type requirement must be a “Severe” VSL.

Guideline 2b: Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

### **Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement**

VSLs should not expand on what is required in the requirement.

### **Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations**

. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

The drafting team will complete the following table, providing of analysis and justification for each VRF and VSL, for each requirement.

VRF and VSL Justifications – COM 003-1, R1	
Proposed VRF	<del>Low</del> Medium
NERC VRF Discussion	R1 is a requirement in a planning time frame that, if violated, <del>would not</del> could, under <del>the</del> emergency, abnormal, or restorative conditions anticipated by the preparations, <del>be expected to directly and</del> adversely affect the electrical state or capability of the bulk electric system, <del>or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of this requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.</del> The VRF for this requirement is “ <del>Medium</del> Low” which is consistent with NERC guidelines
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R1 falls under Recommendation 24 of the Blackout Report. The VRF for this requirement is “ <del>Medium</del> Low” which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for the <del>establishment</del> implementation of <del>documented</del> communication protocols that reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.

VRF and VSL Justifications – COM 003-1, R1

<p>FERC VRF G4 Discussion</p>	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b>                  Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “ <u>Medium</u> <del>Low</del>” which is consistent with NERC guidelines</p>
<p>FERC VRF G5 Discussion</p>	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>                  COM-003-1, Requirement R1 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.</p>

Proposed VSL

Lower	Moderate	High	Severe
<p><del>The Responsible Entity did not include one (1) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols</del> <del>The responsible entity did not include one (1) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols</del></p>	<p><del>The Responsible Entity did not include two (2) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols</del> <del>The responsible entity did not include two (2) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols</del></p>	<p><del>The Responsible Entity did not include three (3) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols</del> <del>The responsible entity did not include three (3) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented</del></p>	<p>The <u>Responsible Entity</u> <del>responsible entity</del> did not include four (4) or more of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols  OR  The <u>Responsible Entity</u> <del>responsible entity</del> did not have documented</p>



VRF and VSL Justifications – COM 003-1, R1

		<p><del>communication protocols</del></p>	<p>communication protocols as required in Requirement R1.  <u>OR</u>  <u>The Responsible Entity did not implement, in a manner that identifies, assesses and corrects deficiencies, their documented communication protocols as required in Requirement R1</u></p>
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**VRF and VSL Justifications – COM 003-1, R1**

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of common communication protocols. If no communication protocols are used at all or if the number of required protocols falls below the listed thresholds, then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R1 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

**VRF and VSL Justifications – COM 003-1, R1**

<b>VRF and VSL Justifications – COM 003-1, R1</b>	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 003-1, R2

Proposed VRF	<del>Low</del> <u>Medium</u>
NERC VRF Discussion	R2 is a requirement in a planning time frame that, if violated, <del>would not</del> could, under <del>the</del> emergency, abnormal, or restorative conditions anticipated by the preparations, <del>be expected to</del> <u>directly and</u> adversely affect the electrical state or capability of the bulk electric system, <u>or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of this requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.</u> The VRF for this requirement is " <del>Medium</del> <u>Low</u> " which is consistent with NERC guidelines
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R2 falls under Recommendation 24 of the Blackout Report. The VRF for this requirement is " <del>Medium</del> <u>Low</u> " which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for the <del>establishment</del> <u>implementation</u> of <u>documented</u> communication protocols that reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is " <del>Medium</del> <u>Low</u> " which is consistent with NERC guidelines

VRF and VSL Justifications – COM 003-1, R2

FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R2 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.		
Proposed VSL			
Lower	Moderate	High	Severe
N/A	N/A	The <u>Responsible Entity</u> <del>responsible entity</del> did not include one (1) of the two (2) parts of Requirement R2, Parts 2.1 to 2.2 in their documented communication protocols	The <u>Responsible Entity</u> <del>responsible entity</del> did not include Parts 2.1 to <del>2.3-2</del> <u>(32)</u> of Requirement R2, in their documented communication protocols  OR  The responsible entity did not have documented communication protocols as required in Requirement R2.  <u>OR</u> <u>The Responsible Entity did not implement, in a manner that identifies, assesses and corrects deficiencies, their documented</u>

VRF and VSL Justifications – COM 003-1, R2

			<a href="#"><u>communication protocols as required in Requirement R1</u></a>
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VRF and VSL Justifications – COM 003-1, R2

<b>VRF and VSL Justifications – COM 003-1, R2</b>	
<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed <del>four</del><u>two</u> VSLs based on misapplication or absence of common communication protocols. If no communication protocols are used at all or if the number of required protocols falls below the listed thresholds, then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R2 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

**VRF and VSL Justifications – COM 003-1, R2**

Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	<p>Non CIP</p>
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	<p>Non CIP</p>



<b><del>VRF and VSL Justifications – COM-003-1, R3</del></b>	
<b><del>Proposed VRF</del></b>	<del>Medium</del>
<del>NERC VRF Discussion</del>	<del>R3 is a requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines</del>
<del>FERC VRF G1 Discussion</del>	<del><b>Guideline 1 – Consistency w/ Blackout Report:</b> R3 falls under Recommendation 24 of the Blackout Report. The VRF for this requirement is “Medium” which is consistent with FERC guideline G1.</del>
<del>FERC VRF G2 Discussion</del>	<del><b>Guideline 2 – Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.</del>
<del>FERC VRF G3 Discussion</del>	<del><b>Guideline 3 – Consistency among Reliability Standards:</b> This requirement calls for use of formal three part communication, among other communication protocols. This requirement is analogous to R2 of COM-002-2, which describes a communication protocol required for operating personnel to use when given a directive. The VRF for this requirement (COM-002-2, R2) is “Medium” which is consistent with COM-003-1 R3 at a “Medium”. The SDT considers “Medium” as the proper assignment because it is consistent with NERC and FERC guidelines.</del>
<del>FERC VRF G4 Discussion</del>	<del><b>Guideline 4 – Consistency with NERC Definitions of VRFs:</b> Failure to utilize formal communication protocols could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines</del>
<del>FERC VRF G5 Discussion</del>	<del><b>Guideline 5 – Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R3 contains only one objective which is to implement a process for identifying</del>

**VRF and VSL Justifications — COM-003-1, R3**

~~deficiencies with adherence to the documented communication protocols. Since the requirement has only one objective, only one VRF was assigned.~~

**Proposed VSL**

Lower	Moderate	High	Severe
N/A	N/A	N/A	<p><del>The Responsible Entity does not have a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R1;</del></p> <p><del>Or</del></p> <p><del>The Responsible Entity did not evaluate their process based on deficiencies found external to Part 3.1 to determine whether modification of the process is necessary;</del></p> <p><del>Or</del></p> <p><del>The Responsible Entity did not implement modifications to the process when the evaluation</del></p>

~~VRF and VSL Justifications — COM-003-1, R3~~

			<p><del>determined that modification of the process was necessary to address the deficiencies found;</del></p> <p><del>Or</del></p> <p><del>The Responsible Entity did not demonstrate that no modification to the process was necessary to address the deficiencies found external to Part 3.1.</del></p>
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**VRF and VSL Justifications — COM-003-1, R3**

<p><b>FERC-VSL-G1</b>          Violation Severity Level          Assignments Should Not Have          the Unintended Consequence          of Lowering the Current Level          of Compliance</p>	<p>Since R3 represents a new approach that does not currently exist, the VSL does not lower the current level of compliance.</p>
<p><b>FERC-VSL-G2</b>          Violation Severity Level          Assignments Should Ensure          Uniformity and Consistency in          the Determination of Penalties          Guideline 2a: The Single          Violation Severity Level          Assignment Category for          "Binary" Requirements Is Not          Consistent          Guideline 2b: Violation Severity          Level Assignments that Contain          Ambiguous Language</p>	<p>Guideline 2a:          The VSL assignment for R3 is binary and Severe.</p> <p>Guideline 2b:          The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC-VSL-G3</b>          Violation Severity Level          Assignment Should Be          Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

**VRF and VSL Justifications — COM-003-1, R3**

Corresponding Requirement	
<p><b>FERC-VSL-G4</b>  <del>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</del></p>	<p><del>The VSL is based on a single violation and not cumulative violations</del></p>
<p><b>FERC-VSL-G5</b>  <del>Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</del></p>	<p>Non-CIP</p>
<p><b>FERC-VSL-G6</b>  <del>VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</del></p>	<p>Non-CIP</p>

<b><del>VRF and VSL Justifications – COM-003-1, R4</del></b>	
<b><del>Proposed VRF</del></b>	<del>Medium</del>
<del>NERC VRF Discussion</del>	<del>R4 is a requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines</del>
<del>FERC VRF G1 Discussion</del>	<del><b>Guideline 1 – Consistency w/ Blackout Report:</b> R4 falls under Recommendation 24 of the Blackout Report. The VRF for this requirement is “Medium” which is consistent with FERC guideline G1.</del>
<del>FERC VRF G2 Discussion</del>	<del><b>Guideline 2 – Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.</del>
<del>FERC VRF G3 Discussion</del>	<del><b>Guideline 3 – Consistency among Reliability Standards:</b> This requirement calls for use of formal three part communication, among other communication protocols. This requirement is analogous to R2 of COM-002-2, which describes a communication protocol required for operating personnel to use when given a directive. The VRF for this requirement (COM-002-2, R2) is “Medium” which is consistent with COM-003-1 R4 at a “Medium”. The SDT considers “Medium” as the proper assignment because it is consistent with NERC and FERC guidelines.</del>
<del>FERC VRF G4 Discussion</del>	<del><b>Guideline 4 – Consistency with NERC Definitions of VRFs:</b> Failure to utilize formal communication protocols could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines</del>
<del>FERC VRF G5 Discussion</del>	<del><b>Guideline 5 – Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R4 contains only one objective which is to implement a process for identifying</del>

<b>VRF and VSL Justifications — COM-003-1, R4</b>			
		deficiencies with adherence to the documented communication protocols. Since the requirement has only one objective, only one VRF was assigned.	
<b>Proposed VSL</b>			
<b>Lower</b>	<b>Moderate</b>	<b>High</b>	<b>Severe</b>
N/A	N/A	N/A	<p>The Responsible Entity does not have a process for identifying deficiencies with adherence to the documented communication protocols specified in Requirement R2;</p> <p>Or</p> <p>The Responsible Entity did not evaluate their process based on deficiencies found external to Part 4.1 to determine whether modification of the process is necessary;</p> <p>Or</p> <p>The Responsible Entity did not implement modifications to the process when the evaluation</p>

~~VRF and VSL Justifications — COM-003-1, R4~~

			<p><del>determined that modification of the process was necessary to address the deficiencies found;</del></p> <p><del>Or</del></p> <p><del>The Responsible Entity did not demonstrate that no modification to the process was necessary to address the deficiencies found external to Part 4.1.</del></p>
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**VRF and VSL Justifications — COM-003-1, R4**

<p><b>FERC-VSL-G1</b>          Violation Severity Level          Assignments Should Not Have          the Unintended Consequence          of Lowering the Current Level          of Compliance</p>	<p>Since R4 represents a new approach that does not currently exist, the VSL does not lower the current level of compliance.</p>
<p><b>FERC-VSL-G2</b>          Violation Severity Level          Assignments Should Ensure          Uniformity and Consistency in          the Determination of Penalties          Guideline 2a: The Single          Violation Severity Level          Assignment Category for          "Binary" Requirements Is Not          Consistent          Guideline 2b: Violation Severity          Level Assignments that Contain          Ambiguous Language</p>	<p>Guideline 2a:          The VSL assignment for R4 is binary and Severe.</p> <p>Guideline 2b:          The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC-VSL-G3</b>          Violation Severity Level          Assignment Should Be          Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

**VRF and VSL Justifications — COM-003-1, R4**

<b>VRF and VSL Justifications — COM-003-1, R4</b>	
<b>Corresponding Requirement</b>	
<p><b>FERC-VSL-G4</b>            Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>
<p><b>FERC-VSL-G5</b>            Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	<p>Non-CIP</p>
<p><b>FERC-VSL-G6</b>            VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	<p>Non-CIP</p>

# Standards Announcement

## Project 2007-02 Operating Personnel Communications Protocols

Successive Ballot and Non-binding Poll now open through Thursday, December 13, 2012

### Now Available

A successive ballot of COM-003-1 – **Operating Personnel Communication Protocols** and a non-binding poll of the associated Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs) is now open through **8 p.m. Eastern on Thursday, December 13, 2012.**

In response to comments received during the last comment period and other input, the drafting team has adopted many of the recommendations of commenters and incorporated them into draft 4 of COM-003-1, as summarized below:

- Combined Requirements R1 and R3, and R2 and R4 to emulate CIP version 5. The language calls for an applicable entity to “implement documented communication protocols in a manner that identifies, assesses and corrects deficiencies.....”
- Added additional language to clarify the definition of “Operating Instructions,” as commenters expressed concerns over the scope of the term.
- Clarified that R1 and R2 now apply to Operating Instructions between Functional Entities.

This version was drafted in conjunction with the development of the Reliability Standard Audit Worksheet (RSAW). Changes were made to the RSAW to reflect the changes in draft 4 of COM-003-1 and changes suggested by some commenters. The RSAW is posted for an informal comment period along with COM-003-1.

### **Instructions**

Members of the ballot pools associated with this project may log in and submit their vote for the Standard and opinion in the non-binding poll of the associated VRFs and VSLs by clicking [here](#).

### **Next Steps**

The ballot results will be announced and posted on the project page. The drafting team will consider all comments received during the formal comment period and, if needed, make revisions to the standard. If the comments do not show the need for significant revisions, the standard will proceed to a recirculation ballot.

## Background

The purpose of this project is to require that real-time system operators use standardized communication protocols during normal and emergency operations to enhance the clarity of communications, improve situational awareness, shorten response time and ultimately serve reliability. As requested in the SAR, in the development of this proposed standard, the drafting team reviewed communication protocols in other NERC standards and considered the use of alert level guidelines and three-part communications to achieve consistency across regions. The proposed standard is designed to ensure that reliability-related information is conveyed effectively, accurately, consistently and in a timely manner to ensure mutual understanding by all key parties, both during alerts and emergencies and during the communication of routine operating instructions.

There are two projects that include the modification of the COM family of standards in the scope of their SAR. This project, Project 2007-02 – Operating Personnel Communications Protocols, is concerned with communication protocols for normal and emergency operations. The other project, Project 2006-06 – Reliability Coordination, is concerned with ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, enforceable, and sufficient to maintain reliability of the Bulk Electric System.

The Project 2006-06 Reliability Coordination standard drafting team (RC SDT) has limited the scope of its modifications to those that address communication during emergency operations. The RC SDT has developed a new term, “Reliability Directive,” to specifically address those communications, and this term has been approved by the ballot pool. The proposed definition of Reliability Directive is “A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.” The RC SDT is proposing to require three-part communication for Reliability Directives, with a High Violation Risk Factor for those requirements.

Since Project 2007-02 – Operating Personnel Communications Protocols addresses communication protocols for normal *and* emergency operations, the drafting team has proposed a new term, “Operating Instruction,” to define the scope of communications to which the COM-003-1 protocols would apply. The proposed definition of Operating Instruction is:

*“Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.”*

The two standards complement each other. COM-003 establishes the practice of using communication protocols for all Operating Instructions, and provides for an entity to identify, assess and correct any deficiencies with that practice. COM-002 is focused on communications during emergency situations.

Additional information is available on the [project page](#).

### **Standards Process**

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

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Standards Process Administrator, at [wendy.muller@nerc.net](mailto:wendy.muller@nerc.net) or at 404-446-2560.*

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# Standards Announcement

## Project 2007-02 Operating Personnel Communications Protocols

**Formal Comment Period Now Open: November 14, 2012 – December 13, 2012**

**RSAW Posted for Industry Comments: November 14, 2012 – December 13, 2012**

**Upcoming:  
Successive Ballot and Non-binding Poll: December 4 – December 13, 2012**

### **Now Available**

A formal comment period for **COM-003-1 – Operating Personnel Communication Protocols** is open through **8 p.m. Eastern on Thursday, December 13, 2012.**

A successive ballot of COM-003-1 and a non-binding poll of the associated Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs) will be conducted **Tuesday, December 4, 2012 through 8 p.m. Eastern on Thursday, December 13, 2012.**

In response to comments received during the last comment period and other input, the drafting team has adopted many of the recommendations of commenters and incorporated them into draft 4 of COM-003-1, as summarized below:

- Combined Requirements R1 and R3, and R2 and R4 to emulate CIP version 5. The language calls for an applicable entity to “implement documented communication protocols in a manner that identifies, assesses and corrects deficiencies.....”
- Added additional language to clarify the definition of “Operating Instructions,” as commenters expressed concerns over the scope of the term.
- Clarified that R1 and R2 now apply to Operating Instructions between Functional Entities.

This version was drafted in conjunction with the development of the Reliability Standard Audit Worksheet (RSAW). Changes were made to the RSAW to reflect the changes in draft 4 of COM-003-1 and changes suggested by some commenters. The RSAW is posted for an informal comment period along with COM-003-1.

### **Instructions for Commenting**

A formal comment period on the draft standard is open through **8 p.m. Eastern on Thursday, December 13, 2012**. Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Wendy Muller at [wendy.muller@nerc.net](mailto:wendy.muller@nerc.net). An off-line, unofficial copy of the comment form is posted on the [project page](#).

A comment period on the draft RSAW is open through **8 p.m. Eastern on Thursday, December 13, 2012**. The draft RSAW is posted on the NERC Compliance Reliability Standard Audit Worksheet page. Please submit comments on the draft RSAW by using the RSAW feedback form on the [project page](#) and sending to: [RSAWfeedback@nerc.net](mailto:RSAWfeedback@nerc.net).

### **Next Steps**

A second successive ballot of COM-003-1 and a non-binding poll of the associated VRFs and VSLs will be conducted beginning on **Tuesday, December 4, 2012 through 8 p.m. Eastern on Thursday, December 13, 2012**.

### **Background**

The purpose of this project is to require that real-time system operators use standardized communication protocols during normal and emergency operations to enhance the clarity of communications, improve situational awareness, shorten response time and ultimately serve reliability. As requested in the SAR, in the development of this proposed standard, the drafting team reviewed communication protocols in other NERC standards and considered the use of alert level guidelines and three-part communications to achieve consistency across regions. The proposed standard is designed to ensure that reliability-related information is conveyed effectively, accurately, consistently and in a timely manner to ensure mutual understanding by all key parties, both during alerts and emergencies and during the communication of routine operating instructions.

There are two projects that include the modification of the COM family of standards in the scope of their SAR. This project, Project 2007-02 – Operating Personnel Communications Protocols, is concerned with communication protocols for normal and emergency operations. The other project, Project 2006-06 – Reliability Coordination, is concerned with ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, enforceable, and sufficient to maintain reliability of the Bulk Electric System.

The Project 2006-06 Reliability Coordination drafting team (RC SDT) has limited the scope of its modifications to those that address communication during emergency operations. The RC SDT has developed a new term, “Reliability Directive,” to specifically address those communications, and this term has been approved by the ballot pool. The proposed definition of Reliability Directive is “A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.” The

RC SDT is proposing to require three-part communication for Reliability Directives, with a High Violation Risk Factor for those requirements.

Since Project 2007-02 – Operating Personnel Communications Protocols addresses communication protocols for normal *and* emergency operations, the drafting team has proposed a new term, “Operating Instruction,” to define the scope of communications to which the COM-003-1 protocols would apply. The proposed definition of Operating Instruction is:

*“Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.”*

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# Standards Announcement

## Project 2007-02 Operating Personnel Communications Protocols

**Formal Comment Period Now Open: November 14, 2012 – December 13, 2012**

**RSAW Posted for Industry Comments: November 14, 2012 – December 13, 2012**

**Upcoming:  
Successive Ballot and Non-binding Poll: December 4 – December 13, 2012**

### **Now Available**

A formal comment period for **COM-003-1 – Operating Personnel Communication Protocols** is open through **8 p.m. Eastern on Thursday, December 13, 2012.**

A successive ballot of COM-003-1 and a non-binding poll of the associated Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs) will be conducted **Tuesday, December 4, 2012 through 8 p.m. Eastern on Thursday, December 13, 2012.**

In response to comments received during the last comment period and other input, the drafting team has adopted many of the recommendations of commenters and incorporated them into draft 4 of COM-003-1, as summarized below:

- Combined Requirements R1 and R3, and R2 and R4 to emulate CIP version 5. The language calls for an applicable entity to “implement documented communication protocols in a manner that identifies, assesses and corrects deficiencies.....”
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A formal comment period on the draft standard is open through **8 p.m. Eastern on Thursday, December 13, 2012**. Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Wendy Muller at [wendy.muller@nerc.net](mailto:wendy.muller@nerc.net). An off-line, unofficial copy of the comment form is posted on the [project page](#).

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### Next Steps

A second successive ballot of COM-003-1 and a non-binding poll of the associated VRFs and VSLs will be conducted beginning on **Tuesday, December 4, 2012 through 8 p.m. Eastern on Thursday, December 13, 2012**.

### Background

The purpose of this project is to require that real-time system operators use standardized communication protocols during normal and emergency operations to enhance the clarity of communications, improve situational awareness, shorten response time and ultimately serve reliability. As requested in the SAR, in the development of this proposed standard, the drafting team reviewed communication protocols in other NERC standards and considered the use of alert level guidelines and three-part communications to achieve consistency across regions. The proposed standard is designed to ensure that reliability-related information is conveyed effectively, accurately, consistently and in a timely manner to ensure mutual understanding by all key parties, both during alerts and emergencies and during the communication of routine operating instructions.

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RC SDT is proposing to require three-part communication for Reliability Directives, with a High Violation Risk Factor for those requirements.

Since Project 2007-02 – Operating Personnel Communications Protocols addresses communication protocols for normal *and* emergency operations, the drafting team has proposed a new term, “Operating Instruction,” to define the scope of communications to which the COM-003-1 protocols would apply. The proposed definition of Operating Instruction is:

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The two standards complement each other. COM-003 establishes the practice of using communication protocols for all Operating Instructions, and provides for an entity to identify, assess and correct any deficiencies with that practice. COM-002 is focused on communications during emergency situations.

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# Standards Announcement

## Project 2007-02 Operating Personnel Communications Protocols

### Successive Ballot and Non-binding Poll Results

#### [Now Available](#)

A successive ballot for **COM-003-1 – Operating Personnel Communication Protocols** and a non-binding poll of the associated Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs) concluded at **8 p.m. Eastern on Thursday, December 13, 2012.**

Voting statistics are listed below, and the [Ballot Results](#) page provides a link to the detailed results.

Approval	Non-binding Poll Results
Quorum: 76.78%	Quorum: 77.22%
Approval: 53.57%	Supportive Opinions: 57.91%

#### Next Steps

The drafting team will consider all comments received during the formal comment period to determine the next steps.

#### Background

The purpose of this project is to require that real-time system operators use standardized communication protocols during normal and emergency operations to enhance the clarity of communications, improve situational awareness, shorten response time and ultimately serve reliability. As requested in the SAR, in the development of this proposed standard, the drafting team reviewed communication protocols in other NERC standards and considered the use of alert level guidelines and three-part communications to achieve consistency across regions. The proposed standard is designed to ensure that reliability-related information is conveyed effectively, accurately, consistently and in a timely manner to ensure mutual understanding by all key parties, both during alerts and emergencies and during the communication of routine operating instructions.

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User Name

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Log in

Register

- Ballot Pools
- Current Ballots
- Ballot Results
- Registered Ballot Body
- Proxy Voters

[Home Page](#)

Ballot Results	
<b>Ballot Name:</b>	Project 2007-02 Successive Ballot COM-003-1 November 2012_in
<b>Ballot Period:</b>	12/4/2012 - 12/13/2012
<b>Ballot Type:</b>	Initial
<b>Total # Votes:</b>	334
<b>Total Ballot Pool:</b>	435
<b>Quorum:</b>	<b>76.78 % The Quorum has been reached</b>
<b>Weighted Segment Vote:</b>	53.57 %
<b>Ballot Results:</b>	<b>The drafting team will review comments received.</b>

Summary of Ballot Results									
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Abstain # Votes	No Vote	
			# Votes	Fraction	# Votes	Fraction			
1 - Segment 1.	110	1	48	0.565	37	0.435	4	21	
2 - Segment 2.	11	0.7	2	0.2	5	0.5	1	3	
3 - Segment 3.	103	1	39	0.574	29	0.426	6	29	
4 - Segment 4.	39	1	15	0.6	10	0.4	3	11	
5 - Segment 5.	93	1	35	0.486	37	0.514	6	15	
6 - Segment 6.	53	1	21	0.525	19	0.475	3	10	
7 - Segment 7.	0	0	0	0	0	0	0	0	
8 - Segment 8.	12	0.5	2	0.2	3	0.3	0	7	
9 - Segment 9.	5	0.2	1	0.1	1	0.1	0	3	
10 - Segment 10.	9	0.6	5	0.5	1	0.1	1	2	
<b>Totals</b>	<b>435</b>	<b>7</b>	<b>168</b>	<b>3.75</b>	<b>142</b>	<b>3.25</b>	<b>24</b>	<b>101</b>	

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Ameren Services	Kirit Shah	Negative	
1	American Electric Power	Paul B. Johnson	Negative	
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman	Negative	
1	ATCO Electric	Glen Sutton	Affirmative	
1	Austin Energy	James Armke	Negative	
1	Avista Corp.	Scott J Kinney	Abstain	

1	Balancing Authority of Northern California	Kevin Smith	Affirmative
1	Baltimore Gas & Electric Company	Gregory S Miller	Abstain
1	BC Hydro and Power Authority	Patricia Robertson	Abstain
1	Beaches Energy Services	Joseph S Stonecipher	
1	Black Hills Corp	Eric Egge	
1	Bonneville Power Administration	Donald S. Watkins	Negative
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	
1	Bryan Texas Utilities	John C Fontenot	Affirmative
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Affirmative
1	Central Electric Power Cooperative	Michael B Bax	Negative
1	City of Pasadena	Marco A Sustaita	Affirmative
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative
1	City Utilities of Springfield, Missouri	Jeff Knottek	
1	City Water, Light & Power of Springfield	Shaun Anders	Negative
1	Clark Public Utilities	Jack Stamper	Affirmative
1	Cleco Power LLC	Danny McDaniel	Negative
1	Colorado Springs Utilities	Paul Morland	Negative
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative
1	Consumers Power Inc.	Stuart Sloan	
1	CPS Energy	Richard Castrejana	
1	Dairyland Power Coop.	Robert W. Roddy	Negative
1	Dayton Power & Light Co.	Hertzel Shamash	Negative
1	Deseret Power	James Tucker	
1	Dominion Virginia Power	Michael S Crowley	Affirmative
1	Duke Energy Carolina	Douglas E. Hils	Negative
1	Empire District Electric Co.	Ralph F Meyer	
1	Entergy Services, Inc.	Edward J Davis	Abstain
1	FirstEnergy Corp.	William J Smith	Affirmative
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative
1	Florida Power & Light Co.	Mike O'Neil	
1	Gainesville Regional Utilities	Richard Bachmeier	Negative
1	Georgia Transmission Corporation	Jason Snodgrass	Negative
1	Great River Energy	Gordon Pietsch	Negative
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon	
1	Hydro One Networks, Inc.	Ajay Garg	Negative
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Affirmative
1	Idaho Power Company	Molly Devine	Affirmative
1	Imperial Irrigation District	Tino Zaragoza	Affirmative
1	International Transmission Company Holdings Corp	Michael Moltane	Negative
1	JEA	Ted Hobson	Affirmative
1	KAMO Electric Cooperative	Walter Kenyon	Negative
1	Kansas City Power & Light Co.	Michael Gammon	Negative
1	Keys Energy Services	Stanley T Rzad	
1	Lakeland Electric	Larry E Watt	Negative
1	Lee County Electric Cooperative	John W Delucca	Affirmative
1	LG&E Energy Transmission Services	Bradley C. Young	
1	Long Island Power Authority	Robert Ganley	Affirmative
1	Los Angeles Department of Water & Power	John Burnett	
1	Lower Colorado River Authority	Martyn Turner	
1	M & A Electric Power Cooperative	William Price	Negative
1	Manitoba Hydro	Joe D Petaski	Negative
1	MEAG Power	Danny Dees	Affirmative
1	MidAmerican Energy Co.	Terry Harbour	Affirmative
1	Minnesota Power, Inc.	Randi K. Nyholm	Negative
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Negative
1	National Grid USA	Michael Jones	Affirmative
1	Nebraska Public Power District	Cole C Brodine	Negative
1	New York Power Authority	Bruce Metruck	Affirmative
1	New York State Electric & Gas Corp.	Raymond P Kinney	Affirmative
1	Northeast Missouri Electric Power Cooperative	Kevin White	Negative
1	Northeast Utilities	David Boguslawski	Affirmative
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative
1	NorthWestern Energy	John Canavan	Negative
1	NStar Gas and Electric	John Robertson	
1	Ohio Valley Electric Corp.	Robert Matthey	Negative



1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	
1	Omaha Public Power District	Doug Peterchuck	Negative
1	Oncor Electric Delivery	Jen Fiegel	Negative
1	Orlando Utilities Commission	Brad Chase	Affirmative
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan	Affirmative
1	PacifiCorp	Ryan Millard	Negative
1	PECO Energy	Ronald Schloendorn	Affirmative
1	Platte River Power Authority	John C. Collins	Affirmative
1	Portland General Electric Co.	John T Walker	Affirmative
1	Potomac Electric Power Co.	David Thorne	Affirmative
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative
1	Public Service Company of New Mexico	Laurie Williams	Affirmative
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative
1	Public Utility District No. 2 of Grant County, Washington	Rod Noteboom	Affirmative
1	Puget Sound Energy, Inc.	Denise M Lietz	Affirmative
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative
1	Salt River Project	Robert Kondziolka	Affirmative
1	Santee Cooper	Terry L Blackwell	Affirmative
1	Seattle City Light	Pawel Krupa	Affirmative
1	Sho-Me Power Electric Cooperative	Denise Stevens	Negative
1	Sierra Pacific Power Co.	Rich Salgo	
1	Snohomish County PUD No. 1	Long T Duong	Affirmative
1	South California Edison Company	Steven Mavis	Affirmative
1	Southern Company Services, Inc.	Robert A. Schaffeld	Negative
1	Southern Illinois Power Coop.	William Hutchison	
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative
1	Tampa Electric Co.	Beth Young	
1	Tennessee Valley Authority	Larry G Akens	Negative
1	Trans Bay Cable LLC	Steven Powell	Affirmative
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative
1	Tucson Electric Power Co.	John Tolo	
1	United Illuminating Co.	Jonathan Appelbaum	Negative
1	Westar Energy	Allen Klassen	Affirmative
1	Western Area Power Administration	Brandy A Dunn	Affirmative
1	Xcel Energy, Inc.	Gregory L Pieper	
2	Alberta Electric System Operator	Mark B Thompson	
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain
2	California ISO	Rich Vine	Negative
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Negative
2	Independent Electricity System Operator	Barbara Constantinescu	Negative
2	ISO New England, Inc.	Kathleen Goodman	
2	Midwest ISO, Inc.	Marie Knox	Negative
2	New Brunswick System Operator	Alden Briggs	Negative
2	New York Independent System Operator	Gregory Campoli	Affirmative
2	PJM Interconnection, L.L.C.	stephanie monzon	Affirmative
2	Southwest Power Pool, Inc.	Charles H. Yeung	
3	Alabama Power Company	Richard J. Mandes	Negative
3	Alameda Municipal Power	Douglas Draeger	Affirmative
3	Ameren Services	Mark Peters	
3	APS	Steven Norris	Affirmative
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Negative
3	Atlantic City Electric Company	NICOLE BUCKMAN	Affirmative
3	Avista Corp.	Robert Lafferty	Abstain
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain
3	Blachly-Lane Electric Co-op	Bud Tracy	
3	Bonneville Power Administration	Rebecca Berdahl	Negative
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	
3	Central Electric Power Cooperative	Adam M Weber	Negative
3	Central Lincoln PUD	Steve Alexanderson	Affirmative
3	City of Austin dba Austin Energy	Andrew Gallo	Negative
3	City of Bartow, Florida	Matt Culverhouse	
3	City of Clewiston	Lynne Mila	
3	City of Farmington	Linda R Jacobson	Abstain

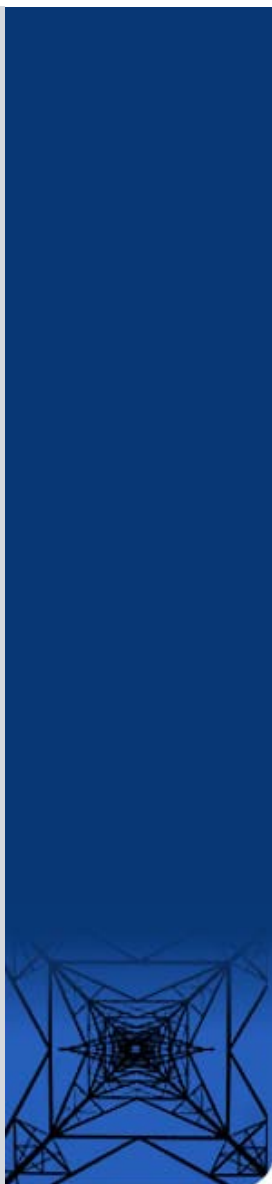
3	City of Garland	Ronnie C Hoeinghaus	Negative	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	
3	City of Lodi, California	Elizabeth Kirkley	Affirmative	
3	City of Palo Alto	Eric R Scott		
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey		
3	City Water, Light & Power of Springfield	Roger Powers		
3	Clearwater Power Co.	Dave Hagen		
3	Cleco Corporation	Michelle A Corley	Negative	
3	Colorado Springs Utilities	Charles Morgan	Negative	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy	Richard Blumenstock	Negative	
3	Consumers Power Inc.	Roman Gillen		
3	Coos-Curry Electric Cooperative, Inc	Roger Meader		
3	Cowlitz County PUD	Russell A Noble	Affirmative	
3	CPS Energy	Jose Escamilla		
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Dominion Resources, Inc.	Connie B Lowe	Affirmative	
3	Duke Energy Carolina	Henry Ernst-Jr		
3	Entergy	Joel T Plessinger		
3	Fall River Rural Electric Cooperative	Bryan Case		
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Negative	
3	Florida Power Corporation	Lee Schuster	Negative	
3	Georgia Power Company	Danny Lindsey	Negative	
3	Georgia System Operations Corporation	Scott McGough	Affirmative	
3	Great River Energy	Brian Glover	Negative	
3	Gulf Power Company	Paul C Caldwell	Negative	
3	Hydro One Networks, Inc.	David Kiguel	Negative	
3	KAMO Electric Cooperative	Theodore J Hilmes		
3	Kansas City Power & Light Co.	Charles Locke	Negative	
3	Kissimmee Utility Authority	Gregory D Woessner		
3	Lakeland Electric	Mace D Hunter		
3	Lane Electric Cooperative, Inc.	Rick Crinklaw		
3	Lincoln Electric System	Jason Fortik	Affirmative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski		
3	Louisville Gas and Electric Co.	Charles A. Freibert	Abstain	
3	M & A Electric Power Cooperative	Stephen D Pogue	Negative	
3	Manitoba Hydro	Greg C. Parent	Negative	
3	MidAmerican Energy Co.	Thomas C. Mielnik		
3	Mississippi Power	Jeff Franklin	Negative	
3	Modesto Irrigation District	Jack W Savage	Affirmative	
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Negative	
3	Nebraska Public Power District	Tony Eddleman	Negative	
3	New York Power Authority	David R Rivera	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann	Negative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby		
3	NW Electric Power Cooperative, Inc.	David McDowell	Negative	
3	Omaha Public Power District	Blaine R. Dinwiddie		
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Abstain	
3	Owensboro Municipal Utilities	Thomas T Lyons	Negative	
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	Pacific Northwest Generating Cooperative	Rick Paschall		
3	PacifiCorp	Dan Zollner	Negative	
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	PNM Resources	Michael Mertz	Affirmative	
3	Portland General Electric Co.	Thomas G Ward	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Progress Energy Carolinas	Sam Waters		
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Affirmative	
3	Puget Sound Energy, Inc.	Erin Apperson	Affirmative	

3	Raft River Rural Electric Cooperative	Heber Carpenter		
3	Rutherford EMC	Thomas M Haire	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salmon River Electric Cooperative	Ken Dizes	Affirmative	
3	Salt River Project	John T. Underhill	Affirmative	
3	Santee Cooper	James M Poston	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Negative	
3	South Carolina Electric & Gas Co.	Hubert C Young	Abstain	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L. Donahey		
3	Tennessee Valley Authority	Ian S Grant	Negative	
3	Tri-County Electric Cooperative, Inc.	Mike Swearingen	Affirmative	
3	Tri-State G & T Association, Inc.	Janelle Marriott		
3	Umatilla Electric Cooperative	Steve Eldrige		
3	Westar Energy	Bo Jones	Affirmative	
3	Wisconsin Electric Power Marketing	James R Keller	Negative	
3	Xcel Energy, Inc.	Michael Ibold	Negative	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Negative	
4	American Municipal Power	Kevin Koloini	Abstain	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Affirmative	
4	City of Austin dba Austin Energy	Reza Ebrahimian	Negative	
4	City of Clewiston	Kevin McCarthy		
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Negative	
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	
4	Consumers Energy	David Frank Ronk		
4	Cowlitz County PUD	Rick Syring	Affirmative	
4	Detroit Edison Company	Daniel Herring		
4	Flathead Electric Cooperative	Russ Schneider	Negative	
4	Florida Municipal Power Agency	Frank Gaffney	Negative	
4	Fort Pierce Utilities Authority	Cairo Vanegas	Negative	
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Negative	
4	Imperial Irrigation District	Diana U Torres		
4	Indiana Municipal Power Agency	Jack Alvey	Abstain	
4	LaGen	Richard Comeaux		
4	Madison Gas and Electric Co.	Joseph DePoorter	Negative	
4	Modesto Irrigation District	Spencer Tacke	Affirmative	
4	Northern California Power Agency	Tracy R Bibb		
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Oklahoma Municipal Power Authority	Ashley Stringer	Affirmative	
4	Old Dominion Electric Coop.	Mark Ringhausen	Affirmative	
4	Pacific Northwest Generating Cooperative	Aleka K Scott		
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean		
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	South Mississippi Electric Power Association	Steven McElhaney		
4	Southern Minnesota Municipal Power Agency	Richard L Koch		
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Turlock Irrigation District	Steven C Hill	Abstain	
4	West Oregon Electric Cooperative, Inc.	Marc M Farmer		
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative	
4	WPPI Energy	Todd Komplin	Negative	
5	AEP Service Corp.	Brock Ondayko	Negative	
5	AES Corporation	Leo Bernier	Affirmative	
5	Amerenue	Sam Dwyer	Negative	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Negative	
5	Avista Corp.	Edward F. Groce	Abstain	
5	BC Hydro and Power Authority	Clement Ma	Abstain	

5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	Affirmative
5	Bonneville Power Administration	Francis J. Halpin	Negative
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative
5	Calpine Corporation	Phillip Porter	
5	City and County of San Francisco	Daniel Mason	Affirmative
5	City of Austin dba Austin Energy	Jeanie Doty	Negative
5	City of Redding	Paul A. Cummings	Affirmative
5	City of Tallahassee	Karen Webb	Abstain
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative
5	Cleco Power	Stephanie Huffman	Negative
5	Cogentrix Energy, Inc.	Mike D Hirst	Negative
5	Colorado Springs Utilities	Jennifer Eckels	Negative
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Affirmative
5	Consumers Energy Company	David C Greyerbiehl	Negative
5	Cowlitz County PUD	Bob Essex	Affirmative
5	Dairyland Power Coop.	Tommy Drea	
5	Deseret Power	Philip B Tice Jr	Negative
5	Detroit Edison Company	Christy Wicke	Affirmative
5	Dominion Resources, Inc.	Mike Garton	Affirmative
5	Duke Energy	Dale Q Goodwine	Negative
5	Dynegy Inc.	Dan Roethemeyer	Negative
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	
5	Edison Mission Marketing & Trading Inc.	Brenda J Frazer	
5	Electric Power Supply Association	John R Cashin	
5	Essential Power, LLC	Patrick Brown	Negative
5	Exelon Nuclear	Michael Korchynsky	Affirmative
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative
5	Florida Municipal Power Agency	David Schumann	Negative
5	Great River Energy	Preston L Walsh	Negative
5	Hydro-Québec Production	Roger Dufresne	Affirmative
5	ICF International	Brent B Hebert	
5	Imperial Irrigation District	Marcela Y Caballero	Affirmative
5	JEA	John J Babik	Affirmative
5	Kansas City Power & Light Co.	Brett Holland	Negative
5	Kissimmee Utility Authority	Mike Blough	Negative
5	Lakeland Electric	James M Howard	
5	Liberty Electric Power LLC	Daniel Duff	Negative
5	Lincoln Electric System	Dennis Florom	Affirmative
5	Los Angeles Department of Water & Power	Kenneth Silver	
5	Luminant Generation Company LLC	Mike Laney	Affirmative
5	Manitoba Hydro	S N Fernando	Negative
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain
5	MEAG Power	Steven Grego	Affirmative
5	MidAmerican Energy Co.	Christopher Schneider	
5	Muscatine Power & Water	Mike Avesing	Negative
5	Nebraska Public Power District	Don Schmit	Negative
5	New York Power Authority	Wayne Sipperly	Affirmative
5	NextEra Energy	Allen D Schriver	Negative
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative
5	Northern Indiana Public Service Co.	William O. Thompson	Affirmative
5	Occidental Chemical	Michelle R DAntuono	Negative
5	Omaha Public Power District	Mahmood Z. Safi	Negative
5	Orlando Utilities Commission	Richard Kinas	
5	Pacific Gas and Electric Company	Richard J. Padilla	Affirmative
5	PacifiCorp	Sandra L. Shaffer	Negative
5	Platte River Power Authority	Roland Thiel	Affirmative
5	Portland General Electric Co.	Matt E. Jastram	
5	PowerSouth Energy Cooperative	Tim Hattaway	Negative
5	PPL Generation LLC	Annette M Bannon	Affirmative
5	Progress Energy Carolinas	Wayne Lewis	
5	PSEG Fossil LLC	Tim Kucey	Affirmative
5	Public Utility District No. 1 of Lewis County	Steven Gega	Abstain
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Affirmative

5	Puget Sound Energy, Inc.	Tom Flynn	Affirmative
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative
5	Salt River Project	William Alkema	
5	Santee Cooper	Lewis P Pierce	Affirmative
5	Seattle City Light	Michael J. Haynes	Affirmative
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative
5	South Carolina Electric & Gas Co.	Edward Magic	Negative
5	Southeastern Power Administration	Douglas Spencer	Affirmative
5	Southern California Edison Co.	Denise Yaffe	Negative
5	Southern Company Generation	William D Shultz	Negative
5	Tacoma Power	Chris Mattson	Affirmative
5	Tampa Electric Co.	RJames Rocha	Affirmative
5	Tenaska, Inc.	Scott M. Helyer	Abstain
5	Tennessee Valley Authority	David Thompson	Negative
5	TransAlta Corporation	Rebbekka McFadden	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Negative
5	U.S. Bureau of Reclamation	Martin Bauer	
5	Westar Energy	Bryan Taggart	Affirmative
5	Wisconsin Electric Power Co.	Linda Horn	Negative
5	WPPI Energy	Steven Leovy	Negative
5	Xcel Energy, Inc.	Liam Noailles	Negative
6	AEP Marketing	Edward P. Cox	Negative
6	Ameren Energy Marketing Co.	Jennifer Richardson	Negative
6	APS	Randy A. Young	Affirmative
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Negative
6	Bonneville Power Administration	Brenda S. Anderson	Negative
6	City of Austin dba Austin Energy	Lisa L Martin	Negative
6	City of Redding	Marvin Briggs	Affirmative
6	Cleco Power LLC	Robert Hirschak	Negative
6	Colorado Springs Utilities	Lisa C Rosintoski	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative
6	Constellation Energy Commodities Group	Donald Schopp	Affirmative
6	Discount Power, Inc.	David Feldman	
6	Dominion Resources, Inc.	Louis S. Slade	Affirmative
6	Duke Energy	Greg Cecil	Negative
6	Entergy Services, Inc.	Terri F Benoit	Abstain
6	FirstEnergy Solutions	Kevin Querry	Affirmative
6	Florida Municipal Power Agency	Richard L. Montgomery	Negative
6	Florida Municipal Power Pool	Thomas Washburn	
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative
6	Great River Energy	Donna Stephenson	Negative
6	Imperial Irrigation District	Cathy Bretz	Affirmative
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative
6	Lakeland Electric	Paul Shipps	Negative
6	Lincoln Electric System	Eric Ruskamp	Affirmative
6	Los Angeles Department of Water & Power	Brad Packer	Abstain
6	Luminant Energy	Brad Jones	
6	Manitoba Hydro	Daniel Prowse	Negative
6	MidAmerican Energy Co.	Dennis Kimm	Abstain
6	Modesto Irrigation District	James McFall	Affirmative
6	Muscatine Power & Water	John Stolley	Negative
6	New York Power Authority	Saul Rojas	Affirmative
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative
6	NRG Energy, Inc.	Alan Johnson	
6	Omaha Public Power District	David Ried	Negative
6	PacifiCorp	Scott L Smith	Negative
6	Platte River Power Authority	Carol Ballantine	Affirmative
6	Progress Energy	John T Sturgeon	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative
6	Public Utility District No. 1 of Chelan County	Hugh A. Owen	
6	Sacramento Municipal Utility District	Diane Enderby	Affirmative
6	Salt River Project	Steven J Hulet	Affirmative
6	Santee Cooper	Michael Brown	Affirmative
6	Seattle City Light	Dennis Sismaet	Affirmative
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative
6	Snohomish County PUD No. 1	William T Moojen	

6	South California Edison Company	Lujuanna Medina		
6	Southern Company Generation and Energy Marketing	John J. Ciza	Negative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Negative	
6	Westar Energy	Grant L Wilkerson	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F Lemmons	Negative	
8		Roger C Zaklukiewicz		
8		Edward C Stein		
8		James A Maenner		
8	APX	Michael Johnson		
8	INTELLIBIND	Kevin Conway		
8	JDRJC Associates	Jim Cyrulewski	Negative	
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Pacific Northwest Generating Cooperative	Margaret Ryan		
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon	Negative	
8	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman	Affirmative	
8	Volkman Consulting, Inc.	Terry Volkman	Negative	
9	California Energy Commission	William M Chamberlain		
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J. Barney	Negative	
9	Oregon Public Utility Commission	Jerome Murray		
9	Public Utilities Commission of Ohio	Klaus Lambeck		
10	Florida Reliability Coordinating Council	Linda Campbell	Affirmative	
10	Midwest Reliability Organization	William S Smith		
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Abstain	
10	SERC Reliability Corporation	Carter B. Edge		
10	Southwest Power Pool RE	Emily Pannel	Affirmative	
10	Texas Reliability Entity, Inc.	Donald G Jones	Negative	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Affirmative	



[Legal and Privacy](#)

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A New Jersey Nonprofit Corporation

# Non-binding Poll Results

Project 2007-02

Non-binding Ballot Results				
<b>Non-binding Poll Name:</b>	Project 2007-02 Non-binding Poll COM-003-1 November 2012_in			
<b>Poll Period:</b>	12/4/2012 - 12/13/2012			
<b>Total # Opinions:</b>	305			
<b>Total Ballot Pool:</b>	395			
<b>Summary Results:</b>	77.22% of those who registered to participate provided an opinion or an abstention; 57.91% of those who provided an opinion indicated support for the VRFs and VSLs.			
Individual Ballot Pool Results				
Segment	Organization	Member	Opinions	Comments
1	Ameren Services	Kirit Shah	Negative	
1	American Electric Power	Paul B. Johnson	Abstain	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman	Negative	
1	ATCO Electric	Glen Sutton	Affirmative	
1	Austin Energy	James Armke	Abstain	
1	Avista Corp.	Scott J Kinney	Abstain	
1	Balancing Authority of Northern California	Kevin Smith	Abstain	
1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher		
1	Black Hills Corp	Eric Egge		
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey		
1	Bryan Texas Utilities	John C Fontenot	Affirmative	
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Negative	
1	Central Electric Power Cooperative	Michael B Bax	Negative	
1	City of Pasadena	Marco A Sustaita	Affirmative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City Utilities of Springfield, Missouri	Jeff Knottek		
1	City Water, Light & Power of Springfield	Shaun Anders	Negative	
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Negative	
1	Colorado Springs Utilities	Paul Morland	Negative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Abstain	
1	CPS Energy	Richard Castrejana		
1	Dairyland Power Coop.	Robert W. Roddy	Negative	

1	Dayton Power & Light Co.	Hertzel Shamash	Negative	
1	Deseret Power	James Tucker		
1	Dominion Virginia Power	Michael S Crowley	Affirmative	
1	Duke Energy Carolina	Douglas E. Hills	Negative	
1	Empire District Electric Co.	Ralph F Meyer		
1	Entergy Services, Inc.	Edward J Davis		
1	FirstEnergy Corp.	William J Smith	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Negative	
1	Florida Power & Light Co.	Mike O'Neil		
1	Gainesville Regional Utilities	Richard Bachmeier	Negative	
1	Georgia Transmission Corporation	Jason Snodgrass	Negative	
1	Great River Energy	Gordon Pietsch	Negative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon		
1	Hydro One Networks, Inc.	Ajay Garg	Negative	
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Affirmative	
1	Idaho Power Company	Molly Devine	Affirmative	
1	Imperial Irrigation District	Tino Zaragoza	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Abstain	
1	JEA	Ted Hobson	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon	Negative	
1	Kansas City Power & Light Co.	Michael Gammon	Negative	
1	Keys Energy Services	Stanley T Rzad		
1	Lakeland Electric	Larry E Watt	Negative	
1	Lee County Electric Cooperative	John W Delucca	Affirmative	
1	LG&E Energy Transmission Services	Bradley C. Young		
1	Long Island Power Authority	Robert Ganley	Affirmative	
1	Los Angeles Department of Water & Power	John Burnett		
1	Lower Colorado River Authority	Martyn Turner		
1	M & A Electric Power Cooperative	William Price	Negative	
1	Manitoba Hydro	Joe D Petaski	Affirmative	
1	MEAG Power	Danny Dees	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Negative	
1	National Grid USA	Michael Jones	Affirmative	
1	Nebraska Public Power District	Cole C Brodine	Negative	
1	New York Power Authority	Bruce Metruck	Affirmative	
1	New York State Electric & Gas Corp.	Raymond P Kinney	Affirmative	
1	Northeast Missouri Electric Power Cooperative	Kevin White	Negative	
1	Northeast Utilities	David Boguslawski		
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Negative	
1	NStar Gas and Electric	John Robertson		
1	Ohio Valley Electric Corp.	Robert Matthey	Abstain	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber		



1	Omaha Public Power District	Doug Peterchuck	Negative	
1	Oncor Electric Delivery	Jen Fiegel	Negative	
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan	Affirmative	
1	PacifiCorp	Ryan Millard	Abstain	
1	PECO Energy	Ronald Schloendorn		
1	Platte River Power Authority	John C. Collins	Abstain	
1	Portland General Electric Co.	John T Walker	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	
1	Public Service Company of New Mexico	Laurie Williams	Affirmative	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Abstain	
1	Public Utility District No. 2 of Grant County, Washington	Rod Noteboom	Affirmative	
1	Puget Sound Energy, Inc.	Denise M Lietz	Affirmative	
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Abstain	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell	Affirmative	
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Sho-Me Power Electric Cooperative	Denise Stevens	Negative	
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	
1	South California Edison Company	Steven Mavis	Affirmative	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Negative	
1	Southern Illinois Power Coop.	William Hutchison		
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	
1	Tampa Electric Co.	Beth Young		
1	Tennessee Valley Authority	Larry G Akens	Abstain	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Affirmative	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Xcel Energy, Inc.	Gregory L Pieper		
2	Alberta Electric System Operator	Mark B Thompson		
2	BC Hydro	Venkataramkrishnan Vinnakota	Abstain	
2	California ISO	Rich Vine	Negative	
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Negative	
2	Independent Electricity System Operator	Barbara Constantinescu	Negative	
2	ISO New England, Inc.	Kathleen Goodman		
2	Midwest ISO, Inc.	Marie Knox	Negative	
2	New Brunswick System Operator	Alden Briggs	Abstain	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	stephanie monzon		

2	Southwest Power Pool, Inc.	Charles H. Yeung		
3	Alabama Power Company	Richard J. Mandes		
3	Alameda Municipal Power	Douglas Draeger		
3	Ameren Services	Mark Peters		
3	APS	Steven Norris	Affirmative	
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Negative	
3	Avista Corp.	Robert Lafferty	Abstain	
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Power Cooperative	Adam M Weber	Negative	
3	Central Lincoln PUD	Steve Alexanderson	Abstain	
3	City of Austin dba Austin Energy	Andrew Gallo	Affirmative	
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila		
3	City of Farmington	Linda R Jacobson	Abstain	
3	City of Garland	Ronnie C Hoeinghaus	Negative	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	
3	City of Lodi, California	Elizabeth Kirkley	Affirmative	
3	City of Palo Alto	Eric R Scott		
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey	Affirmative	
3	Cleco Corporation	Michelle A Corley	Negative	
3	Colorado Springs Utilities	Charles Morgan	Negative	
3	ComEd	Bruce Krawczyk		
3	Consolidated Edison Co. of New York	Peter T Yost	Abstain	
3	Consumers Energy	Richard Blumenstock	Negative	
3	Cowlitz County PUD	Russell A Noble	Affirmative	
3	CPS Energy	Jose Escamilla		
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Duke Energy Carolina	Henry Ernst-Jr		
3	Entergy	Joel T Plessinger		
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Negative	
3	Florida Power Corporation	Lee Schuster	Negative	
3	Georgia Power Company	Danny Lindsey	Negative	
3	Georgia System Operations Corporation	Scott McGough	Affirmative	
3	Great River Energy	Brian Glover	Negative	
3	Gulf Power Company	Paul C Caldwell	Negative	
3	Hydro One Networks, Inc.	David Kiguel	Negative	
3	KAMO Electric Cooperative	Theodore J Hilmes		
3	Kansas City Power & Light Co.	Charles Locke	Negative	
3	Kissimmee Utility Authority	Gregory D Woessner		
3	Lakeland Electric	Mace D Hunter		
3	Lincoln Electric System	Jason Fortik	Affirmative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Abstain	
3	Louisville Gas and Electric Co.	Charles A. Freibert		
3	M & A Electric Power Cooperative	Stephen D Pogue	Negative	

3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik		
3	Mississippi Power	Jeff Franklin	Negative	
3	Modesto Irrigation District	Jack W Savage	Affirmative	
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Negative	
3	Nebraska Public Power District	Tony Eddleman	Negative	
3	New York Power Authority	David R Rivera	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann	Negative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	NW Electric Power Cooperative, Inc.	David McDowell	Negative	
3	Orange and Rockland Utilities, Inc.	David Burke	Abstain	
3	Owensboro Municipal Utilities	Thomas T Lyons	Negative	
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	PacifiCorp	Dan Zollner	Abstain	
3	Platte River Power Authority	Terry L Baker	Abstain	
3	PNM Resources	Michael Mertz	Affirmative	
3	Portland General Electric Co.	Thomas G Ward	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Abstain	
3	Progress Energy Carolinas	Sam Waters		
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Abstain	
3	Puget Sound Energy, Inc.	Erin Apperson	Affirmative	
3	Rutherford EMC	Thomas M Haire	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Abstain	
3	Salmon River Electric Cooperative	Ken Dizes	Affirmative	
3	Salt River Project	John T. Underhill		
3	Santee Cooper	James M Poston	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Negative	
3	South Carolina Electric & Gas Co.	Hubert C Young	Abstain	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L. Donahey		
3	Tennessee Valley Authority	Ian S Grant	Abstain	
3	Tri-County Electric Cooperative, Inc.	Mike Swearingen	Affirmative	
3	Tri-State G & T Association, Inc.	Janelle Marriott		
3	Westar Energy	Bo Jones	Affirmative	
3	Wisconsin Electric Power Marketing	James R Keller		
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Negative	
4	American Municipal Power	Kevin Koloini	Abstain	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Abstain	
4	City of Austin dba Austin Energy	Reza Ebrahimian	Affirmative	
4	City of Clewiston	Kevin McCarthy		

4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Negative	
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	
4	Consumers Energy	David Frank Ronk		
4	Cowlitz County PUD	Rick Syring	Affirmative	
4	Detroit Edison Company	Daniel Herring		
4	Flathead Electric Cooperative	Russ Schneider	Negative	
4	Florida Municipal Power Agency	Frank Gaffney	Negative	
4	Fort Pierce Utilities Authority	Cairo Vanegas	Abstain	
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Imperial Irrigation District	Diana U Torres		
4	Indiana Municipal Power Agency	Jack Alvey	Abstain	
4	LaGen	Richard Comeaux		
4	Madison Gas and Electric Co.	Joseph DePoorter	Abstain	
4	Modesto Irrigation District	Spencer Tacke	Affirmative	
4	Northern California Power Agency	Tracy R Bibb		
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Oklahoma Municipal Power Authority	Ashley Stringer	Affirmative	
4	Old Dominion Electric Coop.	Mark Ringhausen	Affirmative	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean		
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	
4	Sacramento Municipal Utility District	Mike Ramirez	Abstain	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	South Mississippi Electric Power Association	Steven McElhaney		
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative	
4	WPPI Energy	Todd Komplin	Negative	
5	AEP Service Corp.	Brock Ondayko	Abstain	
5	AES Corporation	Leo Bernier	Affirmative	
5	Amerenue	Sam Dwyer	Negative	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit		
5	Avista Corp.	Edward F. Groce	Abstain	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla		
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative	
5	Calpine Corporation	Phillip Porter		
5	City and County of San Francisco	Daniel Mason	Abstain	
5	City of Austin dba Austin Energy	Jeanie Doty	Affirmative	
5	City of Redding	Paul A. Cummings	Affirmative	

5	City of Tallahassee	Karen Webb	Abstain	
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative	
5	Cleco Power	Stephanie Huffman	Negative	
5	Cogentrix Energy, Inc.	Mike D Hirst	Negative	
5	Colorado Springs Utilities	Jennifer Eckels	Negative	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Abstain	
5	Consumers Energy Company	David C Greyerbiehl	Negative	
5	Cowlitz County PUD	Bob Essex	Affirmative	
5	Dairyland Power Coop.	Tommy Drea		
5	Deseret Power	Philip B Tice Jr	Negative	
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Abstain	
5	Duke Energy	Dale Q Goodwine	Negative	
5	Dynegy Inc.	Dan Roethemeyer	Negative	
5	E.ON Climate & Renewables North America, LLC	Dana Showalter		
5	Edison Mission Marketing & Trading Inc.	Brenda J Frazer		
5	Electric Power Supply Association	John R Cashin		
5	Essential Power, LLC	Patrick Brown	Negative	
5	Exelon Nuclear	Michael Korchynsky		
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative	
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Negative	
5	Great River Energy	Preston L Walsh	Negative	
5	Hydro-Québec Production	Roger Dufresne	Affirmative	
5	Imperial Irrigation District	Marcela Y Caballero	Affirmative	
5	JEA	John J Babik	Affirmative	
5	Kansas City Power & Light Co.	Brett Holland	Negative	
5	Kissimmee Utility Authority	Mike Blough	Negative	
5	Lakeland Electric	James M Howard		
5	Liberty Electric Power LLC	Daniel Duff	Negative	
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver		
5	Luminant Generation Company LLC	Mike Laney	Affirmative	
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider		
5	Muscatine Power & Water	Mike Avesing	Negative	
5	Nebraska Public Power District	Don Schmit	Negative	
5	New York Power Authority	Wayne Sipperly	Affirmative	
5	NextEra Energy	Allen D Schriver	Negative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative	
5	Northern Indiana Public Service Co.	William O. Thompson	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Negative	

5	Omaha Public Power District	Mahmood Z. Safi	Negative	
5	Orlando Utilities Commission	Richard Kinas		
5	Pacific Gas and Electric Company	Richard J. Padilla	Affirmative	
5	PacifiCorp	Sandra L. Shaffer	Abstain	
5	Platte River Power Authority	Roland Thiel	Abstain	
5	Portland General Electric Co.	Matt E. Jastram		
5	PowerSouth Energy Cooperative	Tim Hattaway	Negative	
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	Progress Energy Carolinas	Wayne Lewis		
5	PSEG Fossil LLC	Tim Kucey	Abstain	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Abstain	
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Affirmative	
5	Puget Sound Energy, Inc.	Tom Flynn	Affirmative	
5	Sacramento Municipal Utility District	Bethany Hunter	Abstain	
5	Salt River Project	William Alkema		
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	South Carolina Electric & Gas Co.	Edward Magic		
5	Southeastern Power Administration	Douglas Spencer	Affirmative	
5	Southern California Edison Co.	Denise Yaffe	Negative	
5	Southern Company Generation	William D Shultz	Negative	
5	Tacoma Power	Chris Mattson	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Affirmative	
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Abstain	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Negative	
5	U.S. Bureau of Reclamation	Martin Bauer		
5	Wisconsin Electric Power Co.	Linda Horn		
5	WPPI Energy	Steven Leovy	Negative	
5	Xcel Energy, Inc.	Liam Noailles		
6	AEP Marketing	Edward P. Cox	Abstain	
6	Ameren Energy Marketing Co.	Jennifer Richardson	Negative	
6	APS	Randy A. Young	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Affirmative	
6	City of Redding	Marvin Briggs	Affirmative	
6	Cleco Power LLC	Robert Hirschak	Negative	
6	Colorado Springs Utilities	Lisa C Rosintoski		
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Abstain	
6	Duke Energy	Greg Cecil	Negative	
6	Entergy Services, Inc.	Terri F Benoit	Abstain	
6	FirstEnergy Solutions	Kevin Querry	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Negative	
6	Florida Municipal Power Pool	Thomas Washburn		

6	Florida Power & Light Co.	Silvia P. Mitchell	Negative	
6	Great River Energy	Donna Stephenson	Negative	
6	Imperial Irrigation District	Cathy Bretz	Affirmative	
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	
6	Lakeland Electric	Paul Shipps	Negative	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Los Angeles Department of Water & Power	Brad Packer	Abstain	
6	Luminant Energy	Brad Jones		
6	Manitoba Hydro	Daniel Prowse	Affirmative	
6	MidAmerican Energy Co.	Dennis Kimm	Abstain	
6	Modesto Irrigation District	James McFall	Affirmative	
6	Muscatine Power & Water	John Stolley	Negative	
6	New York Power Authority	Saul Rojas	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	NRG Energy, Inc.	Alan Johnson		
6	Omaha Public Power District	David Ried	Negative	
6	PacifiCorp	Scott L Smith	Abstain	
6	Platte River Power Authority	Carol Ballantine	Abstain	
6	Progress Energy	John T Sturgeon		
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Abstain	
6	Sacramento Municipal Utility District	Diane Enderby	Abstain	
6	Salt River Project	Steven J Hulet	Affirmative	
6	Santee Cooper	Michael Brown	Affirmative	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Snohomish County PUD No. 1	William T Moojen		
6	South California Edison Company	Lujuanna Medina		
6	Southern Company Generation and Energy Marketing	John J. Ciza	Negative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Abstain	
6	Westar Energy	Grant L Wilkerson	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
8		James A Maenner		
8		Roger C Zaklukiewicz		
8		Edward C Stein		
8	APX	Michael Johnson		
8	JDRJC Associates	Jim Cyrulewski	Negative	
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon	Abstain	
8	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman	Affirmative	
8	Volkman Consulting, Inc.	Terry Volkman	Negative	
9	California Energy Commission	William M Chamberlain		
9	Commonwealth of Massachusetts	Donald Nelson	Affirmative	

	Department of Public Utilities			
9	Public Utilities Commission of Ohio	Klaus Lambeck		
10	Florida Reliability Coordinating Council	Linda Campbell	Affirmative	
10	Midwest Reliability Organization	William S Smith		
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	
10	SERC Reliability Corporation	Carter B. Edge		
10	Southwest Power Pool RE	Emily Pennel	Negative	
10	Texas Reliability Entity, Inc.	Donald G Jones	Abstain	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Affirmative	



**Individual or group. (64 Responses)**

**Name (45 Responses)**

**Organization (45 Responses)**

**Group Name (19 Responses)**

**Lead Contact (19 Responses)**

**IF YOU WISH TO EXPRESS SUPPORT FOR ANOTHER ENTITY'S COMMENTS WITHOUT ENTERING ANY ADDITIONAL COMMENTS, YOU MAY DO SO HERE. (10 Responses)**

**Comments (64 Responses)**

**Question 1 (46 Responses)**

**Question 1 Comments (54 Responses)**

**Question 2 (47 Responses)**

**Question 2 Comments (54 Responses)**

**Question 3 (40 Responses)**

**Question 3 Comments (54 Responses)**

**Question 4 (0 Responses)**

**Question 4 Comments (54 Responses)**

Group
Southern Company
Antonio Grayson
No
The proposed definition can be improved by clarifying some of the language. First, a command is given in order to direct a recipient to take one of two actions - to either change or preserve the state, status, output or input of an Element or Facility. However, as drafted, it appears that there may be three responses: (i) to act; (ii) to change; or (iii) to preserve. Therefore, in order to avoid any ambiguity or confusion, Southern suggests the following change to the first sentence: "A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act, in order to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System." In addition, the last sentence is helpful to clarify that certain activities are not considered "commands" under this definition. However, this sentence may create ambiguity beyond this definition by stating that certain actions are not "commands". In fact, these actions may be "commands" in other contexts. Therefore, in order to not create ambiguity between definitions or standards, Southern suggests that this sentence should be re-worded to avoid any future ambiguity or confusion. "For purposes of this definition, the term "command" shall not include discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions." Lastly, the Operating Instruction definition does not place an eminent time frame on the action. A communication could take place with the action expected to take place days or weeks later. Three part communication in this instance should not be required.
No
Southern believes that the requirements should clearly list which Functional Entities may issue and receive Operating Instructions (See COM-002-3). As currently drafted, it is not clear what happens when one of the five Functional Entities listed in these two requirements give an Operating Instruction to an entity not listed. The 9 requirements in R1 remain too prescriptive. A more acceptable solution would be for R1 to require "a plan" and for that plan to either address those 9 requirements or to refer to the guideline document that was developed at NERC's direction. Furthermore, we continue to believe a prescriptive use of the word "include" should be removed. We would suggest using the word "consider" or "address." Southern suggests that R2 is not necessary because the issuer of an Operating Instruction is required per sub part 1.6 to confirm that the response from the recipient of the Operating Instruction was accurate, or reissue the Operating Instruction to resolve a misunderstanding. As such this standard should not be applicable to a DP or GOP. From a compliance perspective, the new language proposed for R1 and R2 is consistent with the manner in which internal

controls have been incorporated into Version 5 of the CIP Standards. While Southern believes that internal controls are an integral element of an effective internal compliance program, we are generally not in favor of incorporating internal controls into the NERC Reliability Standards on a requirement-by-requirement basis. Southern believes a more effective way to ensure that Registered Entities develop and implement effective internal controls is to address the issue holistically and provide guidance to the industry. This guidance may very well provide examples of internal controls on a requirement-by-requirement basis, but ultimately the make-up and implementation of internal controls should be decided by the Registered Entity. Note that the question incorrectly references R2 which includes the DP and GOP.

No

Southern disagrees with the explanation of why the VRF for both R1 and R2 were changed from "Low" to "Medium" and believes that these continue to be administrative requirements justifying a "Low" VRF.

Southern agrees with the SDT that each area should have a protocol that is uniform and clear and that increases reliability. Moreover, Southern agrees with the SDT that when a Balancing Authority, Reliability Coordinator or Transmission Operator operates in two different time zones it should establish in its documented communications protocol the applicable time zone (see, e.g., SDT Consideration of Comments dated November 2, 2012, pp 60-61). However, with regard to Requirement R1, subpart 1.3, Southern believes that the standard is too prescriptive when it requires the use of "the time zone where the action will occur". Southern operates across multiple time zones utilizing a common EMS system. This provides for a uniform and clear understanding for all functional entities. However, to require the use of the time zone in which the functional entity resides could require the use of instructions that require the use of different time zones. This would not increase reliability, but would increase the risk to reliability. Further, if the time zone (including whether daylight savings time or standard time is used) is defined in the communications protocol, the BA, RC or TOP should not be required to expressly state the time zone and indicate whether the time is daylight savings time or standard time when issuing an Operating Instruction. Southern utilizes a common EMS system and "Operating Time" (which addresses the applicable time zone and whether daylight savings time or standard time is used) for operational communications. This "Operating Time" is understood by the entities within the Southeastern RC area. Thus, this established protocol provides for a uniform and clear understanding for all functional entities. As such, Southern suggest that if entities have mutually agreed upon a protocol (e.g., an "Operating Time") and this operating time is defined in the documented communications protocols, the BA, RC or TOP should not be required to expressly state the time zone when issuing an Operating Instruction. Therefore, in order to remove any ambiguity, an unnecessary risk to reliability and to insure that the standard is consistent with the SDT's statements, we suggest the following language: "Use of a mutually agreed upon operating time, or in the absence of a mutually agreed upon operating time, use of the time, the time zone and indication of whether the time is daylight saving time or standard time when issuing an oral or written Operating Instruction that refers to clock times between Functional Entities in different time zones." In addition, Southern believes that the requirements under Requirement R1, subpart 1.5 are too prescriptive and may create an unnecessary burden on Balancing Authorities, Reliability Coordinators and Transmission Operators. Instead, it would be more appropriate to require that the protocol clearly address the format to be used when communicating oral Operating Instructions. In the event the issuer must reissue the Operating Instruction under subpart 1.6, at that point, if the Facility or Element is in alpha-numeric format as set forth in subpart 1.5 (i.e., "12B"), the issuer would then be obligated to say "one-two Bravo".

Individual

David Jendras

Ameren

No

(1) We request for the SDT to clarify the portion of the definition of Operating Instruction which reads "Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions". (2) We believe that an Operating Instruction should serve a reliability need. For example, instructions given that are based on economics, should not be included. To be absolutely clear, each Operating Instruction should

always be identified, by BA, RC, or TOP, that, "this is an Operating Instruction" when issuing such an instruction.

No

(1) We request that this be re-written to clarify what "implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols" means? What is required of an entity? Does the SDT mean the communication protocols or the manner that identifies assesses and corrects deficiencies? Can this be broken into two sentences? We would also note that implementing in a manner that identifies assesses and corrects deficiencies implies two requirements; implementation and deficiency correction. If that is required of entities for compliance in an RSAW or audit, the SDT should separate these two requirements in order to explicitly define what is necessary. (2) In addition we believe that the nine subsections in R1 are too prescriptive. The wording "that includes the following" should be changed to say ", that address the following".

No

(1) We believe that the VSLs for the requirement are too severe. We request that the VSL table for VRF #2, the Violation Severity Levels should read as follows: (a) Lower VSL - The Responsible Entity documentation protocol does not include one of the following in R2: a manner that identifies or assesses or corrects deficiencies for R2.1 and/or R2.2. (b) Moderate VSL - The Responsible Entity documentation protocol does not include two or more of the following in R2: a manner that identifies or assesses or corrects deficiencies for R2.1 and/or R2.2. (c) High VSL - The Responsible Entity documentation protocol does not include R2.1 or R2.2. (d) Severe VSL - The Responsible Entity does not have a documented communication protocol. (2) In addition, we disagree with the explanation of why the VRF for both R1 and R2 were changed from "Low" to "Medium" and believe that these continue to be administrative requirements justifying a "Low" VRF.

(1) The Responsible Entities addressed in R1 should be directed to state when giving an Operating Instruction (OI) to a GOP or DP in R2 whether or not a requested action would be deemed an OI. (a) The reason for this is that GOPs receiving OIs are not able to see the BES and therefore would not know if a call by the TOP, RC or BA would be considered an Operating Instruction. (b) If this is not stated a GOP or DP could consider all communications received from the RC, BA and TOP as Operating Instructions and this would create an undue burden on both RE's in R1 and R2. We do not believe this was the intent of the SDT or of this standard. (2) It is not clear from the proposed RSAW what will be audited and how it relates to the actual requirements; the RSAW states: "Review a sample of the entity's Operating Instructions to verify whether the entity is implementing its documented communication protocols". Are the Operating Instructions actually being audited? We are under the impression that the entities "identifying, assessing and correcting", was the requirement. We believe what is being audited is not clear between the Standard and the RSAW and the requirement should be re-written for clarity of intent.

Group

Northeast Power Coordinating Council

Guy Zito

No

The proposed definition as worded can be misconstrued to mean a command made by System Operator to a Reliability Coordinator, or to a Transmission Operator, or to a Balancing Authority. Propose to change the wording to the following: Operating Instruction —A command by a Reliability Coordinator System Operator, a Transmission Operator System Operator, or a Balancing Authority System Operator, where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.

Yes

Yes

Functional entity is capitalized throughout the Standard, yet functional entity is not a defined term in the NERC Glossary. Propose changing the wording in Requirement R1 to the following: R1. Each

Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented communication protocols that include identification, assessment, and correction of deficiencies for Operating Instructions between functional entities that include the following: [Violation Risk Factor: Medium [Time Horizon: Long-term Planning ] The Sub-requirements introduce too much detail into the Standard. This detail dictates "how" something is to be done, rather than "what" is to be done. Following are comments to be considered on the sub-requirements should they remain in the Standard. Propose changing the wording in Sub-requirement 1.1 to the following: 1.1. Use of the English language when issuing or responding to an oral or written Operating Instruction, unless another language is mandated by law or regulation or agreement. Propose changing the wording in Sub-requirement 1.3 to the following: 1.3. Use of the time, the time zone where the action will occur and indication of whether the time is daylight saving time or standard time when issuing an oral or written Operating Instruction that refers to clock times between functional entities in different time zones, unless time protocols are defined in written agreements between the functional entities. Regarding Sub-requirement 1.5, the use of alpha-numeric clarifiers should be no more than a best practice. In case of uncertainty, 3 part communication as specified in Sub-requirement 1.6 would catch any ambiguities. Propose changing the wording in Sub-requirement 1.8 to the following: 1.8. When issuing an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (for example an all call system), verbally or electronically confirm receipt or that communications paths were established to receive the message from one or more receiving parties. Regarding the Time Horizons for Requirements R1 and R2, they should be Real-time Operations since the communications are occurring in real time, and the implementation of the protocol is the intent of R1 and R2. Suggest that the Standard be further clarified so that the intended purpose is to ensure that an entity has implemented a communications protocol with various core attributes, such as three part communication. We believe that it is not the SDT's intent that an entity will be found out of compliance for instances when an operating instruction was given which did not conform to its implemented protocol. Compliance will only be assessed if the Protocol procedure itself was not formally implemented and not to individual violations of such procedure which will be handled by internal controls to track and address any deficiency. In the context of implementation, sufficient implementation as used in this Standard could be demonstrated by management approved protocol procedures issued to the appropriate individuals in the organization and documented training. The Standard is not envisioned to be a zero-defect Standard however, and unless entities and audit staff have clear understandings of what "implement" means there may be instances when an auditor may find non-compliance beyond the intent of the Standard's Purpose and the Reliability Assurance Initiative concept being brought forward with this Standard. Suggest clarification to the word implement as it is used in the Standard and what activities in the compliance area will ensure proper audit expectations are set.

Individual

Thad Ness

American Electric Power

No

While AEP would not argue against the definition of "Operating Instruction" as proposed, we object to its inclusion as we disagree with the concept of requiring three part communications for more routine operations. Our efforts in this regard should first be focused solely on Reliability Directives before expanding this work, and creating similar requirements for all other Operating Communications. Requiring three part communications for every scenario might be considered a best practice by some, but making it a mandatory practice for routine operations emphasizes the manner of communications rather than the operations themselves. In addition, requiring three part communication in such a broader scope could actually diminish the perceived urgency during more urgent situations where such communications are more appropriate. In any event, requiring three part communications for Reliability Directives will likely result in more widespread usage for more routine operating communications, without making it a requirement.

No

AEP disagrees with the concept of requiring three part communications for more routine operations, and as a result, also disagrees with requiring both that entities have documented communication

protocols, as well as implement a process for identifying deficiencies with adherence to the documented communication protocols specified.
No
AEP disagrees with the concept of requiring three part communications for more routine operations, and as a result, has no comment at this time on the proposed VRF's and VLS's.
AEP does not agree with the perceived necessity of this standard, but does support the overall concept of the drafting team's building controls into the standards as well as proposing RSAWs during the comment that perpetuate the ideas and concepts of the drafting team. As stated in the previous comment period, AEP believes that there should not be multiple project teams proposing concurrent changes to COM-001, COM-002, and COM-003. Unless there are overwhelming reasons for not doing so, these efforts should be consolidated and managed by a single project team. In addition, current efforts on COM-003 need to be co-located with the proposed changes to COM-002 within a single standard. Having multiple project teams proposing concurrent changes results in problems such as this, where a) changes are proposed to the same standard or b) similar changes are proposed to separate standards. AEP cannot support revisions on these matters until they are managed by a single project team.
Individual
Greg Froehling
Rayburn Country Electric Cooperative
No
I feel that an additional term is unnecessary. The defined term "Reliability Directive" should be sufficient to accomplish the goal.
No
I feel that this could lead to very inconsistent auditing on not only this standard but CIP version 5 as well. My thoughts on identification, assessment and correction of deficiencies may certainly not be that of the auditors thus leading to the potential for a NOPV. I suggest language to the affect "shall implement communication protocols in accordance with NERC guidelines for internal controls....."
No
The Responsible Entity did not implement, in a manner that identifies, assesses and corrects deficiencies, their documented communication protocols as required in Requirement R2 Suggest to allow for a less subjective audit environment. The Responsible Entity did not include methods for, identifying, assessing and correcting deficiencies, in their documented communication protocols as required in Requirement R2
Combine with COM-002 ASAP Really take a close look at how R2.2 is worded. State clearly the recipient is to call the sender back after the call if they did not understand. Require the sender of the blast call to issue contact information if questions arise. Blast calls do not fit Mcdonalds three part communication model so often used.. Blast calls are very efficient just that not a precision communication tool by any means..
Group
pacificorp
ryan millard
Yes
Yes
No
It is not clear to PacifiCorp why the VSLs are so much higher for R2 when R1 applies to Balancing Authorities, Reliability Coordinators, and Transmission Operators, and thus has a potentially broader application than R2. R2 applies to Distribution Providers and Generator Operators.
PacifiCorp does not feel that the requirements listed in R1.5 regarding the use of alpha-numeric clarifiers when issuing an oral Operating Instruction is warranted. The requirements listed in R1.6,

and R1.7 requiring the strict use of three-way communication should alleviate any possibility of miscommunication, which PacifiCorp understands to be the drafting team's intent in the development of separate Requirement R1.5. Also, implementing the use of alpha-numeric clarifiers poses additional risk due to the introduction of ambiguous language.

Group

Tennessee Valley Authority

DeWayne Scott

Agree

SERC OC Standards Review Group

Individual

Russ

Flathead Electric Cooperative, Inc.

Agree

Support previous comments submitted by Central Lincoln, do not believe the comments were adequately addressed as the SDT refused to incorporate language suggested for DPs with few BES assets.

Group

Associated Electric Cooperative, Inc. - JRO00088

David Dockery - NERC Reliability Compliance Coordinator

No

While AECI deeply appreciates and has carefully considered this SDT's latest effort to contain scope of this definition, we feel it still fails to appropriately balance the risk to the BES, against anticipated Industry compliance assurance costs as well as non-compliance risks. This is primarily due to an anticipated high-volume of very low BES impact Operating Instructions within our own operating environment.

Yes

AECI appreciates the SDT's willingness to move away from zero-defect language.

No

So long as DPs, GOs, small TOs and small BAs are within the scope of this Standard, and the scope of Operating Instruction does not necessarily impact BES reliability, any Severity or Risk assessment greater than Low, forces an Entity's risk of non-compliance with documentation far above actual risk to the Bulk Electric System. AECI cannot agree with such inequity.

AECI remains resolute that COM-002 provides a more appropriate balance between BES reliability risks associated with human-to-human communications within our industry, and industry costs to monitor for compliance with required communication practices.

Group

ACES Standards Collaborators

Ben Engelby

No

(1) We appreciate all of the efforts the drafting team has expended in developing this proposed standard. The drafting team has done an excellent job in balancing the various diverse opinions and interests. We believe the standard is moving in the right direction; however, we still believe there are additional needed improvements. Another round of commenting and balloting may be necessary to capture all stakeholder viewpoints. (2) The current definition of Operating Instruction, particularly "command from a System Operator" is too similar to a Reliability Directive. (3) We recommend the standard drafting team revise the SAR of COM-003-1 to retire the definition of Reliability Directive and COM-002-3. There is no better time to rewrite the standards than when they are in development. (4) There is no delineation between when COM-003-1 and COM-002-3 would apply, which could potentially subject registered entities to double jeopardy. Assume a switching order is an Operating Instruction; would those communications become a Reliability Directive if the switching order resulted

in an emergency or was part of a standing operating guide to resolve the emergency, or would it still be an Operating Instruction? There is still gray area in this standard that needs to be clarified. We appreciate the slides that were shared during the recent webinar; however, the words in the current definitions do not clearly state when an Operating Instruction ends and a Reliability Directive begins. (5) A "command" is a synonym of a directive, not an instruction. We recommend revising the definition to capture the proper intent of the standard. (6) We find the use of input of an Element odd in the Operating Instruction definition. We understand the output of an Element such as the MW output of a generator? However, we are not sure what is intended by the input of an Element? What would the input be on Element? For a generation unit, does the fuel supply constitute input? It would be unusual for a TOP, BA, or RC to issue an operating instruction regarding fuel. For what would be the input on a transformer, transmission line, circuit break, bus section, etc. that a TOP, RC or BA would issue an operating instruction? (7) The "expected to act" and "preserve the state, status, ..." parts of the definition conflict with one another. If an entity is preserving the state or status, action often is not required. For example, would an operating instruction ever be issued to maintain a circuit breaker in the closed position? No action is required in such a situation? When would the drafting team anticipate action to be required to maintain the state, status, output or input? Are these parts intended to cover anticipation by the BA, TOP or RC that the state, status, output or input may move? For instance, if a generator is expected to ramp up based on the unit commitment and dispatch plan but the BA, TOP, or RC determines that the units needs to maintain its current output. We think some explanation and/or examples in a guideline section would be helpful.

No

(1) We agree with the drafting team's decision to remove Requirements R3 and R4, as they were unnecessary. However, we still have concerns with the standard as our comments explain below. (2) We recommend that the SDT consider removing or revising the sub-parts of R1 and R2 to allow registered entities flexibility to define their own communications protocols based on internal policies and procedures. The registered entity should have the freedom to decide what elements are to be included in its communication protocols based on its system, location and configurations. A large entity may have more elements in their communication protocol than the 9 sub-parts, while a small cooperative may need less because of their impact on the BES. We would like the SDT to reconsider each sub-part and revise the requirements in such a way that allows more flexibility for smaller entities, while possibly requiring other registered functions, such as an RC to have more elements in their communication protocols. There is more discussion on each sub-part below. (3) R1, part 1.1, use of the English language. This Part either needs to be eliminated or restructured to place the burden only on those entities that are from areas of North America where English is not the predominant language. The amount of resources expended documenting compliance with this requirement simply is not commensurate with the reliability benefit. There have been audits conducted in which every piece of evidence was presented in English, all audit participants used English exclusively, and control room conversations witnessed by auditors were in English. Yet, when the time came to sign off on compliance with this requirement, auditors expected to find inclusion of a statement in procedures that the English language was not used. Please eliminate this unnecessary expenditure of resources by eliminating the requirement or only requiring those areas where English is not the predominant language to include this in their communication protocols. (4) R1, part 1.3, Use of time zone and Daylight Savings or Standard Time. Contrary to the statements in the response to comments this sub-part prevents the use of relative time, such as "perform an action in 5 minutes" or at the very least complicates it with superfluous information. Specifically, this requirement compels the use of the time zone and daylight savings times in all Operating Instructions. While its does not specifically exclude that RC, BA or TOP from stating that an action must be performed in 5 minutes, it would require the RC to include the time zone and whether it is Daylight Savings or Standard time. For example, the TOP would have to say, "Open breaker one in five minutes in the CST time zone." This does not make sense. (5) R1, part 1.4, Transmission interface Element or Facility. The language used in this sub-part is overly complex. Specifically, the statement "unless another name is mutually agreed by the Functional Entities" is problematic. If that is the case, the mutually-agreed upon name obviates the need for having the sub-part. Also, Project 2007-03 eliminated TOP-002 R18 which referred to the same concept as part 1.4, "uniform line identifiers when referring to transmission facilities." The reason the Real-time TOP SDT removed the language from the new standard was because the "requirement adds no reliability benefit. There has never been a documented case of the lack of uniform line identifiers contributing to a System reliability issue." To be consistent with other approved standards, we recommend striking this sub-part in its entirety. (6) R1, part 1.8 and 1.9,

One-way Burst Messaging. The drafting team should revise this sub-part to state that compliance with this sub-part is optional, depending on whether the entity utilizes burst messages. These sub-parts need additional information for clarity. Same comment for DP/GOP below.

No

(1) We disagree with the VRF classifications being medium. We ask the drafting team to clarify why they decided to raise the risk factor when the requirement still addresses the same activity. Further, with internal controls, this requirement should be low because the majority of deficiencies would not have an adverse impact on the reliability of the BES and would not result in a violation. It appears that the VRF was raised to medium because R3 and R4 were medium and now are incorporated into R1 and R2. We disagree with the justification that correcting deficiencies warrants a medium risk factor. This is illogical and argues that every requirement that includes the "assess, correct, identify" language should be medium. Further, it does not seem consistent with the next paragraph. (2) We disagree with the Time Horizons for R1 and R2. Implementing communications protocols are not long term planning, these activities are operations planning. The requirement is no longer a documentation requirement, this is an operations planning requirement. Furthermore, the communications that are governed by the document occur in the real-time operations time frame. Using the logic that is applied to identify long-term planning as the time frame means that every requirement that will be monitored via internal controls and subject to the "identifies, assesses and corrects" language will be long term planning. This makes no sense and is inconsistent with the approach of the CIP SDT. CIP standards have requirements that did not have the long-term planning horizon. CIP-003-5 R2 is one example. (3) There was a lot of discussion in the recent drafting team webinar about Regional auditors not finding a violation, but there needs to be clear guidelines describing when an auditor will find a PV. The VSLs currently describe a violation when a procedure is deficient, but does not clearly explain when a communication deficiency is not remediated. A deficient communication could result in no finding at all, depending on how the individual auditor interprets the situation. This level of subjectivity is too high; the SDT needs to revise the VSL table to reflect a more reasonable approach, perhaps by including more information and examples of situations that might be viewed as non-compliance (communication breakdown) but because of internal controls, there should be no finding of non-compliance. In the alternative, the SDT could develop a guidance document outlining when an auditor is to find a PV and include examples to ensure consistency. The RSAW does not provide any additional clarity. (4) In the webinar, there were several references to "systemic or chronic" communication deficiencies. The VSLs do not reference any types of trends, but that seems to be the focus of compliance. We suggest revising the VSLs to focus on broader issues, such as systemic deficiencies that remain unresolved. Furthermore, this would make the VSLs more consistent with the data retention section which focuses on retaining "evidence of its manner that identifies, assesses, and correct deficiencies."

(1) In the Background section of the standard, we would like the standard drafting team to provide more details on what "compliance management activities" include as stated in the last sentence of the section. We would like the team to provide examples of these activities for clarity. (2) We support the concept of internal controls that the SDT has proposed. We agree that finding a violation for each instance of deviation from the requirement is burdensome and unreasonable and evaluating internal controls is a more efficient use of resources. However, we are concerned about the consistent evaluation of internal controls. How is NERC planning to ensure that all Regional auditors consistently evaluate internal controls during compliance audits? Currently, there is too much room for auditor subjectivity, especially when evaluating whether a single communication was deficient. There are so many communications that could occur on a daily basis and there is no clear guidance when the Regional Entities will find or not find a possible violation in an audit. (3) In the webinar, SDT chair stated that a registered entity that catches a high percentage of deficiencies, then their process is working, but if the entity is only catching 50% then the entity needs to correct the process. There is currently no percentage or other guideline or metric to determine if an entity's process is sufficient. If this is the SDT's intent, please provide further detail. (4) We recommend the SDT provide additional information in the Rationale and Technical Justification document or in an application guidelines section of the standard to include a guideline to show how the Regional auditors would assess compliance with a control-based standard. It seems that the trend in both COM-003-1 and CIP v5 is to find the errors and fix them without the need to self-report. How are the Regions going to determine when a PV is to be issued? The Technical Justification and the RSAW do not provide enough information when a communication deficiency crosses the threshold of becoming a violation. How



does a registered entity know when to self-report? (5) We recommend adding more detail, perhaps including an application guidelines section as other risk-based standards, for acceptable remediation of deficient communications. What evidence is necessary that the registered entity identified, assessed, and corrected a deficiency with the communications protocol? The data retention section only requires the manner in which the entity identifies, assesses, and corrects to be documented. It does not require retention of any actual instances. We believe this is appropriate and that a few examples of corrections as supporting evidence may be warranted. However, there is no explanation in the standard that makes this clear. An application guideline would be useful in providing an explanation. Without these explanations, the internal controls used to remedy deficiencies could turn into another documentation exercise instead of focusing on effective communication. We recommend the SDT consider ways of satisfying remediation without creating an unnecessary administrative burden for maintaining evidence of compliance. (6) If the Regional auditor is to make recommendations to registered entities on how to improve the COM-003-1 internal controls, would the Regions allow an initial safe harbor to assess the entity's program? If Regional auditors find PVs on the initial audit, that practice would go against the spirit of self-correcting and would stifle the entity's actions to monitor, assess, and correct deficiencies. The SDT should consider this sort of initial assessment in the implementation plan. (7) The response to comments regarding combining COM-002 and COM-003 beyond the scope of the SAR. The comments also cited that the Standards Committee considered combining them. It is our understanding that the Standards Committee rejected SARs to consider combining the standard projects because they were not driven from within the standards drafting team. Scopes can be adjusted by submitting new SARs and SDTs have authority to submit new SARs. If the SDT agrees that combining the standards makes the most sense for reliability, please submit a SAR to combine the standards. (8) Thank you for the opportunity to comment.

Group

Arizona Public Service Company

Janet Smith, Regulatory Affairs Supervisor

Yes

Yes

Yes

AZPS has no other comments.

Individual

Randi Nyholm

Minnesota Power

No

Minnesota Power supports moving away from zero-defect Requirements, but as currently written the language "in a manner that identifies, assesses and corrects deficiencies" does not allow for the identification of deficiencies without the assessment of a severe severity level within the VSLs. We recommend that, at a minimum, the VSLs be modified to allow for this flexibility similar to what was done in the CIP Version 5 Standards.

No

The Standard does not state that switching is only required when issuing instructions for interconnected systems and not for the day to day switching on our system as was stated during the recent COM-003 webinar. Additionally, we do not support the use alpha numeric identifiers to solve a perceived problem that does not exist on our system.

Individual

andrew Z. Pusztai
American Transmission Company, LLC
Yes
Yes
Yes
ATC respectfully submits the following comment for SDT's consideration regarding Draft #4 of COM-003-1: (Ref. Redline for Requirement 1.3 below) 1.3. Use of the time, the time zone where the action will occur and indication of whether the time is daylight saving time or standard time wWhen issuing an oral or written Operating Instruction that refers to clock times between functional Functional entities Entities in different time zones, when referring to clock times include the time, the time zone where the action will occur and indicate whether the time is daylight saving time or standard time. ATC recommends Requirement 1.3 above be revised and/or rewritten as follows: 1.3. "Use of a mutually agreed, prevailing system time zone when issuing an oral or written Operating Instruction between Functional Entities in different time zones." Basis for the comment • The need for time conversion when Operating the BES, injects an opportunity for an error that could potentially cause unintended System configuration, or even an Adverse Reliability Impact. Protocols should be set to eliminate those negative opportunities.
Individual
Larry Watt
City of Lakeland
Agree
Florida Municipal Power Agency (FMPA)
Individual
Jim Cyrulewski
JDRJC Associates
Agree
Midwest ISO
Group
Imperial Irrigation District (IID)
Jesus Sammy Alcaraz
Yes
Yes
Yes
Revise the following sub-requirement. 1.4. Delete "name" and include...Uniform Line Identifier(s) specified by the owner(s) for each Transmission interface Element or Transmission interface Facility when referring to a Transmission interface Element or a Transmission interface Facility-in an oral or written Operating Instruction , unless another name is mutually agreed to by the Functional Entities.
Individual
Patrick Brown
Essential Power, LLC

1. The expression, "repeat, restate, rephrase, or recapitulate," in R. 1.7 and R2.1 would be clearer if shortened to, "repeat or summarize." 2. The revised standard is much improved by focusing on continuous improvement instead of making each communication imperfection a violation, but no guidance is provided as to how rigorous the improvement program must be to be deemed sufficient. M1 and M2 should have added at the end the statement, "Acceptable means of identifying, assessing and correcting deficiencies include the following: • Review of voice logs, for at least one hour per year for each person issuing commands or responses (as applicable) • Personal monitoring of communications, for at least one hour per year for each person issuing commands or responses (as applicable) • Annual refresher training, including a quiz on proper commands or responses, for each person issuing commands or responses (as applicable) (as applicable) 3. Failures of GO and DP operators to repeat or summarize Operating Instructions are easily detectable (R2.1); but it would not ordinarily be possible for a person monitoring COM-003 compliance to detect a lack of understanding accompanied by failure to request a clarification (R2.2), since the resultant silence on the part of the operator is the same reaction associated with clearly understanding the Operating Instruction. M2 should be shortened to, "Evidence must include each applicable entity's documented communications protocols, which must include a provision requiring the recipient of an operating instruction to seek clarification from the initiator in the event of an unclear instruction." 4. From the RSAW: "If the CEA finds in subsequent audits or other compliance monitoring activities that the same or similar deficiencies continue to occur after the entity was provided the feedback by the CEA, the CEA will seek to understand what changes the entity made based on prior recommendations. If the entity did not implement changes to identify, assess and correct deficiencies, the CEA may make a determination of possible non-compliance" The issue here is potential for disagreement on "deficiencies". There are some conversations between GOPs and TOPs which are market driven, but could be read by an auditor as an "operating instruction". Some adjustment to the definition of "operating instruction", or some adjustment to the requirement that an entity address the "recommendation" from the region, may be in order here.

Individual

John Falsey

Ineenergy LLC

Yes

Yes

Yes

Individual

Daniel Duff

Liberty Electric Power

No

This needs further work. As written, there is still potential for a TO to call a GOP to address a market concern, and trigger the standard. Discussions which are purely for market concerns are not properly part of the standards, but an auditor could read such conversations as "Operating Instructions". Suggest that there be a specific clause excluding such discussions from the definitions.

No

The revisions proposed are a significant positive step, and I thank the SDT for their work. However, there are still some issues with the proposed requirements. Requirement 2.2 states "When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), request clarification from the initiator if the communication is not understood.". This requirement cannot be audited as written, as there is no way to determine if a communication is understood by a particular

operator. Further, the concept of three-part is to allow the initiator to determine if the instruction is understood. Instructions disseminated across an All-Call are understood to be crafted in such a way as to avoid such misunderstandings. Suggest elimination of R 2.2, and suggest adding language to the RSAW that considers protocols for resolving misunderstandings as a mitigating factor in determining the sample size pulled for audit purposes. R1.8 as written would only require the issuing entity to confirm receipt from one entity. Receipt confirmation is not needed in a standard written to cover understanding communications, and the requirement should be eliminated.

No

A BA who excludes three-part communication requirements from their communication protocols is assessed a lower VSL. A GOP who does exactly the same thing is assessed a High VSL.

The need for this standard still has not been demonstrated, and will merely add paperwork and confusion due to the existence of COM-002, and the questions which will inevitably arise over which standard, or if any standard, covers any particular conversation. The SAR should be withdrawn and a new SAR requiring a communications protocol designed to "mitigate the possibility of misunderstandings during communications between entities" should be added.

Individual

Michael Falvo

Independent Electricity System Operator

No

The IESO does not have an opinion on whether or not the definition is proper; the IESO is opposed to having this term defined and added to the NERC Glossary. As indicated in our previous comments, the term does not need to be defined. For years, system operators deal with operating instructions on a daily if not minute basis. Having a defined term, and calling such communication as "Command" is unnecessary, and can confuse operators from what they understand to be the meaning of operating instructions. We appreciate the SDT's response to our previous comments, and its effort to add clarifying language by adding the second, qualifying sentence. In fact, the additional clarifying language may cause more confusion to the operators than the purpose it is intended to serve. We therefore continue to respectfully disagree with the need for this definition and the standard as a whole, in particularly the requirement on 3-part communication for operating instructions. We continue to disagree with the need for this standard on the basis that the industry-approved COM-002 together with the NERC OC's operating guide on operator communication already provide the necessary requirements and guideline to fill any potential reliability gaps that may arise due to operator communication. Requiring 3-part communication for routine operating instructions, despite the additional wording in R1 ("in a manner that identifies, assesses and corrects deficiencies") and provisions made in the RSAW, is still a zero defect requirement that would add undue burden to the operators, which is a potential cause of unreliable operations. We therefore continue to disagree with the need for this standard as it adds little to reliability over what COM-002 and the operating guide have already accomplished.

No

Notwithstanding our disagreement with the need for this standard, the phrase "in a manner that identifies, assesses and corrects deficiencies" is vague, not measurable and inconsistent with the results-based standard concept which emphasizes the inclusion of a performance or reliability outcome in the requirement. A more direct and clear requirement would be to simple require "implement documented communication protocol....". We appreciate the SDT's intent for adding this phrase, but it does little to ease the concerns of the commenters. Instead, the addition introduces an immeasurable phrase that may in fact make the requirement more ambiguous and unclear.

No

As expressed previously, we continue to respectfully disagree with this standard and therefore we continue to disagree with the VRFs and VSLs.

a) We appreciate the SDT's hard work and dedication to develop this standard in response to the SAR and the recent BoT directives. Unfortunately, the need for this standard has been overtaken by event (the definition of Reliability Directives and COM-002-3, and the OC's operating guide on operator communication). The BoT, unfortunately, is still under the perception that COM-003 is the answer to the potential reliability gap that was discussed when it approved the COM-002 R2 interpretation. The

two balloting results and the two sets of industry comments suggest that many in the industry share our view. Hence, we believe the industry should attempt to convince the BoT that the potential reliability gap has been duly addressed and therefore COM-003 is no longer needed. We understand the SDT has little to no option, we therefore suggest that the SDT present the results of this round of ballot, if it still fails to make the 2/3 approval rate, to the Standards Committee and ask for its permission to put a hold on further work until the BoT has heard the industry's concern and makes a policy decision on the way forward. Further revision to this standard and posting for industry commenting and balloting will only waist the SDT's effort and industry resource, without a fruitful outcome. b) Notwithstanding the above, the proposed implementation plan conflicts with Ontario regulatory practice respecting the effective date of the standard. It is suggested that this conflict be removed by appending to the implementation plan wording, after "applicable regulatory approval" in the Effective Dates Section (P. 2 of the Implementation Plan) and in Section A5 of the standard, to the following effect: ", or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities."

Group

Duke Energy

Greg Rowland

No

The revised definition still lacks clarity needed to distinguish Operating Instructions from Reliability Directives. The SDT revised definition of Operating Instruction is too wordy and adds significance by using the word "command" versus "communication" as is used in the definition of Reliability Directive. Including the phrase "preserve the state" also adds significance and could be interpreted as an Emergency and take on the meaning of a Reliability Directive. The definition should not include the second part regarding what is not considered an Operating Instruction. The definition of Operating Instruction should be patterned after the BOT approved definition of Reliability Directive, with the only difference being that Operating Instructions address normal system conditions and Reliability Directives address an Emergency or Adverse Reliability Impact. Suggested wording: "Operating Instruction — A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority, where the recipient responds to a request to take action by changing the status, output, or input of an Element or Facility of the Bulk Electric System under normal system conditions."

No

In Requirements R1 and R2, the word "include" should be changed to "address". This change will align the language of the requirements with the language of the RSAW, providing flexibility to entities in how their communications protocols will be structured. For example, on page 3 of the Comments Report, in reference to use of the 24-hour clock, the SDT states: "The SDT points out in this response that these protocols are to be used only when a specific clock time is cited. The SDT accepts relative time such as: " in the next 10 minutes, on the hour or half hour" as clear and unambiguous and not requiring the use of the 24 hour clock and time zone references." However it's not clear to us that R1.2 and R1.3 allow that flexibility.

No

Consistent with our comment to Question 2 above regarding changing the word "include" to "address" in Requirements R1 and R2, this change should also be made in the VSLs for R1 and R2, changing the word "include" to "address".

Individual

RoLynda Shumpert

South Carolina Electric and Gas

No

SCE&G's supports the SERC OC in the following response "We believe that the definition should indicate the timeframe in which the entity "is expected to act." We believe that this language is too wide and can be interpreted in many ways. Furthermore, we continue to believe that prescriptive

communications protocols are unnecessary for routine Operating Instructions. Many Operating Instructions, such as economic loading of resources, do not have a reliability impact to the BES and the entities should not be held accountable to the requirements of this standard."

No

SCE&G support the SERC OC in the following response" We believe that the requirements should clearly list which Functional Entities when the communications protocols should be utilized, for example, what happens when one of the five Functional Entities listed in these two requirements give an Operating Instruction to an entity not listed. Note that the question incorrectly references R2 which include the DP and GOP. Furthermore, while we agree with the concept of identifying, assessing, and correcting deficiencies, we continue to believe a prescriptive use of the word "include" should be removed. We would suggest using the word "consider" or "address."

No

SCE&G supports the SERC OC in the following response "We disagree with the explanation of why the VRF for both R1 and R2 were changed from "Low" to "Medium" and believe that these continue to be administrative requirements justifying a "Low" VRF."

SCE&G is concerned with similarities between Operating Instructions and Reliability Directives. It also appears that the language in the RSAWs would require an entity to keep a log of all Operating Instruction. This would be overly burdensome to the industry and is not included in the requirements.

Individual

Patricia Metro

National Rural Electric Cooperative Association (NRECA)

No

NRECA is concerned that the proposed definition of an "Operating Instruction" is too similar to the definition of a "Reliability Directive" specifically with the inclusion of "command from a System Operator".

No

NRECA agrees with the decision to remove R3 and R4 from COM-003 draft 4, but is concerned with the incorporation of the internal controls language in R1 and R2. These changes don't resolve the concerns provided in comments to the previous draft of the standard. Although internal controls are important, NRECA believes that before such language is added to standards guidance/criteria needs to be developed on how Regional Entities will consistently review internal controls during compliance audits. NRECA suggest removing the language "implement, in a manner that identifies, assesses and corrects deficiencies" until the Reliability Assurance Initiative (RAI) effort to change the compliance/enforcement process to be more focused on a risk-based model and the effectiveness of a registered entity's internal controls/compliance program is implemented.

Individual

Wryan Feil

Northeast Utilities

Agree

Northeast Power Coordinating Council Inc. (NPCC) 1040 Avenue of the Americas 10th Floor New York, NY 10018

Group

Dominion

Connie Lowe

Yes

Yes

Individual
Anthony Jablonski
ReliabilityFirst
Yes
Yes
a. ReliabilityFirst generally agrees with the language in R1 and R2, but believes the intent would be clarified if the structure of the words were shifted around. ReliabilityFirst recommends the following language for R1 for consideration (R2 would be similar): "Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement its documented communication protocols for Operating Instructions, in a manner that identifies, assesses, and corrects deficiencies, between Functional Entities that include the following:"
Yes
ReliabilityFirst abstains and offers the following additional comments for consideration: 1. Requirement R1 and R2 Time Horizons a. ReliabilityFirst believes the Time Horizons (Long-term Planning) for Requirement R1 and R2 are incorrect. Requirement R1 and R2 deal with implementing communication protocols for Operating Instructions which is more of a real time activity. Thus ReliabilityFirst recommends changing the Time Horizons to "Real-time Operations" or at a minimum "Same-day Operations" or "Operations Planning". 2. The term Functional Entity a. Since the term "Functional Entity" is used throughout the standard, ReliabilityFirst recommends adding the word "applicable" in front of it to help clarify that it is referring to the Functional Entities as outlined in the Applicability Section. Without this distinction, individuals may think this term is referring to all Functional Entities as outlined in the NERC Function Model.
Individual
Michelle R. D'Antuono
Occidental Energy Ventures Corp (OEVC)
Yes
OEVC believes that the clarifications that the drafting team has added to the definition of Operating Instruction are helpful. First they have eliminated ambiguity concerning which entities would issue such instructions – in a manner consistent with their function. In addition, we agree with the addition of the statement excluding those conversations which would not be considered an Operating Instruction. This allows us to differentiate between those communications which require action from those which are less consequential; improving the chances that the proper care is applied when reliability information is exchanged.
Yes
OEVC agrees that reliability is not best served by Compliance focus on the execution of every Operating Instruction in 100% accordance with the communications protocol documents. The attainment of perfection is always the ideal, but not realistic in any operating environment. Conversely, the establishment of high, but attainable, internal controls effectiveness goals is a proven method used in other industries to drive down process defects.
Yes
Since the execution of the internal controls process is part of COM-003-1's intent, OEVC believes it is appropriate that R1 and R2 be assigned a Medium VRF.
Although we believe that the latest version of COM-003-1 is ready for adoption by the NERC BOT, OEVC cannot approve the standard until the RSAW is also completed. In our view, the addition of the new risk-based language is the only reason that COM-003-1 is acceptable – but is incomplete without a fully vetted RSAW. There are still too many questions that remain about the audit process – and the success of the entire program hinges on its implementation.

Individual
Melissa Kurtz
US Army Corps of Engineers
Agree
MRO NSRF
Group
seattle city light
paul haase
Yes
No
<p>Seattle City Light commends the Standard Drafting Team on the changes to draft Standard COM-003-1, in particular the use of non-zero defect language that is the same as used in the CIP v5 Standards. Use of common language will help entities apply the new "identify, assess, and correct" approach consistently across Standards. Common language also will help ensure that regulators audit the new approach consistently. Seattle City Light is concerned, however, with the Standard Drafting Team's use of the term "Functional Entity" as establishing the bodies among which communications must meet the requirements of COM-003-1. Seattle has several objections. First, although "Functional Entity" is capitalized in the draft Standard, this term is not defined in the NERC Glossary of Terms. It appears the Standards Drafting Team may have used the term in error, because they were not aware it was not a Glossary-defined term during the COM-003-1 webinar held November 27, 2012. A second objection is that "Functional Entity" in this role does not add clarity to the Standard. "Functional Entity" is defined in the NERC Reliability Functional Model as "the term used in the Functional Model which applies to a class of entity that carries out the Tasks within a Function." This definition refers to other terms defined only with the Functional Model document ("Task," "Function"). It is not illuminating as to defining the bodies among which communications must meet COM-003-1. The third and strongest objection is that use of the term "Functional Entity" in requirements of the draft Standard is incorrect and inconsistent with the NERC Functional Model, and as such creates confusion about Standard obligations for entities registered for more than one function. The NERC Functional Mode Version 5 (November 30, 2009) explicitly does not require any particular organization or assignment of functional Tasks for any multi-function entity. Functional tasks exist undifferentiated across an entity as a whole, and the NERC Functional Model document states clearly that no further differentiation is expected, required, or implied. (See, for example, p. 7 "The Functional Model describes a functional entity envisioned to ensure that all of the Tasks related to its Function are performed. The Model, while using the term 'functional entity', is a guideline and cannot prescribe responsibility" and p.8 "The Model is independent of any particular organization or market structure.") Seattle City Light, for example, is a vertically integrated municipal utility registered for 11 functions: BA, DP, GO, GOP, LSE, PC, PSE, RP, TO, TOP, and TP. Registration is made without differentiation: no particular sub-organization within Seattle City Light is identified as performing BA tasks, as performing TOP tasks, and so on. The Model is simply that Seattle City Light or any other multi-function entity performs these Tasks as a unit. By contrast the draft Standard relies upon differentiation of Functions within an entity, so that it can be determined if a communication occurs between the Functional Entities covered by COM-003-1 or not. Such differentiation is outside the Model and introduces complexities and unintended consequences not envisioned by the Functional Model and the term "Functional Entity." The suggestion made by a member of the Standard Drafting Team during the November 27, 2012, webinar, that the nature of the communications would indicate if COM-003-1 applies or not (i.e., that an Operating Instruction from a System Operator to a Field Operator both working within the same vertically integrated entity could be presumed to be a communication from a TOP to a TO), is neither a sound nor clear basis to resolve the confusion introduced by the incorrect use of "Functional Entity" in the draft. Under such an approach an Operator of a multi-function entity has the extra burden of having to parse with limited or no guidance each communication as to applicability to COM-003-1. Such a burden does not promote timely communications nor reliable, consistent operations. Auditors and regulators assessing compliance with COM-003-1 will face the same confusion, and there is no assurance that different auditors and regulators from different regions will interpret communications the same way, even from</p>



one Operating Instruction to another. It is simply a misreading, tempting as it may be, to presume that Functional Entity Tasks are assigned with greater granularity than to an organization as a whole. To resolve the matter, Seattle City Light recommends simply that the term "Functional Entity" be deleted from within the Requirements of COM-003-1, with the end result that Operating Instructions will apply to BES Facilities and Elements regardless of entity involvement. The term "Functional Entity" is superfluous to the Standard. This suggestion involves changes to R1, R1.3, R1.4, and R2, as follows: R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions ... that include the following 1.3. Use of the time, the time zone where the action will occur and indication of whether the time is daylight saving time or standard time when issuing an oral or written Operating Instruction that refers to clock times ... in different time zones. 1.4. Use of the name specified by the owner(s) for each Transmission interface Element or Transmission interface Facility when referring to a Transmission interface Element or a Transmission interface Facility-in an oral or written Operating Instruction , unless another name is mutually agreed to ... . R2. Each Distribution Provider and Generator Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions ... that include the following... (where ... indicates removal of "between Functional Entities" language)

No

The term "Responsible Entity" is not defined within the NERC Glossary and should not be capitalized in the VSLs. It is a leftover term from earlier versions of the NERC Functional Model (see discussion in Version 5, footnote pp.7-8 regarding use of Functional Entity and Responsible Entity).

Group

Midwest Reliability Organization NERC Standards Review Forum

Joseph DePoorter

No

See last question for comments.

Yes

The NSRF agrees with the language "...shall implement, in a manner that identifies, assesses and corrects deficiencies,..." However, the NSRF has concerns on how CEA's will audit to this requirement. The NSRF requests the SDT to provide information or a guideline that would demonstrate how a Regional Entity would assess and the type of evidence a registered entity would be required to show to demonstrate compliance. Please provide guidance on this topic.

No

For the VSLs, the NSRF is seeking clarification how an auditor will assess the "...identifies, assess and corrects deficiencies..." The VSL is severe if any one of the elements is missing and the NSRF believes that further guidance is needed to understand how a CEA will assess compliance on the control elements of this standard. For example, when would a CEA find a PV for a process that identifies, assess and corrects, however a System Operator does not follow their operating communication protocols on given Operating Instruction. The time horizon - Long-term Planning is incorrect, suggest Real-time Operations or Same-Day Operations. System Operator instructions will pertain to Real-Time or near Real-Time operations.

The NSRF understands that the SDT has discussed the combining of COM-002-3 and COM-003-1 issue (and still unresolved) in the past however the NSRF recommends the standard drafting team amend the SAR of COM-003-1 to combine or withdraw Reliability Standard COM-002-3 protocols. Having two standards covering System Operator communications can lead to confusion and have the unintended consequence of reducing clarity of System Operator communications thus, not supporting the reliability of the BES. For example, when does an Operating Instruction end and a Reliability Directive begin? The registered entity is now faced with possibility of double jeopardy. COM-003-1 has the language "...shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions." However, COM-002-3 does not have the same language. This presents a conflict when managing compliance for each of these standards. For example, a mistake with one of COM-003-1, R1 protocols does not automatically result

in a possible violation, however, in COM-002-3 each and every error would result in a possible violation. As COM-002-3 is written, when a Reliability directive is given, it does not need to follow any of the protocols established in COM-003-1. Again, the NSRF urges the drafting team to combine COM-002-3 and COM-003-1 into one standard. Issue: Defined term of Operating Instruction: "planning instructions verse orders in real-time" concerning issuing a start and stop times of a generation unit. In the draft 3 comments, the NSRF requested that the words "Real-time" be added to the definition of "Operating Instruction" and the OPCSDT stated on page 186 of the Consideration of Comments that "The SDT believes some Operating Instructions can be issued outside as well as in the Real Time horizon". Please clarify the difference between a planning instruction and a real-time Operating Instruction. Without the proper wording within this Standard, all CEA's may interpret this however they see fit. Recommend that "real-time" be added top the definition of Operating Instruction. R1.3: As written, R1.3 does not allow for any entities to have a documented communication protocol to address the issuing of an Operating Instruction between Functional Entities in different time zones without stating the time and time zone where the action is to occur. The NSRF recommends that R1.3 be worded parallel to R1.4 by adding the wording of; "unless there has been an established time and time zone protocol between Functional Entities in different time zones" or "unless a pre-defined approach is used for communicating time and time zones is within an established communication protocol". The above addition would allow different Functional Entities to agree beforehand of what timing system will be used. The NSRF believes that the intent of R1.3 is to have two separate Functional Entities (in two different time zones) in synch with each other so that there can be no misunderstanding of when an Operating Instruction is to occur. There are many Entities who already have these protocols established. Further, R1.3 states, "Use of the time, the time zone where the action will occur..." An RC operating across several time zones will need to know which time zone the entity is in that is receiving the Operating Instruction. Switching from an entity in one time-zone to another entity in another time-zone opens the door for more confusion than using an already established and documented protocol. R1.4 The NSRF recommends removal of sub-requirement 1.4. It has been establish over several commenting periods that Project 2007-03 eliminated TOP-002 R18 which referred to common names and line identifiers, The TOP SDT removed the language from the new standard was because the "This requirement adds no reliability benefit. Entities have existing processes that handle this issue." R1.5 The Alpha-numeric requirement is a one-size fits all solution and is not needed in all situations. The NSFR recommends removing the sub requirement or as an alternative,R1.5 should be reworded to state, "require alpha-numeric clarifiers when reissuing an Operating Instruction to resolve a misunderstanding". The risk of unclear communication is addressed by R1.6 and R1.7. Currently there is not a definition for "...is in alpha-numeric format". The NSRF requests clarification on where and how to apply alpha-numeric clarifiers. For example: Current System Operator communication: RC to GOP – Move generation from 500MW on Big Lake to 350MW at 1200 - time zone understood to be EST from established and documented protocol. Under COM-003-1. Move generation from five, zero, zero on Big Lake to three, five, zero at one, two, hundred hour central daylight time or Move generation from Big Lake to three, five, zero at one, two o'clock, charlie, delta, tango. GOP – is that two o'clock? Again, the purpose is to "reduce the possibility of miscommunication" Is ok to say twelve hundred (1200) ? Or only ok to be used for time? Is ok to say three hundred and fifty (350) MW? Is 350MW and alpha-numeric number? The NSRF agrees with the language "...shall implement, in a manner that identifies, assesses and corrects deficiencies,..." However, the NSRF has concerns on how CEA's will audit to this requirement. The NSRF requests the SDT to provide information or a guideline that would demonstrate how a Regional Entity would assess and the type of evidence a registered entity would be required to show to demonstrate compliance.

Individual

Catherine Wesley

PJM Interconnection

No

PJM supports revising the VRFs and VSLs for both requirements back to a Low Violation Risk. We view these requirements as administrative.

Individual
Nazra Gladu
Manitoba Hydro
No
Some clarity in the definition of Operating Instruction is necessary. The definition suggests that only a System Operator, Reliability Coordinator, Transmission Operation or a Balancing Authority could issue an Operating Instruction. Are Distribution Providers and Generator Operations only recipients? Also, is an Operating Instruction limited to communications between Functional Entities? The requirements state this, but the definition does not.
No
Use of the phrase "implement in a manner that detects, assesses and corrects deficiencies..." is difficult to interpret and therefore creates uncertainty as to what is required. The Background section of the standard indicates that the SDT intended the phrase to be aimed at "deficiencies in the implementation of certain requirements". However, it is inconsistent to require "implementation" in a manner that does not require implementation, leaving the interpretation of this standard unclear. It appears also that the SDT did not want implementation failures to constitute violations. However, as drafted, the standard can still be interpreted to require an entity to implement its policies. It simply places an additional obligation on a Responsible Entity to detect and correct implementation failures. If the SDT wishes to eliminate violations for failure to implement a policy, then there should be a requirement to simply adopt a policy (covering specific subject matter) and a separate requirement to detect, assess and correct deficiencies in implementation.
Yes
No comment.
(1) R1 1.3 – The word 'and' should replace the comma between 'time, the time zone'. (2) R1, 1.8 – We believe that confirmation of receipt should be required from ALL receiving parties, not 'one or more'. (3) R1, 1.9 – The word 'issuer' could replace 'initiator' to be more consistent with the wording of the other requirements. (4) Measures – Both M1 and M2 are awkwardly worded. We suggest that they be rephrased to read 'Each Functional Entity, as applicable, must provide evidence of....' (5) Measures – Further to the comment in (4), we would be concerned about how an entity would be able to demonstrate that the protocols have been implemented in a manner that identifies, assesses and corrects. How exactly could it be demonstrated that a deficiency has been corrected through the manner in which the protocol was implemented? (6) Compliance, Data Retention – The statements that entities should retain evidence 'of its manner that identifies, assesses and corrects deficiencies' does not seem complete. The statements should line up with the language of the requirement/measure. For example, that the entities shall retain evidence that the documented communications protocols were implemented in a manner that....
Individual
Bob Thomas
Illinois Municipal Electric Agency
Agree
Florida Municipal Power Agency, and SERC Operating Committee Standards Review Group
Individual
Chris Mattson
Tacoma Power
Yes
Yes
Yes

Individual
Eric Salsbury
Consumers Energy
No
We believe this is a standard that requires procedures or documents but has nothing to do with performance. These types of standards lead to auditors making a wide range of interpretations.
This is an attempt to make a requirement for 3 way communication for all operating communications. Not all operating conversations avail themselves to that format. The concept is good but allowances must be made for other situations.
Individual
Scott McGough
Georgia System Operations Corporation
Yes
No
Although GSOC supports the revisions and clarifications made in R1 & R2 sub requirements, GSOC continues to have concerns with the revised language applied to internal controls. Fundamentally, GSOC believes internal controls should be part of the compliance monitoring process. Although internal controls are important, GSOC believes that before such language is added to standards guidance/criteria need to be developed on how Regional Entities will consistently review internal controls during compliance audits. GSOC suggests removing the language "implement, in a manner that identifies, assesses and corrects deficiencies" until the Reliability Assurance Initiative (RAI) effort to change the compliance/enforcement process to be more focused on a risk-based model and the effectiveness of a registered entity's internal controls/compliance program is implemented. GSOC supports many of the comments made by both NRECA and Georgia Transmission Corporation.
Yes
Although GSOC supports the revisions and clarifications made in R1 & R2 sub requirements, GSOC continues to have concerns with the revised language applied to internal controls. Fundamentally, GSOC believes internal controls should be part of the compliance monitoring process. Although internal controls are important, GSOC believes that before such language is added to standards guidance/criteria need to be developed on how Regional Entities will consistently review internal controls during compliance audits. GSOC suggests removing the language "implement, in a manner that identifies, assesses and corrects deficiencies" until the Reliability Assurance Initiative (RAI) effort to change the compliance/enforcement process to be more focused on a risk-based model and the effectiveness of a registered entity's internal controls/compliance program is implemented. GSOC supports many of the comments made by both NRECA and Georgia Transmission Corporation.
Individual
Donald Weaver
New Brunswick System Operator
No
Technically the definition is an improvement. The issue is with the need for this definition. The NBSO is opposed to having this term defined and added to the NERC Glossary. The term operating instruction does not need to be defined. System operators deal with operating instructions on a daily if not minute basis. Having a defined term, and calling such communication as "Command" is unnecessary, and can confuse operators from what they understand to be the meaning of operating instructions. The NBSO prefers that the objectives of the SAR (communications protocols) be handled through means other than a Standard (e.g. the Operating Committee's Reliability Guidelines on

Communications). Industry, NERC and the Regional Entities should focus on more productive reliability issues.
No
The requirement still includes the verb "implement". That phrase, as part of a mandatory standard, will require a zero-defect environment. The phrase "in a manner that identifies, assesses and corrects deficiencies" is vague, not measurable and inconsistent with the results-based standard concept which emphasizes the inclusion of a performance or reliability outcome in the requirement. A more direct and clear requirement would be to simply require "implement documented communication protocol....".
The SDT has been effective in responding to the Industry's concerns on the issue of "one-way" messaging. Communications Protocols are not documents that are suitable as "Standards" for a mandatory reliability standard. The zero-defect, self-reporting nature of such standards conflicts with the nature and impact of the violations that get reported. Protocols are internal controls that an entity imposes on itself. Protocols allow an entity to self-regulate itself and to decide if the monitored deviations from their own protocols warrant further action. To mandate such protocols are implemented removes the allowance for "impact to reliability". To mandate that an entity have protocols is a better approach. To create a new category for Protocols that do not carry the same level of monitoring and reporting as standards is an even better approach.
Individual
Barbara Kedrowski
Wisconsin Electric Power Company
No
NO do not support the revised definition. Although the addition of the last sentence helps, the drafting team has yet to differentiate an Operating Instruction command, from the already approved standards that refer to "directive, direct, direction" which may not be a "Reliability Directive" and will fall under, for instance IRO-001 R1 & R2. There needs to be a clear bright line between command and direct, direction.... The expression, "repeat, restate, rephrase, or recapitulate," in R. 1.7 and R2.1 would be clearer if shortened to, "repeat or summarize."
No
The revised standard is much improved by focusing on continuous improvement instead of making each communication imperfection a violation, but no guidance is provided as to how rigorous the improvement program must be to be deemed sufficient. M1 and M2 should have added at the end the statement, "Acceptable means of identifying, assessing and correcting deficiencies include the following: • Review of voice logs, for at least one hour per year for each person issuing commands or responses (as applicable) • Personal monitoring of communications, for at least one hour per year for each person issuing commands or responses (as applicable) • Annual refresher training, including a quiz on proper commands or responses, for each person issuing commands or responses (as applicable) (as applicable)
The revised standard, an improvement, yet falls short by opening the door for compliance enforcement to have a mechanism to apply communications and performance from other standards to commands issued under COM-003. Failures of GO and DP operators to repeat or summarize Operating Instructions are easily detectable (R2.1); but it would not ordinarily be possible for a person monitoring COM-003 compliance to detect a lack of understanding accompanied by failure to request a clarification (R2.2), since the resultant silence on the part of the operator is the same reaction associated with clearly understanding the Operating Instruction. M2 should be shortened to, "Evidence must include each applicable entity's documented communications protocols, which must include a provision requiring the recipient of an operating instruction to seek clarification from the initiator in the event of an unclear instruction." From the RSAW: "If the CEA finds in subsequent audits or other compliance monitoring activities that the same or similar deficiencies continue to occur after the entity was provided the feedback by the CEA, the CEA will seek to understand what changes the entity made based on prior recommendations. If the entity did not implement changes to identify, assess and correct deficiencies, the CEA may make a determination of possible non-compliance" The

issue here is potential for disagreement on "deficiencies". There are some conversations between GOPs and TOPs which are market driven, but could be read by an auditor as an "operating instruction". Some adjustment to the definition of "operating instruction", or some adjustment to the requirement that an entity address the "recommendation" from the region, may be in order here.

Individual

Don Schmit

Nebraska Public Power District

Agree

MRO NSRF [Midwest Reliability Organization - NERC Standards Review Forum]

Individual

Richard Bachmeier

Gainesville Regional Utilities

Yes

Yes

Yes

The problem is that Reliability Directives will have two inconsistent standards applicable to them, i.e., all Reliability Directives (COM-002) are Operating Instructions (COM-003), so, Reliability Directives will need to comply with both COM-002 and COM-003. COM-003's implementation plan should retire COM-002. FMPA is voting negative because two inconsistent standards applying to the same action, especially one as important as a Reliability Directive, is bad for reliability. The most glaring inconsistency for Reliability Directives are one-way burst communications (e.g., Party lines, or All Call), where COM-002 and COM-003 would treat the communications differently. If a Reliability Directive is given to all BAs in the region something like "due to capacity energy emergency, we need X MW shed within Y minutes in accordance with our previously approved allocations in procedure Z", COM-002 seems to say that each BA in the region would need to separately perform 3-part communication with the RC, whereas COM-003 would only require 3 part communication if the message was not understood. It would seem that during an Emergency, speed is of the essence, so, should the RC and BAs (who then need to spend time directing the DPs) spend the time doing separate 3 part communication with each BA, or should a one-way burst messaging occur with clarification only for those who do not understand? If there are dozens of BAs within an RC, COM-002 mode of communication could consume all the time of the Emergency and bad things can happen. FMPA recommends that COM-003 address Reliability Directives, which are a subset of Operating Instructions in a similar fashion to IROs being a subset of SOLs and how they are treated throughout the standards. BY doing so, COM-003 can retire COM-002 such that only one standard applies to Reliability Directives.

Individual

Ken Gardner

AESO

The AESO maintains that "alpha-numeric clarifiers" may be part of good operating practices, but the AESO does not support mandating the use of these identifiers as included in requirement R1.5 to be a mandatory obligation enforceable by law.

Individual

Michael Moltane

ITC

Agree
MRO NSRF
Individual
Jonathan Appelbaum
The United Illuminating Company
Agree
Northeast Power Coordinating Council - NPCC
Group
PPL NERC Registered Affiliates
Brent Ingebrigtsen
The proposed definition of an "Operating Instruction" continues to require clarification. First, the focus of COM-003 is on operations, and therefore the communications subject to the COM-003 requirement should be those requiring action in the Real-time operations time horizon — i.e., actions required within one hour or less. (See definition provided in a NERC document at: <a href="http://www.nerc.com/files/Time_Horizons.pdf">http://www.nerc.com/files/Time_Horizons.pdf</a> ). During the Q/A portion of the November 27th conference call hosted by the SDT, the SDT stated that they intended to narrow the focus of the timeframe of an Operating Instruction to the real time operating horizon. Nevertheless, the definition has not been so revised. Second, a "Reliability Directive" under COM-002 will necessarily fall within the definition of an "Operating Instruction" under COM-003. Because of this overlap, entities subject to the standard would be subject to two Reliability Standard violations – one under COM-002 and another under COM-003 – should the entity deviate from required protocols when either issuing or responding to a Reliability Directive. To avoid this overlap, the SDT should exclude a COM-002 Reliability Directive from the definition of an Operating Instruction under COM-003. Accordingly, PPL Companies suggest the following definition to address the above issues: "Operating Instruction" – Command, other than a Reliability Directive, from a System Operator to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System in which action must be taken within one hour. Alternatively, the SDT could recommend retirement of COM-002 upon the effectiveness of COM-003. If COM-002 is retired then the need to exclude "Reliability Directives" from the definition of an "Operating Instruction" would be unnecessary.
Group
Hydro One Networks Inc.
Sasa Maljukan
No
Hydro One continues to disagree with the need for this standard on the basis that the industry-approved COM-002 together with the NERC OC's operating guide on operator communication already provide the necessary requirements and guideline to fill any potential reliability gaps that may arise due to operator communication (see our response to Question #4 for more details). Notwithstanding above, we'd like to submit following comment in relation to this question. We believe that the proposed definition as worded can be misconstrued to mean a command made by System Operator to a Reliability Coordinator, or to a Transmission Operator, or to a Balancing Authority. Hydro One proposes the following wording: Operating Instruction —A command by a Reliability Coordinator System Operator, a Transmission Operator System Operator, or a Balancing Authority System Operator, where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.
No

Hydro One appreciates the SDT's introduction of additional language in order to effectively make this standard not zero-defect. Unfortunately, since our issues are with the core need for this standard rather than its details we feel that the above mentioned change is not sufficient for us to reconsider our position.

Yes

- Hydro One continues to disagree with the need for this standard on the basis that the industry-approved COM-002 together with the NERC OC's operating guide on operator communication already provide the necessary requirements and guideline to fill any potential reliability gaps that may arise due to operator communication. Requiring 3-part communication for routine operating instructions, despite the additional wording in R1 ("in a manner that identifies, assesses and corrects deficiencies") and provisions made in the RSAW, is still a zero defect requirement that would add undue burden to the operators, which is a potential cause of unreliable operations. We therefore continue to disagree with the need for this standard as it adds little to reliability over what COM-002 and the operating guide have already accomplished. - We appreciate the SDT's hard work and dedication to develop this standard in response to the SAR and the recent BoT directives. Unfortunately, the need for this standard has been overtaken by event (the definition of Reliability Directives and COM-002-3, and the OC's operating guide on operator communication). The BoT, unfortunately, is still under the perception that COM-003 is the answer to the potential reliability gap that was discussed when it approved the COM-002 R2 interpretation. The two balloting results and the two sets of industry comments suggest that many in the industry share our view. Hence, we believe the industry should attempt to convince the BoT that the potential reliability gap has been duly addressed and therefore COM-003 is no longer needed. We understand the SDT has little to no option, we therefore suggest that the SDT present the results of this round of ballot, if it still fails to make the 2/3 approval rate, to the Standards Committee and ask for its permission to put a hold on further work until the BoT has heard the industry's concern and makes a policy decision on the way forward. Further revision to this standard and posting for industry commenting and balloting will only waist the SDT's effort and industry resource, without a fruitful outcome. - Notwithstanding the above, the proposed implementation plan conflicts with Ontario regulatory practice respecting the effective date of the standard. It is suggested that this conflict be removed by appending to the implementation plan wording, after "applicable regulatory approval" in the Effective Dates Section (P. 2 of the Implementation Plan) and in Section A5 of the standard, to the following effect: ", or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities." - Functional entity is capitalized throughout the Standard, yet functional entity is not a defined term in the NERC Glossary. - Propose changing the wording in Requirement R1 to the following: R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, have documented communication protocols that include identification, assessment, and correction of deficiencies in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between functional entities that include the following: [Violation Risk Factor: Medium [Time Horizon: Long-term Planning ] - The Sub-requirements introduce too much detail into the Standard. This detail dictates "how" something is to be done, rather than "what" is to be done. Following are comments to be considered on the sub-requirements should they remain in the Standard. - Propose changing the wording in Sub-requirement 1.1 to the following: 1.1. Use of the English language when issuing or responding to an oral or written Operating Instruction, unless another language is mandated by law or regulation or agreement. - Propose changing the wording in Sub-requirement 1.3 to the following: 1.3. Use of the time, the time zone where the action will occur and indication of whether the time is daylight saving time or standard time when issuing an oral or written Operating Instruction that refers to clock times between functional entities in different time zones., unless time protocols are defined in written agreements between the functional entities. - Regarding Sub-requirement 1.5, the use of alpha-numeric clarifiers should be no more than a best practice. In case of uncertainty, 3 part communication as specified in Sub-requirement 1.6 would catch any ambiguities. - Propose changing the wording in Sub-requirement 1.8 to the following: 1.8. When issuing an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (for example an all call system), verbally or electronically confirm receipt or that communications paths were established to receive the message from one or more receiving parties. - Regarding the Time Horizons for Requirements R1 and R2, they should be Real-time Operations since the communications are



occurring in real time, and the implementation of the protocol is the intent of R1 and R2.
Individual
John D. Brockhan
CenterPoint Energy Houston Electric, LLC
Yes
Yes
No
CenterPoint Energy appreciates the revisions made to the current draft of COM-003 based on stakeholder feedback and has voted AFFIRMATIVE. However we remain concerned over the final manner in which this standard will be audited. The determination of the appropriate identification, assessment, and correction of deficiencies necessary to meet compliance can be subjective. Additionally, if an entity does not identify any deficiencies during its review process, there's the concern that an auditor may interpret that as insufficient Internal Controls rather than exemplary entity performance.
Group
Florida Municipal Power Agency
Frank Gaffney
Yes
Yes
Yes
The problem is that Reliability Directives will have two inconsistent standards applicable to them, i.e., all Reliability Directives (COM-002) are Operating Instructions (COM-003), so, Reliability Directives will need to comply with both COM-002 and COM-003. COM-003's implementation plan should retire COM-002. FMPA is voting negative because two inconsistent standards applying to the same action, especially one as important as a Reliability Directive, is bad for reliability. The most glaring inconsistency for Reliability Directives are one-way burst communications (e.g., Party lines, or All Call), where COM-002 and COM-003 would treat the communications differently. If a Reliability Directive is given to all BAs in the region something like "due to capacity energy emergency, we need X MW shed within Y minutes in accordance with our previously approved allocations in procedure Z", COM-002 seems to say that each BA in the region would need to separately perform 3-part communication with the RC, whereas COM-003 would only require 3 part communication if the message was not understood. It would seem that during an Emergency, speed is of the essence, so, should the RC and BAs (who then need to spend time directing the DPs) spend the time doing separate 3 part communication with each BA, or should a one-way burst messaging occur with clarification only for those who do not understand? If there are dozens of BAs within an RC, COM-002 mode of communication could consume all the time of the Emergency and bad things can happen. FMPA recommends that COM-003 address Reliability Directives, which are a subset of Operating Instructions in a similar fashion to IROs being a subset of SOLs and how they are treated throughout the standards. BY doing so, COM-003 can retire COM-002 such that only one standard applies to Reliability Directives.
Individual
Don Jones
Texas Reliability Entity

No
1. We voted against this draft because the relationship between Reliability Directive in COM-002-3 and Operating Instruction remains a serious problem and needs to be clarified. Is a Reliability Directive also an Operating Instruction, or is it a distinct type of communication? Do the provisions of COM-003-1 apply to Reliability Directives, or are they subject only to COM-002? 2. The added sentence added to the end of the definition is unnecessary, it is potentially ambiguous, and it provides no enhancement to reliability. The sentence will open the door for disputes about whether communications are Operating Instructions or something else.
Group
SERC OC Standards Review Group
Gerry Beckerle
No
We believe that the definition should indicate the timeframe in which the entity "is expected to act." We believe that this language is too wide and can be interpreted in many ways. Furthermore, we continue to believe that prescriptive communications protocols are unnecessary for routine Operating Instructions. Many Operating Instructions, such as economic loading of resources, do not have a reliability impact to the BES and the entities should not be held accountable to the requirements of this standard.
No
We believe that the requirements should clearly list which Functional Entities when the communications protocols should be utilized, for example, what happens when one of the five Functional Entities listed in these two requirements give an Operating Instruction to an entity not listed. Note that the question incorrectly references R2 which include the DP and GOP. Furthermore, while we agree with the concept of identifying, assessing, and correcting deficiencies, we continue to believe a prescriptive use of the word "include" should be removed. We would suggest using the word "consider" or "address."
No
We disagree with the explanation of why the VRF for both R1 and R2 were changed from "Low" to "Medium" and believe that these continue to be administrative requirements justifying a "Low" VRF.
We continue to believe that this standard is too prescriptive as noted in question #2 above and in its current draft appears to us to be not much different than when issuing Reliability Directives. We have discussed in our group that if this standard is implemented as proposed that there would no longer be a need for COM-002-3. In addition, in the proposed standard Background section it states "that these requirements should not focus on individual instances of failure as a basis for violating the standard." But, the draft RSAW states that the CEA: "Review a sample of the entity's Operating Instructions to verify whether the entity is implementing its documented communication protocols," which appears to be contradicting the language in the Background section. It also appears that the language in the RSAWs would require an entity to keep a log of all Operating Instruction. This would be overly burdensome to the industry and is not included in the requirements. The reference in R1 Part 1.3 to specify different time zones is indicative of the overly prescriptive nature of all nine parts of the requirement. Entities that already have protocols of handling different time zones may have negative reliability impacts when required to use a different convention. For example, entities operating across different time zones may rely on their EMS time and requiring the use of a different time zone convention would be confusing. Entities should be able to determine what works best.
Group
National Grid / Niagara Mohawk (A National Grid Company)
Michael Jones

Suggested improvement: We recommend separate requirements for: 1. Documentation and implementation of communication protocols. 2. Documentation and implementation of control processes for the identification, assessment, and correction of deficiencies. In addition, we recommend adding the following to the draft standard: 1. It should be noted that individual failures to use the documented communication protocols should not be considered violations of the implementation of communication protocols. 2. It should be noted that individual failures of control processes for the identification, assessment, and correction of deficiencies should not be considered violations of the implementation of the control processes for the identification, assessment, and correction of deficiencies.
Individual
Cheryl Moseley
Electric Reliability Council of Texas, ,Inc.
No
ERCOT supports the SRC comments and has additional comments. For this question, see the comments in the comment area of question 4.
No
ERCOT supports the SRC comments and has additional comments. For this question, see the comments in the comment area of question 4.
No
The VSL's do not match up with CIP v5 standards. Listing "The Responsible Entity did not implement, in a manner that identifies, assesses and corrects deficiencies, their documented communication protocols as required in Requirement R1" as a severe VSL distinguishes the activities as a singular and separate activity which is inappropriate. CIP v5 more appropriately incorporates it at each VSL level as a part of each VSL which reflects the language in the requirement "in a manner that". If the standard passes, VSLs should be modified like those in CIP v5. Example: The Responsible Entity did not include one (1) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols and did not identify, assess, or correct the deficiencies.
1.) While the proposed definition of "Operating Instruction" reflects improvement in that it helps to clarify exclusion of particular communications not intended to be regulated by the standard, the definition still should not be included because it is unnecessary to address the SAR. This definition supports this standard which is solely focused on reducing miscommunication (incorrect communications) and does not, in ERCOT's opinion, address the Blackout Recommendation and FERC Order which this project is intended to address, as identified in the SAR. As proposed, the term "Operating Instruction" could include communications that have nothing to do with reliability - e.g. communications that are market related and have no impact on system reliability. That outcome is inconsistent with FERC's direction in Order No.693. FERC's discussion of this issue in Order 693 focuses on alerts and emergencies as follows- "We adopt our proposal to require the ERO to establish tightened communication protocols, especially for communications during alerts and emergencies..." (693 at P 531) "Accordingly, we direct the ERO to either modify COM-002-2 or develop a new Reliability Standard that requires tightened communications protocols, especially for communications during alerts and emergencies." (693 at P 535) In addition, the scope of FERC's concerns is limited to communications that impact the reliability of the BPS - "We note that the ERO's response to the Staff Preliminary Assessment supports the need to develop additional Reliability Standards addressing consistent communications protocols among personnel responsible for the reliability of the Bulk-Power System." (693 at P 531) "...we believe, and the ERO agrees, that the communications protocols need to be tightened to ensure Reliable Operation of the Bulk-Power System." (693 at P 532) During the recent webinar, it was evident that confusion still exists and that this proposed standard does not resolve the confusion. In fact, the proposed standard and definition contribute to the confusion. Primarily, the definition should not be made applicable to system operators within the same company and control room who are registered as multiple functions. ERCOT ISO does not have separate desks or operating personnel that perform a single function but performs its functions simultaneously by multiple system operators. The functional entity is not an individual but the entity registered for that function. 2.) ERCOT fully supports the concept that functional entities' internal controls should be used to monitor the effectiveness of their own protocols. However, these matters are not suitable for

reliability standards. Imposition of mandatory controls applicable to all functional entities is inappropriate because of the wide variety of organizational structures that necessarily requires flexibility with respect to developing appropriate controls for each entity's specific circumstances. Furthermore, entities' internal controls are beyond the scope of the Section 215 reliability purview generally, and they are inconsistent with the risk-based initiative being pursued by NERC because they do not impact/are not related to actual reliability impacts. Furthermore, the deficiency review process is ambiguous and, accordingly, lends itself to inefficient and ineffective CMEP results. As an initial matter, what constitutes a deficiency will be an issue that is vulnerable to subjective disagreements. Even assuming there is agreement on that issue, what constitutes an appropriate remedy for a deficiency in terms of assessment and correction will similarly be susceptible to subjective disagreements. Finally, with respect to the obligation to evaluate the deficiency identification process itself, again, the potential for the introduction of subjective compliance review will be problematic in practice in terms of reviewing the decision whether to implement a modification or not to implement a modification; and, if a modification is implemented, whether the revision is adequate. ERCOT is encouraged to see NERC's willingness to explore new ways to move away from a zero defect mentality, but does not understand nor agree with the approach of including such provisions in the standards. The reliability standards should be left as performance-based, not be administrative or prescriptive, and have clear measures. This standard is administrative, prescriptive, and solely focused on miscommunications (incorrect communications) which is a subset, if that, of the "communication protocols" intended by the FERC Order 693 and subsequent Blackout Recommendation. This disconnect is specifically why it has been difficult to garner industry support on this proposed standard. 3.) If the standard were based on effective communication protocols and not specifically miscommunication (incorrect communication) protocols, it would be clearer and more supported than what has been presented to industry for comment and each of the ballots. The SDT, while being very responsive to certain comments that keep its focus on miscommunications, has not been responsive to the industry comments supporting that the proposed requirements are unnecessary and a call for requirements directly responsive to FERC Order 693 and the subsequent Blackout Recommendation related to this project which are related to "effective" communications. The SDT has repeatedly focused on miscommunications rather than on "effective" communications protocols. Effective protocols would constitute communications protocols related to what information needs to be communicated, who needs the information, when they need it particularly during alerts and emergencies. Common phrases, terms, means, etc. can be employed to produce uniformity. As the Blackout Recommendation stated "Ineffective communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade. Consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability." When the Blackout report is read it is evident, this had no stated relationship to miscommunications, but instead to the reliability content of the communications, responsibilities, and speed at which communications occurred. This proposed standard also gives no emphasis to Alerts and Emergencies which is another indicator that it has missed the intended objective of the FERC Order and subsequent Blackout Recommendation. ERCOT respectfully recommends a renewed focus on communication protocol requirements related to promoting "effective" communications and not solely focused on miscommunications. Recent event investigations have only continued to support this concept as recommendations have been made to improve communication protocols that do not have any relation to preventing miscommunications. Examples below: Feb 2, 2008 Cold Weather Event Report Recommendations: 21.) Balancing Authorities should improve communications during extreme cold weather events with Transmission Owner/Operators, Distribution Providers, and other market participants. (page 218) 22.) ERCOT should review and modify its Protocols as needed to give Transmission Service Providers and Distribution Service Providers in Texas access to information about loads on their systems that could be curtailed by ERCOT as Load Resources or as Emergency Interruptible Load Service. (page 218) 23. WECC should review its Reliability Coordinator procedures for providing notice to Transmission Operators and Balancing Authorities when another Transmission Operator or Balancing Authority within WECC is experiencing a system emergency (or likely will experience a system emergency), and consider whether modification of those procedures is needed to expedite the notice process. (page 219) 24. All Transmission Operators and Balancing Authorities should examine their emergency communications protocols or procedures to ensure that not too much responsibility is placed on a single system operator or on other key personnel during an emergency, and should consider developing single points of contact (persons who are not otherwise responsible for emergency operations) for communications during an emergency or likely emergency.

(page 219) Arizona San Diego Outage Report Recommendations 15. On September 8, 2011, at least one affected TOP lost the ability to conduct RTCA more than 30 minutes prior to and throughout the course of the event due to the failure of its State Estimator to converge. The entity did not notify WECC RC or any of its neighboring TOPs, preventing this entity from regaining situational awareness.

Individual

Mike Hirst

Cogentrix Energy Power Management, LLC

1. The expression, "repeat, restate, rephrase, or recapitulate," in R. 1.7 and R2.1 would be clearer if shortened to, "repeat or summarize." 2. The revised standard is much improved by focusing on continuous improvement instead of making each communication imperfection a violation, but no guidance is provided as to how rigorous the improvement program must be to be deemed sufficient. M1 and M2 should have added at the end of the statement, "Acceptable means of identifying, assessing and correcting deficiencies include the following: • Review of voice logs, for at least one hour per year for each person issuing commands or responses (as applicable) • Personal monitoring of communications, for at least one hour per year for each person issuing commands or responses (as applicable) • Annual refresher training, including a quiz on proper commands or responses, for each person issuing commands or responses (as applicable) (as applicable) 3. Failures of GO and DP operators to repeat or summarize Operating Instructions are easily detectable (R2.1); but it would not ordinarily be possible for a person monitoring COM-003 compliance to detect a lack of understanding accompanied by failure to request a clarification (R2.2), since the resultant silence on the part of the operator is the same reaction associated with clearly understanding the Operating Instruction. M2 should be shortened to, "Evidence must include each applicable entity's documented communications protocols, which must include a provision requiring the recipient of an operating instruction to seek clarification from the initiator in the event of an unclear instruction." 4. From the RSAW: "If the CEA finds in subsequent audits or other compliance monitoring activities that the same or similar deficiencies continue to occur after the entity was provided the feedback by the CEA, the CEA will seek to understand what changes the entity made based on prior recommendations. If the entity did not implement changes to identify, assess and correct deficiencies, the CEA may make a determination of possible non-compliance" The issue here is potential for disagreement on "deficiencies". There are some conversations between GOPs and TOPs which are market driven, but could be read by an auditor as an "operating instruction". Some adjustment to the definition of "operating instruction", or some adjustment to the requirement that an entity address the "recommendation" from the region, may be in order here.

Individual

Andrew Gallo

City of Austin dba Austin Energy

Yes

Yes

Austin Energy is pleased the SDT changed the internal control language to be consistent with CIP v5 language.

Yes

(1) The SDT requested industry comment on the reference to "Operating Instructions between Functional Entities." Industry discussions indicate that entities interpret this phrase in different ways. Austin Energy (AE) agrees the use of the term "Functional Entity" is confusing. As noted during the 11/27/12 webinar, Functional Entity is not defined in the NERC Glossary but, instead, only in the functional model. As described by the speakers at the webinar, this language requires protocols for communication between RC and TOP entities or TOP and TO entities, but does not require the same

protocols for TOP-to-TOP communications. This implies that vertically integrated companies should designate certain employees as part of one Functional Entity and other employees as part of another Functional Entity. In the case of AE, this would show up as some employees being "TOP" and others being "TO" and still others as "DP" or "GOP." In reality, all employees are AE employees and it is impractical and confusing to designate them any other way. AE holds one registration with NERC for five different functions (TO, TP, DP, LSE and TOP) and a second registration for the GO and GOP functions. This is due to Regional Entity requirements at the time of registration. AE, as a municipal utility, performs all of those functions but is not organized in a way as to label each employee as fitting under a particular function. The confusion continues when considering communications between companies. In the ERCOT Region, approximately 15 local control centers and ERCOT are all registered as "TOP." One might interpret the webinar discussion to require that communications between neighboring TOPs or ERCOT and one of the local control centers are not subject to the requirements of COM-003-1 because these are TOP-to-TOP communications. AE suggests the SDT greatly simplify COM-003-1 and require entities to "implement, in a manner..., protocols that include three-part communication for Operating Instructions." In other words, omit the reference to Functional Entity. Alternatively, if the SDT wants to limit the protocols to communications between companies (another common interpretation), simply state the requirement that way. (2) AE believes the specificity in the subparts of R1 is unnecessary. Three-part communication is the preferred method for ensuring that both parties understand an Operating Instruction. It provides a sufficient mechanism for clear, concise and accurate communication. AE believes that creating a protocol requiring System Operators to essentially re-learn how to speak (specifically using alpha-numeric identifiers) will only create confusion as operators try to follow protocol and catch/correct themselves.

Individual

Marie Knox

MISO

No

The definition of "Operating Instruction" as proposed in this draft standard is overly broad and ambiguous and will result in everyday operations communications being subject to each entity's "documented communications protocols" unnecessarily, diverting real-time operations resources from monitoring BES reliability and ensuring that changes necessary for reliability are properly understood and implemented. In particular, based on the definition, it is unclear as to whether a discussion regarding implementation of an operating guide would be an "Operating Instruction". More specifically, an operating guide is a common, known, and agreed upon operational action that an entity will take in response to identified system conditions. However, such guide is not normally implemented until the condition manifests itself. Accordingly, based on the definition of "Operating Instruction", it is unclear as to whether a discussion between entities regarding implementation of such an operating guide once the associated condition manifests itself would be considered a "command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System". This uncertainty can only result in affected entities being overly conservative and applying the requirements of COM-003 to a vast majority of communications, resulting in a significant divergence of resources as described above. MISO cannot support the proposed draft standard given the current level of ambiguity, the potential impact upon real-time operations, and the potential for such impact to detract from BES reliability.

No

It is unclear what is meant by "shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities". In particular, there is no established criteria regarding what constitutes "a manner that identifies, assesses and corrects deficiencies". Further, there is no documentation nor rationale provided to support the assignment of a severe VSL to the failure of a Registered Entity to implement its documented communication protocols in "a manner that identifies, assesses and corrects deficiencies". Without a clear criteria, the potential for subjective interpretation of this portion of the requirement is significant and such subjectivity would be associated the most severe VSL possible without justification. Accordingly, MISO cannot support this portion of R1 within this draft proposed

standard.

No

Requirement 1 and 2 do not have a direct effect on the reliability of the BES. Requirement 1 provides clarity for Operating Instructions and Requirement 2 ensures implemented communication protocols are documented. Because R1 and R2 are administrative in nature, we recommend the "Lower" instead of "Medium."

MISO appreciates the time and effort expended by the SDT in revising the proposed draft standard in response to prior comments. However, the ambiguity and absence of justification still present within and associated with this draft, proposed standard prevent MISO from providing its support for COM-003. Additional comments regarding specific sub-requirements are provided below: R1.1 provides that English shall be used "unless another language is mandated by law or regulation. This requirement should be modified to require that operators use English for oral Operating Instructions, even if it is not the required primary language pursuant to law or regulation. R1.2 requires the use of a 24-hour clock for all times. This requirement would result in the expenditure of significant time, resources and attention by System Operators for a minimal benefit to reliability. To date, the use of the 12-hour clock time has not been demonstrated as problematic or as having an adverse impact on reliability. MISO notes that the use of the 24-hour clock time in communication is inconsistent with the 12-hour clock time currently utilized by most systems. The system time characteristics, which are primarily based on 12-hour clock time, should inform the communication protocols regarding time. Accordingly, this requirement appears to place upon operators a requirement that is not justified and onerous. MISO respectfully requests that the SDT consider removal of this requirement. R1.3 states: Use of the time, the time zone where the action will occur and indication of whether the time is daylight saving time or standard time when issuing an oral or written Operating Instruction that refers to clock times between Functional Entities in different time zones. We recommend this be clarified. The requirement should say that the time zone be specified when communicating across zones "unless a pre-defined approach is used for communicating time in the protocols". R1.4 requires the use of the name specified by the owner(s) for each Transmission interface Element or Transmission Interface Facility in an oral or written Operating Instruction. MISO respectfully submits that this requirement is already addressed in TOP-002-2b, R18. Further, MISO respectfully comments that, to date, System Operators have identified equipment by to/from station and voltage level. Such identification has been sufficient to ensure the accurate identification of Transmission interface Elements and Facilities. Additionally, MISO notes that internal identifiers utilized by owners may result from internal coding or naming conventions that would not be known by or comprehensible to external entities. Hence, MISO cannot support this requirement based on the potential adverse impacts to reliability that could result. R1.5: MISO reiterates its comments in Round 2 and 3 that the requirement to use alpha-numeric clarifiers format is ambiguous and could lead to unintended compliance burdens. For instance, it is ambiguous whether alpha-numeric clarifiers would be necessary when referring to commonly-accepted voltage levels, such as 138kv (alpha-numerically as follows: "One-tree-eight-kilo-victor"). MISO argues that in this case that the communication would be less clear and more likely to be misunderstood or misconstrued. MISO also respectfully points out that there is an extra period and space at the beginning of the parenthetical in the draft version of the R1.5. R1.6 and R1.7: Given the broad applicability of R1.6 and R1.7 as a result of the definition of Operating Instruction, the split of compliance obligations into multiple sub-requirements may result in entities being assessed violations for multiple requirements as a result of 1 (one) communication or operating event. While MISO appreciates the clarity in roles and responsibilities the split provides, it is concerned about the future application and feasibility thereof. Please refer to MISO's comments regarding the definition of Operating Communication for more detail on the likely adverse impact to reliability that will result from the diversion of time and resources the split will require. Overall, MISO supports the need to ensure good communications among users, owners, and operators of the grid, but believe the standard, as drafted is misdirected. As drafted, this standard can actually impede reliability as there are, at times, better ways to communicate when group action is needed and there are times when speed or "give and take" are needed. The definition of Operating Instruction could be construed and is sufficiently ambiguous to results in the applicability of COM-003 to common operational communications including non-requests / non-directives diverting time and attention away from ensuring that changes necessary for reliability are properly understood and implemented. MISO cannot support the current version of COM-003-1. Though MISO is voting negative this round, we would respectfully request that the SDT add the following language for the next round of comment

consideration and balloting: "Electronic means of communication can be used in lieu of oral when the clarity of the electronic communication is sufficient to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of BES."

Individual

Greg Travis

Idaho Power Company

Yes

Yes

Yes

Individual

Richard Vine

California Independent System Operator

No

Comments already provided through the ISO/RTO Standards Review Committee

No

Comments already provided through the ISO/RTO Standards Review Committee

It is not clear why the Time Horizon is identified as "Long-term Planning" for requirements R1 and R2, since this seems to be a "Real-Time" communication standard.

Group

ISO RTO Standards Review Committee Group

Albert DiCaprio

No

Technically the definition is an improvement and the SRC would agree with the proposed changes, if the definition were needed. The issue is with the need for this definition, and the continuing debate this definition is generating. The SRC is opposed to having this term defined and added to the NERC Glossary. The term operating instruction does not need to be defined. For years, system operators deal with operating instructions on a daily if not minute basis. Having a defined term, and calling such communication as "Command" is unnecessary, and can confuse operators from what they understand to be the meaning of operating instructions. While the SDT has found that their previous definitions were not appropriate for a NERC standard, and subsequent incremental changes are useful, the debate itself does not seem to be a productive use of the SDT's or the Industry's time. The SRC would prefer that the objectives of the SAR (communications protocols) be handled through means other than a Standard (e.g. the Operating Committee's Reliability Guidelines on Communications). The reason being, a standard requires zero-defect compliance, data retention, self-reporting, and requires these debates over the proposed terms such as "Operating instruction" which diverts the Industry, NERC and the Regional Entities from focusing on more productive reliability issues.

No

The SRC appreciates the SDT's initiative but points out that the requirement still includes the verb "implement". That phrase, as part of a mandatory standard, will require a zero-defect environment. The phrase "in a manner that identifies, assesses and corrects deficiencies" is vague, not measurable and inconsistent with the results-based standard concept which emphasizes the inclusion of a performance or reliability outcome in the requirement. A more direct and clear requirement would be to simply require "implement documented communication protocol....". We appreciate the SDT's intent for adding this phrase, but it does little to ease the concerns of the commenters. Instead, the addition



introduces an immeasurable phrase that may in fact make the requirement more ambiguous and unclear. The SRC realizes the SDT is trying to mandate a Communications Protocol, and would therefore suggest if the SDT still believes a Standard is necessary, then the SDT need only require each entity "have communications protocols, that include periodic monitoring, assessments, and procedures for mitigating violations of those protocols."

The SDT has been effective in responding to the Industry's concerns on the issue of "one-way" messaging. Communications Protocols are not documents that are suitable as "Standards" for a mandatory reliability standard. The zero-defect, self-reporting nature of such standards conflicts with the nature and impact of the violations that get reported. Protocols are internal controls that an entity imposes on itself. Protocols allow an entity to self-regulate itself and to decide if the monitored deviations from their own protocols warrant further action. To mandate such protocols are implemented removes the allowance for "impact to reliability". To mandate that an entity have protocols is a better approach. To create a new category for Protocols that do not carry the same level of monitoring and reporting as standards is an even better approach. The SRC recognizes that the SDT has submitted an RSAW that is designed to mitigate the zero-defect impacts. However, as is stressed by NERC, RSAWs are not requirements. The only requirements are those in the approved standard itself.

Individual

Gregory Campoli

New York Independent System Operator

NPCC RSC

No

We support the comment submitted by the NPCC RSC. It is unclear if a definition of operating instruction is necessary as many entities may use this term and apply it for each unique organization. However NPCC has proposed an alternate definition that should be considered.

Yes

We agree with the proposal to remove R3 and R4. The revisions to R1 and R2 are an improvement. However, it remains unclear whether a communication protocol should be a standard or a guideline. We continue to look for evidence that this type of requirement would have directly prevented a previous event, as there is no published reports today.

We support the set of comments provided by the NPCC RSC and are repeated below: Functional entity is capitalized throughout the Standard, yet functional entity is not a defined term in the NERC Glossary. Propose changing the wording in Requirement R1 to the following: R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented communication protocols that include identification, assessment, and correction of deficiencies for Operating Instructions between functional entities that include the following: [Violation Risk Factor: Medium [Time Horizon: Long-term Planning ] The Sub-requirements introduce too much detail into the Standard. This detail dictates "how" something is to be done, rather than "what" is to be done. Following are comments to be considered on the sub-requirements should they remain in the Standard. Propose changing the wording in Sub-requirement 1.1 to the following: 1.1. Use of the English language when issuing or responding to an oral or written Operating Instruction, unless another language is mandated by law or regulation or agreement. Propose changing the wording in Sub-requirement 1.3 to the following: 1.3. Use of the time, the time zone where the action will occur and indication of whether the time is daylight saving time or standard time when issuing an oral or written Operating Instruction that refers to clock times between functional entities in different time zones, unless time protocols are defined in written agreements between the functional entities. Regarding Sub-requirement 1.5, the use of alpha-numeric clarifiers should be no more than a best practice. In case of uncertainty, 3 part communication as specified in Sub-requirement 1.6 would catch any ambiguities. Propose changing the wording in Sub-requirement 1.8 to the following: 1.8. When issuing an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (for example an all call system), verbally or electronically confirm receipt or that communications paths were established to receive the message from one or more receiving parties. Regarding the Time Horizons for Requirements R1 and R2, they should be Real-time Operations since the communications are

occurring in real time, and the implementation of the protocol is the intent of R1 and R2. Suggest that the Standard be further clarified so that the intended purpose is to ensure that an entity has implemented a communications protocol with various core attributes, such as three part communication. We believe that it is not the SDT's intent that an entity will be found out of compliance for instances when an operating instruction was given which did not conform to its implemented protocol. Compliance will only be assessed if the Protocol procedure itself was not formally implemented and not to individual violations of such procedure which will be handled by internal controls to track and address any deficiency. In the context of implementation, sufficient implementation as used in this Standard could be demonstrated by management approved protocol procedures issued to the appropriate individuals in the organization and documented training. The Standard is not envisioned to be a zero-defect Standard however, and unless entities and audit staff have clear understandings of what "implement" means there may be instances when an auditor may find non-compliance beyond the intent of the Standard's Purpose and the Reliability Assurance Initiative concept being brought forward with this Standard. Suggest clarification to the word implement as it is used in the Standard and what activities in the compliance area will ensure proper audit expectations are set.

Individual

Michiko Sell

Public Utility District No. 2 of Grant County, WA

Yes

No

The term Functional Entities is not a defined term within the NERC glossary nor is it a newly defined term in the proposed Standard language. Grant echoes Seattle City Lights concern with the use of this term.

No

Grant only has concern with the use of "Responsible Entity" within the VSL language since it also is not a recognized defined term.

Grant recognizes the tremendous effort set forth by the Standards Drafting Team in response to comments received on this Standard. Grant is also appreciative of the inclusion of non-zero defect language promoting entities to identify, assess and correct deficiencies in support of reliability improvement.

Individual

Alice Ireland

Xcel Energy

Yes

Yes

Yes

Xcel Energy is voting negative, again, because we continue to believe that some of the individual protocols are too prescriptive. We strongly believe that some of these protocols would be more effective if used in certain circumstances, instead of at all times. In particular, we do not agree with 1.5 being required on all Operating Instructions. Here are some specific perspectives: 1) If field personnel are working from a written copy of a switching request, and they confirm the switching request number, revision, etc., we believe there should be an exception from the use of alpha-numeric clarifiers when the operator and field person are confirming the steps. Do they consider this "oral" communication and thus meeting compliance of 1.5? 2) The use of alpha-numeric clarifiers does not always make a communication more clear. The intent of the standard is to improve a misunderstanding, not create misunderstanding when giving the instruction. As stated previously, we

feel that the use of alpha-numeric clarifiers should be a tool available to the operator when the original communication was not correctly understood. We recommend that R1.5 be reworded to something like this: 1.5 Circumstances where personnel should use alpha-numeric clarifiers, when issuing an oral Operating Instruction for Facilities and Elements in instances where the nomenclature of Facilities or Elements is in alpha-numeric format.

Individual

Jason Snodgrass

Georgia Transmission Corporation

No

GTC is concerned that the proposed definition of an "Operating Instruction" is too similar to the definition of a "Reliability Directive" specifically with the inclusion of "command from a System Operator". GTC recommends an additional statement such as "The term does not include commands specified as Reliability Directives".

No

GTC agrees with the decision to remove R3 and R4 from COM-003 draft 4, but is concerned with the incorporation of the internal controls language in R1 and R2. These changes don't resolve the concerns submitted on the previous draft of the standard. GTC believes that internal controls should be implemented based on a registered entities' assessment of risk and should not be subject to fines and penalties if a regional entity does not agree with a registered entity's control design or control effectiveness. We also question whether the current set of auditors have the appropriate skill set to assess internal control. We believe an assessment of internal controls is appropriate in determining the depth and breadth of audit testing, but strongly disagree that regional entity's should have the authority to, in effect, dictate internal control design. Furthermore, if this language is incorporated, GTC believes that there is too much uncertainty on how Regional Entities will audit internal controls during compliance audits and what a violation will look like. For example, suppose a Registered Entity confirmed that its Operating Instructions between Functional Entities were implemented correctly 100% of the time during a specified reporting period. Would this entity then be designated as non-compliant since zero deficiencies were identified via the control method and thus there wasn't a need to correct? As such, GTC strongly encourages that the internal controls language "in a manner that identifies, assesses and corrects deficiencies" be removed from COM-003 in order to allow the Reliability Assurance Initiative (RAI) effort to be fully developed and implemented with industry involvement to define how a risk-based model will work and how a registered entity's internal controls will be assessed.

No

See example above identifying the possibility that an entity could perform Operating Instructions 100% correctly, yet could be designated as a Severe VSL since the control manner didn't identify any deficiencies.

Group

Boneville Power Administration

Jamison Dye

Yes

No

BPA does not agree with the use of the phrase "between Functional Entities" in R1 and R2 because one organization can have multiple Functional Entities within it. BPA believes that an organization should be able to establish its own internal communication protocols. In consideration of comments, the drafting team stated "The SDT agrees that these communication protocols apply only to external communications between system operators for the TOP, GOP, and BA. It would only make sense to have them apply internally but that is the entity's option. Most entities use all or some of these communication protocols already." However, the language of the standard and the November 27 webinar indicate otherwise. During the webinar an industry representative asked, "Consider a

vertically integrated utility performing functional roles of a BA, TOP, and GOP. Is it required to have communication protocols for operating instructions between the different system operator desks." Both presenters answered "Yes," and explained that separate functional entities within a company would need to comply with this requirement. (11/27 Webinar recording at 1:04/1:30) BPA suggests that the term "external" be added before "functional entities" or another phrasing change be incorporated into the standard to eliminate this potential interpretation.

Yes

Individual

Warren Rust

Colorado Springs Utilities (CSU)

No

CSU appreciates the difficulty the SDT faces in drafting and pursuing approval of this Standard and its Requirements and the hard work of the members. "Operating Order" is a better term than "Operating Instruction" as "instruction" has the connotation of advice or guidance, where I believe the SDT means to convey a sense of "being told to do something ... as in, this is an 'order'." System Operator is already defined in the NERC glossary as, "An individual at a control center <<sic\*>> (Balancing Authority, Transmission Operator, Generator Operator, Reliability Coordinator) whose responsibility it is to monitor and control that electric system in real time." Therefore, the first sentence of the definition is redundant. If the point is to exclude Generator Operators at Control Centers (not sure why that should be), then it would seem easier to simply state that. Facility is also already defined in the NERC glossary as, "A set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.)" and, so, should already be covered by the phrase, "of an Element of the Bulk Electric System," in that, by operating an Element, one would, of necessity, be operating one or more of any Facilities comprising that Element. Also, it is possible that the recipient may not be the person actually taking the action, but may need to pass the Operating Order on for action. Suggest that a more concise definition might be along the lines, "Operating Order - A command by a System Operator with the expectation that the recipient is to take or ensure action is taken to change or preserve the state, status, output, or input of an Element of the Bulk Electric System. Discussions of general information and of potential operations or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions." \*Control Center is a defined term.

Yes

Specifically, agree with the removal of R3 & R4.

No

Having and implementing a "communications protocol" are administrative in nature and the mere fact of not having or implementing such a protocol is not sufficient to "directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system." The VRFs for these two requirements should be LOW. The VSLs, as drafted, focus specifically on the contents of the "communications protocol," but they should address implementation, since that is the active verb in both of the requirements; "shall implement."

Again, I appreciate the hard work required of the members of this SDT to formulate these drafts in the midst of wildly differing expectations and also appreciate the opportunity to express my opinions in this comment. 1) In Consideration of Comments to Draft 3, the SDT stated "... COM-003-1 only applies to communication between functional entities. For example, if a TOP System Operator is issuing an Operating Instruction to an individual that is internal to that TOP, three part communication is not required by this standard. If a TOP System Operator is issuing an Operating Instruction to an individual in another TOP or another functional entity (e.g. Distribution Provider, Generator Operator), then three part communication is required by this standard. If a TOP System Operator is issuing an Operating Instruction to an individual that is not in a functional entity, then three part communication is not required by this standard." and; In response to Bonneville Power Authority comment, "In R1.5, BPA disagrees with the mandatory use of alpha numeric communication protocols for internal communications ..." Response: The SDT agrees that these communication

protocols apply only to external communications between system operators for the TOP, GOP, and BA ...” [Comment] It is not clear in the language of the standard that the requirements apply only to external communications. The standard should explicitly state so. The requirement should apply only to communications between separate Registered Entities, vice Functional Entities. Within a single control room (same room) there may be Transmission System Operators, Distribution System Operators, and Generator Operators. If the CEA considers that those individuals represent different Functional Entities (even though all work for the same Registered Entity), and takes into consideration the above guidance, one “TSO” could issue an instruction to another “TSO” or to an individual in the field (ostensibly not a Functional Entity) without needing to show compliance with any of the minimum Communication Protocol requirements, but would have to show compliance when giving an order to the “DSO” or “GSO” at the next desk over. And, does the SDT have a suggestion for how the various “Communications Protocol” requirements be evidenced for compliance when communication between “in-house” Functional Entities is face-to-face? 2) From the Consideration of Comments, Summary p.4, “Commenters in draft 3 argued that “alpha-numeric clarifiers” are of no value and could only lead to confusion and delays by System Operators. The SDT has chosen to retain the inclusion of alpha-numeric clarifiers as a means of clarifying Operating Instructions. The use of such clarifiers, which an entity can develop to suit their preferences, eliminates the ambiguity of similar sounding letters and numbers. Their use, based on the experience of other organizations that use them, becomes a natural part of communication language.” [Comment] There are situations where the use of such clarifiers would exacerbate ambiguity or unnecessarily complicate or burden the communication leading to just as much risk of misunderstanding. Does “develop to suit their preferences” give room for an entity to state in its Communications Protocol that the use of “clarifiers” is required in Operating Instructions only when it is obvious they are necessary to ensure clarity? From the Consideration of Comments, in response to ACES Power Marketing Standards Collaborators comment; “Response: The requirement does allow an entity to develop its own protocol around alpha numeric clarifiers. The protocol should be uniform, clear and must increase reliability. ” [Comment] It appears, from the language in the draft, that the only flexibility might be in deciding what “clarifiers” are to be used (Alpha vs Adam, etc.). Is it the SDT’s intention that an Entity could address alpha-numeric clarifiers in its Protocol by stating they do not need to be used, or only as necessary to ensure clarity? Also, in my opinion, it is not sufficiently clear that such clarifiers are necessary to increase BES reliability in the first place. CSU agrees with the numerous commentators on the previous draft as well as any on the current one that the use of “alpha-numeric identifiers,” while appropriate in certain, if not many, circumstances; may not be appropriate in all and may, indeed, be counter to productive and clear communication in some, if not many, circumstances. 3) And, in response to PPL Corporation NERC Registered Affiliates’ comment in regards to the use of the EPRI study, “Response: The OPCPSDT thanks you for your comments. The OPCPSDT cited those figures from a commenter who appended an Industry white paper (by the same author) to the draft comment form. The SDT responded after reading it. Even if the mishap rate for communication issues is 14.5% that is a significant impact on BES reliability that will be addressed by COM-003-1.” The SDT continues, in their consideration of comments to Draft 3, to rely on an EPRI study which does not support the conclusions they wish to draw from it. “Failure to use `alpha-numeric clarifiers’” was not one of the identified communications deficiencies in the EPRI study and therefore it is misguided to cite this study in defense of requiring the use of such `clarifiers’ in Operating Instructions. Indeed, none of the proposed requirements can be found as cited deficiencies in that report. The study depended on voluntary reporting by only a portion of EPRI members, and was not designed to be scientifically valid study. The introduction to the study itself acknowledged that the sample was self-selected and not random, so, therefore, “not representative of the industry as a whole, or even the membership of EPRI.” The report also goes on to state there may be reporting bias in the data submitted (e.g, utilities may have been motivated to participate by their own high error rates, while those with low rates may have chosen not to participate). Also, the data submitted were a result of each utility’s internal investigations – not necessarily consistently performed even within the same utility, and most probably not between different utilities. The SDT is relying on the contribution of communications deficiencies in 14.5% of the reported events (which, by the way, is not an error RATE, much less an “impact to BES” rate) to justify communications protocols that will not address the majority of the communications error types which made up that contribution in that report. 4) The OPCPSDT, in my opinion, has not adequately justified retaining R1.4 in the face of the elimination of the exact same requirement in TOP-002 R18.

Individual

Jen Fiegel
Oncor Electric Delivery
Yes
No
Oncor supports the shift in compliance to the internal controls approach and we looks forward to NERC providing a programmatic/principles framework in a collaborative approach with the industry. In the absence of this framework, it is unknown how the concept of "identify, assess and correct" will evolve. As the framework is developed including the "identify, assess and correct" concept, Oncor requests that continuous focus be placed on implementing principles including this concept and not requiring or specifying internal controls which would place additional compliance burden on entities. The internal controls principles/framework should enable entities to establish internal controls model utilizing deficiency correction approach but should not mandate the approach at the Standard/Requirement level. Internal Controls Program needs to be defined by an Entity, it is not a "One Size Fits All". The standards/RSAs should reflect this understanding.
Yes
The SDT requested industry comment on the reference to "Operating Instructions between Functional Entities." Industry discussions show that entities interpret this in different ways, and Oncor agrees that the use of the term "Functional Entity" is confusing. Functional Entity is not defined in the NERC Glossary. The NERC Webinar 11/27/12 stated this language requires protocols for communication between RC and TOP entities or TOP and TO entities, but it does not require the same protocols for TOP to TOP communications. This would require entities with multiple registration functions to designate personnel by functional entity and in turn, personnel would have to identify which functional entity each person they interface with. It is impractical and inefficient to require Entities to re-organize all personnel which would foster an inefficient structure and could potentially lead teams to not communicate effectively. In addition, this could have a negative impact on communications between companies. For example, in the ERCOT region, there are approximately 15 local control centers and ERCOT who are all registered as TOPs. One might interpret the webinar discussion to say that communications between neighboring TOPs or ERCOT and one of the local control centers are not subject to the requirements of COM-003-1 since these are TOP to TOP communications. We strongly recommend the SDT review this to greatly simplify COM-003-1. Potential alternative to the current language would be "require entities to implement, in a manner ..., protocols that include three-part communication for Operating Instructions" and eliminate the reference to Functional Entity. Alternatively, if the SDT is trying to limit the protocols to communications between companies (another common interpretation), simply state it as such. In addition, Oncor believes the specificity in the subparts of R1 is unnecessary. Three-part communication is the preferred method for ensuring that both parties understand an Operating Instruction and it provides a sufficient mechanism for clear, concise and accurate communication. In creating a protocol that requires System Operators to essentially relearn the way to speak (specifically using alpha-numeric identifiers) will only create confusion and inefficiency as operators try to follow protocol and catch/correct themselves.

Additional Comments Received:

**Brett Holland**  
**KCPL – Operations Compliance**

1. Do you agree with the changes made to the proposed definition "Operating Instruction" (now proposed as a "A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the

Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.”) to be added as a term for the NERC Glossary? If not, please explain in the comment area of the last question.

Yes

**No**

Comments: Would suggest the language read as follows: “An order by a System Operator of a Reliability Coordinator, Transmission Operator, or of a Balancing Authority, where the recipient of the order is expected...” for clarity. Operating Instructions, this term should not be added to the NERC Glossary to bring all Operating Instructions into scope.

2. The SDT has proposed new language in COM-003-1, R1 and R2: “Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:” R3 and R4 from draft 3 are eliminated. Do you agree with these proposed requirement changes? If not, please explain in the comment area of the last question.

Yes

**No**

Comments:

R1.8, R1.9, and R2.2 need further clarification. The specific vehicle for information delivery in these 3 particular requirements is via “one-way burst messaging” systems, which obviously do not allow for 2 way communication. Acceptable means of verbal and/or electronic confirmations and clarification requests need more definition.

R1.8 addresses confirmation requirements when utilizing one-way burst messaging systems for communication with multiple parties. We are not sure why we would only request one or more confirmations in this case as it is possible that one or more parties, but not all, would receive the intended message. This leaves the possibility open for potential mis-understanding or lacks of information for one or more of the potential multiple parties receiving the message.

This language (identifies, assesses and corrects deficiencies) should not be added to the standard as it introduces internal controls into the requirements. Internal controls are a strengthening of a compliance program and support a strong culture of compliance, however, are not mandatory and enforceable. This will introduce a precedent that we are not prepared as an industry to deal with or respond to in order to satisfy compliance and enforcement.

Albert DiCaprio

PJM

IRC Standards Review Committee Group

Ben Li IESO NPCC segment 2

Ali Miremadi CAISO WECC segment 2

Steve Myers ERCOT ERCOT segment 2

Charles Yeung SPP SPP segment 2

1. Do you agree with the changes made to the proposed definition “Operating Instruction” (now proposed as a “A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions. ”) to be added as a term for the NERC Glossary? If not, please explain in the comment area of the last question.

Yes

No

Comments:

*Technically the definition is an improvement and the SRC would agree with the proposed changes, if the definition were needed. The issue is with the need for this definition, and the continuing debate this definition is generating. The SRC is opposed to having this term defined and added to the NERC Glossary. The term operating instruction does not need to be defined. For years, system operators deal with operating instructions on a daily if not minute basis. Having a defined term, and calling such communication as “Command” is unnecessary, and can confuse operators from what they understand to be the meaning of operating instructions. While the SDT has found that their previous definitions were not appropriate for a NERC standard, and subsequent incremental changes are useful, the debate itself does not seem to be a productive use of the SDT’s or the Industry’s time.*

*The SRC would prefer that the objectives of the SAR (communications protocols) be handled through means other than a Standard (e.g. the Operating Committee’s Reliability Guidelines on Communications). The reason being, a standard requires zero-defect compliance, data retention, self-reporting, and requires these debates over the proposed terms such as “Operating instruction” which diverts the Industry, NERC and the Regional Entities from focusing on more productive reliability issues.*



2. The SDT has proposed new language in COM-003-1, R1 and R2: ***“Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”*** R3 and R4 from draft 3 are eliminated. Do you agree with these proposed requirement changes? If not, please explain in the comment area of the last question.

Yes

No

Comments:

*The SRC appreciates the SDT’s initiative but points out that the requirement still includes the verb “implement”. That phrase, as part of a mandatory standard, will require a zero-defect environment.*

*The phrase “in a manner that identifies, assesses and corrects deficiencies” is vague, not measurable and inconsistent with the results-based standard concept which emphasizes the inclusion of a performance or reliability outcome in the requirement. A more direct and clear requirement would be to simply require “implement documented communication protocol...”. We appreciate the SDT’s intent for adding this phrase, but it does little to ease the concerns of the commenters. Instead, the addition introduces an immeasurable phrase that may in fact make the requirement more ambiguous and unclear.*

*The SRC realizes the SDT is trying to mandate a Communications Protocol, and would therefore suggest if the SDT still believes a Standard is necessary, then the SDT need only require each entity “have communications protocols, that include periodic monitoring, assessments, and procedures for mitigating violations of those protocols.”*

3. Do you agree with the VRFs and VSLs for Requirements R1 and R2?

Yes

No

Comments:

4. Do you have any other comments or suggestions to improve the draft standard?

Comments:

*The SDT has been effective in responding to the Industry’s concerns on the issue of “one-way” messaging.*

*Communications Protocols are not documents that are suitable as “Standards” for a mandatory reliability standard. The zero-defect, self-reporting nature of such standards conflicts with the nature and impact of the violations that get reported.*

*Protocols are internal controls that an entity imposes on itself. Protocols allow an entity to self-regulate itself and to decide if the monitored deviations from their own protocols warrant further action. To mandate such protocols are implemented removes the allowance for “impact to reliability”. To mandate that an entity have protocols is a better approach. To create a new category for Protocols that do not carry the same level of monitoring and reporting as standards is an even better approach.*

*The SRC recognizes that the SDT has submitted an RSAW that is designed to mitigate the zero-defect impacts. However, as is stressed by NERC, RSAWs are not requirements. The only requirements are those in the approved standard itself.*

Group Name     SPP Standards Review Group  
 Lead Contact    Robert Rhodes  
 Contact Organization    Southwest Power Pool  
 Segment            2

<u>Additional Member</u>	<u>Additional Organization</u>	<u>Region</u>	<u>Segment</u>
Leo Bernier	AES Shady Point LLC	SPP	5
Doug Callison	Grand River Dam Authority	SPP	1,3,5
Albert Campbell	Grand River Dam Authority	SPP	1,3,5
Michelle Corley	Cleco Power LLC	SPP	1,3,5
	Rayburn Country Electric		
Greg Froehling	Cooperative	SPP	3
Jonathan Hayes	Southwest Power Pool	SPP	2
Bo Jones	Westar Energy	SPP	1,3,5,6
Allen Klassen	Westar Energy	SPP	1,3,5,6
Tiffany Lake	Westar Energy	SPP	1,3,5,6

1. Do you agree with the changes made to the proposed definition “Operating Instruction” (now proposed as a “A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions. ”) to be added as a term for the NERC Glossary? If not, please explain in the comment area of the last question.

- Yes  
 No

Comments:

2. The SDT has proposed new language in COM-003-1, R1 and R2: *“Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following:”* R3 and R4 from draft 3 are eliminated. Do you agree with these proposed requirement changes? If not, please explain in the comment area of the last question.

Yes

No

Comments:

While we are glad to see an effort on the part of the drafting team and NERC to move away from ‘zero tolerance’ requirements and move toward internal controls to address deficiencies, we are concerned as to how this process will be implemented if it is approved. For example, if our process calls for a 2% sampling size and the sample is presented to the CEA, what prevents the CEA from saying that the sample size is too small and finds us in violation because of it. Also, if our process does not uncover any discrepancies is it because there are no discrepancies or is it because our process is flawed and we missed something? We are concerned about how a CEA will respond to such a situation. Perhaps we need a more descriptive methodology of how this process will actually work in the field.

3. Do you agree with the VRFs and VSLs for Requirements R1 and R2?

Yes

No

Comments:

The third component of the Severe VSLs of R1 and R2 should read:

“The Responsible Entity did not implement documented communication protocols in a manner that identifies, assesses and corrects deficiencies in those protocols as required in Requirement 1.”

“The Responsible Entity did not implement documented communications protocols in a manner that identifies, assesses and corrects deficiencies in those protocols as required in Requirement 2.”

4. Do you have any other comments or suggestions to improve the draft standard?

Comments:

- We are not sure which time zone is required in R1.3. For example, if two facilities are physically located side-by-side in the Mountain Time Zone but are controlled by

different GOPs, one in the Central Time Zone and the other in the Eastern Time Zone, which time zone should be used in the Operating Instruction?

- Delete the extra space following 'Instruction' in the 4<sup>th</sup> line of R1.4.
- R1.5 should be read:

“Use of alpha-numeric clarifiers when issuing an oral Operating Instruction for Facilities and Elements in instances where the nomenclature of Facilities or Elements is in alpha-numeric format. (For example, if an entity designated a circuit breaker “One two Bravo” (12B), one two Bravo would need alpha-numeric clarifiers if used in an oral Operating Instruction.)”

- Delete the “. “ in the parentheticals in the 3<sup>rd</sup> lines of both R1.8 and R1.9
- R1.9 and R2.2 should be expanded to clarify what the recipient should do in the event the communication via a burst messaging system is not understood. We propose the following for both R1.9 and R2.2.

“When receiving an oral Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system), if the communication received is not understood, subsequent to the call, the recipient is to call the initiator and request clarification.”

**Standard Development Roadmap**

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

**Development Steps Completed:**

1. The Standards Committee (SC) approved the Standard Authorization Request (SAR) for posting on March 1, 2007.
2. The SAR was posted for comment from March 19 through April 17, 2007.
3. The SC sought SAR drafting team nominations April 18 through May 2, 2007.
4. The SAR drafting team posted reply comments to industry comments received on the first posting SAR on June 8, 2007
5. Standard drafting team appointed by SC Executive Committee on June 28, 2007
6. Version 1 draft of Standard posted November 2009 for Informal Comments closed January 15 2010.
7. Version 2 draft of Standard posted May 2012 for Formal Comments, Initial Ballot closed June 20 2012.
8. Version 3 draft of Standard posted August 2012 for Formal Comments, Ballot closed September 22, 2012.
9. Version 4 draft of Standard posted November 2012 for Formal Comments, Ballot closed December 13, 2012.

**Description of Current Draft:**

This is the fifth draft of a new standard requiring the use of standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The drafting team requests posting for a 30-day concurrent Formal Comment period and Ballot.

**Future Development Plan:**

<b>Anticipated Actions</b>	<b>Anticipated Date</b>
1. Drafting team considers comments, makes conforming changes, and requests SC approval to proceed to pre-ballot comment period.	February 2013
2. Third Successive Ballot of Standards	March 2013
3. Recirculation ballot of standards.	April 2013
4. Board adopts standards.	May 2013

### **Definitions of Terms Used in Standard**

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

*When using terms or phrases contained in the Reliability Standards Glossary of Terms for communications it should be cited as the source. When used in written communications, terms or phrases contained in the Reliability Standards Glossary of Terms are capitalized.*

**Operating Instruction** —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.

### A. Introduction

1. **Title:** Operating Personnel Communications Protocols
2. **Number:** COM-003-1
3. **Purpose:** To provide System Operators predefined communications protocols that reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of BES.
4. **Applicability:**
  - 4.1. **Functional Entities**
    - 4.1.1 Balancing Authority
    - 4.1.2 Distribution Provider
    - 4.1.3 Generator Operator
    - 4.1.4 Reliability Coordinator
    - 4.1.5 Transmission Operator
5. **(Proposed) Effective Date:** First day of first calendar quarter, twelve (12) calendar months following applicable regulatory approval, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter twelve (12) calendar months from the date of Board of Trustee adoption.

### B. Requirements

- R1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop and implement documented communication protocols that outline the communications expectations of its System Operators. The documented communication protocols will address, where applicable, the following: [*Violation Risk Factor: Low*] [*Time Horizon: Long-term Planning* ]

- 1.1. Use of the English language when issuing or responding to an oral or written Operating Instruction or Reliability Directive, unless another language is mandated by law or regulation.
- 1.2. Instances that require time identification when issuing an oral or written Operating Instruction or Reliability Directive, and the format for that time identification.
- 1.3. Nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction or Reliability Directive.
- 1.4. Instances where alpha-numeric clarifiers are necessary when issuing an oral Operating Instruction or Reliability Directive, and the format for those clarifiers.

Implementation means (in R1, R2 R3 and R4) incorporating the communication protocols into processes, policies, procedures, training programs and assessment programs to support setting and attaining the communication expectations of operators (R3) and System Operators (R1).

- 1.5. Instances where the issuer of an oral two party, person-to-person Operating Instruction is required to:
  - Confirm that the response from the recipient of the Operating Instruction was accurate, or
  - Reissue the Operating Instruction to resolve a misunderstanding.
- 1.6. Require the recipient of an oral two party, person-to-person Operating Instruction to repeat, restate, rephrase, or recapitulate the Operating Instruction, if requested by the issuer.
- 1.7. Instances where the issuer of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) is required to verbally or electronically confirm receipt from at least one receiving party.
- 1.8. Require the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the issuer if the communication is not understood.
- 1.9. Coordination with affected Reliability Coordinators', Balancing Authorities', Transmission Operators', Distribution Providers', and Generator Operators' communication protocols.
- R2.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop method(s) to assess System Operators' communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R1. [*Violation Risk Factor: Medium*] [*Time Horizon: Operations Planning, Operations Assessment* ]
- R3.** Each Distribution Provider and Generator Operator shall develop and implement documented communication protocols that outline the communications expectations of its operators. The documented communication protocols will address, where applicable, the following: [*Violation Risk Factor: Low*] [*Time Horizon: Long-term Planning* ]
  - 3.1. Use of the English language when responding to an oral or written Operating Instruction or Reliability Directive, unless another language is mandated by law or regulation.
  - 3.2. Require the recipient of an oral two party, person-to-person Operating Instruction to repeat, restate, rephrase, or recapitulate the Operating Instruction, if requested by the issuer.
  - 3.3. Require the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the issuer if the communication is not understood.
- R4.** Each Distribution Provider and Generator Operator shall develop method(s) to assess operators' communication practices and implement corrective actions necessary to



meet the expectations in its documented communication protocols developed for Requirement R3. [*Violation Risk Factor: Medium*] [*Time Horizon: Operations Planning /Operations Assessment* ]

**C. Measures**

- M1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence that it implemented its documented communication protocols that it developed for Requirement R1 which may include, but is not limited to, its policies, procedures, and or operator training.
- M2.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide the results of its periodic assessment and of any corrective actions (if any corrective actions were implemented) developed for Requirement R2.
- M3.** Each Distribution Provider and Generator Operator shall provide its documented communications protocols developed for Requirement R3. Each Distribution Provider, and Generator Operator shall provide evidence that it implemented its documented communication protocols that it developed for Requirement R3 which may include, but is not limited to, its policies, procedures, and or operator training.
- M4.** Each Distribution Provider and Generator Operator shall provide the results of its periodic assessment and of any corrective actions (if any corrective actions were implemented) developed for Requirement R4.

**D. Compliance**

**1. Compliance Monitoring Process**

**1.1. Compliance Enforcement Authority**

As defined in the NERC Rules of Procedure, “Compliance Enforcement Authority” means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

**1.2. Data Retention**

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each Transmission Operator, Balancing Authority, Reliability Coordinator, Generator Operator, and Distribution Provider shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall retain evidence for Requirement R1 Measure M1 for the most recent 90 days.

Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall retain evidence for Requirement R2 Measure M2 for the most recent 180 days.

Each Distribution Provider and Generator Operator shall retain evidence for Requirement R3 Measure M3 for the most recent 90 days.

Each Distribution Provider and Generator Operator shall retain evidence for Requirement R4 Measure M4 for the most recent 180 days.

If a Transmission Operator, Balancing Authority, Reliability Coordinator, Generator Operator or Distribution Provider is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

### **Compliance Monitoring and Assessment Processes**

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

### **1.3. Additional Compliance Information**

None

**COM-003-1 Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R1</b>	Long Term Planning	Low	<p>The Responsible Entity did not address one (1) of the nine(9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</p> <p>OR</p> <p>The Responsible Entity did not implement one (1) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</p>	<p>The Responsible Entity did not address two (2) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</p> <p>OR</p> <p>The Responsible Entity did not implement two (2) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</p>	<p>The Responsible Entity did not address three (3) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</p> <p>OR</p> <p>The Responsible Entity did not implement three (3) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</p>	<p>The Responsible Entity did not address four (4) or more of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</p> <p>OR</p> <p>The Responsible Entity did not have any documented communication protocols as required in Requirement R1</p> <p>OR</p> <p>The Responsible Entity did not implement any documented communication protocols as required in Requirement R1</p>

**COM-003-1 Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R2</b>	Operations Planning Operations Assessment	Medium	The Responsible Entity performed periodic assessments of its System Operators' communication practices and implemented 50 % or more but not all corrective action identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.	The Responsible Entity performed periodic assessments of its System Operators' communication practices and implemented less than 50 % of the corrective actions identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.	The Responsible Entity performed periodic assessments of its System Operators' communication practices but did not implement any corrective actions identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.	The Responsible Entity did not perform periodic assessments of its System Operators' communication practices identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.

**COM-003-1 Operating Personnel Communications Protocols**

<p><b>R3</b></p>	<p>Long Term Planning</p>	<p>Low</p>		<p>The Responsible Entity did not address one (1) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</p> <p>OR</p> <p>The Responsible Entity did not implement one (1) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</p>	<p>The Responsible Entity did not address two (2) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</p> <p>OR</p> <p>The Responsible Entity did not implement two (2) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</p>	<p>The Responsible Entity did not address three (3) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</p> <p>OR</p> <p>The Responsible Entity did not develop any documented communication protocols as required in Requirement R3</p> <p>OR</p> <p>The Responsible Entity did not implement any documented communication protocols as required in Requirement R3</p>
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**COM-003-1 Operating Personnel Communications Protocols**

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<p><b>R4</b></p>	<p>Operations Planning Operations Assessment</p>	<p>Medium</p>	<p>The Responsible Entity performed periodic assessments of its operators' communication practices and implemented 50 % or more but not all corrective action identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3.</p>	<p>The Responsible Entity performed periodic assessments of its operators' communication practices and implemented less than 50 % of the corrective actions identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3.</p>	<p>The Responsible Entity performed periodic assessments of its operators' communication practices but did not implement any corrective actions identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3</p>	<p>The Responsible Entity did not perform assessments of its operators' communication practices and did not meet the expectations in its documented communication protocols developed for Requirement R3.</p>
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**E. Regional Variances**

None.

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>

### Standard Development Roadmap

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

#### Development Steps Completed:

1. The Standards Committee (SC) approved the Standard Authorization Request (SAR) for posting on March 1, 2007.
2. The SAR was posted for comment from March 19 through April 17, 2007.
3. The SC sought SAR drafting team nominations April 18 through May 2, 2007.
4. The SAR drafting team posted reply comments to industry comments received on the first posting SAR on June 8, 2007
5. Standard drafting team appointed by SC Executive Committee on June 28, 2007
6. Version 1 draft of Standard posted November 2009 for Informal Comments closed January 15 2010.
7. Version 2 draft of Standard posted May 2012 for Formal Comments, Initial Ballot closed June 20 2012.
8. Version 3 draft of Standard posted August 2012 for Formal Comments, ~~Initial~~ Ballot closed September ~~2022~~, 2012.
9. Version 4 draft of Standard posted November 2012 for Formal Comments, Ballot closed December 13, 2012.

#### Description of Current Draft:

This is the ~~fourth~~fifth draft of a new standard requiring the use of standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The drafting team requests posting for a 30-day concurrent Formal Comment period and Ballot.

#### Future Development Plan:

Anticipated Actions	Anticipated Date
<u>1. Drafting team considers comments, makes conforming changes, and requests SC approval to proceed to pre-ballot comment period.</u>	<u>February 2013</u>
<del>1.2.</del> <u>Second</u> <del>Third</del> Successive Ballot of Standards	<del>November 2012</del> <u>March 2013</u>
<del>2.3.</del> Recirculation ballot of standards.	<del>January</del> <u>April</u> 2013



<u>3.4.</u> Board adopts standards.	<del>February</del> <u>May</u> 2013
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### Definitions of Terms Used in Standard

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

*When using terms or phrases contained in the Reliability Standards Glossary of Terms for communications it should be cited as the source. When used in written communications, terms or phrases contained in the Reliability Standards Glossary of Terms are capitalized.*

Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.

## A. Introduction

1. **Title:** Operating Personnel Communications Protocols
2. **Number:** COM-003-1
3. **Purpose:** To provide System Operators ~~uniform~~predefined communications protocols that reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of BES.
4. **Applicability:**
  - 4.1. **Functional Entities**
    - 4.1.1 Balancing Authority
    - 4.1.2 Distribution Provider
    - 4.1.3 Generator Operator
    - 4.1.4 Reliability Coordinator
    - 4.1.5 Transmission Operator
5. **(Proposed) Effective Date:** First day of first calendar quarter, twelve (12) calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter twelve (12) calendar months from the date of Board of Trustee adoption. \_\_\_\_\_

### ~~6. Background:~~

~~The SDT has incorporated within this standard a recognition that these requirements should not focus on individual instances of failure as a basis for violating the standard. In particular, the SDT has incorporated an approach to empower and enable the industry to identify, assess, and correct deficiencies in the implementation of certain requirements. The intent is to change the basis of a violation in those requirements so that they are not focused on whether there is a deficiency, but on identifying, assessing, and correcting deficiencies. It is presented in those requirements by modifying “implement” as follows:~~

~~Each ... shall implement, in a manner that identifies, assesses, and corrects deficiencies, ...~~

~~The term *documented communication protocols* refers to a set of required protocols specific to the Functional Entity. This term does not imply any particular naming or approval structure beyond what is stated in the requirements. An entity should include as much as it believes necessary in their documented protocols, but they must address all of the applicable parts of the Requirement. The documented protocols themselves are not required to include the “... identifies, assesses, and corrects deficiencies, ...” elements described in the preceding paragraph, as those aspects are related to the manner of implementation of the documented protocols and could be accomplished through other controls or compliance management activities.~~

## B. Requirements

**R1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop and implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include that outline the communications expectations of its System Operators. The documented communication protocols will address, where applicable, the following: ~~:[Violation Risk Factor: *Medium-Low*] [Time Horizon: Long-term Planning ]~~

**1.1.** Use of the English language when issuing or responding to an oral or written Operating Instruction or Reliability Directive, unless another language is mandated by law or regulation.

~~1.~~ Use of the 24-hour clock format when referring to clock times Instances that require time identification when issuing an oral or written Operating Instruction.

~~1.2.~~ Use of the time, the or Reliability Directive, and the format for that time zone where the action will occur and indication of whether the time is daylight saving time or standard time identification.

~~1.2.1.3.~~ Nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction ~~that refers to clock times between Functional Entities in different time zones or Reliability Directive.~~

~~2.~~ Use of the name specified by the owner(s) for each Transmission interface Element or Transmission interface Facility when referring to a Transmission interface Element or a Transmission interface Facility in an oral or written Operating Instruction , unless another name is mutually agreed to by the Functional Entities.

~~1.3.1.4.~~ Use of Instances where alpha-numeric clarifiers are necessary when issuing an oral Operating Instruction ~~for Facilities and Elements in instances where the nomenclature of Facilities or Elements is in alpha-numeric or Reliability Directive, and the format (for example if an entity designated a circuit breaker “One two Bravo” (12B). One two Bravo would need alpha-numeric those clarifiers if used in an oral Operating Instruction).~~

~~1.4.1.5.~~ When issuing Instances where the issuer of an oral two party, person-to-person Operating Instruction, ~~require the issuer~~ is required to:

- Confirm that the response from the recipient of the Operating Instruction was accurate, or
- Reissue the Operating Instruction to resolve a misunderstanding.

Implementation means (in R1, R2 R3 and R4) incorporating the communication protocols into processes, policies, procedures, training programs and assessment programs to support setting and attaining the communication expectations of operators (R3) and System Operators (R1).

1.5.1.6. ~~When receiving~~ Require the recipient of an oral two party, person-to-person Operating Instruction, ~~require the recipient~~ to repeat, restate, rephrase, or recapitulate the Operating Instruction, if requested by the issuer.

1.6.1.7. ~~When issuing~~ Instances where the issuer of an oral Operating Instruction ~~through~~ Reliability Directive using a one-way burst messaging system ~~used~~ to communicate a common message to multiple parties in a short time period (~~for example~~ e.g. an all-call All Call system) ~~;~~ is required to verbally or electronically confirm receipt from at least one or more receiving parties party.

1.8. ~~When receiving~~ Require the receiver of an oral Operating Instruction ~~through~~ Reliability Directive using a one-way burst messaging system ~~used~~ to communicate a common message to multiple parties in a short time period (~~for example~~ e.g. an all-call All Call system) ~~;~~ to request clarification from the ~~initiator~~ issuer if the communication is not understood.

1.7.1.9. Coordination with affected Reliability Coordinators', Balancing Authorities', Transmission Operators', Distribution Providers', and Generator Operators' communication protocols.

R2. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop method(s) to assess System Operators' communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R1. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Operations Assessment ]

R2.R3. Each Distribution Provider and Generator Operator shall develop and implement, in a manner documented communication protocols that identifies, assesses and corrects deficiencies, outline the communications expectations of its operators. The documented communication protocols for Operating Instructions between Functional Entities that include will address, where applicable, the following: [Violation Risk Factor: MediumLow] [Time Horizon: Long-term Planning ]

3.1. ~~When receiving~~ Use of the English language when responding to an oral or written Operating Instruction or Reliability Directive, unless another language is mandated by law or regulation.

3.1.3.2. Require the recipient of an oral two party, person-to-person Operating Instruction, ~~require the recipient~~ to repeat, restate, rephrase, or recapitulate the Operating Instruction, if requested by the issuer.

3.2.3.3. ~~When receiving~~ Require the receiver of an oral Operating Instruction ~~through~~ Reliability Directive using a one-way burst messaging system ~~used~~ to communicate a common message to multiple parties in a short time period (e.g. an ~~all-call~~ All Call system) ~~;~~ to request clarification from the ~~initiator~~ issuer if the communication is not understood, ~~if required by the issuer.~~

R4. Each Distribution Provider and Generator Operator shall develop method(s) to assess operators' communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R3. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning /Operations Assessment ]

## C. Measures

- M1.** ~~Evidence must include each applicable entity's~~Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1 ~~and must demonstrate.~~ Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence that ~~the protocols have been~~it implemented in a manner-its documented communication protocols that identifies, assesses and corrects deficiencies.-it developed for Requirement R1 which may include, but is not limited to, its policies, procedures, and or operator training.
- M2.** ~~Evidence must include each applicable entity's~~Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide the results of its periodic assessment and of any corrective actions (if any corrective actions were implemented) developed for Requirement R2.
- M3.** Each Distribution Provider and Generator Operator shall provide its documented communications protocols developed for Requirement ~~R2 and must demonstrate~~R3. Each Distribution Provider, and Generator Operator shall provide evidence that ~~the it implemented its documented communication~~ protocols have been implemented in a manner that identifies, assesses and corrects deficienciesit developed for Requirement R3 which may include, but is not limited to, its policies, procedures, and or operator training.
- ~~M2.~~**M4.** Each Distribution Provider and Generator Operator shall provide the results of its periodic assessment and of any corrective actions (if any corrective actions were implemented) developed for Requirement R4.

## D. Compliance

### 1. Compliance Monitoring Process

#### 1.1. Compliance Enforcement Authority

~~The Regional Entity shall serve as~~As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority-(CEA) unless" means NERC or the ~~applicable entity is owned, operated, or controlled by~~Regional Entity in their respective roles of monitoring and enforcing compliance with the Regional Entity. ~~In such cases the ERO or a Regional Entity approved by FERC or other applicable governmental authority shall serve as the CEA.~~

NERC Reliability Standards.

#### 1.2. Data Retention

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each Transmission Operator, Balancing Authority, Reliability Coordinator, Generator Operator, and Distribution Provider shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall retain evidence ~~of its manner that identifies, assesses and corrects deficiencies~~ for Requirement R1 Measure M1 for the most recent 90 days.

Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall retain evidence for Requirement R2 Measure M2 for the most recent 180 days.

Each Distribution Provider and Generator Operator shall retain evidence ~~of its manner that identifies, assesses and corrects deficiencies~~ for Requirement ~~R2~~R3 Measure ~~M2~~M3 for the most recent 90 days.

Each Distribution Provider and Generator Operator shall retain evidence for Requirement R4 Measure M4 for the most recent 180 days.

If a Transmission Operator, Balancing Authority, Reliability Coordinator, Generator Operator or Distribution Provider is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

### **Compliance Monitoring and Assessment Processes**

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

### **1.3. Additional Compliance Information**

None

R #	Time Horizon		VRF	Violation Severity Levels			
				Lower VSL	Moderate VSL	High VSL	Severe VSL



COM-003-1 Operating Personnel Communications Protocols

<p><b>R1</b></p>	<p>Long Term Planning</p>	<p>Low</p>	<p>The Responsible Entity did not <del>include</del><u>address</u> one (1) of the nine (9) parts of Requirement <del>R1, Parts 1.1 to 1.9 in R1</del> in their documented communication protocols <u>as required in Requirement R1</u></p> <p><u>OR</u></p> <p><u>The Responsible Entity did not implement one (1) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</u></p>	<p>The Responsible Entity did not <del>include</del><u>address</u> two (2) of the <u>nine (9)</u> parts of Requirement R1, <del>Parts 1.1 to 1.9</del> in their documented communication protocols <u>as required in Requirement R1</u></p> <p><u>OR</u></p> <p><u>The Responsible Entity did not implement two (2) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</u></p>	<p>The Responsible Entity <u>did not</u> <del>include</del><u>address</u> three (3) of the <u>nine (9)</u> parts of <u>Requirement R1, Parts 1.1 to 1.9</u> in their documented communication protocols <u>as required in Requirement R1</u></p> <p><u>OR</u></p> <p><u>The Responsible Entity did not implement three (3) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</u></p>	<p>The Responsible Entity did not <del>include</del><u>address</u> four (4) or more of the <u>nine (9)</u> parts of <u>Requirement R1, Parts 1.1 to 1.9</u> in their documented communication protocols <u>as required in Requirement R1</u></p> <p><u>OR</u></p> <p>The Responsible Entity did not have <u>any</u> documented communication protocols as required in Requirement R1</p> <p><u>OR</u></p> <p>The Responsible Entity did not implement, <del>in a manner that identifies, assesses and corrects deficiencies, their</del> <u>any</u> documented communication protocols as required in Requirement R1</p>
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**COM-003-1 Operating Personnel Communications Protocols**

<b>R2</b>	<b>Long-Term Planning</b>	<b>Low</b>	<b>N/A</b>	<b>N/A</b>	<del>The Responsible Entity did not include one (1) of the two (2) parts of Requirement R2, Parts 2.1 to 2.2 in their documented communication protocols</del>	<del>The Responsible Entity did not include Parts 2.1 to 2.2 of Requirement R2, in their documented communication protocols OR The responsible entity did not have documented communication protocols as required in Requirement R2 OR The Responsible Entity did not implement, in a manner that identifies, assesses and corrects deficiencies, their documented communication protocols as required in Requirement R2</del>
<u>R #</u>	<u>Time Horizon</u>	<u>VRF</u>	<u>Violation Severity Levels</u>			
			<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>

**COM-003-1 Operating Personnel Communications Protocols**

<u>R2</u>	<u>Operations Planning</u> <u>Operations Assessment</u>	<u>Medium</u>	<u>The Responsible Entity performed periodic assessments of its System Operators' communication practices and implemented 50 % or more but not all corrective action identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.</u>	<u>The Responsible Entity performed periodic assessments of its System Operators' communication practices and implemented less than 50 % of the corrective actions identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.</u>	<u>The Responsible Entity performed periodic assessments of its System Operators' communication practices but did not implement any corrective actions identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.</u>	<u>The Responsible Entity did not perform periodic assessments of its System Operators' communication practices identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.</u>
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**COM-003-1 Operating Personnel Communications Protocols**

<p><u>R3</u></p>	<p><u>Long Term Planning</u></p>	<p><u>Low</u></p>		<p><u>The Responsible Entity did not address one (1) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</u></p> <p><u>OR</u></p> <p><u>The Responsible Entity did not implement one (1) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</u></p>	<p><u>The Responsible Entity did not address two (2) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</u></p> <p><u>OR</u></p> <p><u>The Responsible Entity did not implement two (2) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</u></p>	<p><u>The Responsible Entity did not address three (3) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</u></p> <p><u>OR</u></p> <p><u>The Responsible Entity did not develop any documented communication protocols as required in Requirement R3</u></p> <p><u>OR</u></p> <p><u>The Responsible Entity did not implement any documented communication protocols as required in Requirement R3</u></p>
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**COM-003-1 Operating Personnel Communications Protocols**

<b>R4</b>	<u>Operations Planning</u> <u>Operations Assessment</u>	<u>Medium</u>	<u>The Responsible Entity performed periodic assessments of its operators' communication practices and implemented 50 % or more but not all corrective action identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3.</u>	<u>The Responsible Entity performed periodic assessments of its operators' communication practices and implemented less than 50 % of the corrective actions identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3.</u>	<u>The Responsible Entity performed periodic assessments of its operators' communication practices but did not implement any corrective actions identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3</u>	<u>The Responsible Entity did not perform assessments of its operators' communication practices and did not meet the expectations in its documented communication protocols developed for Requirement R3.</u>
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**E. Regional Variances**

None.

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>

## Implementation Plan

Project 2007-02 - Operating Personnel Communications Protocols

### Implementation Plan for COM-003-1 – Operating Personnel Communications Protocols Standard

#### **Approvals Required**

COM-003-1 – Operating Personnel Communications Protocols Standard

#### **Prerequisite Approvals**

None

#### **Revisions to Glossary**

The following term is proposed for addition to the NERC Glossary of Terms:

#### **Operating Instruction —**

Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.

#### **Applicable Entities**

Balancing Authority  
Distribution Provider  
Generator Operator  
Reliability Coordinator  
Transmission Operator

#### **Revisions or Retirements to Approved Standards**

Approved Requirement to be Retired	Proposed Replacement Requirement(s)
<p>COM-001-1.1 Requirement R4</p> <p>R4.Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation</p>	<p>COM-003-1 Requirement R1 Part 1.1</p> <p><b>R1.</b> Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop and implement documented communication protocols that outline the communications expectations of its System Operators. The documented</p>

<p>control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations</p>	<p>communication protocols will address, where applicable, the following:[<i>Violation Risk Factor: Low</i>] [<i>Time Horizon: Long-term Planning</i> ]</p> <p>1.1. Use of the English language when issuing or responding to an oral or written Operating Instruction or Reliability Directive, unless another language is mandated by law or regulation</p>
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***Conforming Changes to Other Standards***

None

***Effective Dates***

COM-003-1 shall become effective the first day of first calendar quarter, twelve calendar months following applicable regulatory approval, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter twelve calendar months from the date of Board of Trustee adoption.

COM-001-1.1 Requirement R4 shall expire midnight of the day immediately prior to the Effective Date of COM-003-1 in the particular Jurisdiction in which COM-003-1 is becoming effective.



## Implementation Plan

Project 2007-02 - Operating Personnel Communications Protocols

### Implementation Plan for COM-003-1 – Operating Personnel Communications Protocols Standard

#### **Approvals Required**

COM-003-1 – Operating Personnel Communications Protocols Standard

#### **Prerequisite Approvals**

None

#### **Revisions to Glossary**

The following term is proposed for addition to the NERC Glossary of Terms:

#### **Operating Instruction –**

Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.

#### **Applicable Entities**

Balancing Authority  
Distribution Provider  
Generator Operator  
Reliability Coordinator  
Transmission Operator

#### **Revisions or Retirements to Approved Standards**

Approved Requirement to be Retired	Proposed Replacement Requirement(s)
COM-001-1.1 Requirement R4 R4.Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation	COM-003-1 Requirement R1 Part 1.1 <b><u>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop and implement documented communication protocols that outline the communications expectations of its System Operators. The documented</u></b>

<p>control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations</p>	<p><u>communication protocols will address, where applicable, the following: [Violation Risk Factor: Low] [Time Horizon: Long-term Planning]</u></p> <p><del>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following: [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]</del></p> <p>1.1. <u>Use of the English language when issuing or responding to an oral or written Operating Instruction or Reliability Directive, unless another language is mandated by law or regulation.</u></p> <p><del>Use of the English language when issuing an oral or written Operating Instruction between functional entities, unless another language is mandated by law or regulation.</del></p>
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**Conforming Changes to Other Standards**

None

**Effective Dates**

COM-003-1 shall become effective the first day of first calendar quarter, twelve calendar months following applicable regulatory approval, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter twelve calendar months from the date of Board of Trustee adoption.

COM-001-1.1 Requirement R4 shall expire midnight of the day immediately prior to the Effective Date of COM-0031-12 in the particular Jurisdiction in which COM-0031-12 is becoming effective.

# Unofficial Comment Form

## Project 2007-02 Operating Personnel Communications Protocols COM-003-1

Please **DO NOT** use this form. The drafting team is posting the draft COM-003-1 Operating Personnel Communications Protocols standard for industry comment for a 30-day comment period. Please use the [electronic comment form](#) located at the link below to submit comments. Comments must be submitted by **April 5, 2013**. If you have questions please contact Joseph Kriasiak at [Joseph.Kriasiak@nerc.net](mailto:Joseph.Kriasiak@nerc.net) or by telephone at 609-651-0903.

[http://www.nerc.com/filez/standards/Op\\_Comm\\_Protocol\\_Project\\_2007-02.html](http://www.nerc.com/filez/standards/Op_Comm_Protocol_Project_2007-02.html)

### **Background Information:**

Effective communication is critical for Bulk Electric System (BES) operations. Failure to successfully communicate clearly can create misunderstandings resulting in improper operations increasing the potential for failure of the BES.

The Standard Authorization Request (SAR) for this project was initiated on March 1, 2007 and approved by the Standards Committee on June 8, 2007. It established the scope of work to be done for Project 2007-02 Operating Personnel Communications Protocols (OPCP). The scope described in the SAR is to establish essential elements of communications protocols and communications paths such that operators and users of the North American Bulk Electric System will efficiently convey information and ensure mutual understanding. The August 2003 Blackout Report, Recommendation Number 26, calls for a tightening of communications protocols. This proposed standard's goal is to ensure that effective communication is practiced and delivered in clear language and standardized format via pre-established communications paths among pre-identified operating entities.

The SAR indicated that references to communication protocols in other NERC Reliability Standards may be moved to this new standard. The SAR instructed the standard drafting team to consider incorporating the use of Alert Level Guidelines and three-part communications in developing this new standard to achieve high level consistency across regions. The Standard Drafting Team (SDT) believes the Alert Level Guidelines, while valuable, belong in a separate standard and has petitioned the Standards Committee to approve the transfer to another standard or to start a separate project.

The upgrade of communication system hardware where appropriate is not included in this project (it is included in NERC Project 2007-08 Emergency Operations).

The standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators (GOPs), and Distribution Providers (DPs). These requirements ensure that communications include essential elements such that information is efficiently conveyed and mutually understood for communicating changes to real-time operating conditions and responding to directives, notifications, directions, instructions, orders, or other reliability related operating information.

The Purpose statement of COM 003-1 states: “To provide System Operators predefined communications protocols that reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of BES.”

- 1) **New NERC Glossary terms:** The SDT has maintained the definition of “Operating Instructions” proposed in the Standard version 4.

Operating *Instructions* differentiate the broad class of communications that deal with changing or altering the state of the BES from general discussions of options or alternatives. Changes to the BES operating state with unclear communications create increased opportunities for events that could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures.

This term is proposed for addition to the NERC Glossary to establish meaning and usage within the electricity industry.

- 2) **COM-003-1, Draft 5 now features 4 requirements:** The “*Implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities*” language has wide acceptance within industry, but concerns over compliance with internal controls caused great concern for some draft 4 commenters. The requirement structure and language has been changed in draft 5 based on changes to the standard recommended by Industry representatives at the “Communications in Operations Conference” of February 14-15, 2013 in Atlanta to allow applicable entities more flexibility to develop their communication protocols and to develop methods to assess operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols. Implementation means incorporating the communication protocols into policies, procedures, training programs and assessment programs to support setting and attaining the communication expectations of operators (R3) and System Operators (R1). The OPCP SDT believes draft 5 shifts the focus to improving the entity’s communication protocols, from a focus on whether the entity’s internal controls are “compliant”.

3) **Documented Communication Protocols:** The OPCP SDT has incorporated requirements R1 and R3, for an applicable entity to develop and implement documented communication protocols that **address**, where applicable, the following elements: ( note: the word address was recommended by draft 4 commenters and by a consensus at the “Communications in Operations Conference” of February 14-15, 2013 in Atlanta).

- a) **English language:** Use of the English language when issuing an oral or written Operating Instruction between functional entities, unless another language is mandated by law or regulation.
- b) **Time Identification:** Instances that require time identification when issuing an oral or written Operating Instruction or Reliability Directive, and the format for that time identification.
- c) **Line and Equipment Identifiers:** Nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction or Reliability Directive.
- d) **Alpha-numeric clarifiers:** Instances where alpha-numeric clarifiers are necessary when issuing an oral Operating Instruction or Reliability Directive, and the format for those clarifiers.

**e) Three-part Communication:**

Instances where the issuer of an oral two party, person-to-person Operating Instruction, is required to:

- Confirm that the response from the recipient of the Operating Instruction was accurate, or
- Reissue the Operating Instruction to resolve a misunderstanding.

Require the recipient of an oral two party, person-to-person Operating Instruction to repeat, restate, rephrase, or recapitulate the Operating Instruction, if requested by the issuer.

**One-way burst messaging system to multiple parties (all call):** Instances where the issuer of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) is required to verbally or electronically confirm receipt from at least one receiving party.

Require the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the initiator if the communication is not understood.

- f) **Three-part Communication: For Distribution Providers (DP) and Generator Operators (GOP):** Require the recipient of an oral two party, person-to-person Operating Instruction to repeat, restate, rephrase, or recapitulate the Operating Instruction, if requested by the issuer.
  - g) **One-way burst messaging system to multiple parties (all call): For Distribution Providers (DP) and Generator Operators (GOP):** Require the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the initiator if the communication is not understood, if required by the issuer.
  - h) **Uniformity of communication protocols among entities:** Coordination with affected Reliability Coordinators', Balancing Authorities', Transmission Operators', Distribution Providers', and Generator Operators' communication protocols.
- 4) **Violation Risk Factor (VRF) and Violation Severity Level (VSL) changes from version three:** The OPSDT reviewed the VRFs and VSLs associated with R1, R2, R3, R4 and made changes to more closely conform to NERC and FERC guidelines.

The SDT is proposing to retire Requirement R4 from COM-001-1.1 and incorporate it into Requirement R1 and R3 of this draft COM-003-1. Since Requirement R4 from COM-001-1.1 carries over essentially unchanged there is no specific question related to it in this Comment Form.

The choice of VRFs was made on the basis of the potential impact on the Bulk Electric System of a miscommunication during Operating Instructions. Requirements R2 and R4 are assigned a Medium Violation Risk due to their potential direct impact on BES reliability.

Time Horizons were selected to reflect the period within which the requirements applied. Requirements R1 and R3 must be implemented in long term planning operations and therefore were assigned a Time Horizon of Long Term Planning. R2 and R4 must be implemented in Operations planning and Operations Assessment Time Horizons.

## Questions

1. The SDT has proposed new language in COM-003-1, R1 and R3: *“Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop and implement documented communication protocols that outline the communications expectations of its System Operators. The documented communication protocols will address, where applicable, the following:”* (the same language exists for R3, except DPs and GOPs listed as applicable entities and the use of “operators” instead of “System Operators”). Do you agree with the changes made to the proposed definition “Operating Instruction” (now proposed as a *“A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.”*) to be added as a term for the NERC Glossary? Do you agree with these proposed requirement changes? If not, please explain in the comment area of the last question.

- Yes  
 No

2. The SDT has proposed new language in COM-003-1, R2 and R4: *“Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop method(s) to assess System Operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols.* (the same language exists for R3, except DPs and GOPs listed as applicable entities and the use of “operators” instead of “System Operators”). ” Do you agree with these proposed requirement changes? If not, please explain in the comment area of the last question.

- Yes  
 No

3. Do you agree with the VRFs and VSLs for Requirements R1, R2, R3 and R4?

- Yes  
 No

4. Do you have any other comments or suggestions to improve the draft standard?

Comments:

# Project 2007-02, COM-003-1 Operating Personnel Communication Protocols Rationale and Technical Justification

Justification for Requirements in Draft 5

## Rationale and Technical Justification

The Quality Review team for the draft 2 posting of COM-003-1 highly recommended that the OPCPSDT provide a justification or rationale document to aid reviewers in their examination of this draft of COM-003-1. The OPCPSDT agrees with the QR recommendation and has developed the following to support the standard and to help stakeholders understand the intent and scope of the standard. This version of the standard features a non traditional approach to standards that could alleviate concerns that surfaced in comments in drafts one, two, three and four.

### **Background**

Because Operating Instructions affect Facilities and Elements of the Bulk Electric System, the communication of those Operating Instructions must be understood by all involved parties, especially when those communications occur between functional entities. An EPRI study reviewed nearly 400 switching mishaps by electric utilities and found that roughly 19% of errors (generally classified as loss of load, breach of safety, or equipment damage) were due to communication failures.<sup>1</sup> This was nearly identical to another study of dispatchers from 18 utilities representing nearly 2000 years of operating experience that found that 18% of the operators' errors were due to communication problems.<sup>2</sup>

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<sup>1</sup> Beare, A., Taylor, J. *Field Operation Power Switching Safety*, WO2944-10, Electric Power Research Institute.

<sup>2</sup> Bilke, T., *Cause and prevention of human error in electric utility operations*, Colorado State University, 1998.



**Requirement R1**

Requirement R1 requires entities that can both issue and receive Operating Instructions to develop and implement documented communication protocols that outline the communications expectations of its operators. The protocols address the use of the English language (from COM-001-1.1 R4), time formatting, nomenclature for Transmission interface Elements, alpha-numeric clarifiers, and three part communications. There are added protocols to address operator training periodicity and to address the need for entities to coordinate their protocols for consistency among affected applicable entities. Only applicable protocols need to be addressed.

**Requirement R2**

Requirement R2 requires entities that both issue and receive Operating Instructions to develop method(s) to assess System Operators' communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R1.

**Requirement R3**

Requirement R3 requires entities that only receive Operating Instructions to develop and implement documented communication protocols that outline the communications expectations of its operators. Only applicable protocols need to be addressed. The first protocol requires the use of the English language. The two other protocols (R3, Parts 3.2 and 3.3) are repeat back for three part communication and clarification if an "all call" communication is unclear.

**Requirement R4**

Requirement R4 requires entities that only receive Operating Instructions to develop method(s) to assess operators' communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R3.

**Rationale**

The SDT has maintained within this standard a recognition that these requirements should not focus on individual instances of failure as a basis for violating the standard. In particular, the SDT has incorporated an approach to empower and enable the industry to assess and correct deficiencies in the communication practices. The intent is to change the basis of a violation in those requirements so that they are not focused on whether there is a deficiency, but on assessing communication practices and correcting deficiencies to reduce the possibility of miscommunication.

The term implement means incorporating the communication protocols into, but not limited to policies, procedures, training programs and assessment programs to support setting and attaining the communication expectations of operators (R3) and System Operators (R1).

The term *documented communication protocols* refers to a set of required protocols specific to the Functional Entity and the Functional Entities they must communicate with. This term does not imply any particular naming or approval structure beyond what is stated in the requirements. An entity should include as much as it believes necessary in their documented protocols, but they must address all of the applicable parts of the Requirement. The documented protocols themselves are not required to include the "... assessment and correction, ..." elements, as those aspects are related to the manner of implementation of the documented protocols and could be accomplished through other controls or compliance management activities.

The changes and rationale for draft 5 were a result of stakeholder comment and participation in the Communications in Operations Conference held on February 14 and 15, 2013. Stakeholders and the ERO conducted informational sessions, expressed concerns and conducted a workshop that provided guidance to the OPCPSDT to prepare draft 5. The changed language was a collaborative effort between industry and ERO.

# Project 2007-02, COM-003-1 Operating Personnel Communication Protocols Rationale and Technical Justification

Justification for Requirements in Draft ~~35~~

## Rationale and Technical Justification

The Quality Review team for the draft 2 posting of COM-003-1 highly recommended that the OPCPSDT provide a justification or rationale document to aid reviewers in their examination of this draft of COM-003-1. The OPCPSDT agrees with the QR recommendation and has developed the following to support the standard and to help stakeholders understand the intent and scope of the standard. This version of the standard features a non traditional approach to standards that could alleviate concerns that surfaced in comments in drafts one, two, ~~and three~~ and four.

### **Background**

Because Operating Instructions affect Facilities and Elements of the Bulk Electric System, the communication of those Operating Instructions must be understood by all involved parties, especially when those communications occur between functional entities. An EPRI study reviewed nearly 400 switching mishaps by electric utilities and found that roughly 19% of errors (generally classified as loss of load, breach of safety, or equipment damage) were due to communication failures.<sup>1</sup> This was nearly identical to another study of dispatchers from 18 utilities representing nearly 2000 years of operating experience that found that 18% of the operators' errors were due to communication problems.<sup>2</sup>

<sup>1</sup> [Beare, A., Taylor, J. Field Operation Power Switching Safety, WO2944-10, Electric Power Research Institute.](#)

<sup>2</sup> [Bilke, T., Cause and prevention of human error in electric utility operations, Colorado State University, 1998.](#)

**Requirement R1**

Requirement R1 requires entities that can both issue and receive Operating Instructions to develop and implement documented communication protocols that outline the communications expectations of its operators in a manner that identifies, assesses, and corrects deficiencies. The necessary protocols include address the use of the English language (from COM-001-1.1 R4), time formatting, mutually agreed nomenclature for Transmission interface Elements, alpha-numeric clarifiers, and three part communications. There are added protocols to address operator training periodicity and to address the need for entities to coordinate their protocols for consistency among affected applicable entities. Only applicable protocols need to be addressed.

**Requirement R2**

Requirement R2 requires entities that both issue and receive “Operating Instructions” to develop method(s) to assess System Operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R1. perform a quarterly assessment of its System Operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R1.

**Requirement R2-R3**

Requirement R2-R3 requires entities that only receive “Operating Instructions” to develop and implement documented communication protocols that outline the communications expectations of its operators implement documented communication protocols in a manner that identifies, assesses, and corrects deficiencies. Only applicable protocols need to be addressed.

The first (R3, Part 3.1) protocol includes requires the use of the English language. The two other protocols (protocols (R2, R3, Parts 2.3.1-2 and 2.3.23) required are repeat back for three part communication and clarification if an “all call” communication is unclear. There is an added protocol to address the training periodicity.

**Requirement R4**

Requirement R4 requires entities that only receive Operating Instructions to develop method(s) to assess operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for perform a quarterly assessment of its operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R3.

**Rationale**

The SDT has incorporated-maintained within this standard a recognition that these requirements should not focus on individual instances of failure as a basis for violating the standard. In particular, the SDT has incorporated an approach to empower and enable the industry to identify, assess, and correct

deficiencies in the communication practices~~implementation of certain requirements the standard's requirements~~. The intent is to change the basis of a violation in those requirements so that they are not focused on whether there is a deficiency, but on identifying~~assessing~~ communication practices~~operator performance~~, and correcting deficiencies to reduce the possibility of miscommunication~~improve operator performance~~. It is presented in those requirements by modifying "implement" as follows:

~~Each ... to perform a quarterly assessment of its System Operators' communication practices and implement corrective actions necessary shall implement, in a manner that identifies, assesses, and corrects deficiencies, ...~~

The term implement means incorporating the communication protocols into, but not limited to policies, procedures, training programs and assessment programs to support setting and attaining the communication expectations of operators (R3) and System Operators (R1).

The term *documented communication protocols* refers to a set of required protocols specific to the Functional Entity and the Functional Entities they must communicate with. This term does not imply any particular naming or approval structure beyond what is stated in the requirements. An entity should include as much as it believes necessary in their documented protocols, but they must address all of the applicable parts of the Requirement. The documented protocols themselves are not required to include the ". . . identifies, assesses~~assessment~~, and correction s deficiencies, . . ." elements ~~described in the preceding paragraph~~, as those aspects are related to the manner of implementation of the documented protocols and could be accomplished through other controls or compliance management activities.

The changes and rationale for draft 5 were a result of stakeholder comment and participation in the Communications in Operations Conference held on February 14 and 15, 2013. Stakeholders and the ERO conducted informational sessions, expressed concerns and conducted a workshop that provided guidance to the OPCPSDT to prepare draft 5. The changed language was a collaborative effort between industry and ERO.

## Project 2007-02: Operating Personnel Communication Protocols

### Mapping Document

#### 1. Mapping Document Showing Translation of COM-001-1.1, R4– Telecommunications into COM-003-1–Operating Personnel Communications Protocol

Requirement in Approved Standard	Translation to New Standard or Other Action	Comments
<p>R4.Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations</p>	<p>Moved into COM 003-1 R1.1</p>	<p>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop and implement documented communication protocols that outline the communications expectations of its System Operators. The documented communication protocols will address, where applicable, the following:[Violation Risk Factor: Low] [Time Horizon: Long-term Planning ]</p> <p>1.1. Use of the English language when issuing or responding to an oral or written Operating Instruction or Reliability Directive, unless another language is mandated by law or regulation.</p>

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Requirement in Approved Standard	Translation to New Standard or Other Action	Comments

## Project 2007-02: Operating Personnel Communication Protocols

### Mapping Document

#### 1. Mapping Document Showing Translation of COM-001-1.1, R4– Telecommunications into COM-003-1–Operating Personnel Communications Protocol

Requirement in Approved Standard	Translation to New Standard or Other Action	Comments
<p>R4.Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations</p>	<p>Moved into COM 003-1 R1.1</p>	<p><u>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop and implement documented communication protocols that outline the communications expectations of its System Operators. The documented communication protocols will address, where applicable, the following:[Violation Risk Factor: Low] [Time Horizon: Long-term Planning ]</u></p> <p><del>Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following::</del></p> <p>1.1. Use of the English language when issuing <u>or</u></p>



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Requirement in Approved Standard	Translation to New Standard or Other Action	Comments
		<u>responding to</u> an oral or written Operating Instruction <u>or Reliability Directive</u> <del>between functional entities</del> , unless another language is mandated by law or regulation.

## **Project 2007-2 – Operating Personnel Communications Protocol**

### **VRF and VSL Justifications**

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in COM 003-1 Operating Personnel Communications Protocols.

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Operations Personnel Communications Protocol Standard Drafting Team applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSLs for the requirements under this project:

### **NERC Criteria - Violation Risk Factors**

#### **High Risk Requirement**

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a

cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

### **Medium Risk Requirement**

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

### **Lower Risk Requirement**

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

## **FERC Violation Risk Factor Guidelines**

### **Guideline (1) — Consistency with the Conclusions of the Final Blackout Report**

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief

#### **Guideline (2) — Consistency within a Reliability Standard**

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

#### **Guideline (3) — Consistency among Reliability Standards**

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

#### **Guideline (4) — Consistency with NERC's Definition of the Violation Risk Factor Level**

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC's definition of that risk level.

**Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation**

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC's VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC's Reliability Standards and implies that these requirements should be assigned a "High" VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

## VRF for COM-003-1:

There are four requirements in COM-003-1, draft 5 with the addition of R3 and R4. Requirements R1 and R3 are assigned a "Low" VRF. R1 and R3 now read: *"Each ..... shall develop and implement documented communication protocols that outline the communications expectations of its operators. The documented communication protocols will address, where applicable, the following: "* Requirements R2 and R4 are assigned a "Medium" VRF. and the language change to R2 and R4, which now reads: *"Each ..... shall perform a quarterly assessment of its System Operators' communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement RX "*; warrants raising the VRF to "Medium" because it features evaluation and correction of operating performance that would have a deeper impact on the reliability of the BES.

## **NERC Criteria - Violation Severity Levels**

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple "degrees" of noncompliant performance and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
Missing a minor element (or a small percentage) of the required performance The performance or product measured has significant value as it almost meets the full intent of the requirement.	Missing at least one significant element (or a moderate percentage) of the required performance. The performance or product measured still has significant value in meeting the intent of the requirement.	Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component. The performance or product has limited value in meeting the intent of the	Missing most or all of the significant elements (or a significant percentage) of the required performance. The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.

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		requirement.	
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### **FERC Order on Violation Severity Levels**

In its June 19, 2008 Order on Violation Severity Levels, FERC indicated it would use the following four guidelines for determining whether to approve VSLs:

#### **Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance**

Compare the VSLs to any prior Levels of Non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when Levels of Non-compliance were used.

#### **Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties**

Guideline 2a: A violation of a “binary” type requirement must be a “Severe” VSL.

Guideline 2b: Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

#### **Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement**

VSLs should not expand on what is required in the requirement.

**Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations**

. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

The drafting team will complete the following table, providing of analysis and justification for each VRF and VSL, for each requirement.

VRF and VSL Justifications – COM 003-1, R1	
Proposed VRF	Low
NERC VRF Discussion	R1 is a requirement in a long term planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system The VRF for this requirement is “Low” which is consistent with NERC guidelines
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R1 establishes communication protocols, which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for the development and implementation of documented communication protocols by entities that will both issue and receive “Operating Instructions” that reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b>



VRF and VSL Justifications – COM 003-1, R1			
	Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “ Low” which is consistent with NERC guidelines for similar requirements.		
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R1 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.		
Proposed VSL			
Lower	Moderate	High	Severe
The Responsible Entity did not address one (1) of the nine(9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1  OR The Responsible Entity did not implement one (1) of the nine	The Responsible Entity did not address two (2) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1  OR	The Responsible Entity did not address three (3) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1  OR The Responsible Entity did not implement three (3) of the nine (9) parts of Requirement R1 in	The Responsible Entity did not address four (4) or more of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1  OR The Responsible Entity did not have any documented

**VRF and VSL Justifications – COM 003-1, R1**

<p>(9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</p>	<p>The Responsible Entity did not implement two (2) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</p>	<p>their documented communication protocols as required in Requirement R1</p>	<p>communication protocols as required in Requirement R1  OR  The Responsible Entity did not implement any documented communication protocols as required in Requirement R1</p>
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**VRF and VSL Justifications – COM 003-1, R1**

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of common communication protocols. If no communication protocols were addressed at all or if the number of required protocols falls below the listed thresholds, then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R1 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

**VRF and VSL Justifications – COM 003-1, R1**

Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	<p>Non CIP</p>
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	<p>Non CIP</p>

VRF and VSL Justifications – COM 003-1, R2	
<b>Proposed VRF</b>	Medium
NERC VRF Discussion	R2 is a requirement in an Operations planning and Operations Assessment time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system The VRF for this requirement is “Medium” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R2 falls under Recommendation 26 of the Blackout Report. The VRF for this requirement is “Medium” which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for the assessment and correction of System Operators’ performance with documented communication protocols by entities that will both issue and receive “Operating Instructions” to reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to assess and correct System Operators’ performance with proper utilization of communication protocols could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R2 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one

<b>VRF and VSL Justifications – COM 003-1, R2</b>			
VRF was assigned.			
<b>Proposed VSL</b>			
<b>Lower</b>	<b>Moderate</b>	<b>High</b>	<b>Severe</b>
The Responsible Entity performed periodic assessments of its System Operators’ communication practices and implemented 50 % or more but not all corrective action identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.	The Responsible Entity performed periodic assessments of its System Operators’ communication practices and implemented less than 50 % of the corrective actions identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.	The Responsible Entity performed periodic assessments of its System Operators’ communication practices but did not implement any corrective actions identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.	The Responsible Entity did not perform periodic assessments of its System Operators’ communication practices identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.

**VRF and VSL Justifications – COM 003-1, R2**

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed four VSLs based on quarterly assessments of an entity’s System Operators’ communication practices and the administration of corrective actions. If no quarterly assessments of an entity’s System Operators’ communication practices are conducted , then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R2 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

**VRF and VSL Justifications – COM 003-1, R2**

Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	<p>Non CIP</p>
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	<p>Non CIP</p>



VRF and VSL Justifications – COM 003-1, R3	
<b>Proposed VRF</b>	Low
NERC VRF Discussion	R3 is a requirement in a long term planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system. The VRF for this requirement is “Low” which is consistent with NERC guidelines
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R3 establishes communication protocols, which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for the development and implementation of documented communication protocols by entities that will only receive “Operating Instructions” that reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Low” which is consistent with NERC guidelines for requirements that are administrative.
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R3 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to

<b>VRF and VSL Justifications – COM 003-1, R3</b>			
	action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.		
<b>Proposed VSL</b>			
<b>Lower</b>	<b>Moderate</b>	<b>High</b>	<b>Severe</b>
	<p>The Responsible Entity did not address one (1) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</p> <p>OR</p> <p>The Responsible Entity did not implement one (1) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</p>	<p>The Responsible Entity did not address two (2) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</p> <p>OR</p> <p>The Responsible Entity did not implement two (2) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</p>	<p>The Responsible Entity did not address three (3) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</p> <p>OR</p> <p>The Responsible Entity did not develop any documented communication protocols as required in Requirement R3</p> <p>OR</p> <p>The Responsible Entity did not implement any documented communication protocols as required in Requirement R3</p>

**VRF and VSL Justifications – COM 003-1, R3**

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of common communication protocols. If no communication protocols are used at all or if the number of required protocols falls below the listed thresholds, then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R1 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

VRF and VSL Justifications – COM 003-1, R3	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 003-1, R4	
<b>Proposed VRF</b>	Medium
NERC VRF Discussion	R4 is a requirement in an Operations planning and Operations Assessment time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system The VRF for this requirement is “Medium” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R4 falls under Recommendation 26 of the Blackout Report. The VRF for this requirement is “Medium” which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for the assessment and correction of operators’ performance with documented communication protocols that reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to assess and correct operators’ performance with proper utilization of communication protocols could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R4 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one

<b>VRF and VSL Justifications – COM 003-1, R4</b>			
VRF was assigned.			
<b>Proposed VSL</b>			
<b>Lower</b>	<b>Moderate</b>	<b>High</b>	<b>Severe</b>
The Responsible Entity performed periodic assessments of its operators' communication practices and implemented 50 % or more but not all corrective action identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3.	The Responsible Entity performed periodic assessments of its operators' communication practices and implemented less than 50 % of the corrective actions identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3.	The Responsible Entity performed periodic assessments of its operators' communication practices but did not implement any corrective actions identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3	The Responsible Entity did not perform assessments of its operators' communication practices and did not meet the expectations in its documented communication protocols developed for Requirement R3.

**VRF and VSL Justifications – COM 003-1, R4**

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of quarterly assessments or correction of an entity’s System Operators’ communication practices. If no quarterly assessments of an entity’s System Operators’ communication practices are conducted, then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R4 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

VRF and VSL Justifications – COM 003-1, R4	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP



## **Project 2007-2 – Operating Personnel Communications Protocol**

### **VRF and VSL Justifications**

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in COM 003-1 Operating Personnel Communications Protocols.

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Operations Personnel Communications Protocol Standard Drafting Team applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSLs for the requirements under this project:

### **NERC Criteria - Violation Risk Factors**

#### **High Risk Requirement**

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a

cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

### **Medium Risk Requirement**

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

### **Lower Risk Requirement**

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

## **FERC Violation Risk Factor Guidelines**

### **Guideline (1) — Consistency with the Conclusions of the Final Blackout Report**

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief

### **Guideline (2) — Consistency within a Reliability Standard**

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

### **Guideline (3) — Consistency among Reliability Standards**

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

### **Guideline (4) — Consistency with NERC's Definition of the Violation Risk Factor Level**

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC's definition of that risk level.

### **Guideline (5) – Treatment of Requirements that Co-mingle More Than One Obligation**

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC’s VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC’s Reliability Standards and implies that these requirements should be assigned a “High” VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

VRF for COM-003-1:

There are ~~two~~ four requirements in COM-003-1, draft 4.5 with the addition of R3 and R4. Requirements R1 and ~~R2-R3~~ are assigned a "Low" VRF. ~~because they are now administrative. R1 and R3 now read:~~ *"Each ..... shall develop and implement documented communication protocols that outline the communications expectations of its operators. The documented communication protocols will address, where applicable, the following: "* Requirements R2 and R4 are assigned a "Medium" VRF. ~~The elimination of draft 3 R3 and R4 and the language change to R1-R2 and R2R4, which now reads:~~ *"Each ..... shall perform a quarterly assessment of its System Operators' communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement RX shall implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols for Operating Instructions between Functional Entities that include the following: "*, warrants raising the VRF to "Medium" because it ~~makes the requirement more than just administrative as it now features~~ evaluative evaluation and correction of operating performance process that would have a deeper impact on the reliability of the BES.

### NERC Criteria - Violation Severity Levels

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple "degrees" of noncompliant performance and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
Missing a minor element (or a small percentage) of the required performance The performance or product measured has significant value as it almost meets the	Missing at least one significant element (or a moderate percentage) of the required performance. The performance or product measured still has	Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component.	Missing most or all of the significant elements (or a significant percentage) of the required performance. The performance measured does not meet the intent of the requirement or the product delivered cannot be used in

full intent of the requirement.	significant value in meeting the intent of the requirement.	The performance or product has limited value in meeting the intent of the requirement.	meeting the intent of the requirement.
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**FERC Order on Violation Severity Levels**

In its June 19, 2008 Order on Violation Severity Levels, FERC indicated it would use the following four guidelines for determining whether to approve VSLs:

**Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance**

Compare the VSLs to any prior Levels of Non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when Levels of Non-compliance were used.

**Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties**

Guideline 2a: A violation of a “binary” type requirement must be a “Severe” VSL.

Guideline 2b: Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

**Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement**

VSLs should not expand on what is required in the requirement.

**Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations**

. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

The drafting team will complete the following table, providing of analysis and justification for each VRF and VSL, for each requirement.

VRF and VSL Justifications – COM 003-1, R1	
Proposed VRF	Low
NERC VRF Discussion	R1 is a requirement in a <u>long term</u> planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system The VRF for this requirement is “ <del>Medium</del> <u>Low</u> ” which is consistent with NERC guidelines
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R1 <del>establishes communication protocols, falls under Recommendation 24 26 of the Blackout Report. The VRF for this requirement is “Medium</del> <u>Low</u> ” <del>because of its administrative nature, which</del> is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b>

VRF and VSL Justifications – COM 003-1, R1			
	<p><u>This requirement calls for the development and implementation of documented communication protocols by entities that will both issue and receive “Operating Instructions” that</u> reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.</p>		
FERC VRF G4 Discussion	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b>                      Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “<del>Medium</del> <u>Low</u>” which is consistent with NERC guidelines <u>for similar requirements that are administrative.</u></p>		
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>                      COM-003-1, Requirement R1 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.</p>		
Proposed VSL			
Lower	Moderate	High	Severe
<p><u>The Responsible Entity did not address one (1) of the nine(9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</u></p>	<p><u>The Responsible Entity did not address two (2) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</u></p>	<p><u>The Responsible Entity did not address three (3) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</u></p>	<p><u>The Responsible Entity did not address four (4) or more of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</u></p>



VRF and VSL Justifications – COM 003-1, R1

<p><u>OR</u></p> <p><u>The Responsible Entity did not implement one (1) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</u></p> <p><del>The Responsible Entity did not include one (1) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols</del></p>	<p><u>OR</u></p> <p><u>The Responsible Entity did not implement two (2) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</u></p> <p><del>The Responsible Entity did not include two (2) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols</del></p>	<p><u>OR</u></p> <p><u>The Responsible Entity did not implement three (3) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</u></p> <p><del>The Responsible Entity did not include three (3) of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols</del></p>	<p><u>OR</u></p> <p><u>The Responsible Entity did not have any documented communication protocols as required in Requirement R1</u></p> <p><u>OR</u></p> <p><u>The Responsible Entity did not implement any documented communication protocols as required in Requirement R1</u></p> <p><del>The Responsible Entity did not include four (4) or more of the nine (9) parts of Requirement R1, Parts 1.1 to 1.9 in their documented communication protocols</del></p>
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VRF and VSL Justifications – COM 003-1, R1

			<p><del>OR</del></p> <p><del>The Responsible Entity did not have documented communication protocols as required in Requirement R1.</del></p> <p><del>OR</del></p> <p><del>The Responsible Entity did not implement, in a manner that identifies, assesses and corrects deficiencies, their documented communication protocols as required in Requirement R1</del></p>
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VRF and VSL Justifications – COM 003-1, R1

<b>VRF and VSL Justifications – COM 003-1, R1</b>	
<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of common communication protocols. If no communication protocols <del>are used</del> <u>were addressed</u> at all or if the number of required protocols falls below the listed thresholds, then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R1 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

**VRF and VSL Justifications – COM 003-1, R1**

VRF and VSL Justifications – COM 003-1, R1	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 003-1, R2	
Proposed VRF	<del>Low</del> <u>Medium</u>
NERC VRF Discussion	R2 is a requirement in a <u>an Operations planning and Operations Assessment</u> time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system The VRF for this requirement is “Medium” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R2 falls under Recommendation <u>24-26</u> of the Blackout Report. The VRF for this requirement is “Medium” which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has <u>no</u> sub-requirements <del>that are of equal importance and similarly address communication protocols</del> ; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for the <u>assessment and correction of System Operators’ performance with documented communication protocols by entities that will both issue and receive “Operating Instructions” to</u> reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to <del>utilize-</del> <u>assess and correct System Operators’ performance with proper utilization of</u> communication protocols <del>properly</del> could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R2 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to

VRF and VSL Justifications – COM 003-1, R2			
		action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.	
Proposed VSL			
Lower	Moderate	High	Severe
<p><u>The Responsible Entity performed periodic assessments of its System Operators’ communication practices and implemented 50 % or more but not all corrective action identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.</u> N/A</p>	<p><u>The Responsible Entity performed periodic assessments of its System Operators’ communication practices and implemented less than 50 % of the corrective actions identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.</u> N/A</p>	<p><u>The Responsible Entity performed periodic assessments of its System Operators’ communication practices but did not implement any corrective actions identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.</u> <del>The Responsible Entity did not include one (1) of the two (2) parts of Requirement R2, Parts 2.1 to 2.2 in their documented communication protocols</del></p>	<p><u>The Responsible Entity did not perform periodic assessments of its System Operators’ communication practices identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.</u> <del>The Responsible Entity did not include Parts 2.1 to 2.2 (2) of Requirement R2, in their documented communication protocols</del></p> <p>OR</p> <p><del>The responsible entity did not have documented communication protocols as required in Requirement R2.</del></p>

VRF and VSL Justifications – COM 003-1, R2

			<p><del>OR</del>  <del>The Responsible Entity did not implement, in a manner that identifies, assesses and corrects deficiencies, their documented communication protocols as required in Requirement R1</del></p>
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VRF and VSL Justifications – COM 003-1, R2

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed <del>two</del><u>four</u> VSLs based on <u>quarterly assessments of an entity's System Operators' communication practices and the administration of corrective actions</u><del>misapplication or absence of common communication protocols</del>. If no <u>quarterly assessments of an entity's System Operators' communication practices communication protocols</u> are <del>used</del><u>conducted</u> <del>at all</del> <del>or if the number of required protocols falls below the listed thresholds</del>, then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R2 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>



**VRF and VSL Justifications – COM 003-1, R2**

VRF and VSL Justifications – COM 003-1, R2	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

**VRF and VSL Justifications – COM 003-1, R3**

<b><u>Proposed VRF</u></b>	<u>Low</u>
<u>NERC VRF Discussion</u>	<u>R3 is a requirement in a long term planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system. <del>The requirement R3 is administrative</del> The VRF for this requirement is “Low” which is consistent with NERC guidelines</u>
<u>FERC VRF G1 Discussion</u>	<b><u>Guideline 1- Consistency w/ Blackout Report:</u></b> <u>R3 establishes communication protocols, which is consistent with FERC guideline G1. <del>falls under Recommendation 26 of the Blackout Report. The VRF for this requirement is “Low” because of its administrative nature, which is consistent with FERC guideline G1.</del></u>
<u>FERC VRF G2 Discussion</u>	<b><u>Guideline 2- Consistency within a Reliability Standard :</u></b> <u>The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.</u>
<u>FERC VRF G3 Discussion</u>	<b><u>Guideline 3- Consistency among Reliability Standards:</u></b> <u>This requirement calls for the development and implementation of documented communication protocols by entities that will only receive “Operating Instructions” that reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.</u>
<u>FERC VRF G4 Discussion</u>	<b><u>Guideline 4- Consistency with NERC Definitions of VRFs:</u></b> <u>Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Low” which is consistent with NERC guidelines for requirements that are administrative.</u>

**VRF and VSL Justifications – COM 003-1, R3**

<p><u>FERC VRF G5 Discussion</u></p>	<p><b><u>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</u></b>  <u>COM-003-1, Requirement R3 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.</u></p>		
<p><b><u>Proposed VSL</u></b></p>			
<p><b><u>Lower</u></b></p>	<p><b><u>Moderate</u></b></p>	<p><b><u>High</u></b></p>	<p><b><u>Severe</u></b></p>
	<p><u>The Responsible Entity did not address one (1) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</u></p> <p><u>OR</u></p> <p><u>The Responsible Entity did not implement one (1) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</u></p>	<p><u>The Responsible Entity did not address two (2) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</u></p> <p><u>OR</u></p> <p><u>The Responsible Entity did not implement two (2) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</u></p>	<p><u>The Responsible Entity did not address three (3) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</u></p> <p><u>OR</u></p> <p><u>The Responsible Entity did not develop any documented communication protocols as required in Requirement R3</u></p> <p><u>OR</u></p> <p><u>The Responsible Entity did not implement any documented</u></p>

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VRF and VSL Justifications – COM 003-1, R3

communication protocols as  
required in Requirement R3

**VRF and VSL Justifications – COM 003-1, R3**

<p><b><u>FERC VSL G1</u></b>  <u>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</u></p>	<p><u>Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of common communication protocols. If no communication protocols are used at all or if the number of required protocols falls below the listed thresholds, then the VSL is Severe.</u></p>
<p><b><u>FERC VSL G2</u></b>  <u>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</u>  <u>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</u>  <u>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</u></p>	<p><u>Guideline 2a:</u>  <u>The VSL assignment for R1 is not binary.</u></p> <p><u>Guideline 2b:</u>  <u>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</u></p>
<p><b><u>FERC VSL G3</u></b>  <u>Violation Severity Level Assignment Should Be Consistent with the</u></p>	<p><u>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</u></p>

**VRF and VSL Justifications – COM 003-1, R3**

<p><u>Corresponding Requirement</u></p>	
<p><b><u>FERC VSL G4</u></b>  <u>Violation Severity Level</u>  <u>Assignment Should Be Based on</u>  <u>A Single Violation, Not on A</u>  <u>Cumulative Number of</u>  <u>Violations</u></p>	<p><u>The VSL is based on a single violation and not cumulative violations</u></p>
<p><b><u>FERC VSL G5</u></b>  <u>Requirements where a single</u>  <u>lapse in protection can</u>  <u>compromise computer network</u>  <u>security, i.e., the ‘weakest link’</u>  <u>characteristic, should apply</u>  <u>binary VSLs</u></p>	<p><u>Non CIP</u></p>
<p><b><u>FERC VSL G6</u></b>  <u>VSLs for cyber security</u>  <u>requirements containing</u>  <u>interdependent tasks of</u>  <u>documentation and</u>  <u>implementation should account</u>  <u>for their interdependence</u></p>	<p><u>Non CIP</u></p>

<b><u>VRF and VSL Justifications – COM 003-1, R4</u></b>	
<b><u>Proposed VRF</u></b>	<u>Medium</u>
<u>NERC VRF Discussion</u>	<u>R4 is a requirement in an Operations planning and Operations Assessment time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system The VRF for this requirement is “Medium” which is consistent with NERC guidelines.</u>
<u>FERC VRF G1 Discussion</u>	<b><u>Guideline 1- Consistency w/ Blackout Report:</u></b> <u>R4 falls under Recommendation 26 of the Blackout Report. The VRF for this requirement is “Medium” which is consistent with FERC guideline G1.</u>
<u>FERC VRF G2 Discussion</u>	<b><u>Guideline 2- Consistency within a Reliability Standard :</u></b> <u>The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.</u>
<u>FERC VRF G3 Discussion</u>	<b><u>Guideline 3- Consistency among Reliability Standards:</u></b> <u>This requirement calls for the assessment and correction of operators’ performance with documented communication protocols that reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.</u>
<u>FERC VRF G4 Discussion</u>	<b><u>Guideline 4- Consistency with NERC Definitions of VRFs:</u></b> <u>Failure to assess and correct operators’ performance with proper utilization of communication protocols could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines</u>
<u>FERC VRF G5 Discussion</u>	<b><u>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</u></b> <u>COM-003-1, Requirement R4 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one</u>

<b><u>VRF and VSL Justifications – COM 003-1, R4</u></b>			
<u>VRF was assigned.</u>			
<b><u>Proposed VSL</u></b>			
<b><u>Lower</u></b>	<b><u>Moderate</u></b>	<b><u>High</u></b>	<b><u>Severe</u></b>
<u>The Responsible Entity performed periodic assessments of its operators’ communication practices and implemented 50 % or more but not all corrective action identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3.</u>	<u>The Responsible Entity performed periodic assessments of its operators’ communication practices and implemented less than 50 % of the corrective actions identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3.</u>	<u>The Responsible Entity performed periodic assessments of its operators’ communication practices but did not implement any corrective actions identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3</u>	<u>The Responsible Entity did not perform assessments of its operators’ communication practices and did not meet the expectations in its documented communication protocols developed for Requirement R3.</u>



**VRF and VSL Justifications – COM 003-1, R4**

<p><b><u>FERC VSL G1</u></b>  <u>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</u></p>	<p><u>Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of quarterly assessments or correction of an entity’s System Operators’ communication practices. If no quarterly assessments of an entity’s System Operators’ communication practices are conducted, then the VSL is Severe.</u></p>
<p><b><u>FERC VSL G2</u></b>  <u>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</u>  <u>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</u>  <u>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</u></p>	<p><u>Guideline 2a:</u>  <u>The VSL assignment for R4 is not binary.</u></p> <p><u>Guideline 2b:</u>  <u>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</u></p>
<p><b><u>FERC VSL G3</u></b>  <u>Violation Severity Level Assignment Should Be Consistent with the</u></p>	<p><u>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</u></p>

**VRF and VSL Justifications – COM 003-1, R4**

<p><u>Corresponding Requirement</u></p>	
<p><b><u>FERC VSL G4</u></b>  <u>Violation Severity Level</u>  <u>Assignment Should Be Based on</u>  <u>A Single Violation, Not on A</u>  <u>Cumulative Number of</u>  <u>Violations</u></p>	<p><u>The VSL is based on a single violation and not cumulative violations</u></p>
<p><b><u>FERC VSL G5</u></b>  <u>Requirements where a single</u>  <u>lapse in protection can</u>  <u>compromise computer network</u>  <u>security, i.e., the ‘weakest link’</u>  <u>characteristic, should apply</u>  <u>binary VSLs</u></p>	<p><u>Non CIP</u></p>
<p><b><u>FERC VSL G6</u></b>  <u>VSLs for cyber security</u>  <u>requirements containing</u>  <u>interdependent tasks of</u>  <u>documentation and</u>  <u>implementation should account</u>  <u>for their interdependence</u></p>	<p><u>Non CIP</u></p>

## Frequently Asked Questions – Addendum

### COM-003, Draft 5

This document is being provided to assist commenters' understanding of COM-003-1, draft 5 based on inquiries received by the drafting team and the Standards Committee.

1. How would you differentiate between slips of the tongue and “deficient communication practices” without involving subjective judgments? The same is true for attempting to identify changes in an operator’s degree of understanding, especially when doing so through the numbing process of making before-and-after voice recordings comparisons.

**Response:** The criteria for System Operator/operator performance should be established by the applicable entity. The Operating Personnel Communications Protocols Standard Drafting Team (OPCPSDT) believes it is the discretion of the applicable entity to set its expectations of its operating personnel with regard to communication protocols and then to monitor and if necessary improve their performance. There will be less subjective judgment if the entity develops strong communication protocols and structured programs to evaluate and improve System Operator/operator performance. The OPCPSDT acknowledges there are many forms of programs and methods an entity might employ to accomplish this, but it does not want to dictate a one size fits all process.

2. If the goal is to have strong internal controls where the detective control of periodically sampling conversations allows the Generator Operator (GOP) to detect and correct communications, why would the GOP need documentation other than to note they found nothing, or to note they found one issue and made the operator retake training?

**Response:** If the entity, in this case a GOP, during the audit period, found nothing or they found one issue and made the operator retake training, the documentation supporting those circumstances would suffice. M4 only asks for “*the results of its periodic assessment and of any corrective actions (if any corrective actions were implemented)*”.

3. Does R4 leave GOPs open to the auditor’s interpretation of the sufficiency of the corrective program? Or is it intended that GOP and Distribution Provider (DP) have the authority to develop their own programs without the risk an audit will find it insufficient.

**Response:** The OPCPSDT intended that entities develop their own programs that support the requirements of COM-003-1. There are many methods available to entities to accomplish this and the OPCPSDT does not want to dictate a one size fits all approach to monitoring and improving operator communication protocol performance. M4 only asks for “*the results of its periodic assessment and of any corrective actions (if any corrective actions were implemented)*” The important focus are the results of its periodic assessment and of any corrective actions. The OPCPSDT believes entities will develop or already possess evaluation and training programs and

would advocate for improving operator communication protocol performance on the Bulk Electric System (BES) based on the desire to avoid communication mishaps.

4. The Reliability Standard Audit Worksheet requires the GOP to turn over records of monitoring communications (which is a large compliance burden, especially for smaller entities) as well as records of corrective actions and then proof the “problem” is not still in place. Turn over records to whom? How many records? How do you prove it has stopped? Where does the paperwork stop?

**Response:** The records are to be provided to the CEA for review and verification. The CEA needs to review and understand the entity’s monitoring program(s) and to review the instances where corrective action was warranted. The CEA should expect to see evidence needed to be assured that the assessment and corrective program exists and is being implemented. Such evidence could consist of review logs noting the communications that were reviewed (e.g. date, time, and reviewer) and descriptions and evidence of the corrective actions take, if any. The entity should establish its own measure of effectiveness to determine if an operator meets the entity’s expectations. This makes it less murky for the CEA and reduces subjectivity.

5. Who determines the GOP and DP personnel who are subject to R3 and R4? Are the GOP personnel those in a control room in the plant? For a DP are they distribution dispatches? Is there a way to clarify who the Standard is applicable to?

**Response:** The criteria for which GOP and DP personnel subject to R3 and R4 of COM-003-1 would be an operator who would receive either a:

*Operating Instruction: A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions or a*

*Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.*

**Response part two:** Distribution system dispatches by a DP would not be applicable. COM-003-1 is applicable to BES communications as defined by Operating Instructions and Reliability Directives. The OPCPTSDT would encourage communication protocols for verbal switching on the distribution system because they improve reliability.

6. How can three-way communication be used for “a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system)” -- to those on the receiving end, it does not seem possible under the current technology used for these oral messaging systems to have three way. Please explain how three-way can be used for one way burst messaging systems?

**Response:** The Standard *does not require three part communication for “a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system)”* because obtaining a response from all of the multiple receivers would create considerable delays and potential confusion defeating the speed and efficiency an all call type of message provides.

R1 Part 1.8 and R3 Part 3.3 require the receiver of an oral Operating Instruction or Reliability Directive using an all call system to request clarification from the initiator if the communication is not understood, if required by the issuer.

7. It appears consistent with Order 743 and FERC’s ruling that only generator dispatch operators be trained on implementing directives and instructions to also limit COM-003 to FERC’s ruling in Order 743, which would apply COM-003 generation dispatchers who (at a centrally-located generation dispatch center or at a dispatch center at the same site as a single generation plant) either:
  - a. Receive direction and then develop specific dispatch instructions for plant operators under their control or
  - b. Determine the best way to deliver that generation from its portfolio of units. Was this the intent of COM-003 to be consistent with Order No. 743 and the work on PER-005?

**Response:** COM-003-1 is compliant with the FERC’s ruling in Oder 743. The standard is clear that generator operators that receive or will receive Operating Instructions and Reliability Directives from a Balancing Authority, Reliability Coordinator or Transmission Operator are applicable entities and must be compliant.

The issue of how communication protocols are established and managed within the GOP’s organization can be addressed within the scope of the entity’s documented communication protocols. The GOP is encouraged to make them uniform to prevent confusion within its organization.

8. The latest version of COM-003-1 appears to introduce a potential conflict with COM-002-3 related to use of one-way burst messaging systems to issue a Reliability Directive. In other words, COM-003-1 allows one-way burst messaging to be used for Reliability Directives and prescribes:
  - a. issuer to confirm receipt from at least one receiving party
  - b. receiver to request clarification from the issuer if the communication is not understood

However, COM-002-3 has the following requirements:

R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase, or recapitulate the Reliability Directive.

R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall either:

- a. Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or

b. Reissue the Reliability Directive to resolve a misunderstanding.

In other words, in the case of a one-way burst messaging used for Reliability Directives, COM-002-3 does not appear to allow for only those responses required in COM-003-1 but instead requires a full 3 way communication from all parties. This potentially sets up both the issuer and receiver for violating COM-002-3 if they respond to a one-way burst messaging Reliability Directive as the requirements indicate in COM-003-1. In order to be fully compliant with both standards, the receiver would have to contact the issuer, repeat what was said on the original burst message, and then the issuer would confirm that the response was accurate before acting on the message. Is this correct?

**Response:** The COM-002 team addressed the Reliability Directive “all call” issue in the consideration of comments for COM-002-3, found on the project page:

[http://www.nerc.com/filez/standards/Reliability\\_Coordination\\_Project\\_2006-6.html](http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html)

The COM-002-3 drafting team envisioned that Reliability Directives could/would be issued using “blast call”/“all call” capability. They also clearly tied their response to COM-003-1, saying that Project 2007-02 would resolve the issue. The current draft of COM-003-1 resolves the issue by allowing entities to create a procedure to allow flexibility on how this will be achieved. The procedure must require an issuer of a “blast call”/“all call” to confirm receipt from at least one receiving party (R1.7) and for the receiver to request clarification from the issuer if the communication is not understood (R1.8). The consideration of comments will be filed with COM-002-3 and will become part of the development record of COM-002-3, and as such can be referenced by entities for their compliance in COM-002-3 and COM-003-1. For COM-003-1 to not cover “all call” scenarios for Reliability Directives would leave a gap for entities in compliance with COM-002-3.

For draft 5 of COM-002-3, the following comment and response was provided:

**Comment:** *The Standard is not clear as to what each entity is to do when more than one entity receives a Reliability Directive at the same time (e.g. during a RC area teleconference call). Is, for example, a roll call of receiving entities expected to be held so that they individually can repeat, restate, rephrase or recapitulate the Reliability Directive followed by individual confirmation required in R3?*

**Response:** The question about whether a roll call of receiving entities is expected to be held is asking for prescription of “how” to accomplish what is required. The RCSDT recognizes that there is more than one way to accomplish the confirmation when more than one entity received a Reliability Directive at the same time. What is required is for the recipient to respond in such a way that the issuer may determine whether the message has been properly understood. One way for that to occur would be, as you suggest, for the entities to individually respond. Another way would be for a pre-established protocol or procedure (e.g. roll-call, all-call, etc.) to be in place and used in such cases. The RCSDT has determined that prescribing “how” to ensure that “what” is required has been accomplished is not required and that the individually adopted procedures or protocols could offer many different ways to ensure effectiveness. No change made. The RCSDT concept is

that “All Call” compliance is related to having a document that explains how the entity responds. No change made.

[http://www.nerc.com/docs/standards/sar/Project\\_2006\\_06\\_Response\\_to\\_Comments\\_2012\\_06\\_12.pdf](http://www.nerc.com/docs/standards/sar/Project_2006_06_Response_to_Comments_2012_06_12.pdf) (page 173)

For draft 4 of COM-002-3, the following comments and responses were provided:

**Comment:** *Requirements for using three-part communication: It is our opinion that the standard needs language that clearly states that during a Blast Call three-part communication is not required. Blast Calls are used when information needs to be disseminated quickly to a large number of entities. Strictly enforcing the use of three-part communication under these circumstances has the potential to be more harmful to reliability than helpful.*

**Response:** The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols would be addressed in the COM-003 standard being developed in Project 2007-02.

[http://www.nerc.com/docs/standards/sar/Consideration\\_of\\_Comments\\_Initial\\_Ballot\\_2006-06\\_071411.pdf](http://www.nerc.com/docs/standards/sar/Consideration_of_Comments_Initial_Ballot_2006-06_071411.pdf) (page 44)

**Comment:** *We also are concerned about the need to conduct three-part communications for a Reliability Directive issued through a blast call. Under these circumstances, the need for immediate action of multiple parties may require a blast call and there may not be time for all parties to complete three-part communications before initiating actions. Thus, we believe blast calls should be treated separately and that should be made clear.*

**Response:** The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols requiring for issuing alerts will be addressed in the COM-003 standard being developed in Project 2007-02.

[http://www.nerc.com/docs/standards/sar/Consideration\\_of\\_Comments\\_Initial\\_Ballot\\_2006-06\\_071411.pdf](http://www.nerc.com/docs/standards/sar/Consideration_of_Comments_Initial_Ballot_2006-06_071411.pdf) (page 56)

# Standards Announcement

## Project 2007-02 Operating Personnel Communications Protocols COM-003-1

**Successive Ballot and Non-binding Poll now open through April 5, 2013**

### [Now Available](#)

A successive ballot of COM-003-1 and a non-binding poll of the associated Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs) is now being conducted through **8 p.m. Eastern on Friday, April 5, 2013**.

In response to comments received during the last comment period and other input, the drafting team has adopted many of the recommendations of commenters and attendees of the “Communications in Operations Conference” of February 14-15, 2013, in Atlanta, and incorporated them into to COM-003-1, draft 5.

The Operating Personnel Communications Protocols Standard Drafting Team has created four requirements for COM-003-1, draft 5. Requirements R1, R2, R3, and R4. The new R1 and R3 language calls for an applicable entity to *“develop and implement documented communication protocols that outline the communications expectations of its System Operators. The documented communication protocols will address, where applicable, the following: (protocols)”*. The new R2 and R4 language calls for an applicable entity to *“develop method(s) to assess System Operators’ communication practices and perform corrective actions necessary to meet the expectations in its documented communication protocols”*

This version was drafted in conjunction with the development of the Reliability Standard Audit Worksheet (RSAW). Changes were made to the RSAW to reflect the changes in COM-003-1, draft 5 and changes suggested by some commenters. The RSAW is posted for informal comments along with COM-003-1.

Background information for this project can be found on the [project page](#).

### **Instructions**

Members of the ballot pools associated with this project may log in and submit their vote for the standard and non-binding poll of the associated VRFs and VSLs by clicking [here](#).



**Next Steps**

The ballot results will be announced and posted on the project page. The drafting team will consider all comments received during the formal comment period and, if needed, make revisions to the standard. If the comments do not show the need for significant revisions, the standard will proceed to a recirculation ballot.

**Standards Process**

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact Wendy Muller,  
Standards Development Administrator, at [wendy.muller@nerc.net](mailto:wendy.muller@nerc.net) or at 404-446-2560.*

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# Standards Announcement

## Project 2007-02 Operating Personnel Communications Protocols

Formal Comment Period and RSAW Posted for Industry Comments: March 7 – April 5, 2013  
Successive Ballot and Non-binding Poll: March 27 – April 5, 2013

### Now Available

A formal comment period for COM-003-1 – Operating Personnel Communication Protocols (OPCP) is open through **8 p.m. Eastern on Friday, April 5, 2013.**

A successive ballot of COM-003-1 and a non-binding poll of the associated Violation Risk Factors and Violation Severity Levels will be conducted beginning on Wednesday, March 27, 2013 through 8 p.m. Eastern on Friday, April 5, 2013.

In response to comments received during the last comment period and other input, the drafting team has adopted many of the recommendations of commenters and attendees of the “Communications in Operations Conference” of February 14-15, 2013, in Atlanta, and incorporated them into to COM-003-1, draft 5.

The OPCP Standard Drafting Team (SDT) has created four requirements for COM-003-1, draft 5. Requirements R1, R2, R3, and R4. The new R1 and R3 language calls for an applicable entity to “*develop and implement documented communication protocols that outline the communications expectations of its System Operators. The documented communication protocols will address, where applicable, the following: (protocols)*”. The new R2 and R4 language calls for an applicable entity to “*develop method(s) to assess System Operators’ communication practices and perform corrective actions necessary to meet the expectations in its documented communication protocols*”

This version was drafted in conjunction with the development of the Reliability Standard Audit Worksheet (RSAW). Changes were made to the RSAW to reflect the changes in COM-003-1, draft 5 and changes suggested by some commenters. The RSAW is posted for informal comments along with COM-003-1.

Background information for this project can be found on the [project page](#).

### **Instructions for Commenting**

Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Wendy Muller at [wendy.muller@nerc.net](mailto:wendy.muller@nerc.net). An off-line, unofficial copy of the comment form is posted on the [project page](#).

A comment period on the draft RSAW is open through **8 p.m. Eastern on Friday, April 5, 2013**. The draft RSAW is posted on the NERC Compliance RSAW page. Please submit comments on the draft RSAW using the RSAW comment form to [RSAWfeedback@nerc.net](mailto:RSAWfeedback@nerc.net).

### **Next Steps**

A successive ballot of COM-003-1 and a non-binding poll of the associated VRFs and VSLs will be conducted beginning on Wednesday, March 27, 2013 through 8 p.m. Eastern on Friday, April 5, 2013.

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# Standards Announcement

## Project 2007-02 Operating Personnel Communications Protocols COM-003-1

### Successive Ballot and Non-binding Poll Results

#### [Now Available](#)

A successive ballot of COM-003-1 and a non-binding poll of the associated Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs) concluded at **8 p.m. Eastern on Friday, April 5, 2013.**

Voting statistics are listed below, and the [Ballot Results](#) page provides a link to the detailed results for the successive ballot.

Approval	Non-binding Poll Results
Quorum: 78.39%	Quorum: 77.97%
Approval: 57.50%	Supportive Opinions: 54.28%

Background information for this project can be found on the [project page](#).

### Next Steps

The drafting team will consider all comments received during the formal comment period and, if needed, make revisions to the standard. If the comments do not show the need for significant revisions, the standard will proceed to a recirculation ballot.

### Standards Process

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact Wendy Muller,  
Standards Development Administrator, at [wendy.muller@nerc.net](mailto:wendy.muller@nerc.net) or at 404-446-2560.*

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- Registered Ballot Body
- Proxy Voters

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Ballot Results	
<b>Ballot Name:</b>	Project 2007-02 COM-003-1 Successive Ballot
<b>Ballot Period:</b>	3/25/2013 - 4/8/2013
<b>Ballot Type:</b>	Successive
<b>Total # Votes:</b>	341
<b>Total Ballot Pool:</b>	435
<b>Quorum:</b>	<b>78.39 % The Quorum has been reached</b>
<b>Weighted Segment Vote:</b>	57.50 %
<b>Ballot Results:</b>	<b>The drafting team will review comments received.</b>

Summary of Ballot Results								
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Abstain # Votes	No Vote
			# Votes	Fraction	# Votes	Fraction		
1 - Segment 1.	110	1	47	0.573	35	0.427	7	21
2 - Segment 2.	11	1	7	0.636	4	0.364	0	0
3 - Segment 3.	103	1	40	0.556	32	0.444	4	27
4 - Segment 4.	39	1	8	0.32	17	0.68	0	14
5 - Segment 5.	93	1	38	0.507	37	0.493	5	13
6 - Segment 6.	53	1	19	0.463	22	0.537	4	8
7 - Segment 7.	0	0	0	0	0	0	0	0
8 - Segment 8.	12	0.4	4	0.4	0	0	0	8
9 - Segment 9.	5	0.2	2	0.2	0	0	0	3
10 - Segment 10.	9	0.8	6	0.6	2	0.2	1	0
<b>Totals</b>	<b>435</b>	<b>7.4</b>	<b>171</b>	<b>4.255</b>	<b>149</b>	<b>3.145</b>	<b>21</b>	<b>94</b>

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Ameren Services	Kirit Shah	Affirmative	
1	American Electric Power	Paul B Johnson	Negative	
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman	Affirmative	
1	ATCO Electric	Glen Sutton	Abstain	
1	Austin Energy	James Armke	Negative	
1	Avista Corp.	Scott J Kinney		

1	Balancing Authority of Northern California	Kevin Smith	Negative
1	Baltimore Gas & Electric Company	Gregory S Miller	Abstain
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative
1	Beaches Energy Services	Joseph S Stonecipher	
1	Black Hills Corp	Eric Egge	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	Negative
1	Bryan Texas Utilities	John C Fontenot	Affirmative
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Negative
1	Central Electric Power Cooperative	Michael B Bax	Affirmative
1	City of Pasadena	Marco A Sustaita	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Negative
1	City Utilities of Springfield, Missouri	Jeff Knottek	Negative
1	City Water, Light & Power of Springfield	Shaun Anders	Affirmative
1	Clark Public Utilities	Jack Stamper	Negative
1	Cleco Power LLC	Danny McDaniel	Negative
1	Colorado Springs Utilities	Paul Morland	Affirmative
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative
1	Consumers Power Inc.	Stuart Sloan	
1	CPS Energy	Richard Castrejana	Negative
1	Dairyland Power Coop.	Robert W. Roddy	Affirmative
1	Dayton Power & Light Co.	Hertzel Shamash	Negative
1	Deseret Power	James Tucker	Abstain
1	Dominion Virginia Power	Michael S Crowley	Affirmative
1	Duke Energy Carolina	Douglas E. Hils	Affirmative
1	Empire District Electric Co.	Ralph F Meyer	
1	Entergy Services, Inc.	Edward J Davis	Affirmative
1	FirstEnergy Corp.	William J Smith	Affirmative
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	
1	Florida Power & Light Co.	Mike O'Neil	Affirmative
1	Gainesville Regional Utilities	Richard Bachmeier	Abstain
1	Georgia Transmission Corporation	Jason Snodgrass	Negative
1	Great River Energy	Gordon Pietsch	Affirmative
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon	
1	Hydro One Networks, Inc.	Ajay Garg	Affirmative
1	Hydro-Quebec TransEnergie	Bernard Pelletier	
1	Idaho Power Company	Molly Devine	Affirmative
1	Imperial Irrigation District	Tino Zaragoza	
1	International Transmission Company Holdings Corp	Michael Moltane	Affirmative
1	JEA	Ted Hobson	Affirmative
1	KAMO Electric Cooperative	Walter Kenyon	Affirmative
1	Kansas City Power & Light Co.	Michael Gammon	Negative
1	Keys Energy Services	Stanley T Rzad	
1	Lakeland Electric	Larry E Watt	Negative
1	Lee County Electric Cooperative	John W Delucca	
1	LG&E Energy Transmission Services	Bradley C. Young	
1	Long Island Power Authority	Robert Ganley	
1	Los Angeles Department of Water & Power	John Burnett	Affirmative
1	Lower Colorado River Authority	Martyn Turner	Negative
1	M & A Electric Power Cooperative	William Price	Affirmative
1	Manitoba Hydro	Joe D Petaski	Affirmative
1	MEAG Power	Danny Dees	Affirmative
1	MidAmerican Energy Co.	Terry Harbour	Affirmative
1	Minnesota Power, Inc.	Randi K. Nyholm	Affirmative
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Affirmative
1	National Grid USA	Michael Jones	Affirmative
1	Nebraska Public Power District	Cole C Brodine	Negative
1	New York Power Authority	Bruce Metruck	Negative
1	New York State Electric & Gas Corp.	Raymond P Kinney	Abstain
1	Northeast Missouri Electric Power Cooperative	Kevin White	Affirmative
1	Northeast Utilities	David Boguslawski	
1	Northern Indiana Public Service Co.	Kevin M Largura	Negative
1	NorthWestern Energy	John Canavan	Negative
1	NStar Gas and Electric	John Robertson	
1	Ohio Valley Electric Corp.	Robert Matthey	Negative

1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Negative	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Jen Fiegel	Negative	
1	Orlando Utilities Commission	Brad Chase	Abstain	
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan	Negative	
1	PacifiCorp	Ryan Millard	Negative	
1	PECO Energy	Ronald Schloendorn	Affirmative	
1	Platte River Power Authority	John C. Collins	Negative	
1	Portland General Electric Co.	John T Walker	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	
1	Public Service Company of New Mexico	Laurie Williams	Affirmative	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative	
1	Public Utility District No. 2 of Grant County, Washington	Rod Noteboom		
1	Puget Sound Energy, Inc.	Denise M Lietz	Abstain	
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Negative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell	Negative	
1	Seattle City Light	Pawel Krupa	Negative	
1	Sho-Me Power Electric Cooperative	Denise Stevens	Affirmative	
1	Sierra Pacific Power Co.	Rich Salgo	Affirmative	
1	Snohomish County PUD No. 1	Long T Duong	Negative	
1	South California Edison Company	Steven Mavis	Affirmative	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Negative	
1	Southern Illinois Power Coop.	William Hutchison		
1	Southwest Transmission Cooperative, Inc.	John Shaver	Affirmative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Affirmative	
1	Tampa Electric Co.	Beth Young		
1	Tennessee Valley Authority	Larry G Akens	Negative	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Negative	
1	Tucson Electric Power Co.	John Tolo		
1	United Illuminating Co.	Jonathan Appelbaum	Negative	
1	Westar Energy	Allen Klassen	Negative	
1	Western Area Power Administration	Brandy A Dunn		
1	Xcel Energy, Inc.	Gregory L Pieper	Negative	
2	Alberta Electric System Operator	Mark B Thompson	Affirmative	
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
2	California ISO	Rich Vine	Negative	
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Affirmative	
2	Independent Electricity System Operator	Barbara Constantinescu	Affirmative	
2	ISO New England, Inc.	Kathleen Goodman	Negative	
2	Midwest ISO, Inc.	Marie Knox	Affirmative	
2	New Brunswick System Operator	Alden Briggs	Negative	
2	New York Independent System Operator	Gregory Campoli	Affirmative	
2	PJM Interconnection, L.L.C.	stephanie monzon	Negative	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Affirmative	
3	Alabama Power Company	Richard J. Mandes	Negative	
3	Alameda Municipal Power	Douglas Draeger		
3	Ameren Services	Mark Peters	Affirmative	
3	APS	Steven Norris		
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Affirmative	
3	Atlantic City Electric Company	NICOLE BUCKMAN	Affirmative	
3	Avista Corp.	Robert Lafferty		
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blachly-Lane Electric Co-op	Bud Tracy		
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham		
3	Central Electric Power Cooperative	Adam M Weber	Affirmative	
3	Central Lincoln PUD	Steve Alexanderson	Negative	
3	City of Austin dba Austin Energy	Andrew Gallo	Negative	
3	City of Bartow, Florida	Matt Culverhouse	Negative	
3	City of Clewiston	Lynne Mila		
3	City of Farmington	Linda R Jacobson	Abstain	

3	City of Garland	Ronnie C Hoeinghaus	Negative	
3	City of Green Cove Springs	Gregg R Griffin		
3	City of Lodi, California	Elizabeth Kirkley		
3	City of Palo Alto	Eric R Scott	Negative	
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey	Abstain	
3	City Water, Light & Power of Springfield	Roger Powers	Affirmative	
3	Clearwater Power Co.	Dave Hagen		
3	Cleco Corporation	Michelle A Corley	Negative	
3	Colorado Springs Utilities	Charles Morgan	Affirmative	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy	Richard Blumenstock	Affirmative	
3	Consumers Power Inc.	Roman Gillen		
3	Coos-Curry Electric Cooperative, Inc	Roger Meader		
3	Cowlitz County PUD	Russell A Noble		
3	CPS Energy	Jose Escamilla	Negative	
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Detroit Edison Company	Kent Kujala	Negative	
3	Dominion Resources, Inc.	Connie B Lowe	Affirmative	
3	Duke Energy Carolina	Henry Ernst-Jr		
3	Entergy	Joel T Plessinger		
3	Fall River Rural Electric Cooperative	Bryan Case		
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Negative	
3	Florida Power Corporation	Lee Schuster	Affirmative	
3	Georgia Power Company	Danny Lindsey	Negative	
3	Georgia System Operations Corporation	Scott McGough	Negative	
3	Great River Energy	Brian Glover	Affirmative	
3	Gulf Power Company	Paul C Caldwell	Negative	
3	Hydro One Networks, Inc.	David Kiguel	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Affirmative	
3	Kansas City Power & Light Co.	Charles Locke	Negative	
3	Kissimmee Utility Authority	Gregory D Woessner	Negative	
3	Lakeland Electric	Mace D Hunter		
3	Lane Electric Cooperative, Inc.	Rick Crinklaw		
3	Lincoln Electric System	Jason Fortik	Affirmative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski		
3	Louisville Gas and Electric Co.	Charles A. Freibert	Affirmative	
3	M & A Electric Power Cooperative	Stephen D Pogue	Affirmative	
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Mississippi Power	Jeff Franklin	Negative	
3	Modesto Irrigation District	Jack W Savage	Negative	
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Affirmative	
3	Nebraska Public Power District	Tony Eddleman	Negative	
3	New York Power Authority	David R Rivera	Negative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone		
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann	Affirmative	
3	Northern Indiana Public Service Co.	William SeDoris	Negative	
3	Northern Lights Inc.	Jon Shelby		
3	NW Electric Power Cooperative, Inc.	David McDowell	Affirmative	
3	Omaha Public Power District	Blaine R. Dinwiddie	Affirmative	
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative	
3	Owensboro Municipal Utilities	Thomas T Lyons	Abstain	
3	Pacific Gas and Electric Company	John H Hagen	Negative	
3	Pacific Northwest Generating Cooperative	Rick Paschall		
3	PacifiCorp	Dan Zollner	Negative	
3	Platte River Power Authority	Terry L Baker	Negative	
3	PNM Resources	Michael Mertz	Affirmative	
3	Portland General Electric Co.	Thomas G Ward	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Progress Energy Carolinas	Sam Waters		
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Affirmative	
3	Puget Sound Energy, Inc.	Erin Apperson	Abstain	

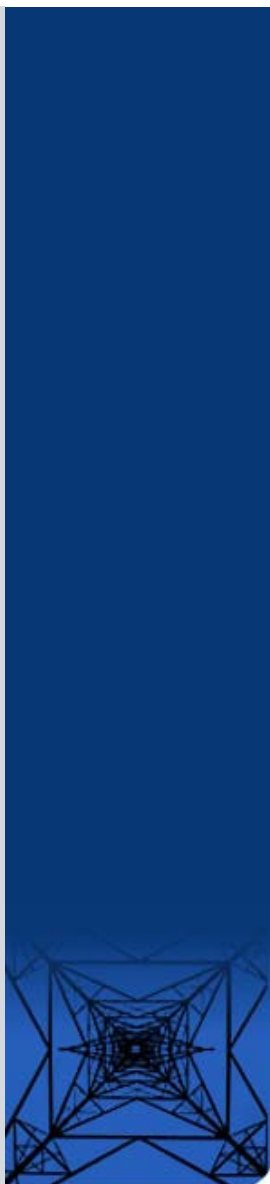


3	Raft River Rural Electric Cooperative	Heber Carpenter	
3	Rutherford EMC	Thomas M Haire	Negative
3	Sacramento Municipal Utility District	James Leigh-Kendall	Negative
3	Salmon River Electric Cooperative	Ken Dizes	
3	Salt River Project	John T. Underhill	Affirmative
3	Santee Cooper	James M Poston	Negative
3	Seattle City Light	Dana Wheelock	Negative
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Affirmative
3	South Carolina Electric & Gas Co.	Hubert C Young	
3	Tacoma Public Utilities	Travis Metcalfe	Negative
3	Tampa Electric Co.	Ronald L. Donahey	
3	Tennessee Valley Authority	Ian S Grant	Negative
3	Tri-County Electric Cooperative, Inc.	Mike Swearingen	Affirmative
3	Tri-State G & T Association, Inc.	Janelle Marriott	Negative
3	Umatilla Electric Cooperative	Steve Eldrige	
3	Westar Energy	Bo Jones	Negative
3	Wisconsin Electric Power Marketing	James R Keller	Affirmative
3	Xcel Energy, Inc.	Michael Ibold	Negative
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative
4	American Municipal Power	Kevin Koloini	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative
4	Central Lincoln PUD	Shamus J Gamache	Negative
4	City of Austin dba Austin Energy	Reza Ebrahimian	Negative
4	City of Clewiston	Kevin McCarthy	
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Negative
4	City of Redding	Nicholas Zettel	Affirmative
4	City Utilities of Springfield, Missouri	John Allen	Negative
4	Consumers Energy	David Frank Ronk	
4	Cowlitz County PUD	Rick Syring	
4	Detroit Edison Company	Daniel Herring	
4	Flathead Electric Cooperative	Russ Schneider	Negative
4	Florida Municipal Power Agency	Frank Gaffney	Negative
4	Fort Pierce Utilities Authority	Cairo Vanegas	Negative
4	Georgia System Operations Corporation	Guy Andrews	Negative
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative
4	Imperial Irrigation District	Diana U Torres	
4	Indiana Municipal Power Agency	Jack Alvey	Negative
4	LaGen	Richard Comeaux	
4	Madison Gas and Electric Co.	Joseph DePoorter	Negative
4	Modesto Irrigation District	Spencer Tacke	Negative
4	Northern California Power Agency	Tracy R Bibb	
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative
4	Oklahoma Municipal Power Authority	Ashley Stringer	Negative
4	Old Dominion Electric Coop.	Mark Ringhausen	Negative
4	Pacific Northwest Generating Cooperative	Aleka K Scott	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Negative
4	Sacramento Municipal Utility District	Mike Ramirez	Negative
4	Seattle City Light	Hao Li	Negative
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative
4	South Mississippi Electric Power Association	Steven McElhanev	
4	Southern Minnesota Municipal Power Agency	Richard L Koch	
4	Tacoma Public Utilities	Keith Morissette	Negative
4	Turlock Irrigation District	Steven C Hill	
4	West Oregon Electric Cooperative, Inc.	Marc M Farmer	
4	Wisconsin Energy Corp.	Anthony Jankowski	Affirmative
4	WPPI Energy	Todd Komplin	Affirmative
5	AEP Service Corp.	Brock Ondayko	Negative
5	AES Corporation	Leo Bernier	Negative
5	Amerenue	Sam Dwyer	Affirmative
5	Arizona Public Service Co.	Edward Cambridge	Affirmative
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Affirmative
5	Avista Corp.	Edward F. Groce	
5	BC Hydro and Power Authority	Clement Ma	Affirmative

5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	Negative
5	Bonneville Power Administration	Francis J. Halpin	Affirmative
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative
5	Calpine Corporation	Phillip Porter	
5	City and County of San Francisco	Daniel Mason	Negative
5	City of Austin dba Austin Energy	Jeanie Doty	Negative
5	City of Redding	Paul A. Cummings	Affirmative
5	City of Tallahassee	Karen Webb	Affirmative
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative
5	Cleco Power	Stephanie Huffman	Negative
5	Cogentrix Energy, Inc.	Mike D Hirst	Negative
5	Colorado Springs Utilities	Jennifer Eckels	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Affirmative
5	Consumers Energy Company	David C Greyerbiehl	Affirmative
5	Cowlitz County PUD	Bob Essex	
5	Dairyland Power Coop.	Tommy Drea	
5	Deseret Power	Philip B Tice Jr	Negative
5	Detroit Edison Company	Christy Wicke	Negative
5	Dominion Resources, Inc.	Mike Garton	Affirmative
5	Duke Energy	Dale Q Goodwine	Affirmative
5	Dynegy Inc.	Dan Roethemeyer	Negative
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain
5	Edison Mission Marketing & Trading Inc.	Brenda J Frazer	Negative
5	Electric Power Supply Association	John R Cashin	
5	Essential Power, LLC	Patrick Brown	Negative
5	Exelon Nuclear	Michael Korchynsky	Affirmative
5	ExxonMobil Research and Engineering	Martin Kaufman	Abstain
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative
5	Florida Municipal Power Agency	David Schumann	Negative
5	Great River Energy	Preston L Walsh	Affirmative
5	Hydro-Québec Production	Roger Dufresne	Affirmative
5	ICF International	Brent B Hebert	
5	Imperial Irrigation District	Marcela Y Caballero	
5	JEA	John J Babik	Affirmative
5	Kansas City Power & Light Co.	Brett Holland	Negative
5	Kissimmee Utility Authority	Mike Blough	Negative
5	Lakeland Electric	James M Howard	Negative
5	Liberty Electric Power LLC	Daniel Duff	Negative
5	Lincoln Electric System	Dennis Florom	Affirmative
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative
5	Luminant Generation Company LLC	Mike Laney	
5	Manitoba Hydro	S N Fernando	Affirmative
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Affirmative
5	MEAG Power	Steven Grego	Affirmative
5	MidAmerican Energy Co.	Christopher Schneider	Affirmative
5	Muscatine Power & Water	Mike Avesing	Affirmative
5	Nebraska Public Power District	Don Schmit	Negative
5	New York Power Authority	Wayne Sipperly	Negative
5	NextEra Energy	Allen D Schriver	Affirmative
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Affirmative
5	Northern Indiana Public Service Co.	William O. Thompson	Negative
5	Occidental Chemical	Michelle R DAntuono	Negative
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative
5	Orlando Utilities Commission	Richard Kinas	
5	Pacific Gas and Electric Company	Richard J. Padilla	Negative
5	PacifiCorp	Sandra L. Shaffer	Negative
5	Platte River Power Authority	Roland Thiel	Negative
5	Portland General Electric Co.	Matt E. Jastram	Affirmative
5	PowerSouth Energy Cooperative	Tim Hattaway	Affirmative
5	PPL Generation LLC	Annette M Bannon	Affirmative
5	Progress Energy Carolinas	Wayne Lewis	
5	PSEG Fossil LLC	Tim Kucey	Affirmative
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Affirmative

5	Puget Sound Energy, Inc.	Tom Flynn	Abstain
5	Sacramento Municipal Utility District	Bethany Hunter	Negative
5	Salt River Project	William Alkema	Affirmative
5	Santee Cooper	Lewis P Pierce	Negative
5	Seattle City Light	Michael J. Haynes	Negative
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative
5	Snohomish County PUD No. 1	Sam Nietfeld	Negative
5	South Carolina Electric & Gas Co.	Edward Magic	
5	Southeastern Power Administration	Douglas Spencer	Affirmative
5	Southern California Edison Co.	Denise Yaffe	Affirmative
5	Southern Company Generation	William D Shultz	Negative
5	Tacoma Power	Chris Mattson	Negative
5	Tampa Electric Co.	RJames Rocha	Negative
5	Tenaska, Inc.	Scott M. Helyer	Abstain
5	Tennessee Valley Authority	David Thompson	Negative
5	TransAlta Corporation	Rebbekka McFadden	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Negative
5	U.S. Bureau of Reclamation	Martin Bauer	Abstain
5	Westar Energy	Bryan Taggart	Negative
5	Wisconsin Electric Power Co.	Linda Horn	Affirmative
5	WPPI Energy	Steven Leovy	Affirmative
5	Xcel Energy, Inc.	Liam Noailles	Negative
6	AEP Marketing	Edward P. Cox	Negative
6	Ameren Energy Marketing Co.	Jennifer Richardson	Affirmative
6	APS	Randy A. Young	Affirmative
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Affirmative
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative
6	City of Austin dba Austin Energy	Lisa L Martin	Negative
6	City of Redding	Marvin Briggs	Affirmative
6	Cleco Power LLC	Robert Hirschak	Negative
6	Colorado Springs Utilities	Lisa C Rosintoski	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative
6	Constellation Energy Commodities Group	Donald Schopp	Affirmative
6	Discount Power, Inc.	David Feldman	
6	Dominion Resources, Inc.	Louis S. Slade	Affirmative
6	Duke Energy	Greg Cecil	
6	Entergy Services, Inc.	Terri F Benoit	Abstain
6	FirstEnergy Solutions	Kevin Querry	Affirmative
6	Florida Municipal Power Agency	Richard L. Montgomery	Negative
6	Florida Municipal Power Pool	Thomas Washburn	Negative
6	Florida Power & Light Co.	Silvia P. Mitchell	Affirmative
6	Great River Energy	Donna Stephenson	
6	Imperial Irrigation District	Cathy Bretz	Abstain
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative
6	Lakeland Electric	Paul Shipps	Negative
6	Lincoln Electric System	Eric Ruskamp	Affirmative
6	Los Angeles Department of Water & Power	Brad Packer	Affirmative
6	Luminant Energy	Brad Jones	Negative
6	Manitoba Hydro	Daniel Prowse	Affirmative
6	MidAmerican Energy Co.	Dennis Kimm	Affirmative
6	Modesto Irrigation District	James McFall	Negative
6	Muscatine Power & Water	John Stolley	Negative
6	New York Power Authority	Saul Rojas	Negative
6	Northern Indiana Public Service Co.	Joseph O'Brien	Negative
6	NRG Energy, Inc.	Alan Johnson	Abstain
6	Omaha Public Power District	David Ried	
6	PacifiCorp	Scott L Smith	Negative
6	Platte River Power Authority	Carol Ballantine	Negative
6	Progress Energy	John T Sturgeon	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative
6	Public Utility District No. 1 of Chelan County	Hugh A. Owen	Abstain
6	Sacramento Municipal Utility District	Diane Enderby	Negative
6	Salt River Project	Steven J Hulet	Affirmative
6	Santee Cooper	Michael Brown	Negative
6	Seattle City Light	Dennis Sismaet	Negative
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative
6	Snohomish County PUD No. 1	William T Moojen	

6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Southern Company Generation and Energy Marketing	John J. Ciza	Negative	
6	Tacoma Public Utilities	Michael C Hill	Negative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Negative	
6	Westar Energy	Grant L Wilkerson	Negative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F Lemmons	Negative	
8		Roger C Zaklukiewicz	Affirmative	
8		James A Maenner		
8		Edward C Stein	Affirmative	
8	APX	Michael Johnson		
8	INTELLIBIND	Kevin Conway		
8	JDRJC Associates	Jim Cyrulewski		
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Pacific Northwest Generating Cooperative	Margaret Ryan		
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon		
8	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman	Affirmative	
8	Volkman Consulting, Inc.	Terry Volkman		
9	California Energy Commission	William M Chamberlain		
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J. Barney	Affirmative	
9	Oregon Public Utility Commission	Jerome Murray		
9	Public Utilities Commission of Ohio	Klaus Lambeck		
10	Florida Reliability Coordinating Council	Linda Campbell	Affirmative	
10	Midwest Reliability Organization	William S Smith	Affirmative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Abstain	
10	SERC Reliability Corporation	Carter B. Edge	Affirmative	
10	Southwest Power Pool RE	Emily Pannel	Affirmative	
10	Texas Reliability Entity, Inc.	Donald G Jones	Negative	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Negative	



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A New Jersey Nonprofit Corporation

# Non-binding Poll Results

Project 2007-02 COM-003-1

Non-binding Poll Results	
<b>Non-binding Poll Name:</b>	Project 2007-02 COM-003-1 Non-binding Poll
<b>Poll Period:</b>	3/25/2013 - 4/8/2013
<b>Total # Opinions:</b>	308
<b>Total Ballot Pool:</b>	395
<b>Summary Results:</b>	77.97% of those who registered to participate provided an opinion or an abstention; 54.28% of those who provided an opinion indicates support of the VRFs and VSLs.

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Ameren Services	Kirit Shah	Abstain	
1	American Electric Power	Paul B Johnson	Abstain	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman	Affirmative	
1	ATCO Electric	Glen Sutton	Abstain	
1	Austin Energy	James Armke	Affirmative	
1	Avista Corp.	Scott J Kinney		
1	Balancing Authority of Northern California	Kevin Smith	Negative	
1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher		
1	Black Hills Corp	Eric Egge		
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	Negative	
1	Bryan Texas Utilities	John C Fontenot	Affirmative	
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Negative	
1	Central Electric Power Cooperative	Michael B Bax	Affirmative	
1	City of Pasadena	Marco A Sustaita		
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Negative	
1	City Utilities of Springfield, Missouri	Jeff Knottek	Negative	
1	City Water, Light & Power of Springfield	Shaun Anders	Affirmative	
1	Clark Public Utilities	Jack Stamper	Negative	
1	Cleco Power LLC	Danny McDaniel	Negative	
1	Colorado Springs Utilities	Paul Morland	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	CPS Energy	Richard Castrejana	Negative	

1	Dairyland Power Coop.	Robert W. Roddy	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash	Negative	
1	Deseret Power	James Tucker	Affirmative	
1	Dominion Virginia Power	Michael S Crowley	Abstain	
1	Duke Energy Carolina	Douglas E. Hils	Affirmative	
1	Empire District Electric Co.	Ralph F Meyer		
1	Entergy Services, Inc.	Edward J Davis	Affirmative	
1	FirstEnergy Corp.	William J Smith	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton		
1	Florida Power & Light Co.	Mike O'Neil	Affirmative	
1	Gainesville Regional Utilities	Richard Bachmeier	Abstain	
1	Georgia Transmission Corporation	Jason Snodgrass	Negative	
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon		
1	Hydro One Networks, Inc.	Ajay Garg	Affirmative	
1	Hydro-Quebec TransEnergie	Bernard Pelletier		
1	Idaho Power Company	Molly Devine	Affirmative	
1	Imperial Irrigation District	Tino Zaragoza		
1	International Transmission Company Holdings Corp	Michael Moltane	Abstain	
1	JEA	Ted Hobson	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon	Affirmative	
1	Kansas City Power & Light Co.	Michael Gammon	Negative	
1	Keys Energy Services	Stanley T Rzad		
1	Lakeland Electric	Larry E Watt	Negative	
1	Lee County Electric Cooperative	John W Delucca		
1	LG&E Energy Transmission Services	Bradley C. Young		
1	Long Island Power Authority	Robert Ganley		
1	Los Angeles Department of Water & Power	John Burnett	Affirmative	
1	Lower Colorado River Authority	Martyn Turner	Negative	
1	M & A Electric Power Cooperative	William Price	Affirmative	
1	Manitoba Hydro	Joe D Petaski	Affirmative	
1	MEAG Power	Danny Dees	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Affirmative	
1	National Grid USA	Michael Jones	Affirmative	
1	Nebraska Public Power District	Cole C Brodine	Abstain	
1	New York Power Authority	Bruce Metruck		
1	New York State Electric & Gas Corp.	Raymond P Kinney	Abstain	
1	Northeast Missouri Electric Power Cooperative	Kevin White	Affirmative	
1	Northeast Utilities	David Boguslawski		
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Negative	
1	NStar Gas and Electric	John Robertson		
1	Ohio Valley Electric Corp.	Robert Matthey	Abstain	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Negative	

1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Jen Fiegel	Negative	
1	Orlando Utilities Commission	Brad Chase	Abstain	
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan	Negative	
1	PacifiCorp	Ryan Millard	Abstain	
1	PECO Energy	Ronald Schloendorn		
1	Platte River Power Authority	John C. Collins	Abstain	
1	Portland General Electric Co.	John T Walker	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	
1	Public Service Company of New Mexico	Laurie Williams	Affirmative	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Abstain	
1	Public Utility District No. 2 of Grant County, Washington	Rod Noteboom		
1	Puget Sound Energy, Inc.	Denise M Lietz	Abstain	
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Negative	
1	Salt River Project	Robert Kondziolka	Negative	
1	Santee Cooper	Terry L Blackwell	Negative	
1	Seattle City Light	Pawel Krupa	Negative	
1	Sho-Me Power Electric Cooperative	Denise Stevens	Affirmative	
1	Snohomish County PUD No. 1	Long T Duong	Negative	
1	South California Edison Company	Steven Mavis	Affirmative	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Negative	
1	Southern Illinois Power Coop.	William Hutchison		
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	
1	Tampa Electric Co.	Beth Young		
1	Tennessee Valley Authority	Larry G Akens	Abstain	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Negative	
1	Tucson Electric Power Co.	John Tolo		
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Negative	
1	Western Area Power Administration	Brandy A Dunn		
1	Xcel Energy, Inc.	Gregory L Pieper		
2	Alberta Electric System Operator	Mark B Thompson		
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Rich Vine	Negative	
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Affirmative	
2	Independent Electricity System Operator	Barbara Constantinescu	Affirmative	
2	ISO New England, Inc.	Kathleen Goodman		
2	Midwest ISO, Inc.	Marie Knox	Affirmative	
2	New Brunswick System Operator	Alden Briggs	Abstain	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	stephanie monzon	Abstain	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Abstain	

3	Alabama Power Company	Richard J. Mandes	Negative	
3	Alameda Municipal Power	Douglas Draeger		
3	Ameren Services	Mark Peters	Abstain	
3	APS	Steven Norris		
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Affirmative	
3	Avista Corp.	Robert Lafferty		
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Power Cooperative	Adam M Weber	Affirmative	
3	Central Lincoln PUD	Steve Alexanderson	Negative	
3	City of Austin dba Austin Energy	Andrew Gallo	Affirmative	
3	City of Bartow, Florida	Matt Culverhouse	Negative	
3	City of Clewiston	Lynne Mila		
3	City of Farmington	Linda R Jacobson	Abstain	
3	City of Garland	Ronnie C Hoeinghaus	Negative	
3	City of Green Cove Springs	Gregg R Griffin		
3	City of Lodi, California	Elizabeth Kirkley		
3	City of Palo Alto	Eric R Scott	Negative	
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey		
3	Cleco Corporation	Michelle A Corley	Negative	
3	Colorado Springs Utilities	Charles Morgan	Affirmative	
3	ComEd	Bruce Krawczyk		
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy	Richard Blumenstock	Affirmative	
3	Cowlitz County PUD	Russell A Noble		
3	CPS Energy	Jose Escamilla	Negative	
3	Detroit Edison Company	Kent Kujala	Negative	
3	Duke Energy Carolina	Henry Ernst-Jr		
3	Entergy	Joel T Plessinger		
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Negative	
3	Florida Power Corporation	Lee Schuster	Affirmative	
3	Georgia Power Company	Danny Lindsey	Negative	
3	Georgia System Operations Corporation	Scott McGough	Negative	
3	Great River Energy	Brian Glover	Affirmative	
3	Gulf Power Company	Paul C Caldwell	Negative	
3	Hydro One Networks, Inc.	David Kiguel	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Affirmative	
3	Kansas City Power & Light Co.	Charles Locke	Negative	
3	Kissimmee Utility Authority	Gregory D Woessner	Negative	
3	Lakeland Electric	Mace D Hunter		
3	Lincoln Electric System	Jason Fortik	Affirmative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski		
3	Louisville Gas and Electric Co.	Charles A. Freibert		
3	M & A Electric Power Cooperative	Stephen D Pogue	Affirmative	
3	Manitoba Hydro	Greg C. Parent	Affirmative	



3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Mississippi Power	Jeff Franklin	Negative	
3	Modesto Irrigation District	Jack W Savage	Negative	
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Abstain	
3	Nebraska Public Power District	Tony Eddleman	Negative	
3	New York Power Authority	David R Rivera	Negative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone		
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann	Affirmative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	NW Electric Power Cooperative, Inc.	David McDowell	Affirmative	
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Owensboro Municipal Utilities	Thomas T Lyons	Abstain	
3	Pacific Gas and Electric Company	John H Hagen	Negative	
3	PacifiCorp	Dan Zollner	Abstain	
3	Platte River Power Authority	Terry L Baker	Abstain	
3	PNM Resources	Michael Mertz	Affirmative	
3	Portland General Electric Co.	Thomas G Ward	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Abstain	
3	Progress Energy Carolinas	Sam Waters		
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Abstain	
3	Puget Sound Energy, Inc.	Erin Apperson	Abstain	
3	Rutherford EMC	Thomas M Haire	Negative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Negative	
3	Salmon River Electric Cooperative	Ken Dizes		
3	Salt River Project	John T. Underhill	Negative	
3	Santee Cooper	James M Poston	Negative	
3	Seattle City Light	Dana Wheelock	Negative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Affirmative	
3	South Carolina Electric & Gas Co.	Hubert C Young		
3	Tacoma Public Utilities	Travis Metcalfe	Negative	
3	Tampa Electric Co.	Ronald L. Donahey		
3	Tennessee Valley Authority	Ian S Grant	Abstain	
3	Tri-County Electric Cooperative, Inc.	Mike Swearingen	Affirmative	
3	Tri-State G & T Association, Inc.	Janelle Marriott	Negative	
3	Westar Energy	Bo Jones	Negative	
3	Wisconsin Electric Power Marketing	James R Keller		
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini		
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Negative	
4	City of Austin dba Austin Energy	Reza Ebrahimian	Affirmative	
4	City of Clewiston	Kevin McCarthy		
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Negative	

4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Negative	
4	Consumers Energy	David Frank Ronk		
4	Cowlitz County PUD	Rick Syring		
4	Detroit Edison Company	Daniel Herring		
4	Flathead Electric Cooperative	Russ Schneider	Negative	
4	Florida Municipal Power Agency	Frank Gaffney	Negative	
4	Fort Pierce Utilities Authority	Cairo Vanegas	Abstain	
4	Georgia System Operations Corporation	Guy Andrews	Negative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Imperial Irrigation District	Diana U Torres		
4	Indiana Municipal Power Agency	Jack Alvey	Abstain	
4	LaGen	Richard Comeaux		
4	Madison Gas and Electric Co.	Joseph DePoorter	Abstain	
4	Modesto Irrigation District	Spencer Tacke	Negative	
4	Northern California Power Agency	Tracy R Bibb		
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Oklahoma Municipal Power Authority	Ashley Stringer	Negative	
4	Old Dominion Electric Coop.	Mark Ringhausen	Negative	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean		
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Negative	
4	Sacramento Municipal Utility District	Mike Ramirez	Negative	
4	Seattle City Light	Hao Li	Negative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	South Mississippi Electric Power Association	Steven McElhany		
4	Tacoma Public Utilities	Keith Morisette	Negative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Affirmative	
4	WPPI Energy	Todd Komplin	Affirmative	
5	AEP Service Corp.	Brock Ondayko	Abstain	
5	AES Corporation	Leo Bernier	Negative	
5	Amerenue	Sam Dwyer	Abstain	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Affirmative	
5	Avista Corp.	Edward F. Groce		
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	Negative	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative	
5	Calpine Corporation	Phillip Porter		
5	City and County of San Francisco	Daniel Mason		
5	City of Austin dba Austin Energy	Jeanie Doty	Affirmative	
5	City of Redding	Paul A. Cummings	Affirmative	
5	City of Tallahassee	Karen Webb	Affirmative	
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative	
5	Cleco Power	Stephanie Huffman	Negative	

5	Cogentrix Energy, Inc.	Mike D Hirst	Negative	
5	Colorado Springs Utilities	Jennifer Eckels		
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Affirmative	
5	Consumers Energy Company	David C Greyerbiehl	Affirmative	
5	Cowlitz County PUD	Bob Essex		
5	Dairyland Power Coop.	Tommy Drea		
5	Deseret Power	Philip B Tice Jr	Negative	
5	Detroit Edison Company	Christy Wicke	Negative	
5	Dominion Resources, Inc.	Mike Garton	Abstain	
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Negative	
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain	
5	Edison Mission Marketing & Trading Inc.	Brenda J Frazer	Negative	
5	Electric Power Supply Association	John R Cashin		
5	Essential Power, LLC	Patrick Brown	Negative	
5	Exelon Nuclear	Michael Korchynsky		
5	ExxonMobil Research and Engineering	Martin Kaufman	Abstain	
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Negative	
5	Great River Energy	Preston L Walsh	Affirmative	
5	Hydro-Québec Production	Roger Dufresne	Affirmative	
5	Imperial Irrigation District	Marcela Y Caballero		
5	JEA	John J Babik	Affirmative	
5	Kansas City Power & Light Co.	Brett Holland	Negative	
5	Kissimmee Utility Authority	Mike Blough	Negative	
5	Lakeland Electric	James M Howard		
5	Liberty Electric Power LLC	Daniel Duff	Negative	
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative	
5	Luminant Generation Company LLC	Mike Laney		
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider	Affirmative	
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Abstain	
5	New York Power Authority	Wayne Sipperly	Negative	
5	NextEra Energy	Allen D Schriver	Affirmative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative	
5	Northern Indiana Public Service Co.	William O. Thompson	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Negative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard Kinan		
5	Pacific Gas and Electric Company	Richard J. Padilla		
5	PacifiCorp	Sandra L. Shaffer	Abstain	

5	Platte River Power Authority	Roland Thiel	Negative	
5	Portland General Electric Co.	Matt E. Jastram	Affirmative	
5	PowerSouth Energy Cooperative	Tim Hattaway	Affirmative	
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	Progress Energy Carolinas	Wayne Lewis		
5	PSEG Fossil LLC	Tim Kucey	Abstain	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative	
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Affirmative	
5	Puget Sound Energy, Inc.	Tom Flynn	Abstain	
5	Sacramento Municipal Utility District	Bethany Hunter	Negative	
5	Salt River Project	William Alkema	Negative	
5	Santee Cooper	Lewis P Pierce	Negative	
5	Seattle City Light	Michael J. Haynes	Abstain	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Negative	
5	South Carolina Electric & Gas Co.	Edward Magic		
5	Southeastern Power Administration	Douglas Spencer	Affirmative	
5	Southern California Edison Co.	Denise Yaffe	Affirmative	
5	Southern Company Generation	William D Shultz	Negative	
5	Tacoma Power	Chris Mattson	Negative	
5	Tampa Electric Co.	RJames Rocha	Negative	
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Abstain	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	U.S. Bureau of Reclamation	Martin Bauer	Abstain	
5	Wisconsin Electric Power Co.	Linda Horn		
5	WPPI Energy	Steven Leovy	Affirmative	
5	Xcel Energy, Inc.	Liam Noailles		
6	AEP Marketing	Edward P. Cox	Abstain	
6	Ameren Energy Marketing Co.	Jennifer Richardson	Abstain	
6	APS	Randy A. Young	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Affirmative	
6	City of Redding	Marvin Briggs	Affirmative	
6	Cleco Power LLC	Robert Hirschak	Negative	
6	Colorado Springs Utilities	Lisa C Rosintoski		
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative	
6	Duke Energy	Greg Cecil		
6	Entergy Services, Inc.	Terri F Benoit	Abstain	
6	FirstEnergy Solutions	Kevin Querry	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Negative	
6	Florida Municipal Power Pool	Thomas Washburn	Negative	
6	Florida Power & Light Co.	Silvia P. Mitchell	Affirmative	
6	Great River Energy	Donna Stephenson		
6	Imperial Irrigation District	Cathy Bretz	Abstain	
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	

6	Lakeland Electric	Paul Shipps	Negative	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Los Angeles Department of Water & Power	Brad Packer	Affirmative	
6	Luminant Energy	Brad Jones	Negative	
6	Manitoba Hydro	Daniel Prowse	Affirmative	
6	MidAmerican Energy Co.	Dennis Kimm	Affirmative	
6	Modesto Irrigation District	James McFall	Negative	
6	Muscatine Power & Water	John Stolley	Negative	
6	New York Power Authority	Saul Rojas	Negative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	NRG Energy, Inc.	Alan Johnson	Abstain	
6	Omaha Public Power District	David Ried		
6	PacifiCorp	Scott L Smith	Abstain	
6	Platte River Power Authority	Carol Ballantine	Abstain	
6	Progress Energy	John T Sturgeon		
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Abstain	
6	Sacramento Municipal Utility District	Diane Enderby	Negative	
6	Salt River Project	Steven J Hulet	Negative	
6	Santee Cooper	Michael Brown	Negative	
6	Seattle City Light	Dennis Sismaet	Negative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Snohomish County PUD No. 1	William T Moojen		
6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Southern Company Generation and Energy Marketing	John J. Ciza	Negative	
6	Tacoma Public Utilities	Michael C Hill	Negative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Abstain	
6	Westar Energy	Grant L Wilkerson	Negative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
8		Edward C Stein	Affirmative	
8		James A Maenner		
8		Roger C Zaklukiewicz	Affirmative	
8	APX	Michael Johnson		
8	JDRJC Associates	Jim Cyrulewski		
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon		
8	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman	Affirmative	
8	Volkman Consulting, Inc.	Terry Volkman		
9	California Energy Commission	William M Chamberlain		
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative	
9	Public Utilities Commission of Ohio	Klaus Lambeck		
10	Florida Reliability Coordinating Council	Linda Campbell	Affirmative	
10	Midwest Reliability Organization	William S Smith	Affirmative	
10	New York State Reliability Council	Alan Adamson	Affirmative	

10	Northeast Power Coordinating Council	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Negative	
10	SERC Reliability Corporation	Carter B. Edge	Abstain	
10	Southwest Power Pool RE	Emily Pennel	Affirmative	
10	Texas Reliability Entity, Inc.	Donald G Jones	Abstain	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Negative	

**Name (50 Responses)**  
**Organization (50 Responses)**  
**Group Name (28 Responses)**  
**Lead Contact (28 Responses)**  
**Contact Organization (28 Responses)**  
**IF YOU WISH TO EXPRESS SUPPORT FOR ANOTHER ENTITY'S COMMENTS WITHOUT ENTERING ANY ADDITIONAL COMMENTS, YOU MAY DO SO HERE. (16 Responses)**  
**Comments (78 Responses)**  
**Question 1 (52 Responses)**  
**Question 1 Comments (62 Responses)**  
**Question 2 (53 Responses)**  
**Question 2 Comments (62 Responses)**  
**Question 3 (44 Responses)**  
**Question 3 Comments (62 Responses)**  
**Question 8 (0 Responses)**  
**Question 8 Comments (62 Responses)**

Individual
Scott Bos
Muscatine Power and Water
Yes
Yes
Yes
Individual
Herb Schrayshuen
Self
Yes
Yes
Yes
Individual
Scott McGough
Georgia System Operations Corporation
Yes
No
Internal controls-like language was first introduced into draft 3, R3 and R4. We note that after the technical conference held in Atlanta – Feb 2013, draft 5, R2 and R4 appear to still have remnants of this control language. As discussed in length, it is not appropriate to have such control language in reliability requirements. As GSOC recalls, insertion of R2 and R4 was not discussed or agreed upon at the conference. GSOC recalls that statements were made by participants that it was pre-mature to

include controls language in the standard/requirement at this time. So it appears that revisions to the contrary when were made when in fact NERC statements were made that the full RAI process would not be in place until 2016. GSOC still supports the RAI as it "proposes to transition away from a process-driven enforcement strategy to a proactive, risk-based strategy that clearly defines, communicates, and promotes desired entity behavior in an effort to improve the reliability of the BPS." However, this transition has not been implemented yet. Until NERC transitions the Compliance Monitoring and Evaluation Program (CEMP) to the risk-based strategy, we are still under the past/current process-driven enforcement strategy. A primary concern of GSOC is that until the RAI is developed and provides audit guidance regarding treatment of entity control measures, then auditor subjectivity may creep into the audit process. GSOC believes that once a transition to a risk-based strategy is complete, only then will there be an established "set of parameters" to "guide the exercise of enforcement discretion." "The parameters that would guide the exercise of discretion as well as the protections" "would be in place to ensure due process and to ensure that enforcement decisions are sound and reflect a consistent application of the ERO enterprise enforcement strategy." More specifically, The "decline to pursue option" will have replaced Find, Fix, and Track "after necessary training of [NERC and Regional] personnel, industry and stakeholder outreach, and development of process improvements." At that time, "for those violations that pose a serious or substantial risk, or are not proper candidates for the exercise of enforcement discretion, the ability to impose penalties up to the statutory maximum or adopt increased monitoring and broader audit scope must be retained." At that time, internal controls will be the way to do business (operations/planning) and the process-driven zero-tolerance enforcement process will only apply to those serious or substantial risks. Regarding zero tolerance, some in industry have the false perception that putting internal controls-like language in a reliability requirement NOW will subsequently allow auditors to apply non-zero tolerance. To the contrary, GSOC believes the current process-driven CMEP inclusive of requirements with controls-like language actually requires zero-tolerance treatment. If this standard is passed in its present form an auditor will not have the discretion to "decline to pursue" and must treat every possible violation the same. Of course, NERC/Regional compliance enforcement can now treat some possible violations as applicable to Find, Fix, Track. But that does not require controls language in a requirement. Accordingly, mitigating COMPLIANCE risk has been and still is a driver for the industry's compliance programs. Once the CMEP is transitioned to the risk-based strategy, then such language will be in place with the CMEP and the industry can focus more on RELIABILITY risk and less on COMPLIANCE risk. In addition, GSOC notes that controls-like language is a requirement which is administrative and therefore meets the criteria under P81 for exclusion from reliability requirements. It is not a risk-based reliability requirement. A reliability requirement is one that is (as the statutory definition says) a requirement to provide for reliable operation of the bulk-power system. A reliability requirement includes requirements for the operation of existing bulk-power system facilities, including cyber-security protection, and the design of planned additions or modifications to such facilities to the extent necessary to provide for reliable operation of the bulk-power system. This administrative requirement does not meet the criteria for being a reliability requirement.

No

R2 & R4 - we believe without any definitive guidance from NERC's still-undeveloped RAI, auditors will apply subjective judgment as to the adequacy of controls used to perform periodic assessments and therefore VRF and VSL are not appropriate.

GSOC recommends that only R1 and R3 survive; eliminate R2 and R4.

Individual

Greg Travis

Idaho Power Company

No

Yes for R1 and R3. No for the definition of "Operating Instructions". It is not written very well and is difficult to understand. The language below is offered as a suggestion to simplify the definition. Operating Instruction —A command by a System Operator of a Reliability Coordinator, Transmission Operator, or Balancing Authority where the recipient is instructed to change or preserve the state, status, output, or input of any portion of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are



not considered Operating Instructions.
Yes
Yes
Individual
Robert W. Kenyon
NERC
No
This will require each entity to develop its own unique protocol. This will not "tighten up" communications. Having each entity follow its own protocol will complicate and confuse communications. One entity will be attempting to communicate with another entity which is not familiar with the protocol being used by the first entity because the second entity uses a different protocol. Protocols if required should be standardized. Moreover, the proposed language requires a protocol that "meets the expectations of its System Operators". The plain meaning of that sentence as written is that the protocol meet the expectations of the individual workers, not the entity itself. If this change is going to be approved, should not it read "Each (entity) shall develop protocols that PROVIDE ITS expectations of its System Operators"?
Yes
Yes
Requirement (R1.5) provides inadequate protection against a misunderstanding when directives are issued. Granted, the Requirement does obligate the party receiving the directive to repeat back the directive. However, if the recipient repeats the directive back to the person issuing the directive, and the "repeat back" indicates the recipient has misunderstood the directive, this Requirement merely obligates the person issuing the directive to state the directive again. The Requirement places no obligation on the person issuing the directive, who knows he has been misunderstood, to explicitly and clearly bring to the attention of the recipient that the recipient has misunderstood. All the party issuing the directive has to do is repeat what he has already said. The party issuing the directive is under no obligation to make it clear that there has been a misunderstanding. With respect, I suggest having the person issuing the directive merely repeat it if he's been misunderstood, with no explicit statement that there has been a mistake, leaves open the potential for the recipient to be unaware he has misunderstood and to execute a misunderstood directive.
Individual
Thad Ness
American Electric Power
No
Due to the manner in which the sub-requirements for R1 are written, there could be misinterpretation at which entities plan would require those sub-requirements. We assume that requirements R1.6 and R1.8 apply to an entity that in that instance is *receiving* an Operating Instruction where Requirement R1.2, R1.3, R1.4, R1.5, R1.7 are reserved for only those cases where an entity is *issuing* the Operating Instruction. As currently drafted, R1.6 and R1.8 could be interpreted as somehow requiring an entity that would normally be issuing an instruction (such as an RC) to implement documented communication protocols for an outside receiving entity (such as a Balancing Authority). A potential solution would be to restructure R1 and R3 in such a way that it is based on entities that would be issuing instructions in one requirement and entities that would be receiving instructions in a separate requirement. AEP strongly disagrees with R 1.9, requiring coordination with affected Reliability Coordinators', Balancing Authorities', Transmission Operators', Distribution Providers', and Generator Operators' communication protocols. For AEP, this requirement would

require coordination among numerous entities, and keeping all those protocols in sync would be a significant logistical challenge that does not appear to proportionately improve reliability. In addition, exactly what kind of coordination is needed? R1.1 through are robust enough that adding R1.9 is totally redundant and unnecessary. If beyond R1.1 through 1.8 there are additional, specific needs that still need to be addressed, those should be identified so that specific requirements could be developed if necessary. For this requirement alone, AEP must vote negative on this proposed draft.

No

If an entity has a control in place, but that control is somehow not viewed favorably during an audit, is that entity potentially in violation of an additional requirement? R2 and R4 appear to have potential double jeopardy implications.

It needs to be acknowledged by the project team that there are overlapping requirements between COM-003-1 and COM-002-3. Although the project webpage states that "COM-003-1 establishes the practice of using communication protocols for all Operating Instructions", COM-003-1 explicitly includes Reliability Directives along with the Operating Instructions. We understand Reliability Directives to be a subset of Operating Instructions, so with respect to Reliability Directives, there are unnecessary overlaps which will only cause confusion in adhering to the standard. In short, COM-003-1 should only be adopted with the understanding that the overlapping requirements in COM-002 would then be retired. AEP supports the forward-looking approach advocated by NERC's Reliability Assurance Initiative. We believe this proposed standard puts "the cart before the horse" in that it mandates internal controls for a limited number of requirements rather than taking a holistic approach where internal controls are generally required for all standards and where that language is housed outside of the standard itself. AEP believes this R 1.3 is redundant with TOP-002 R18. Other requirements in this proposed standard are already in place to drive clarity of communication.

Individual

John Seelke

Public Service Enterprise Group

No

We found what we believe to be a typo in the definition of "Operating Instruction." The defined term "Operating Instruction" has this phrase: "...where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System." The comma after "act" should be removed because it is not grammatically correct. If removed, the phrase would become: "...where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.

Yes

The purpose statement needs to have "System Operators" limited to just those of RCs, TOPs, and BAs. The definition of "System Operators" in the NERC Glossary includes GOPs. The capitalized language added to the Purpose statement below would clarify this: Purpose: To provide System Operators OF RELIABILITY COORDINATORS, TRANSMISSION OPERATORS, AND BALANCING AUTHORITIES predefined communications protocols that reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of BES.

Individual

Andrew Gallo

City of Austin dba Austin Energy

No

The latest version of COM-003 introduces a potential conflict with COM-002 related to the use of one-way burst messaging systems to issue a Reliability Directive. In COM-003, the follow Requirements apply: R1.7 Instances where the issuer of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short

time period (e.g. an All Call system) is required to verbally or electronically confirm receipt from at least one receiving party. R1.8 Require the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the issuer if the communication is not understood. R3.3 Require the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the issuer if the communication is not understood. In other words, COM-003 allows one-way burst messaging for Reliability Directives and prescribes:

- the issuer confirm receipt from at least one receiving party
- the receiver request clarification from the issuer if the communication is not understood

However, COM-002 has the following requirements: R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase, or recapitulate the Reliability Directive. R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall either:

- Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or
- Reissue the Reliability Directive to resolve a misunderstanding.

In other words, in the case of a one-way burst message used for Reliability Directives, COM-002 does not allow for only those responses required in COM-003 but instead requires a full 3 way communication from all parties. This potentially sets up both the issuer and receiver for violating COM-002 if they respond to a one-way burst message Reliability Directive as the requirements indicate in COM-003. In order to fully comply with BOTH standards, the receiver would have to contact the issuer and repeat what was said on the original burst message; then, the issuer would confirm the response was accurate before acting on the message.

Yes

Yes

Group

Salt River Project

Bob Steiger

Electric Reliability Compliance

Yes

Yes

No

The VSLs give a higher violation to a GO than a BA for exactly the same error, even though the consequences with the BA are much greater. A GO who fails to require 3-part responses when requested is tagged with a Moderate violation, the BA with a lower. We believe the VRF should be Low rather than Medium for R4.

R4 should be eliminated and R3 should end after the first sentence. GOs do not issue Operating Instructions. They only receive instructions from others. GOs should have a communications procedure as part of their operations. However, the methods used are properly business decisions made by the GO. The content, thoroughness and effectiveness of a communications plan are excellent items to consider when assessing an internal compliance program.

Group

Northeast Power Coordinating Council

Guy Zito

Northeast Power Coordinating Council

Yes

No
Requirement 3 is an administrative requirement that does little to benefit the reliable operation of the BES. By specifically calling out "Directives" in the requirement it creates the potential for double jeopardy with other requirements such as COM-002, IRO-001 and TOP-001 which all speak to following Directives. Requiring a documented communications protocol when the only responsibility is repeat back the instruction as received and seek clarification if the directive is misunderstood is beyond the intended scope of the reliability program in general. This requirement should be removed. Requirement 4 should be removed because it is unnecessary and excessive. The smaller entities that this will affect do not record phone conversations and it would be difficult to assess performance based on the very low number of "Operating Instructions" or "Directives" that these entities actually receive. The performance of "Operating Instructions" should be the proof. A better approach would be to amend the above mentioned standards (IRO, TOP, COM) to include "Operating Instructions" along with Directives. The term "All Call" is used in Requirement 1 Part 1.8. It should be defined in the NERC Glossary. If it isn't to be defined, then it should not be capitalized. Regarding Requirement 1 Part 1.8, and Requirement 3 Part 3.3, the receiver of an oral Operating Instruction or Reliability Directive from a one-way burst messaging system is "to request clarification from the issuer if the communication is not understood." What if the receiver never gets the issued Operating Instruction or Reliability Directive? Regarding Requirement 1 Part 1.8, and Requirement 3 Part 3.3, suggest changing "using" to "from" to make them read "Require the receiver of an Oral Operating Instruction or Reliability Directive from a one-way burst..."
Individual
John Brockhan
CenterPoint Energy Houston Electric L.L.C.
No
See comments below
No
See comments below
CenterPoint Energy appreciates the opportunity to comment. The Company recognizes the work of the SDT however CenterPoint Energy still has large concerns with Draft 5. Specifically: 1) The addition of the term "Reliability Directive" to COM-003-1. 2) R1.9 coordination with other entities. 3) The addition of specifying the alpha-numeric format in R1.4. 4) The VSL's. 1) The addition of the term "Reliability Directive" to COM-003-1 introduces a potential conflict with the already industry and NERC BOD approved COM-002-3. Requirements R1.7 of the current draft of COM-003-1 states: "Instances where the issuer of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) is required to verbally or electronically confirm receipt from at least one receiving party." (emphasis added) Requirements R1.8 and R3.3 of the current draft of COM-003-1 allow the recipient of a Reliability Directive from a one way burst messaging system communication to "...request clarification from the issuer if the communication is not understood." (emphasis added) COM-002-3 makes no such distinctions regarding the issuing or receiving of Reliability Directives. COM-002-3 is clear; whether an entity is issuing or receiving a Reliability Directive 3-part communication must be employed. The Company firmly believes this conflict could easily cause entities to follow COM-003-1 yet be non-compliant with COM-002-3. In addition, since COM-002-3 already addresses emergency communications and has been reviewed and approved by industry stakeholders as well as the NERC BOD CenterPoint Energy believes there is no additional reliability benefit to adding "Reliability Directive" to COM-003-1. CenterPoint Energy strongly recommends deleting "Reliability Directive" from COM-003-1. 2) CenterPoint Energy has strong concerns regarding the addition of R1.9 to Draft 5 of COM-003-1. R1.9 requires that an entity's documented communication protocols address coordination with affected RC's, BA's, TOP's, DP's, and GOP's communication protocols. For responsible entities that have interconnections with multiple entities, this will be the equivalent of

“herding cats”. The Company does not believe it will be possible to coordinate with and come to a common agreement regarding the items in R1.1 – R1.8 with multiple parties. For example: R1.4 requires the documented communication protocols to address the format to be used when alpha-numeric clarifiers are necessary. Where a responsible entity is a TOP and is interconnected with multiple other TOP’s, DP’s, GOP’s as well as its RC, and BA, it will be extremely difficult for all parties to agree to a common alpha-numeric format. In addition, coordination will become an issue when any of the parties decide to revise or amend its communication protocols. This will be an on-going management issue for all entities. CenterPoint Energy strongly recommends R1.9 be deleted from COM-003-1. 3) CenterPoint Energy believes the addition to R1.4 requiring a responsible entity to specify the format to be used where alpha-numeric clarifiers are necessary is an unnecessary and burdensome requirement. The Company agrees with the SDT’s decision to add to R1 and R3 language that allows an entity to address, where applicable, the items in the sub-requirements instead of requiring these items to be in the communication protocols as it was in Draft 4. However, the addition of specifying the format for those clarifiers is a step backwards. Draft 4 did not require documenting a specific format and therefore would have allowed an entity the flexibility to use, for example, “Baker” or “Bravo” for the letter “B”. The Draft 5 version now sets up an operator for a possible violation if the protocol specifies “Baker” and the operator inadvertently uses “Bravo”. The purpose of using alpha-numeric clarifiers is to ensure the recipient understands that the alpha component, in this case, is the letter “B” and not “E” or “D”. The use of “Baker” or “Bravo” accomplishes that purpose. The Company believes having to specify a format to use does not result in any reliability benefit and therefore CenterPoint Energy strongly recommends the deletion of the format requirement from R1.4. 4) CenterPoint Energy firmly believes there should be no High or Severe VSL for simply failing to document a process, policy, or procedure. High or Severe VSL’s should only apply to the most egregious violations that have a high impact on the reliability of the BES. As NERC has stated on many occasions, the purpose of the Reliability Standards is to enhance the reliable operation of the BES. Where an entity is performing the process, procedure, or task required in an applicable Standard and therefore is reliably operating its portion of the BES, yet has failed to document that process, procedure, or task, penalizing that entity with a High or Severe VSL will not result in improved reliable operation of the BES. CenterPoint Energy recommends no VSL’s higher than Moderate. CenterPoint Energy supported Draft 4 of COM-003-1 however, the changes made by the SDT in Draft 5 has caused the Company to rethink its position. If the SDT were to make the recommended changes CenterPoint Energy would be able to support the Standard.

Individual

John Bee on behalf of Exelon and its' affiliates

Exelon

Yes

No

See comment #3 in the comment area of the last question

1) In the COM-003 FAQ document the response to question 5 states that R3 and R4 apply to the “recipient of the command” where the recipient is “expected to act, to change or preserve the state, status, output, or Element of the [BES] of Facility of the [BES]. In many Registered Entity organizations, the commands from a TOP, BA or an RC typically go through an intermediary dispatch control center. Then, if necessary, the commands are passed through to the associated DP or GOP. How does COM-003 apply to such organizations with respect to R3 and R4? 2) In the COM-003 FAQ document the response to question 3 states that entities “develop their own programs that support the requirements of COM-003.” Suggest that the SDT clarify that recorded lines are not specifically required and that other tools such as documented direct supervisory observation could be used. 3) In R3 and R4 the term ‘operators’ is used, in generation stations this term is widely used and relates to different job functions. Suggest clarifying the term by stating ‘operators who receive Operating Instructions or Reliability Directives from a Balancing Authority, Reliability Coordinator or Transmission Operator’. 4) The COM-003 language that includes ‘reliability directives’ has the potential to create a compliance issue with COM-002 related to “all calls” since some Transmission Operations use ‘all calls’ or ‘one way burst messaging’ to communicate reliability directives. These

communication methods typically do not allow for a response or repeat back or for an acknowledgement of the response accuracy. The problems with COM-002 cannot be solved by making edits to COM-003. Instead, changes to COM-002 should be made to clarify that "all calls" or burst messaging systems can be used to deliver Reliability Directives.

Group

Western Electricity Coordinating Council

Steve Rueckert

WECC

No

We do not agree with the revisions to the language of R1 and R3. The changes are a lowering of the bar for reliability. Earlier versions identified specific communication protocols for each BA, RC, and TOP. These specific requirements would have resulted in a consistent approach to communications between all system operators. The proposed revisions couple result in varying procedures that do not close the gap in communications. The watered-down versions of the requirements are essentially a fill-in-the-blank type of standard allowing each applicable entity to develop their own protocols.

Yes

No

Based on the changes we believe are necessary for Requirements R1 and R3, we believe the VSLs should be changed accordingly.

The apparent conflict between COM-002-3 and COM-003-1 needs to be addressed. The information provided in the Frequently Asked Questions document was helpful but it is not clear that a drafting team response to a frequently asked question can alter what is required in another standard. It is not clear that developing a communications protocol that says three-part communication is not necessary for a one-way burst message is going to relieve a BA, RC, or TOP from the requirement to use three-part communications for all Reliability Directives. If the position is that three-part communication is not required for one-way burst messages, this exception should be included in COM-002-3.

Individual

D. Jones

Texas Reliability Entity

Texas RE voted "no" on this draft for reasons expressed in our comments submitted on prior drafts. In particular, we are concerned about lack of coordination between COM-003 and COM-002.

Group

Seattle City Light

paul haase

seattle city light

Yes

Yes

Seattle City Light is supportive of the proposed "assess and implement" approach to compliance for COM-003 R2 and R4.

No

The VSLs give a higher violation to a GO than a BA for exactly the same error, even though the consequences with the BA are much greater. A GO who fails to require 3-part responses when requested is tagged with a Moderate violation, the BA with a lower. Both should be lower.

Seattle City Light is concerned about the conflict between COM-002 and COM-003 regarding responses to Reliability Directives. In the case of a one-way burst messaging used to issue a Reliability Directive, COM-002 does not allow for only those responses required in COM-003 but instead requires a full 3-way communication from all parties. This potentially sets up both the issuer and receiver for violating COM-002 if they respond to a one-way burst messaging Reliability Directive as the requirements indicate in COM-003. In order to be fully compliant with BOTH standards, the receiver would have to contact the issuer, repeat what was said on the original burst message, then the issuer would confirm that the response was accurate before acting on the message. Seattle City Light appreciates the responsiveness of the OPCPSDT in quickly posting an FAQ once the COM-002/COM-003 issue was raised. The opinion of the OPCPSDT notwithstanding, Seattle is not reassured by the secondary documentation cited in the FAQ when the plain language of the two Standards are in conflict. Past experience, such as illustrated in the 2008 PacifiCorp case, shows that where Standards are unclear or in conflict, auditors have been prone to take the language at face value and disregard secondary documents. In addition, entities charged with implementing the Standards are prone to change practices to avoid ambiguous areas and compliance risk, which in this case could result in the phase-out of effective all-call or burst messaging systems for announcing reliability Directives. As a result, Seattle is sufficiently concerned about the audit and reliability implications created by the present draft of COM-003 to change from a YES position to NO at this time. Seattle is prepared to support COM-003 once this conflict is addressed. A simple solution would be to eliminate the words "Reliability Directive" from COM-003, which after all is designed to address "Operating Instructions." Inclusion of Reliability Directive language in COM-003 creates an additional complication, by making R1.8 incomplete. R1.8 require the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the issuer if the communication is not understood. This language does not address the next step: if an entity receives a burst message from its RC that is unclear, and is unable to reach the RC for clarification (perhaps because the RC is busy handling the emergency situation), what is the entity to do? Implement to Reliability Directive to its best understanding? Wait until it can clarify the Directive? Do nothing? Serious reliability and compliance risks attend all of these possibilities, and the Standard should be clear as to which is preferred. Seattle again recommends removing "Reliability Directive" language from COM-003 as a simple solution. If the Reliability Directive language remains in COM-003, this potentiality should be addressed in the Standard as to which approach is preferred.

Group

Duke Energy

Michael Lowman

Duke Energy

Yes

R1.7, R1.8, and R3.3 – All Call should not be capitalized since it is not a defined term. It should instead be placed in quotation ("All Call"). R1.6, R1.8, R3.2, and R3.3 – Change the word "Require" to "Requirement for" to better align grammar with R1.

Yes

Yes

Group

Platte River Power Authority

Christopher Wood

Platte River Power Authority

Agree

Large Public Power Council

Group

San Diego Gas & Electric

Annamay Luyun
San Diego Gas & Electric
Yes
Yes
Yes
Please see comments: NEW NERC RELIABILITY STANDARD – COM-003-1 – Version 5 Version 5 comments R1.1 and R3.1 Proposed Updated Language: Use of English language when issuing or responding to an oral or written Operating Instruction or Reliability Directive, unless another language is mandated by law or regulation, or as otherwise agreed to by the parties. Comment: The Western Interconnection is interconnected with Mexico, south of the California, Arizona and New Mexico borders and with Canadian provinces north of the Washington, Idaho and Montana borders. SDG&E, which is located at the California-Mexico border, communicates almost daily with the Mexico utility located in Baja California, CFE. When the standards became mandatory and enforceable, in compliance with COM-001, R4, SDG&E maintained an agreement with CFE which documents that English will typically be used, but in instances where communicating in Spanish is more effective in ensuring system reliability, the personnel involved will use Spanish given that all parties involved are fluent in Spanish. CFE does not have a mandate to be in compliance with the U.S. NERC Reliability Standards. The native language in Mexico is Spanish, and SDG&E staffs its Electric Grid Operations department with personnel who are fluent in Spanish, therefore its agreement with CFE is managed to insure that all communications with its neighbor to the south are clear, concise, and understood. In addition, there are at least two generation stations located south of the California border, interconnected with SDG&E, and the employees at those stations are fluent in Spanish, therefore, because those generation station personnel will also communicate with the California ISO and the WECC RC on occasion, those entities need the flexibility provided in COM-001 R4 to be carried through to COM-003-1, R1.1. & R3.1. All policies and procedures developed by power company entities south of the border are written in Spanish, and at times, written communication between U.S. and entities in Mexico are in Spanish. Since SDG&E's neighbors to the south do not have to comply with U.S. NERC Reliability Standards, and U.S. entities are required to comply with U.S. NERC Reliability Standards, SDG&E proposes the revisions to COM-003-1 R1.1 and R3.1 as identified above. This proposed revision provides for the flexibility that already exists in COM-001 R4 that has effectively worked over the last several years. R1.2 Proposed Updated Language: Instances that require time identification when issuing an oral or written Operating Instruction or Reliability Directive, and the format for the time identification specified uses a 24-hour clock format and the Entity's time zone. Comment: SDG&E prefers the language proposed above. The proposed language leaves NO doubt associated with how to reference a specific time for ALL entities. If one entity uses the 24 hour clock, and another is using a.m. and p.m., it simply leaves the opportunity for some confusion that can be eloquently avoided when stating that a 24 hour clock is to be used.
Group
North American Generator Forum Standards Review Team
Patrick Brown
Essential Power, LLC
No
See answer to 4 below.
No
See answer to 4 below.
The SRT agrees with the concepts put forth in COM-003, but have some concerns, particularly with the proposed administrative burden associated with the Standard. The SRT offers to following comments: 1. R1.9 requires a TOP, BA, and RC to coordinate with affected RC, BA, TOP, DP and GOP



communication protocols; this could result in a TOP having to coordinate with a hundred+ different entities' communications protocols. This coordination would not improve reliability, but only serve to create confusion and significant communication time delays in real-time operations. Both R1 and R4 create significant documentation and administrative burdens, without providing a comparable improvement to the reliability of the BES. As reliability based Standard, COM-003 should focus on those actions that would have a direct impact on reliability, while minimizing the administrative burden. 2. R3 should end after the first sentence. GOPs do not issue Operating Instructions. They only receive instructions from others. GOPs should have a communications procedure as part of their operations, however, the methods used are properly business decisions made by the GOP. The content, thoroughness and effectiveness of a communications plan are excellent items to consider when assessing an entity's internal compliance program. 3. R4 raises the question of sufficiency of an entities corrective program. The RSAW requires the GO to turn over records of monitoring communications as well as records of corrective actions and then prove the "problem" is not still in place. This standard could easily turn into a high-profile audit target due to the varying concepts of what does and does not constitute a sufficient corrective action program. 4. The SRT recommends that the language to M4 be changed as follows: M4. Each Distribution Provider and Generator Operator shall provide the results of its periodic assessment and of any corrective actions (if any corrective actions were implemented) developed for Requirement R4. Examples of sufficient periodic assessment programs include, but are not limited to, the following: -Documented review of voice logs for a total of at least one hour per calendar year for each operator (does not need to be a single session) -Documented personal monitoring of communications for a total of at least one hour per calendar year for each operator (does not need to be a single session) -Documented annual training Examples of sufficient corrective action programs include, but are not limited to, the following: - Documented refresher training -Documented meeting -Documented "hot box" communication 5. The VSLs give a higher violation to a GOP than a BA for exactly the same error, even though the consequences with the BA are much greater. A GOP who fails to require 3-part responses when requested is tagged with a Moderate violation, while the BA would receive a Lower. 6. In the RSAW, the following passage should be expunged; "Where practicable, verify that deficient communication practice was indeed corrected by reviewing evidence of Operator communications (such as voice recordings) occurring after the date of the corrective action to determine if deficient communication practice was corrected." Differentiating between slips of the tongue and "deficient communication practices" involves subjective judgments. The same is true for attempting to identify changes in an operator's degree of understanding, especially when doing so through the numbing process of making before-and-after voice recording comparisons. This is an open-ended matter that could very quickly become an unreasonable compliance burden. RSAWs in general should not introduce new requirements, measures or forms of evidence, so the GOP materials reviewed should be limited to the protocols/procedures of R3, and the assessment forms and corrective action reports of R4.

Individual

Ronnie Hoeinghaus

City of Garland

Yes

No

R2 & R4 Requirements are written assuming that corrective actions will be necessary. Should be written to state corrective actions "if necessary"

1)COM-003 now includes "Reliability Directives" which is why COM-002-3 was developed and approved – COM-002-3 does not need to exist if Reliability Directives are covered in COM-003 2)In the Background Section of the "Unofficial Comment Form", it is stated that the final goal of this standard was to implement 3 part communication. It would seem that it would be simple to state in a requirement that the entity has to develop a procedure to use 3 part communications for Operating Instructions using English except where prohibited by law or regulation and then a 2nd requirement to develop an assessment process with a corrective process if necessary. It is totally unnecessary to write a requirement with 9 sub parts that must be accounted for in a policy and procedure for an industry wide practice that already exists. As written, it only add burdensome and unnecessary

paperwork to operations and compliance departments that has to be maintained and audited – again for a process that already exists industry wide. 3) Why is the Time Horizon stated as "Long Term Planning" instead of "Real-Time"

Individual

Jim Howard

Lakeland Electric

Agree

Florida Municipal Power Agency (FMPA)

Group

Hydro One Networks Inc.

David Kiguel

Hydro One Networks Inc.

Yes

We are not convinced that a Standard is the best approach to routine communications, but we feel that the latest draft is a reasonable compromise.

Individual

David Jendras

Ameren

No

We do not believe that we need a definition for the term "Operating Instruction" and we would like to see this defined in the entities protocol. However if a definition is included, we ask the SDT to require an RC, TOP, or BA to identify when an Operating Instruction is used to communication to a GOP or DP.

No

We ask the SDT to delete requirements R3 and R4 because they are redundant and may cause double jeopardy for entities as these requirements are addressed in requirements R1 and R2 for the BA, RC, and TOP communication protocols with DPs/GOPs.

No

Concerning the VRF and VSLs we ask the SDT to review the severity levels because we do not believe that any violations of this standard should be at either a High or Severe level since these are documentation requirements.

We would ask the SDT to consider for clarity to this standard that COM-002 only address Reliability Directives and COM-003 only address Operating Instructions.

Individual

Joe O'Brien

NIPSCO

see NIPSCO comments from Julaine Dyke, thanks

Individual

Martyn Turner

LCRA Transmission Services Corporation

Agree

Seattle City Light
Individual
Jack Stamper
Clark Public Utilities
Yes
Yes
No
The VSLs give a higher violation to a GO than a BA for exactly the same violation, even though the consequences with the BA are much greater. A GO who fails to require 3-part responses when requested is tagged with a Moderate violation, the BA with a Lower. Both should be Lower.
Clark Public Utilities is concerned about the conflict between COM-002 and COM-003 regarding responses to Reliability Directives. In the case of a one-way burst messaging used to issue a Reliability Directive, COM-002 does not allow for only those responses required in COM-003 but instead requires a full 3-way communication from all parties. This potentially sets up both the issuer and receiver for violating COM-002 if they respond to a one-way burst messaging Reliability Directive as the requirements indicate in COM-003. In order to be fully compliant with BOTH standards, the receiver would have to contact the issuer, repeat what was said on the original burst message, then the issuer would confirm that the response was accurate before acting on the message. Clark appreciates the responsiveness of the OPCPSDT in quickly posting an FAQ once the COM-002/COM-003 issue was raised. The opinion of the OPCPSDT notwithstanding, Clark is not reassured by the secondary documentation cited in the FAQ when the plain language of the two Standards are in conflict. A simple solution would be to eliminate the words "Reliability Directive" from COM-003, which after all is designed to address "Operating Instructions."
Individual
Alice Ireland
Xcel Energy
Agree
MRO NERC Standards Review Forum (NSRF)
Group
SERC OC Standards Review Group
Gerry Beckerle
Ameren
No
No
No
Regarding question #1, the SERC OC Review Group agrees with the definition of Operating Instruction. While we also can agree to the changes made to R1, we feel R3 in its entirety is unnecessary and duplicative. Removal of the word "develop" would eliminate double-jeopardy concerns. R3 could be acceptable if "develop and" are omitted and "as developed in R1" is inserted after "protocols" and before "that." It should be noted that this suggestion only applies to the sub-requirements in R1 that correspond to the proposed sub-requirements in R3. Regarding question #2, R2 is acceptable and R4, as stated above for R3, is unnecessary and duplicative. Regarding question #3, we agree with the VRFs and VSLs for R1 and R2. Based on our previous comments, we do not agree with the need for R3 and R4, and therefore VRFs and VSLs for these requirements are not needed. Additional SERC OC Standards Review Group supporting these comments are James Wood

with Southern Company and Kelly Casteel with TVA. The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review Group only and should not be construed as the position of SERC Reliability Corporation, its board, or its officers.

Individual

Wayne Sipperly

New York Power Authority

Agree

Large Public Power Council (LPPC)

Group

Dominion

Mike Garton

Dominion Resources Services, Inc.

Agree

EI

Individual

Julaine Dyke

NIPSCO

Yes

No

"Each Distribution Provider and Generator Operator shall develop and implement documented communication protocols that outline the communications expectations of its operators." This language is unclear as to the communication expectation to its operators. Does this address the communications between the DP and the TOP only? Or does this apply to the communication between the DP and field personnel?

Yes

As per the effort of paragraph 81, we feel that COM-002 and COM-003 should be combined into one standard. It is evident there is redundancy between these two standards which should be eliminated.

Individual

Michelle D'Antuono

Occidental Energy Ventures Corp

No

See comments below.

Yes

Yes

Occidental Energy Ventures Corp. ("OEV") is firmly on board with the strategy taken by the drafting team to incorporate structure in the communication of Operating Instructions, while allowing each entity some flexibility in the process. As a GOP, we take very seriously our responsibility to accurately capture and execute all instructions from RCs, BAs, and TOPs that may affect the state of the Bulk Electric System. This approach will allow us to differentiate between instructions issued orally, via email/messaging, and one-to-many broadcasts – which change rapidly as new communications technologies are introduced. In addition, we agree that a risk-based compliance method is necessary – particularly in the case of oral communications. Even the most perfectly trained operators can stumble on occasion, and the result should not be a compliance violation unless the errors continue to manifest themselves. Furthermore, the amount of overhead necessary to ensure that every oral instruction is repeated back with time stamps, equipment identifiers, and alpha-numeric clarifiers is

extraordinary in the zero-defect model. However, we are not convinced that these excellent intentions are captured in a manner that will assure consistent assessments by Compliance Enforcement Authorities. It is clear from our reading of the FAQs recently posted by the drafting team that many industry respondents are unclear how auditors will interpret COM-003-1's requirements over a wide range of operating scenarios – a concern that we share. This means that a common understanding must be reached in an enforceable document that both operators and CEAs can rely on for consistency. In our view, the RSAW is the logical vehicle for this approach. It is a fundamental audit tool and has been traditionally used as a semi-binding reference in the evaluation of reliability compliance. In addition, the concurrent development of the RSAW with COM-003-1 was instituted precisely to ensure uniformity between the SDT's intent and the standard's enforcement. This implies that the RSAW must contain a greater level of detail to address multiple situations – and we have provided specific suggestions in our RSAW feedback form along these lines. Lastly, we do not have a clear understanding how Requirement R1.9 will be implemented. As it is presently written, it would seem that GOPs should expect some notification from their RCs, BAs, and TOPs that communication policies are to be "coordinated." Our experience has been that some entities simply post instructions on their web-sites hidden among many other documents – which does not count as coordination in our view. However, we are not sure that the issuers' policies are consistent with all of R1's other sub-requirements. As such, OEVC recommends that R1.9 be removed.

Individual

Jonathan Appelbaum

The United Illuminating Company

Yes

Yes

Yes

UI as its functional role of DP is voting No because of the conflict between COM-003 R 1.7, R1.8 and R3.3 with COM-002 R2. COM-003 allows for the RC/TOP/BA communication protocol when issuing Reliability Directives to override the clearly stated requirement of COM-002 R2 that a DP SHALL REPEAT, RESTATE, REPHRASE, OR RECAPITULATE the Reliability Directive. There is no leeway in COM-002 R2 to allow for solely providing an affirmation of receipt of a verbal reliability directive or not repeating back the message when the RC/TOP requests no repeat. As a DP, UI is placed in a position of attempting to comply with two opposing requirement in the two standards. If the RC/TOP communication protocol clearly stated that there will be no repeat back when receiving a verbal Reliability Directive and COM-003 requires a DP to comply with the RC/TOP communication protocol, UI would have to choose between violating COM-002 or COM-003. Since the VRF for COM-002 R2 is HIGH indicating a greater risk to reliability than COM-003 VRF LOW, UI would comply with COM-002 R2. This issue can be resolved either by correcting COM-002 by assigning the flexibility of opting out of repeat back to the RC/TOP/BA function, or removing the words "Reliability Directive" from COM-003.

Group

pacificorp

ryan millard

pacificorp

No

PacifiCorp supports the proposed language referenced under R1 and the definition of "Operating Instruction" but does not support the following language proposed under R1.4: "Instances where alpha-numeric clarifiers are necessary when issuing an oral Operating Instruction or Reliability Directive, and the format for those clarifiers." Under the proposed draft, instances where alpha-numeric clarifiers are "necessary" are not clearly defined. In the absence of a clear definition, the identification of such instances is open to interpretation by both the entity and the auditor. Moreover,

requiring the use of alpha-numeric clarifiers is not warranted when the requirements listed in R1.5 - R1.8 (requiring the strict use of three-way communication) alleviate any possibility of miscommunication, which PacifiCorp understands to be the drafting team's intent in the development of separate Requirement R1.4. PacifiCorp believes implementing the use of alpha-numeric clarifiers poses additional risk due to the introduction of ambiguous language.

No

PacifiCorp does not support the following language referenced under R2 (with substantially similar language in R4) as it pertains to the Balancing Authority, Reliability Coordinator, Transmission Operator, Generator Operator, and Distribution Provider: "...shall develop method(s) to assess System Operators' communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R1." In the absence of any proposed criteria for measuring how the aforementioned method(s) are developed, determining whether an entity has successfully met the expectations it has established in its communication protocols is subject to a multitude of interpretations. Moreover, Measures M2 and M4 are focused exclusively on the results of an entity's periodic assessment and corrective actions. PacifiCorp believes that a results-based review of an entity's assessment fails to provide any insight into the quality of the assessment itself.

No

PacifiCorp does not support the VRFs and VSLs for Requirements R2 and R4. In keeping with PacifiCorp's comment in Question 2, a method of assessment that is not explicitly defined and cannot be measured against a clear set of criteria makes it difficult for an entity or auditor to determine whether any of the corrective actions taken by an entity have fulfilled the expectations documented in their communication protocols. Assigning a severity level based on a percentage of completion is redundant when an entity cannot determine what a "complete" assessment is or the criteria by which it is measured.

Individual

William O. Thompson

NIPSCO

No

See comments submitted on NIPSCO's behalf by Julaine Dyke

Yes

See comments submitted on NIPSCO's behalf by Julaine Dyke

Group

MRO NSRF

Russ Mountjoy

MRO

Yes

Yes

Yes

The NSRF recommends the following issues be addressed in order to provide a less ambiguous Requirement. Regarding R1 and the term; 'implement'. The "Blue Box" explanation is not carried forward when the standard is filed with the Commission. The "Blue Box" explanation greatly expands the meaning "and implement". Our understanding of 'implement' is that you will use the documented communication protocols in the manner outlined in your System Operator communications protocols.

Training is not a demonstration of implementing. Only actual System Operator communications demonstrating the use of the communication protocols is demonstrating implementation. Recommend that "training" be removed from the blue text box since training is inherent to assuring that protocols are followed. The Training issue will also need to be removed from the RSAW. Suggest R1.8 be removed. This requirement cannot be measured. How do you prove compliance? An entity will be asked to prove the negative and demonstrate that my System Operators were not confused? I can see where I might have to provide an attestation that states: "My System Operators were not confused on any one-way burst messages." This proposed requirement is a common sense issue. R1.9, R3.3: the word "coordination with affected" is vague and open to many interpretations. Suggest this requirement be deleted. Should the requirement be kept, suggest clarifying what is intended in the requirement. Such as "RC, TOP's BA's... shall share their communication protocols with applicable RC, BA, TOP, ... " The NSRF does not understand if the intent is to share or coordinate protocols? Both have different outcomes, please clarify. The NSRF believes that the infrequent communications to a Distribution Provider, that are not already in scope of COM-002-3, do not carry any considerable risk to the BES. The administrative burden on the Distribution Provider should be greatly reduced, as there would not be a measurable gain in reliability by requiring them to formally document communication protocols and establish a monitoring program. To address these concerns, we recommend that Distribution Provider be removed from the applicability in R3 and R4. Secondly, we suggest that an R5 be created similarly to COM-002-3, R2. Recommend the following for how the new R5 might read: R5. Each Distribution Provider that is the recipient of an oral Operating Instruction, other than Reliability Directives, shall: 5.1 Use the English language, unless another language is mandated by law or regulation. 5.2 Repeat, restate, rephrase, or recapitulate the oral Operating Instruction, excluding oral Operating Instructions issued as a one-way burst message.

Individual

Michael Falvo

Independent Electricity System Operator

No

We agree with most of the changes made. We offer a preferred wording for Part 1.4, and have a concern over the ambiguity of Part 1.6 and Part 1.8. Part 1.4 states that: 1.4 Instances that alpha-numeric clarifiers are necessary when issuing an oral Operating Instruction or Reliability Directive, and the format for those clarifiers. A preferable description would say that the protocol should address the risk of miscommunication arising from alpha-numeric identifiers. This could be addressed through the use of the phonetic alphabet or through different means if local conditions dictate a different approach. As noted above, we are concerned over the ambiguity of Part 1.6, which states that: 1.6 Require the recipient of an oral two party, person-to-person Operating Instruction to repeat, restate, rephrase, or recapitulate the Operating Instruction, if requested by the issuer. When read together with the last sentence in R1, "The documented communication protocols will address, where applicable, the following:", this part is unclear as to whether it is to identify the instances that the repeat is required, or that the documentation needs to include explicit statements that the issuer needs to request a repeat when issuing an operating instruction or reliability directive which the issuer feels a repeat is necessary. This sub-requirement part, as written, is ambiguous and appears to be more applicable to the instruction recipient than the issuer. When read together with Part 3.2, Part 1.6 appears to be requiring the issuer to identify the instances that a repeat is required. We therefore suggest the SDT to revise Part 3.2 as follows: 1.6 Instances where it requires the recipient of an oral two party, person-to-person Operating Instruction to repeat, restate, rephrase, or recapitulate the Operating Instruction, if requested by the issuer. Similar concerns with Part 1.8 except the mirror part 3.3 does not contain the wording "if requested by the issuer". Hence, we assume that the recipient is required to request clarification from the issuer if the communication is not understood without having to be asked. Therefore, we propose Part 1.8 be revised as follow: 1.8 A stipulation that the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the issuer if the communication is not understood.

Yes

Yes

Individual
Nazra Gladu
Manitoba Hydro
Yes
(1) Definition "Operating Instruction" - reference is made to both 'Bulk Electric System' and 'BES'. For consistency, either the words or acronym should be used.
No
(1) Compliance Data Retention, 1.2 – COM-001 and COM-002 standards both read 3 months or 90 days for the retention of evidence. It is unclear as to why the retention has been doubled in this standard to 180 days for R2, M2 and R4, M4. For consistency and simplicity, 90 days should be used.
Yes
Although Manitoba Hydro is in general agreement with the standard, we have the following clarifying comments: (1) VSLs, R1 – the Severe category is missing the concept of 'The Responsible Entity did not implement four or more documented communication protocols as required in Requirement R1'. As written, it skips from 'three or more' to not implementing any of them. There is a gap if there is a Responsible Entity that failed to implement for example, 5 of the protocols. (2) VSLs, R3 – for readability, the first paragraph should be written 'The Responsible Entity did not address any parts of Requirement R3 in their documented communication protocols as required by Requirement R3.'.
(1) 'Reliability Directive' is referred to in R1, 1.1 of the COM-003-1 standard but is not currently a FERC approved definition, defined in the Glossary of Terms. (2) R1, 1.3 and Rationale and Technical Justification documents - reference is made to 'interface', which is not a defined term. Accordingly, its meaning is questionable. Consider removing or clarifying. (3) R1, 1.6 and 1.8 – requirement language is not consistent. For example, 'recipient' and 'receiver' are used but have the same meaning. Suggest beginning the requirements with the following text "Instances where....". (4) R2, R4 - the word 'periodically' should be inserted before 'assess' in each of these requirements for consistency with the Measures and VSLs, which refer to 'periodic assessments'. (5) R2, R4 - the phrase 'necessary to meet the expectations in its documented communication protocols' is ambiguous and will be difficult to interpret when assessing compliance. Is this statement to be the interpretation of the drafter of the protocols as to what is, in their opinion 'reasonably necessary'? (6) R3, 3.2 and 3.3 – requirement language is not consistent. For example, 'recipient' and 'receiver' are used but have the same meaning. Suggest beginning the requirements with the following text "Instances where....". (7) General Measures – there is lack of guidance with respect to both who the documentation is to be provided, and when. For example, periodically, upon request, etc. (8) M1 and M3 – ' / ' should be placed between the words 'and' and 'or'. (9) Section D, Compliance, 1.1 – the paraphrased definition of 'Compliance Enforcement Authority' from the Rules of Procedure is not the standard language for this section. Is there a reason that the standard CEA language is not being used?
Individual
Michiko Sell
Grant County PUD
Agree
Seattle City Light
Individual
David Thorne
Pepco Holdings Inc
Agree
Pepco Holdings Inc supports the comments submitted by EEI
Group
Arizona Public Service Company
Janet Smith, Regulatory Affairs Supervisor
Arizona Public Service Company



Yes
Yes
Yes
Individual
Cheryl Moseley
Electric Reliability Council of Texas, Inc.
ERCOT recognizes and commends the drafting team's efforts to respond to industry comments and is supportive of draft 5 of COM-003-1. It should be clear in the definition and the standard that electronic systematic interchanges are not Operating Instructions. Please consider modifying the last sentence of the definition for Operating Instructions as below: "Discussions of general information and of potential options or alternatives to resolve BES operating concerns as well as electronic, system to system, interchanges are not commands and are not considered Operating Instructions." ERCOT ISO also maintains that the sub-requirements for R1 and R3 are not the "communication protocols" that FERC Order 693 and Blackout Recommendation #26 intended to be addressed as they are solely focused on "miscommunication". However, ERCOT ISO believes that the structure of COM-003-1, in allowing an entity to address subrequirements through development of its own documented communication protocols and identification of the instances of needing to use such protocols, allows for future revisions to focus on the subrequirements, as needed, leaving the construct in place to easily add, modify, or delete such parts as necessary through such subsequent revisions. An example of such a revision is where IRO-014-1 R1 has a similar construct and was modified to include an additional subrequirement (R1.7) in version 2. ERCOT believes that oral and written operator communication requirements should be in a single reliability standard and supports further refinement of the requirements and combining COM-002 and COM-003 into a single reliability standard.
Group
SMUD/Balancing Authority of Northern California
Joe Tarantino
Sacramento Municipal Utility District
SMUD would like to thank the Drafting Team for their efforts. While we agree with the intent of COM-003 SMUD believes the requirements R1.5 & R1.5 are too vague. Requiring the receiving party to repeat back the Operating Instruction only (emphasis added) if requested does not provide insurance that the receiving party would have a clear understanding of the necessary actions intended by the issuing party.
SMUD would like to thank the Drafting Team for their efforts. While we agree with the intent of COM-003 we would like the Drafting Team to provide input on a possible conflict between the Board approved COM-002-3 Requirement and Draft #5 of COM-003-1 Requirements R1, Part 1.7 & R3, Part 3.3. It appears that a "One-way" burst messaging that includes either oral or electronic Operating Instructions or Reliability Directives as depicted in the current COM-003 does not require practice of 3-way communication prior to taking action. Since COM-002 Requirement R2 specifies that the recipient "shall repeat, restate, rephrase, or recapitulate the Reliability Directive" it is unclear whether or not the receiving parties of a blast message adhering to the COM-003 Standards would be in compliance with COM-002 requirement R2.

Individual
Richard Vine
California ISO
Agree
The California ISO is supportive of those comments submitted by the SRC (ISO/RTO Council).
Group
Western Small Entity Comment Group
Steve Alexanderson
Central Lincoln
No
In the comment area of the last section as asked.
No
In the comment area of the last section as asked.
1) R3 (formerly R2) apparently now applies to all of a DP's or GO's operating communication expectations, and not just to Operating Instructions or Reliability Directives. We fail to see what Reliability objective is accomplished by entities presenting all their communication protocols for audit, when the only real reliability concern is if the entity responds appropriately to an Operating Instruction or Reliability Directive. Although 3.1, 3.2, and 3.3 deal only with Operating Instructions and Reliability Directives, R3 itself does not share this limitation. 2) We also note that by removing the "in a manner that identifies, assesses and corrects deficiencies" language, R3 becomes a zero defect requirement and an entity becomes subject to sanction for a single failure to implement the developed protocol. We don't believe this was the SDT's intent, but this was the effect of moving the language to R4. R4 is simply an additional separate requirement an entity must comply with. Taken together, we believe most auditors would look first to find failures to implement procedure under R3. If any failure was found, they would assign a violation and move on to R4 to look for evidence of corrective action following the occurrence. If none were found, a second violation would be assigned. 3) We suggest: "R3. Each Distribution Provider and Generator Operator shall develop and implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols that outline the communications expectations for receipt of Operating Instructions and Reliability Directives by its operators," and that R4 be removed.
Individual
RoLynda Shumpert
South Carolina Electric and Gas
No
No
No
This standard is becoming overly complicated. The reason this COM standard is being developed is to reduce the possibility of miscommunication of information when the BES is being altered. This proposed standard is an administrative burden. Operators will be fearful that they will cause a NERC Compliance Violation every time they communicate. Their focus will be on communicating compliantly and not on operating the BES. Consideration should be given to simplifying this standard. Below is an unrefined proposal for consideration: R1: Applicable REs shall have a procedure that requires its personnel (whether as a receiver or as an initiator) to use three-part communication when altering the state of the BES. Three-part communication is defined as when an initiator issues a command, the receiver repeats the command back, and the initiator confirms. Any misunderstandings are resolved during the repeat back. (3-part communication is the only proven way to mitigate miscommunication. If personnel use three way communication then all issues related to alpha-numeric clarifiers, time, etc

should be resolved naturally during the repeat back/confirmation. Additionally, this requires operators and field personnel to remember one thing: when changing the state of the BES they must use 3-part communication.) R2: Each calendar month REs required to comply with R1 shall assess a random sample of communications that occurred over the month to ensure that three-way communication was properly being utilized, when the BES was being altered. In instances where deficiencies are found, REs shall require remedial training to be completed by the individuals involved in the deficient communication. (Remedial training will act as a deterrent for those who get lazy about using three-part communication. Additionally, peers will be aware of who had to undergo remedial training, which will further act as deterrent. Requiring remedial training would be an incentive to using three-part communication properly)

Individual

Brenda Frazer

Edison Mission Marketing & Trading

Yes

No

No

EMMT agrees with the concepts put forth in COM-003, but have some concerns, particularly with the proposed administrative burden associated with the Standard. EMMT offers the following comments: 1. R1.9 requires a TOP, BA, and RC to coordinate with affected RC, BA, TOP, DP and GOP communication protocols; this could result in a TOP having to coordinate with a hundred+ different entities communications protocols. This coordination would not improve reliability, but only serve to create confusion and significant communication time delays in real-time operations. Both R1 and R4 create significant documentation and administrative burdens, without providing a comparable improvement to the reliability of the BES. As reliability based Standard, COM-003 should focus on those actions that would have a direct impact on reliability, while minimizing the administrative burden. 2. R3 should end after the first sentence. GOPs do not issue Operating Instructions. They only receive instructions from others. GOPs should have a communications procedure as part of their operations, however, the methods used are properly business decisions made by the GOP. The content, thoroughness and effectiveness of a communications plan are excellent items to consider when assessing an entity's internal compliance program. 3. R4 raises the question of sufficiency of an entities corrective program. The RSAW requires the GO to turn over records of monitoring communications as well as records of corrective actions and then prove the "problem" is not still in place. This standard could easily turn into a high-profile audit target due to the varying concepts of what does and does not constitute a sufficient corrective action program. 4. EMMT recommends that the language to M4 be changed as follows: M4. Each Distribution Provider and Generator Operator shall provide the results of its periodic assessment and of any corrective actions (if any corrective actions were implemented) developed for Requirement R4. Examples of sufficient periodic assessment programs include, but are not limited to, the following: Documented review of voice logs for a total of at least one hour per calendar year for each operator (does not need to be a single session) Documented personal monitoring of communications for a total of at least one hour per calendar year for each operator (does not need to be a single session) Documented annual training Examples of sufficient corrective action programs include, but are not limited to, the following: Documented refresher training Documented meeting Documented "hot box" communication 5. The VSLs give a higher violation to a GOP than a BA for exactly the same error, even though the consequences with the BA are much greater. A GOP who fails to require 3-part responses when requested is tagged with a Moderate violation, while the BA would receive a Lower. 6. In the RSAW, the following passage should be expunged; "Where practicable, verify that deficient communication practice was indeed corrected by reviewing evidence of Operator communications (such as voice recordings) occurring after the date of the corrective action to determine if deficient communication practice was corrected." Differentiating between slips of the tongue and "deficient communication practices" involves subjective judgments. The same is true for attempting to identify changes in an operator's degree of understanding. especially when doing so through the numbing process of making before-

and-after voice recording comparisons. This is an open-ended matter that could very quickly become an unreasonable compliance burden. RSAWs in general should not introduce new requirements, measures or forms of evidence, so the GOP materials reviewed should be limited to the protocols/procedures of R3, and the assessment forms and corrective action reports of R4.

Group

ISO/RTO Standards Review Committee

Albert DiCaprio

PJM

No

No

The SRC recognizes and commends the Drafting Team’s efforts to respond to Industry comments and to offer a revised pragmatic solution for this Project. The proposed changes do not create a common results-based standard that addresses let alone resolves any identified reliability problem. The SRC is concerned that the posting as proposed the standard creates a fill-in-the-blanks solution that could discourage a functional entity from employing anything more than a least common denominator solution. Technically the definition and proposal are improvements and the SRC would agree with the proposed changes, if the definition and proposal were needed. The issue is with the need for this definition, and the continuing debate this definition is generating. The SRC is opposed to having this term defined and added to the NERC Glossary. The term operating instruction does not need to be defined. For years, system operators deal with operating instructions on a daily if not minute-to-minute basis. Having a defined term, and calling such communication as “Command” is unnecessary, and potentially could confuse operators from what they understand to be the meaning of operating instructions. While the SDT has found that their previous definitions were not appropriate for a NERC standard, and the subsequent incremental changes are useful, the debate itself does not seem to be a productive use of the SDT’s or the Industry’s time. The SRC would prefer that the objectives of the SAR (communications protocols) be handled through means other than a Standard (e.g. the Operating Committee’s Reliability Guidelines on Communications). The reason being, a standard requires zero-defect compliance, data retention, self-reporting, and requires these debates over the proposed terms such as “Operating instruction” which diverts the Industry, NERC and the Regional Entities from focusing on more productive reliability issues. The proposed RSAW wording must be more objective as the current test contains too many subjective requirements: Page 3 • “... Identification of instances ...” – will this be viewed as identification of every instance or will one instance be sufficient? • “...when....necessary...” – who decides when there is a necessity? The auditor or the functional entity? Page 4 • “...may include...” – this phraseology may be seen as meaning the listed following items are among the items that are required but are themselves insufficient to meet the requirement. Page 5 • “...reviews of System Operator voice recordings...: - it should be made clear that the “review” is of the sampled recordings used by the entity in its own self-assessments, and not a “review” of any voice recording. • “Where practicable” is subjective and inappropriate for a standard. To avoid confusion and misapplication of the standard, the RSAW should include a statement that messaging systems are not oral communication and not evaluated under the standard.

Group

ACES Standards Collaborators

Ben Engelby

ACES

Yes

(1) We appreciate the efforts of the drafting team in developing this standard and the steps the team took to resolve industry’s concerns. (2) We continue to have concerns that the glossary term “Operating Instruction” overlaps with “Reliability Directive.” The standard as written allows flexibility on how to deal with these two terms/situations and gives the registered entity the responsibility to

handle these types of communications in its protocol. Because of the flexibility and in the spirit of moving forward, we can support the approach by the drafting team that would allow NERC to address FERC concerns. This represents a good balance.

Yes

(1) We appreciate the drafting team allowing the registered entity to have the flexibility in determining the assessment methods and corrective actions to implement. Further, we appreciate that the measures for these requirements state that the assessment should be "periodic" but do not impose any strict timeline. We recommend that the RSAW state the same or similar language, as the entity should be able to dictate how often the assessments occur in their protocols, policies, and procedures.

No

(1) There are a few changes that need to be made in the severe VSLs for R1 and R3. The severe VSL states, "The Responsible Entity did not implement any documented communication protocols as required in Requirement R1." This statement is in direct conflict with the lower, medium and high VSLs because if an entity violated at least one documented communication protocol (low VSL), or two protocols (medium VSL), or three protocols (high VSL), then the entity violated "any." We recommend striking the statement in the severe VSL to avoid this conflict.

(1) The sub-parts of the protocols have grammatical errors, where the sub-parts do not correlate to the lead-in sentence. We recommend replacing the phrase "Require the recipient/receiver..." that is stated in sub-parts 1.6, 1.8, 3.2 and 3.3 with "Instances in which the recipient/receiver is required to..." in order to maintain consistency throughout the standard. Leaving these sections as mandates (verb phrases) could confuse auditors into thinking that these are zero defect requirements.

Individual

Scott Berry

Indiana Municipal Power Agency

No

The COM-003-1 standard needs to an independent document used to audit entities and the RSAW should not be used to address items not covered in the standard as to what is acceptable and what is not acceptable when it comes to instances when three-part communication is not properly followed by an entity during an audit. IMPA is concerned that an entity has one instance of a missed repeat back and per the entity's plan they address it and re-train for it; NERC could still call it a violation. The standard language needs to be clear about the latitude that an entity is given to work things out within their internal controls. The main item that the standard should do is to make sure that entities have communication plans and their internal controls within the communication plans contain a process to monitor and self-deal with corrective action of instances where its communication plan was not properly followed. This language needs to be clearly stated in the standard and not somewhat stated in the RSAW. IMPA believes the prior version of this draft standard was close when it used language on internal controls that stated "implement, in a manner that identifies, assesses, and corrects deficiencies...".

IMPA believes there is a conflict between COM-003-1 and COM-002-3 when it comes to how an entity replies back to an "All Call". COM-003-1 does not require three part communication and it seems that COM-002-3 does require it. This creates confusion and needs to be corrected. IMPA supports the use of one communication standard to address proper communication protocols for Directives and Operating Instructions. This could be accomplished by retiring COM-002-3 upon the implementation of COM-003-1.

Individual

Anthony Jablonski

ReliabilityFirst

No

ReliabilityFirst abstains and offers the following comments for consideration: 1. Requirement R1 and

Requirement R3 - ReliabilityFirst questions the reasoning behind the term "where applicable" in the last sentence of Requirement R1 and Requirement R3. Can the SDT provide examples when there would be instances where an Entity would not need to address a sub-part within their documented communication protocols? ReliabilityFirst believes all sub-parts under Requirement R1 and Requirement R3 should be addressed within the respected protocols. 2. Requirement R1, Part 1.9 - ReliabilityFirst does not believe it is appropriate for Requirement R1, Part 1.9 to be addressed within the documented communication protocols. It is unclear how an entity would address "coordination" of its protocol within the protocol itself. ReliabilityFirst does agree with the concept of having the responsible entities be aware of each other's communication protocols and thus recommend elevating this to a stand-alone requirement. ReliabilityFirst recommends the following for consideration as a new R3, "Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall make available its documented communication protocols that outline the communications expectations of its System Operators."

No

ReliabilityFirst abstains and offers the following comments for consideration: 1. Requirement R2 - ReliabilityFirst believes the concept of implementation of the method(s) to assess System Operators' communication should be added to the requirement. If the Entity is not required to implement the method(s), an Entity may never find any deficiencies and get to the point of implementing the corrective actions necessary to meet the expectations in its documented communication protocols. ReliabilityFirst recommends the following for consideration, "Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop and implement method(s) to assess System Operators' communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R1." 2. Requirement R4 - Similar to the comment on Requirement R2, ReliabilityFirst believes the concept of implementation of the method(s) to assess System Operators' communication should be added to the requirement. ReliabilityFirst recommends the following for consideration, "Each Distribution Provider and Generator Operator shall develop and implement method(s) to assess operators' communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R3."

No

1. VSL for Requirement R1 - In order to capture instances where more than three parts were not addressed, the second VSL under the "High" category needs to be modified to state, "...did not implement three (3) or more of the nine (9) parts of..." 2. VSL for Requirement R2 - ReliabilityFirst recommends including a lower bounds around the "Medium VSL". As written, an entity would fall into the Medium VSL range if they only implemented 1% or implemented 49% of the corrective actions. ReliabilityFirst recommends gradating the VSLs using 25% increments across all four VSLs. 3. VSL for Requirement R4 - ReliabilityFirst recommends including a lower bounds around the "Medium VSL". As written, an entity would fall into the Medium VSL range if they only implemented 1% or implemented 49% of the corrective actions. ReliabilityFirst recommends gradating the VSLs using 25% increments across all four VSLs.

Group

PPL NERC Registered Affiliates

Brent Ingebrigtsen

LG&E and KU Services

These comments are submitted on behalf of the following PPL Companies: Louisville Gas and Electric Company and Kentucky Utilities Company; PPL Electric Utilities Corporation, PPL EnergyPlus, LLC; and PPL Generation, LLC, on behalf of its NERC registered subsidiaries. The PPL Companies are registered in six regions (MRO, NPCC, RFC, SERC, SPP, and WECC) for one or more of the following NERC functions: BA, DP, GO, GOP, IA, LSE, PA, PSE, RP, TO, TOP, TP, and TSP The PPL Companies believe that the revised COM-003 standard represents an improvement over previous drafts. Nevertheless,

we have one concern with the proposed standard and urge the Standard Drafting Team to add the following note to Requirements 1.7, 1.8, and 3.3 in the standard before it is submitted to NERC and FERC for their approval: Notwithstanding anything in COM-002, the requirements set forth in COM-003 Requirements R1.7, R1.8 and R3.3 shall govern the manner for responding to Reliability Directives that are issued through one-way burst messages (e.g., an All Call system).

Individual

Kathleen Goodman

ISO New England Inc.

No

No

We do not believe a Standard is needed, given other developments: A. The SDT materials have not demonstrated the reliability gap/need for this Standard. Without having a better sense of what the scope of the actual reliability risks are (frequency, impact, etc...), it's difficult to know if the proposed solution – as embodied in COM-003 Draft Version 5 – is “necessary to provide for reliable operation of the bulk-power system”. B. Moreover, the Requirements that the recipient repeat, restate, etc., if required/requested by the issuer (1.6 & 3.2) suggest that a RC, BA or TOP needs to ensure a repeat back or be non-compliant even though taking this extra time may, in fact, impact reliability. C. Lastly, the fact that the Ballot Body and Standard Drafting Team continue to have so many questions about how to interpret these requirements (see the recently issued FAQs) suggests: (a) that the Operating Committee would serve as a more effective forum for discussing what additional communication practices, if any, are needed, and (b) the requirements themselves may be unduly ambiguous. - Proposed Solution: We support strengthening communications protocols such as contained in the pending COM-002 revisions and in the OC White Paper. NERC Event Analysis Staff should work with the NERC OC to document the reported risks to the system, continue to monitor system operator performance, and periodically report on findings. If, however, it is determined that the Standard will move forward, then we would offer the following suggestions: A. We consider use of one-way burst messaging systems to be electronic and, as such, do not believe they should be included in the Standard. Further, in accordance with 1.5, a one-way burst messaging system is not a “oral two party, person-to-person Operating Instruction,” which would further justify its exclusion. B. Draft Version 5’s Requirements establish that each covered registered Entity shall develop its own communication protocol outlining the communications expectations of its operators. This has the potential for confusion as multiple Registered Entities within a single RC, BA or TOPs’ footprint may establish different communication expectations. - Proposed Solution: The Requirements should establish that if the RC, BA or TOP establish a communication protocol for their System Operators, the RC, BA or TOP should share that protocol with Registered Entities operating within their footprint, those Registered Entities must follow the RC, BA or TOP’s protocol, or adopt a consistent one for their company C. We agree with the SDT that the COM Standard need not employ a “zero tolerance/zero defect” approach, because NERC Enforcement need not monitor and assess every Operator-to-Operator communication. In Draft Version 5 (Measurements & RSAW), NERC, however, appears to adopt an approach of establishing “zero tolerance” around a Company’s Internal Controls program. The RSAW states that registered entities must provide “evidence that corrective actions necessary to meet the expectations in its documented communication protocols... are taken” and “deficient communication practice was indeed corrected.” - This type of approach to Standard drafting raises untested questions of how the Standard will be enforced, whether it is a “fill-in-the-blank”-type Standard, and whether a new “zero tolerance” enforcement approach to monitoring will, in fact, be maintained. - Proposed solution: Draft a Standard that sets performance based expectations and allow the ERO to use its enforcement discretion (e.g., through FFT and through review of internal control programs) to determine how stringently to audit and sanction.

Group

Florida Municipal Power Agency

Frank Gaffney

Florida Municipal Power Agency

No
FMPA prefers the prior version which had language on internal controls, e.g., "implement, in a manner that identifies, assesses and corrects deficiencies ...". As stated, and by using the word "implement" which means: "carry out, accomplish; especially : to give practical effect to and ensure of actual fulfillment by concrete measures", means that each entity must have evidence ("concrete measures") of implementing its communications protocol at all times for every instance. Three part communication is watered-down by giving the entity the choice as to whether to follow three-part communication for: 1) all Operating Instructions; 2) for Reliability Directives only; or 3) something in between. Many entities, to manage compliance risk, will only require three-part communications for Reliability Directives in their communication protocols as a result. For reliability reasons, FMPA believes that three-part communication ought to be required for all Operating Instructions, but, at the same time, there should be some tolerance for mistakes through use of the CIP v5 internal controls language "implement, in a manner that identifies, assesses and corrects deficiencies ...".
No
Use of the term "System Operators" is ambiguous; does the requirement cause internal evaluation, or evaluation of neighboring System Operators? We assume the former and suggest adding "its" in front of "System Operators".
As commented on several times previously, FMPA will not vote Affirmative (or recommend an Affirmative vote) until the inconsistencies of COM-003-1 and COM-002-3 concerning Reliability Directives are resolved. For a Reliability Directive delivered by an "All Call", COM-003-1 does not require three part communication whereas COM-002-3 does. This inconsistency will only be a source of confusion during the very time when rapid response to communication is needed, which causes us to be concerned for reliability. FMPA continues to recommend retiring COM-002-3 as part of the implementation plan of COM-003-1 and fails to see a good reason not to do so. All that would need to be done is to retain the definition of Reliability Directive and include R1 of COM-002-3 into COM-003-1, and a slight modification to 1.5 of COM-003-1 to require confirmation of a Reliability Directive.
Individual
Marie Knox
MISO
Yes
While MISO is not opposed to the current version of COM-003-1, it remains concerned regarding the overlap between COM-002-3 and COM-003-1. As written, the definition of "operating instruction" encompasses "reliability directives". This overlap and the application of multiple separate standards to operator communications in general is likely to result in ambiguity and confusion. Further, that only certain sub-requirements of COM-003-1 also mention reliability directives further confuses the applicability of these standards. While the identified overlap and application is manageable, it is recommended that this overlap be addressed at the earliest opportunity. One clear, succinct standard that addresses both operator communications, whether reliability directives or operating instructions, is respectfully recommended.
Yes
We believe the drafting team found a very reasonable solution to meet a FERC directive for a situation that deals with managing the quality of the millions of operator communications that occur annually.
Yes
To avoid confusion and misapplication of the standard, the RSAW should include a statement that electronic messaging systems are not subject to compliance with this standard.
Individual
James R. Keller
Wisconsin Electric Power Company
Agree



Edison Electric Institute
Group
Southern Company - Southern Company Services, Inc.; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation; Southern Company Generation and Energy Marketing
Pamela R. Hunter
Southern Company Operations Compliance
No
<p>Southern Company agrees with the new definition. Southern Company believes that Requirements R3 and R4 should be deleted. A. Southern Company believes that Requirements R3 and R4 (applicable to Distribution Providers (“DPs”) and Generator Operators (“GOPs”)) should be deleted from the proposed COM-003 standard because the burdens placed on Balancing Authorities (“BAs”), Reliability Coordinators (“RCs”) and Transmission Operators (“TOPs”) by Requirements R1 and R2: (a) sufficiently tighten communications protocols with DPs and GOPs, (b) render Requirements R3 and R4 administrative, unnecessary, and redundant, counter to FERC’s objectives as implemented by the NERC Paragraph 81 Task Force, and (c) potentially expose some Registered Entities to double jeopardy violations of COM-003-1. Specifically, Requirement R1 provides that BAs, RCs, and TOPs must develop and implement documented communication protocols that (a) address instances where the issuer of an oral two-party communication Operating Instruction is required to confirm that the DP or GOP recipient’s response was accurate or to reissue the Operating Instruction to resolve the misunderstanding (R1.5); and (b) to address coordination with affected DPs’ and GOPs’ communication protocols (R1.9). Requirement R2 further requires BAs, RCs, and TOPs to develop methods that assess communication practices and implement corrective actions necessary to meet the expectations outlined in these same protocols. Note that this assessment method would necessarily include assessment of the expectations included in the protocols regarding DPs and GOPs as required by R1.5 and R1.9. Meanwhile, proposed Requirement R3 would require the recipient DPs and GOPs to develop their own documented communications protocols that outline the communication expectations already addressed in the R1 protocols. [Note that the Rationale and Technical Justification for COM-003-1 specifies that Requirements R1 and R2 are addressed to entities that both issue and receive Operating instructions (BAs, RCs, and TOPs) whereas Requirements R3 and R4 are addressed to entities that only receive Operating Instructions.] Requiring DPs and GOPs in R3 to develop protocols outlining the communications expectations of its operators -- and requiring DPs and GOPs in R4 to assess those same operators’ communications practices and implement corrective actions -- is redundant and unnecessary when those same expectations are already being documented by BAs, RCs, and TOPs in the R1 protocols, are already being coordinated with DPs and GOPs under R1.9, and are already being assessed and corrected by the BAs, RCs, and TOPs as required by R2. Therefore, requiring DPs and GOPs to go through the same motions simply creates another layer of documentation that strains limited resources and does little to enhance the reliability of the Bulk Electric System. B. These duplicative exercises created by Requirements R3 and R4 run counter to the objectives directed by FERC in Paragraph 81 of FERC’s March 15, 2012 Order on NERC’s proposed “Find, Fix, and Track” (“FFT”) initiatives (“FFT Order”) as implemented by the P 81 Task Force. In Paragraph 81 of the FFT Order, FERC noted that “some current requirements likely provide little protection for Bulk-Power System reliability or may be redundant.” In complying with FERC’s directives, the Paragraph 81 Task Force set out to identify standards that (a) do “little if anything, to benefit or protect the reliable operation of the BES” and (b) among other possible criteria, are either: “(a) Administrative in nature, do not support reliability, and are needlessly burdensome; or (b) Require responsible entities to develop documents that are not necessary to protect BES reliability; or (c) Impose documentation updating requirements that are out of sync with the actual BES operations, unnecessary, or duplicative; or (d) Redundant with another FERC-approved Reliability Standard requirement(s), the ERO compliance and monitoring program, or a governmental regulation.” (See Paragraph 81 Task Force Technical White Paper.) With respect to this last criterion of redundancy, the Task Force specifically stated that it is “designed to identify requirements that are redundant with other requirements and are therefore unnecessary. Unlike the other criteria listed ... in the case of redundancy, the task or activity itself may contribute to a reliable BES, but it is not necessary to have two duplicative requirements on the same or similar task or activity.” (emphasis added). By creating duplicative requirements on both ends of a coordinated</p>

communication scheme between issuing BAs/RCs/TOPs and recipient DPs/GOPs, the Standards Drafting Team is creating an unnecessary administrative burden that does "little, if anything, to benefit or protect the reliable operation of the BES." Even if it may be argued that requiring double coordination from both issuer and recipient somehow contributes to a reliable BES, "it is not necessary to have the two duplicative requirements on the same or similar task or activity." Proposed Requirements R3 and R4 would fit all of the criteria listed above that the Paragraph 81 Task Force is using to identify candidates for retirement and/or revision. C. Finally, the risk created by proposed Requirements R3 and R4 in conjunction with R1 and R2 is more than simple administrative duplication. For vertically integrated entities that are registered both as issuing BAs/RC/TOPs and recipient DPs/GOPs, the redundancy created by Requirement R3 and R4 could potentially expose them to double penalties for a single violation. Because of the duplicative documentation and coordination requirements in R1/R2 and R3/R4, an auditor could interpret a single instance where the communications protocol of an issuing BA/RC/TOP did not match up with the recipient DP/GOP as multiple violations. In such an instance, both the issuers and the recipients could conceivably be penalized because the issuer's communications protocols were not coordinated with the recipient's communications protocols and this lack of coordination was not assessed and remedied. If the Standards Drafting Team chooses not to delete Requirements R3 and R4, then Southern suggests that the following rewording of R3 and R4 would be beneficial. If the Standards Draft Team does not delete Requirement R3 and R4 in their entirety, then Southern suggests that R3 and R4 be reworded such that the entities work together to implement and coordinate one set of issuers' communications protocols (i.e., that of the BAs/RCs/TOPs) instead of two sets of both issuers' and recipients' protocols. This should help to "tighten" the communications protocols as directed in Order 693 and to mitigate some of the confusion and duplicative documentation that could arise from Requirements R3 and R4 as written: "R3. Each Distribution Provider and Generator Operator shall implement the documented communication protocols of its associated BA, RC, and TOP that define the communications expectations of R1. The documented communication protocols will address, where applicable, the following: [Violation Risk Factor: Low] [Time Horizon: Long-term Planning ] ...." and "R4. Each Distribution Provider and Generator Operator shall develop method(s) to assess its communications practices and implement corrective actions necessary to meet the expectations in the documented communications protocols developed for Requirement R1." Conforming revisions would also need to be made to the language in the Measures, VRFs, and VSLs as applicable.

No

See Southern's comments above regarding deletion and/or modification of R4. If R4 was not part of this question then Southern's answer would change to yes for this question. Additionally, GOPs do not issue Operating Instructions. They only receive instructions from others. GOPs should have a communications procedure as part of their operations. However, the methods used are proper business decisions made by the GOP. The content, thoroughness and effectiveness of a communications plan are excellent items to consider when assessing an internal compliance program.

No

We agree with the VRFs and VSLs for R1 and R2. As discussed above, R3 and R4 should not be part of the standard. To the extent R3 and R4 should be deleted or modified, the VRFs and VSLs should be modified accordingly.

See Southern's comments for R3 and R4 in the RSAW comments regarding use of the terms "Operator" and "operator". If Requirements R3 and R4 are neither deleted nor reworded as suggested above, then changes should be made in either the standard or the RSAW to make the two terms consistent and to clearly define the term "operator" if necessary.

Individual

Brett Holland

Kansas City Power & Light

Agree

Southwest Power Pool

Group

SPP Standards Review Group

Robert Rhodes

Southwest Power Pool

No
We suggest adding 'as determined by the Functional Entity' to R1 to clarify that the protocols are those specifically determined by the applicable responsible entity: 'The documented communication protocols will address, where applicable as determined by the Functional Entity, the following:' Is the intent of R1.3 for applicable entities to maintain a list of common name identifiers which must be utilized in communications with all affected entities? If so, a similar requirement (R18) in TOP-002-2 is currently proposed to be eliminated in TOP-002-3. Therefore it shouldn't be added back by this requirement. Can the drafting team be more specific as to exactly what is required in R1.3 without going overboard as in the existing wording? We understand the need to be sure that affected entities do not have any misunderstandings regarding the specific facility that is at issue. However, our experience does not indicate that this is a problem. If we can't relax R1.3, we suggest eliminating it altogether. The use of the term 'coordination' in R1.9 causes concern in determining exactly what is required to coordinate. This could become a compliance nightmare for applicable entities. We suggest replacing R1.9 with "Provide each affected Reliability Coordinator, Balancing Authority, Transmission Operator, Distribution Provider, and Generator Operator with its communication protocols."
No
We have concerns with the continued inclusion of Distribution Provider in the list of Applicable Entities. Although this is in response to a FERC directive, the risk that Distribution Providers present to the BES is minimal at best. Actions taken by Distribution Providers which impact the reliability of the BES, load shedding for example, are adequately covered under COM-002-3 which applies to emergency situations. There are also jurisdictional questions associated with FERC directing the inclusion of Distribution Providers. If the Distribution Provider must remain as an Applicable Entity, then we would propose deleting Distribution Provider from R3 and R4 and then follow with the addition of a new R5 and R6. R5. Each Distribution Provider that is the recipient of an oral Operating Instruction, other than Reliability Directives, shall: 5.1 Use the English language, unless another language is mandated by law or regulation. 5.2 Repeat, restate, rephrase, or recapitulate the oral Operating Instruction. 5.3 For oral Operating Instructions issued as a one-way burst message to multiple parties in a short time period (e.g. an All Call system), request clarification from the issuer if the communication is not understood. R6. Each Distribution Provider shall develop method(s) to assess operators' communication practices and implement corrective actions necessary to meet the expectations in Requirement R5.
No
While we understand the process that gets us to the point where the VRFs for R1 and R3 are Low and those for R2 and R4 are Medium, in this situation we question the logic of the process. If developing a document only deserves a low VRF then how can we logically say that not implementing the items contained in the document is a medium? What happens if the document is flawed? This appears to be an inverted pyramid. We suggest using Low for all requirements.
Our comments are listed with the specific question they address.
Individual
Larry Watt
Lakeland Electric
Agree
LAK supports FMPA comments
Individual
Andrew Z. Pusztai
American Transmission Company
Yes
Yes
Yes

Requirement 1.9 requires "Coordination with affected Reliability Coordinators', Balancing Authorities', Transmission Operators', Distribution Providers', and Generator Operators' communication protocols." This requirement seems unnecessary since the requirements of COM-3-1 apply to all these entities. If everyone is adhering to the requirements of COM-3-1 then the need for coordination is redundant as it becomes automatic. If individual entities adopt slight nuances to this requirement, or are more restrictive then the requirement then coordination between every entity becomes extremely difficult.
Individual
Bob Thomas
Illinois Municipal Electric Agency
Agree
Florida Municipal Power Agency
Group
Santee Cooper
Terry L. Blackwell
SC Public Service Authority
The latest version of COM-003 introduces a potential conflict with COM-002 related to use of one-way burst messaging systems to issue a Reliability Directive. COM-002 does not allow for only those responses required in COM-003 but instead requires a full 3 way communication from all parties. This potentially sets up both the issuer and receiver for violating COM-002 if they respond to a one-way burst messaging RD as the requirements indicate in COM-003. In COM-003, the follow Requirements are included: R1.7 Instances where the issuer of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) is required to verbally or electronically confirm receipt from at least one receiving party. R1.8 Require the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the issuer if the communication is not understood. R3.3 Require the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the issuer if the communication is not understood. In other words, COM-003 allows one-way burst messaging to be used for Reliability Directives and prescribes: • issuer to confirm receipt from at least one receiving party • receiver to request clarification from the issuer if the communication is not understood
Individual
Mike Hirst
Cogentrix Energy Power Management
No
No
No
Regarding question #1, the SERC OC Review Group agrees with the definition of Operating Instruction. While we also can agree to the changes made to R1, we feel R3 in its entirety is unnecessary and duplicative. Removal of the word "develop" would eliminate double-jeopardy concerns. R3 could be acceptable if "develop and" are omitted and "as developed in R1" is inserted after "protocols" and before "that." It should be noted that this suggestion only applies to the sub-requirements in R1 that correspond to the proposed sub-requirements in R3. Regarding question #2,

R2 is acceptable and R4, as stated above for R3, is unnecessary and duplicative. Regarding question #3, we agree with the VRFs and VSLs for R1 and R2. Based on our previous comments, we do not agree with the need for R3 and R4, and therefore VRFs and VSLs for these requirements are not needed. 1. R1.9 requires a TOP, BA, and RC to coordinate with affected RC, BA, TOP, DP and GOP communication protocols; this could result in a TOP having to coordinate with a hundred+ different entities communications protocols. This coordination would not improve reliability, but only serve to create confusion and significant communication time delays in real-time operations. Both R1 and R4 create significant documentation and administrative burdens, without providing a comparable improvement to the reliability of the BES. As reliability based Standard, COM-003 should focus on those actions that would have a direct impact on reliability, while minimizing the administrative burden. 2. R3 should end after the first sentence. GOPs do not issue Operating Instructions. They only receive instructions from others. GOPs should have a communications procedure as part of their operations, however, the methods used are properly business decisions made by the GOP. The content, thoroughness and effectiveness of a communications plan are excellent items to consider when assessing an entity's internal compliance program. 3. R4 raises the question of sufficiency of an entities corrective program. The RSAW requires the GO to turn over records of monitoring communications as well as records of corrective actions and then prove the "problem" is not still in place. This standard could easily turn into a high-profile audit target due to the varying concepts of what does and does not constitute a sufficient corrective action program. 4. The SRT recommends that the language to M4 be changed as follows: M4. Each Distribution Provider and Generator Operator shall provide the results of its periodic assessment and of any corrective actions (if any corrective actions were implemented) developed for Requirement R4. Examples of sufficient periodic assessment programs include, but are not limited to, the following: Documented review of voice logs for a total of at least one hour per calendar year for each operator (does not need to be a single session) Documented personal monitoring of communications for a total of at least one hour per calendar year for each operator (does not need to be a single session) Documented annual training Examples of sufficient corrective action programs include, but are not limited to, the following: Documented refresher training Documented meeting Documented "hot box" communication 5. The VSLs give a higher violation to a GOP than a BA for exactly the same error, even though the consequences with the BA are much greater. A GOP who fails to require 3-part responses when requested is tagged with a Moderate violation, while the BA would receive a Lower. 6. In the RSAW, the following passage should be expunged; "Where practicable, verify that deficient communication practice was indeed corrected by reviewing evidence of Operator communications (such as voice recordings) occurring after the date of the corrective action to determine if deficient communication practice was corrected." Differentiating between slips of the tongue and "deficient communication practices" involves subjective judgments. The same is true for attempting to identify changes in an operator's degree of understanding, especially when doing so through the numbing process of making before-and-after voice recording comparisons. This is an open-ended matter that could very quickly become an unreasonable compliance burden. RSAWs in general should not introduce new requirements, measures or forms of evidence, so the GOP materials reviewed should be limited to the protocols/procedures of R3, and the assessment forms and corrective action reports of R4.

Group

Pacific Gas and Electric Company

Glenn Rounds

Pacific Gas and Electric Company

Yes

Yes

Yes

Draft 5 fails to address all of the communication gaps identified in the Standards Authorization Request (SAR), FERC Order 693 and the recommendations of the August 2003 Blackout Report. The draft as written does not require a consistent application of effective communications protocols but in turn requires each functional entity to develop their own protocols with insufficient guidance on how

to achieve better consistency.
Individual
Keith Morisette
Tacoma Power
No
Tacoma Power supports and strongly suggests reverting back to the Draft 2 definition, "Operating Communication — Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System."
No
Tacoma Power supports Draft 2 - The requirement to establish communication protocols should be identical for BA, TO, RC, GO, and DP. To make different requirements for different functions is very confusing for those who perform multiple functions. Go back to basic "3-part communication" (and include an option for push-to talk). Remove fuzzy language such as "if requested". The Standard should leave it up to the Entity to establish their communication protocols and procedures based upon the type of communication systems they are using. This draft seems to trying to write the procedures for every type of possible communication equipment rather than set a standard for how to communicate.
No
Tacoma Power believes the Standard Drafting Team made Draft 5 overly complex and confusing for the System Operators and Operators to use. The Drafting Team needs to go back to the basics. The standard should apply to all, BA, TO, RC, GO and DPs alike. 1. Require all parties to develop Communication Protocols, train their operating personnel to use them, review their protocols annually and make improvements if necessary. 2. Require all parties to use "3-part communication" and forget the "oral two-party, person-to-person Operating Instruction" that has different requirements for GO and DP. All responsible entities should have the same requirements. The proposed Standard as written allows for the Instruction to be repeated back "if requested" by the issuer. This exception creates a "compliance" trap for the people communicating – remove it. BASIC 3-PART COMMUNICATION should include: * A System Operator or Operator shall issue an Operating Instruction * The person receiving the Operating Instruction shall repeat it back to the issuer, and/or request clarification if needed * The System Operator or Operator will acknowledge as correct and/or discuss clarifications as needed and agree on the final instruction. 3. We are not sure why "address nomenclature for Transmission interface Elements and Transmission interface Facilities" has replaced the term "common line identifiers." Entities should coordinate their communication protocols with the other Entities that they commonly communicate with and agree on: * Nomenclature for Lines and equipment * A common system for Alpha Numeric clarifiers * Use 24-hour clock and identify the time, time-zone and if day-light savings or standard time is in effect. System Operators and Operators are too busy to be put in the position of trying to maintain compliance with a standard that is so convoluted and confusing as to become a potential violation. Tacoma Power supports the original premise of the proposed COM-003 and the concept to separate the technical communication equipment requirements from communication protocol requirements but the drafting team has gone too far away from the intent of the standard by trying to make exceptions for too many different issues when they do not need to. Get back to the basics, i.e. Draft 2.
Individual
Gregory Campoli
NYISO
The text presented in the blue box for Requirement 1 should be incorporated into Requirement #1. If the requirement needs to be explained at this point, we recommend clarifying it in the text. In addition, by using this definition we have now introduced a list of controls that we will be audited

against. The requirement should simply be to have a procedure. The controls assessment can be addressed during the future RAI process. The current draft provides for a fill in the blank framework that allows for an entity to define what is applicable for its communication protocol. A better approach would be to state that an entity may include items from the list provided that the entity identifies them as critical. Then the entity would only be required to show what is critical to its operations, rather than having to prove what is not critical. The language in requirement 1.5 needs to be clarified. It is not clear on how an entity is required to 'confirm' the response was accurate. This could simply be a '2 part communication', where once the receiving entity repeats the instruction, the initiator may move on if he deems it correct. Or does the confirmation need to be 'confirmed' with the receiving party as in '3 part communications'? If the requirement is meant to initiate 2 part communication, the requirement should say that. If the requirement is meant for '3 part communication,' then we recommend utilizing the language from COM-002 R2 in place of Requirements 1.5 and 1.6.

Individual

Jason Snodgrass

Georgia Transmission Corporation

No

Georgia Transmission Corporation agrees with the new definition. Georgia Transmission Corporation believes that Requirements R3 and R4 should be deleted. A. Georgia Transmission Corporation does not agree with the use of the term "operators" with respect to the functional entity Distribution Providers for R3 and R4. This poses an incomprehensible requirement for non-vertically integrated entities that are registered as Transmission Owner's also serving as the DPs. NERC does not define or associate anywhere in the Functional Model or NERC registry the term Distribution Provider operator. Specifically, GTC would not understand how to comply with R3 or R4 because GTC does not have any operators yet we are registered as a DP for the functions we perform of our facilities which are directly connected to the BES. GTC believes that Requirements R3 and R4 (applicable to Distribution Providers ("DPs")) should be deleted from the proposed COM-003 standard, or else disassociate the term "operators" from the DP. B. Additionally, Georgia Transmission Corporation believes that Requirements R3 and R4 (applicable to Distribution Providers ("DPs") and Generator Operators ("GOPs")) should be deleted from the proposed COM-003 standard because the burdens placed on Balancing Authorities ("BAs"), Reliability Coordinators ("RCs") and Transmission Operators ("TOPs") by Requirements R1 and R2: (a) sufficiently tighten communications protocols with DPs and GOPs, (b) render Requirements R3 and R4 administrative, unnecessary, and redundant, counter to FERC's objectives as implemented by the NERC Paragraph 81 Task Force, and (c) potentially expose some Registered Entities to double jeopardy violations of COM-003-1. Specifically, Requirement R1 provides that BAs, RCs, and TOPs must develop and implement documented communication protocols that (a) address instances where the issuer of an oral two-party communication Operating Instruction is required to confirm that the response of any recipient entity such as a DP or GOP was accurate or to reissue the Operating Instruction to resolve the misunderstanding (R1.5); and (b) to address coordination with affected recipient entities' communication protocols (R1.9). Requirement R2 further requires BAs, RCs, and TOPs to develop methods that assess communication practices and implement corrective actions necessary to meet the expectations outlined in these same protocols. Note that this assessment method would necessarily include assessment of the expectations included in the protocols regarding any recipient entity as required by R1.5 and R1.9. Meanwhile, proposed Requirement R3 would require the recipient DPs and GOPs to develop their own documented communications protocols that outline the communication expectations already addressed in the R1 protocols. [Note that the Rationale and Technical Justification for COM-003-1 specifies that Requirements R1 and R2 are addressed to entities that both issue and receive Operating instructions (BAs, RCs, and TOPs) whereas Requirements R3 and R4 are addressed to entities that only receive Operating Instructions.] Requiring DPs and GOPs in R3 to develop protocols outlining the communications expectations of its operators -- and requiring DPs and GOPs in R4 to assess those same operators' communications practices and implement corrective actions -- is redundant and unnecessary when those same expectations are already being documented by BAs, RCs, and TOPs in the R1 protocols, are already being coordinated with recipient entities, such as DPs and GOPs under R1.9, and are already being assessed and corrected by the BAs, RCs, and TOPs as required by R2. Therefore, requiring DPs and GOPs to go through the same motions simply creates another layer of documentation that strains limited resources and does little to enhance the reliability of the Bulk

Electric System. C. These duplicative exercises created by Requirements R3 and R4 run counter to the objectives directed by FERC in Paragraph 81 of FERC's March 15, 2012 Order on NERC's proposed "Find, Fix, and Track" ("FFT") initiatives ("FFT Order") as implemented by the P 81 Task Force. In Paragraph 81 of the FFT Order, FERC noted that "some current requirements likely provide little protection for Bulk-Power System reliability or may be redundant." In complying with FERC's directives, the Paragraph 81 Task Force set out to identify standards that (a) do "little if anything, to benefit or protect the reliable operation of the BES" and (b) among other possible criteria, are either: "(a) Administrative in nature, do not support reliability, and are needlessly burdensome; or (b) Require responsible entities to develop documents that are not necessary to protect BES reliability; or (c) Impose documentation updating requirements that are out of sync with the actual BES operations, unnecessary, or duplicative; or (d) Redundant with another FERC-approved Reliability Standard requirement(s), the ERO compliance and monitoring program, or a governmental regulation." (See Paragraph 81 Task Force Technical White Paper.) With respect to this last criterion of redundancy, the Task Force specifically stated that it is "designed to identify requirements that are redundant with other requirements and are therefore unnecessary. Unlike the other criteria listed ... in the case of redundancy, the task or activity itself may contribute to a reliable BES, but it is not necessary to have two duplicative requirements on the same or similar task or activity." (emphasis added). By creating duplicative requirements on both ends of a coordinated communication scheme between issuing BAs/RCs/TOPs and recipient DPs/GOPs, the Standards Drafting Team is creating an unnecessary administrative burden that does "little, if anything, to benefit or protect the reliable operation of the BES." Even if it may be argued that requiring double coordination from both issuer and recipient somehow contributes to a reliable BES, "it is not necessary to have the two duplicative requirements on the same or similar task or activity." Proposed Requirements R3 and R4 would fit all of the criteria listed above that the Paragraph 81 Task Force is using to identify candidates for retirement and/or revision. D. Finally, the risk created by proposed Requirements R3 and R4 in conjunction with R1 and R2 is more than simple administrative duplication. For vertically integrated entities that are registered both as issuing BAs/RC/TOPs and recipient DPs/GOPs, the redundancy created by Requirement R3 and R4 could potentially expose them to double penalties for a single violation. Because of the duplicative documentation and coordination requirements in R1/R2 and R3/R4, an auditor could interpret a single instance where the communications protocol of an issuing BA/RC/TOP did not match up with the recipient DP/GOP as multiple violations. In such an instance, both the issuers and the recipients could conceivably be penalized because the issuer's communications protocols were not coordinated with the recipient's communications protocols and this lack of coordination was not assessed and remedied. If the Standards Draft Team does not delete Requirement R3 and R4 in their entirety, then Georgia Transmission Corporation suggests that R3 be reworded such that the entities work together to implement and coordinate one set of issuers' communications protocols (i.e., that of the BAs/RCs/TOPs) instead of two sets of both issuers' and recipients' protocols. This should help to "tighten" the communications protocols as directed in Order 693 and to mitigate some of the confusion and duplicative documentation that could arise from Requirements R3 as written: "R3. Each Distribution Provider and Generator Operator shall implement the documented communication protocols of its associated BA, RC, and TOP that define the communications expectations of R1. The documented communication protocols will address, where applicable, the following: [Violation Risk Factor: Low] [Time Horizon: Long-term Planning ] ...." and "R4. In addition to the recommendation to eliminate for the reasons above, GTC still believes R4 prescribes elements of internal control language to which is not necessary due to the tightening of communications protocols for issuing entities within R1 and should still be eliminated under this alternate scenario.

No

See GTC's comments above regarding deletion of R4. GTC also believes the same logic can apply to R2 and recommends to be deleted. Additionally, see GTC's comments regarding the conflict with the drafting team's proposal to inadvertently define a new function for the DP "operators". Lastly, DPs do not issue Operating Instructions; DP field personnel only receive instructions from others.

No

We agree with the VRFs and VSLs for R1. As discussed above, R3 and R4 should not be part of the standard. To the extent R3 and R4 should be deleted or modified, the VRFs and VSLs should be modified accordingly.

If Requirements R3 and R4 are neither deleted nor reworded as suggested above, then changes should be made in the standard to clearly define the term "operator" or disassociate the term from



the DP function.
Group
Oklahoma Gas & Electric
Terri Pyle
Oklahoma Gas & Electric
Oklahoma Gas & Electric supports that comments submitted by the Southwest Power Pool and submits its own comments as well.
No
Comment for R1.3: Is the intent of R1.3 for applicable entities to maintain a list of common name identifiers which must be utilized in communications with all affected entities? If so, a similar requirement (R18) in TOP-002-2 is currently proposed to be eliminated in TOP-002-3. Therefore, it shouldn't be added back by this requirement. Can the drafting team be more specific as to exactly what is required in R1.3 without going overboard as in the existing wording? We understand the need to be sure that affected entities do not have any misunderstandings regarding the specific facility that is at issue. However, our experience does not indicate that this is a problem. If we can't relax R1.3, we suggest eliminating it altogether since we believe this not does significantly impact the reliability of the BES. Comment for R1.9: The use of the term 'coordination' in R1.9 causes concern in determining exactly what is required to coordinate. This could become a compliance nightmare for applicable entities. We suggest replacing R1.9 with "Provide each affected Reliability Coordinator, Balancing Authority, Transmission Operator, Distribution Provider, and Generator Operator with its communication protocols."
No
We believe that R2 and R4 should already be covered in PER-005
No
While we understand the process that gets us to the point where the VRFs for R1 and R3 are Low and those for R2 and R4 are Medium; however, in this situation we question the logic of the process. If developing a document only deserves a Low VRF then how can we logically say that not implementing the items contained in the document is a Medium? What happens if the document is flawed? We suggest using Low for all requirements.
<ul style="list-style-type: none"> <li>• We believe that this proposed Standard (COM-003-1) meets the intent of Paragraph 81 of the FERC Order which notes that reliability standards that provide little protection to the reliable operations of the BES are redundant or unnecessary. Although blackout occurrences in the past points to communication issues, we believe it is not related to miscommunication. Instead, we believe it is due to lack of communication and communicating information that was incorrect to begin with.</li> <li>• In the Consideration of Comments from the Feb 14-15 conference, the SDT said "The OPCPSDT maintains its position that three-part communication be addressed in documented communication protocols, where applicable." OG&amp;E believes that while the opinions of the members of SDT are important, the SDT itself should not maintain a "position" as such. Rather, the SDT should attempt to merge direction from FERC with the comments from industry instead of rejecting industry comments out of hand. Per the Standards Process Manual (pg.9), the roles of drafting teams are: <ul style="list-style-type: none"> <li>o Drafts proposed language for the Reliability Standards, definitions, Variances, and/or Interpretations and associated implementation plans.</li> <li>o Solicits, considers, and responds to comments related to the specific Reliability Standards development project.</li> <li>o Participates in industry forums to help build consensus on the draft Reliability Standards, definitions, Variances, and/or Interpretations and associated implementation plans.</li> <li>o Assists in developing the documentation used to obtain governmental approval of the Reliability Standards, definitions, Variances, and/or Interpretations and associated implementation plans.</li> </ul> </li> </ul>
Group
Luminant
Brenda Hampton
Luminant Energy Company LLC
Edison Electric Institute (EEI)
No
All comments are shown in response to Question 4.
Yes

No
All comments are shown in response to Question 4.
Luminant is generally supportive of the direction of this standard and agrees that requiring a documented communication protocol and monitoring processes is the correct approach for this standard. While we understand the need for the some Registered Entities (RE) to use a one-way burst messaging system to make mass communication quicker and easier the inclusion of Reliability Directive in R1.7, R1.8 and R3.3 creates a conflict COM-002-3 R2 and R3. By including Reliability Directives in R1.7, R1.8 and R3.3 which allows and electronic response or only one receipt to restate, the receiving REs will not be able to comply with COM-002-3 R2 that requires EACH recipient of a Reliability Directive to repeat, restate, rephrase or recapitulate the Reliability Directive. Removing Reliability Directive from those section would eliminate any confusion and conflict between COM-002-3 and COM-001-3 and allow COM-001-3 to be passed and implemented. Alternatively, COM-002-3 could be revised to CLEARLY STATE that it only applies to one-on-one verbal (or written?) communication.
Individual
Bradley Collard
Oncor Electric Delivery Company LLC
No
Oncor believes the specificity in the subparts of R1 is unnecessary. Three-part communication is the preferred method for ensuring that both parties understand an Operating Instruction and it provides a sufficient mechanism for clear, concise and accurate communication. In creating a protocol that requires System Operators to essentially relearn the way to speak (specifically using alpha-numeric identifiers) will only create confusion and inefficiency as operators try to follow protocol and catch/correct themselves.
No
Oncor supports the shift in compliance to the internal controls approach and we look forward to NERC providing a programmatic/principles framework in a collaborative approach with the industry. In the absence of this framework, it is unknown how the concept of "assess and correct" will evolve. As the framework is developed including the "assess and correct" concept, Oncor requests that continuous focus be placed on implementing principles including this concept and not requiring or specifying internal controls which would place additional compliance burden on entities. The internal controls principles/framework should enable entities to establish internal controls model utilizing deficiency correction approach but should not mandate the approach at the Standard/Requirement level. Internal Controls Program needs to be defined by an Entity, it is not a "One Size Fits All". The standards/RSAs should reflect this understanding. Oncor does not see how the Drafting Team adequately addressed this concern. NERC and the rest of the industry should work together and define the framework around Internal Controls.
Yes
R1.9 states that entities will address "Coordination with affected Reliability Coordinators', Balancing Authorities', Transmission Operators', Distribution Providers', and Generator Operators' communication protocols." Coordination with these entities in the ERCOT market will become cumbersome. Is it the SDT's intent to ensure all communication protocols are coordinated with multiple entities that a Transmission Operator communicates with, including the RC, BA, other TOs, GOPs, and DPs? Oncor is unclear how an entity with multiple registrations would communicate with itself in different functions. Would this require an entity with multiple registration functions to designate personnel by functional entity and in turn, personnel would have to identify which functional entity each person they interface with? It is impractical and inefficient to require Entities to re-organize all personnel which would foster an inefficient structure and could potentially lead teams to not communicate effectively. In addition, this could have a negative impact on communications between companies. For example, in the ERCOT region, there are approximately 15 local control centers and ERCOT who are all registered as TOPs. One might interpret communications between neighboring TOPs or ERCOT and one of the local control centers are not subject to the requirements

of COM-003-1 since these are TOP to TOP communications. We strongly recommend the SDT review this to greatly simplify COM-003-1. Potential alternative to the current language would be "require entities to implement, in a manner ..., protocols that include three-part communication for Operating Instructions" and eliminate the reference to Functional Entity.

Group

Tennessee Valley Authority

Dennis Chastain

Tennessee Valley Authority

SERC OC Standards Review Group

No

We agree with the definition of Operating Instruction. While we also can agree to the changes made to R1, we feel R3 in its entirety is unnecessary and duplicative. Removal of the word "develop" would eliminate double-jeopardy concerns. R3 could be acceptable if "develop and" is omitted and "as developed in R1" is inserted after "protocols" and before "that." It should be noted that this suggestion only applies to the sub-requirements in R1 that correspond to the proposed sub-requirements in R3.

No

R2 is acceptable and R4, as stated above for R3, is unnecessary and duplicative.

No

We agree with the VRFs and VSLs for R1 and R2. Based on our previous comments, we do not agree with the need for R3 and R4, and therefore VRFs and VSLs for these requirements are not needed.

TVA Nuclear Power's Human Performance program is driven by INPO and includes 1) requirements for operations to use 3-way communication and the phonetic alphabet; and 2) a documented assessment process via an established observation program with corrective actions. Any additional oversight process will contribute to distraction in the control room and promote overreliance on process and procedure with a "checklist mentality" rather than focus on potential impacts of the task being performed. If the RC, TOP, or BA specifically requests confirmation of a verbal communication (R1.6), our nuclear plant operators will respond accordingly as they are already expected to do. The use of "periodic assessment" in the measurements does not provide adequate guidance in the development of consistent, effective measures of compliance.

Individual

Jose H Escamilla

CPS Energy

Yes

No

Distribution Providers (DP) may be co-located in the same room with Transmission Operators (TOP) and would have oral communications and not use a telephone or other messaging system. Generator Operators (GOP) should have a separate standard.

No

I do not agree with the requirements, therefore I do not agree with the VRF's and VSL.

Separate the Distribution Provider (DP) and Generator Operator (GOP) COM requirements into a separate standard.

Group

Bonneville Power Administration

Jamison Dye

Transmission Reliability Program

Yes

Yes

Yes
Individual
Daniel Duff
Liberty Electric Power
Agree
Generator Forum Standards Review Team
Individual
Banagalore
Vijayraghavan
The primary reason for a no vote is that Draft 5 fails to address the communication gaps identified in the Standards Authorization Request (SAR), FERC Order 693 and the recommendations of the August 2003 Blackout Report. The draft as written does not require a consistent application of effective communications protocols but in turn requires each functional entity to develop their own protocols with insufficient guidance on how to achieve better consistency.
No
No
No
Individual
Tony Kroskey
Brazos Electric Power Cooperative, Inc.
Agree
ACES Power Marketing.
Individual
Russ Schneider
Flathead Electric Cooperative, Inc.
Agree
Western Small Entity Comment Group submitted by Central Lincoln

# Consideration of Comments

## Project 2007-02 Operating Personnel Communications Protocols COM-003-1

The Operating Personnel Communications Protocols Drafting Team thanks all commenters who submitted comments on the proposed draft COM-003-1 standard. The standard was posted for a 30-day public comment period from March 7, 2013 through April 8, 2013. Stakeholders were asked to provide feedback on the standard and associated documents through a special electronic comment form. There were 78 sets of comments, including comments from approximately 215 different people from approximately 130 companies representing all 10 of the Industry Segments as shown in the table on the following pages.

All comments submitted may be reviewed in their original format on the standard's [project page](#).

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Mark Lauby, at 404-446-2560 or at [mark.lauby@nerc.net](mailto:mark.lauby@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

### Summary Consideration:

#### Requirements (Question 1, Comments on R1 and R3):

***“Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop and implement documented communication protocols that outline the communications expectations of its System Operators. The documented communication protocols will address, where applicable, the following: [Violation Risk Factor: Low] [Time Horizon: Long-term Planning]”***

A Major concern from draft 5, Question one regarding COM-003-1, R1 and R3 was the term “Reliability Directive” appearing in many parts of requirements R1 and R3 causing confusion as to which standard would apply to a situation and if potential conflict could exist between COM-003-1 and COM-002-3.

**The OPCPSDT agrees and has removed the term “Reliability Directive” from the Parts of Requirement R1**

<sup>1</sup> The appeals process is in the Standard Processes Manual: [http://www.nerc.com/files/Appendix\\_3A\\_StandardsProcessesManual\\_20120131.pdf](http://www.nerc.com/files/Appendix_3A_StandardsProcessesManual_20120131.pdf)

Another concern of commenters of draft 5 was the use of the term “all call” in COM-003-1, R1 and R3. Commenters are concerned these requirements create a conflict with COM-002-3 which is silent on the use of multi-party one way messages. Commenters cited confusion and double jeopardy as concerns.

**The OPCPSDT agrees and has removed the term “all call” from the Parts of R1**

An additional concern in COM-003-1, R1 was Part 1.9 requiring entities to coordinate communication protocols. Commenters believed this was ambiguous and difficult to accomplish.

**The OPCPSDT agrees and has removed COM-003-1, R1 Part 1.9 from R1 and now requires applicable entities to jointly develop the communication protocols.**

In response to Question 1 regarding use of the English language, 24 hour clock and time zone reference, common interface identifiers, and alpha-numeric clarifiers, a large majority of the commenters still believe that all of Parts are too prescriptive.

**The OPCPSDT believes the protocols must have common elements to ensure uniformity and consistent application for clear and concise communication.**

Another continuing theme that was repeated in draft 5 comments and previously from draft 2, 3 and 4 was the concern that the OPCPSDT was not addressing the tasking from the SAR, as well as related directives and orders.

**The OPCPSDT disagrees and cites the language from the SAR. The purpose of the SAR for this project is “Require that real time System Operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” Additionally, the SAR is very specific in that it also includes the term normal operating conditions under Applicability: “*Clear and mutually established communications protocols used during real time operations under normal and emergency conditions ensure universal understanding of terms and reduce errors.*”**

There were many recommendations for multiple requirement language changes to improve clarity.

**The OPCPSDT agrees and has incorporated many of those recommendations into COM-003-1, draft 6.**

Others expressed a desire to combine COM-002-3 and COM-003-1 into a single standard.

**Based on other feedback, the OPCPSDT has chosen not to combine the two standards. The OPCPSDT also believes draft 6 requirements create a logical delineation between COM-002-3 and COM-003-1.**

**Requirements (Question 2 Comments on R2 and R4):**

***“Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop method(s) to assess System Operators’ communication practices and implement corrective actions***

***necessary to meet the expectations in its documented communication protocols developed for Requirement R1. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Operations Assessment] (Same language for R4 for DP and GOP)”***

A majority of the commenters expressed concerns over how an entity’s internal controls to improve System Operators’ communication performance would be audited. The commenters state that auditing internal controls is contrary to ongoing initiatives that are seeking to improve the effectiveness of the audit process. Some commenters also claim the potential for double jeopardy exists. The lack of certainty over how compliance would be administered caused commenters to be concerned.

**The OPCPSDT understands the commenters’ concerns. The OPCPSDT decided to eliminate the COM-003-1, draft 5, R2 and R4 requirements in draft 6. Draft 6 features a results based approach that clearly specifies compliance and is linked to reliability results. The draft 6 requirements will also reduce the exposure of entities to voluminous compliance documentation.**

The OPCPSDT points out that many other commenters responded positively to the use of internal controls and preferred the assess and correct requirement.

**After consideration of all of the comments, the OPCPSDT voted for the approach featured in COM-003-1, draft 6.**

### **VRFs and VSLs (Question 3):**

The OPCPSDT acknowledges there were many good comments on draft 5 regarding VSLs and VRFs and appreciates the contributions.

**The OPCPSDT has changed draft 6, and all of the VRFs and VSLs have been adjusted to reflect those changes. The elimination of the “assess and correct” language and the revisions to R1, R2 and R3 have resulted in extensive changes to VRFs and VSLs for draft 6.**

### **Additional Issues Addressed by the OPCPSDT:**

Other commenters raised issues around:

The requirement for DPs and GOPs to have documented protocols

**Draft 6 resolves this issue by eliminating this requirement for GOPs and DPs.**

**Index to Questions, Comments, and Responses**

1. The SDT has proposed new language in COM-003-1, R1 and R3: “Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop and implement documented communication protocols that outline the communications expectations of its System Operators. The documented communication protocols will address, where applicable, the following:” (the same language exists for R3, except DPs and GOPs listed as applicable entities and the use of “operators” instead of “System Operators”). Do you agree with the changes made to the proposed definition “Operating Instruction” (now proposed as a “A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions. ”) to be added as a term for the NERC Glossary? Do you agree with these proposed requirement changes? If not, please explain in the comment area of the last question. .... 17
2. The SDT has proposed new language in COM-003-1, R2 and R4: “Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop method(s) to assess System Operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols. (the same language exists for R3, except DPs and GOPs listed as applicable entities and the use of “operators” instead of “System Operators”). ” Do you agree with these proposed requirement changes? If not, please explain in the comment area of the last question: ..... 42
3. Do you agree with the VRFs and VSLs for Requirements R1, R2, R3 and R4? ..... 55
4. Do you have any other comments or suggestions to improve the draft standard? ..... 63



**The Industry Segments are:**

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment											
				1	2	3	4	5	6	7	8	9	10		
1.	Group	Guy Zito	Northeast Power Coordinating Council												X
Additional Member		Additional Organization		Region	Segment Selection										
1.	Alan Adamson	New York State Reliability Council, LLC		NPCC	10										
2.	Carmen Agavrioloai	Independent Electricity System Operator		NPCC	2										
3.	Greg Campoli	New York Independent System Operator		NPCC	2										
4.	Sylvain Clermont	Hydro-Quebec TransEnergie		NPCC	1										
5.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.		NPCC	1										
6.	Gerry Dunbar	Northeast Power Coordinating Council		NPCC	10										
7.	Peter Yost	Consolidated Edison Co. of New York, Inc.		NPCC	3										
8.	Kathleen Goodman	ISO - New England		NPCC	2										
9.	Michael Jones	National Grid		NPCC	1										

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
			1	2	3	4	5	6	7	8	9	10								
10. David Kiguel	Hydro One Networks Inc.	NPCC	1																	
11. Christina Koncz	PSEG Power LLC	NPCC	5																	
12. Randy MacDonald	New Brunswick Power Transmission	NPCC	9																	
13. Bruce Metruck	New York Power Authority	NPCC	6																	
14. Silvia Parada Mitchell	NextEra Energy, LLC	NPCC	5																	
15. Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10																	
16. Robert Pellegrini	The United Illuminating Company	NPCC	1																	
17. Si-Truc Phan	Hydro-Quebec TransEnergie	NPCC	1																	
18. David Ramkalawan	Ontario Power Generation, Inc.	NPCC	5																	
19. Brian Robinson	Utility Services	NPCC	8																	
20. Brian Shanahan	National Grid	NPCC	1																	
21. Wayne Sipperly	New York Power Authority	NPCC	5																	
22. Donald Weaver	New Brunswick System Operator	NPCC	2																	
23. Ben Wu	Orange and Rockland Utilities	NPCC	1																	
2.	Group	paul haase	Seattle City Light	X		X	X	X	X											
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	pawel krupa	seattle city light	WECC	1																
2.	dana wheelock	seattle city light	WECC	3																
3.	hao li	seattle city light	WECC	4																
4.	mike haynes	seattle city light		5																
5.	dennis sismaet	seattle city light		6																
3.	Group	Michael Lowman	Duke Energy	X		X		X	X											
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Doug Hills			1																
2.	Lee Schuster			3																
3.	Dale Goodwine			5																
4.	Greg Cecil																			
4.	Group	Patrick Brown	North American Generator Forum Standards Review Team					X												
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Allen Schriver	NextEra		5																

Group/Individual	Commenter	Organization	Registered Ballot Body Segment											
			1	2	3	4	5	6	7	8	9	10		
2. Pamela Dautel	IPR-GDF Suez Generation NA	5												
3. Dan Duff	Liberty Electric Power	5												
4. Mike Hirst	Cogentrix Energy, LLC	5												
5. Don Lock	PPL Generation, LLC	5												
6. Dana Showalter	e.on	5												
7. William Shultz	Southern Company	5												
5. Group	David Kiguel	Hydro One Networks Inc.	X		X									
<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>											
1.	Ajay Garg	Hydro One Networks Inc.	NPCC	1, 3										
2.	Sasa Maljukan	Hydro One Networks inc.	NPCC	1, 3										
6. Group	Gerry Beckerle	SERC OC Standards Review Group	X		X									
<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>											
1.	Jeff Harrison	AECI	SERC	1, 3, 5, 6										
2.	Randy Castello	Alabama Power Company	SERC	3										
3.	Eric Scott	Ameren	SERC	1, 3										
4.	Jeff Hackman	Ameren	SERC	1, 3										
5.	Mark Fowler	Ameren	SERC	1, 3										
6.	Mike Hirst	Cogentrix	SERC	5										
7.	Dan Roethemeyer	Dynegy	SERC	5										
8.	Phil Whitmer	Georgia Power Company	SERC	3										
9.	Bob Thomas	Illinois Municipal Electric Agency	SERC	4										
10.	Wayne Van Liere	LGE-KU	SERC	1, 3, 5, 6										
11.	Timmy LeJeune	Louisiana Generating, LLC	SERC	4, 5, 6										
12.	Martin Summe	NC Municipal Power Agency # 1	SERC	3										
13.	Doug White	NCEMC	SERC	1, 3, 4, 5										
14.	Scott Brame	NCEMC	SERC	1, 3, 4, 5										
15.	Dwayne Roberts	Owensboro, KY Municipal Utilities	SERC	3										
16.	William Berry	Owensboro, KY Municipal Utilities	SERC	3										
17.	Bill Thigpen	PowerSouth Energy Cooperative	SERC	1, 5										
18.	Tim Hattaway	PowerSouth Energy Cooperative	SERC	1, 5										
19.	Alisha Anker	Prairie Power	SERC	3										

Group/Individual	Commenter	Organization	Registered Ballot Body Segment											
			1	2	3	4	5	6	7	8	9	10		
20. Rene Free	SCPSA	SERC	1, 3, 5, 6											
21. Marc Butts	Southern	SERC	1, 5											
22. Mike Hardy	Southern	SERC	1, 5											
23. Randy Hubbert	Southern	SERC	1, 5											
24. Joel Wise	TVA	SERC	1, 3, 5, 6											
25. Stuart Goza	TVA	SERC	1, 3, 5, 6											
7. Group	Mike Garton	Dominion		X		X		X	X					
<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>											
1.	Louis Slade	Dominion Resources Services, Inc.	RFC											
2.	Randi Heise	Dominion Resources Services, Inc.	MRO											
3.	Connie Lowe	Dominion Resources Services, Inc.	NPCC											
4.	Michael Crowley	Virginia Electric and Power Company	SERC											
8. Group	Russ Mountjoy	MRO NSRF		X	X	X	X	X	X	X	X	X	X	X
<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>											
1.	Alice Ireland	Xcel Energy	MRO											
2.	Chuck Lawrence	ATC	MRO											
3.	Dan Inman	MPC	MRO											
4.	Dave Rudolph	BEPC	MRO											
5.	Kayleigh Wilkerson	LES	MRO											
6.	Jodi Jensen	WAPA	MRO											
7.	Joseph DePoorter	MGE	MRO											
8.	Ken Goldsmith	ALTW	MRO											
9.	Lee Kittleson	OTP	MRO											
10.	Mahmood Safi	OPPD	MRO											
11.	Marie Knox	MISO	MRO											
12.	Mike Brytowski	GRE	MRO											
13.	Scott Bos	MPW	MRO											
14.	Scott Nickles	RPU	MRO											
15.	Terry Harbour	MEC	MRO											
16.	Tom Breene	WPS	MRO											

Group/Individual	Commenter	Organization	Registered Ballot Body Segment											
			1	2	3	4	5	6	7	8	9	10		
17.	Tony Eddleman	NPPD MRO	1, 3, 5											
9.	Group Joe Tarantino	SMUD/Balancing Authority of Northern California	X		X	X	X	X						
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	Kevin Smith	BANC WECC	1											
10.	Group Steve Alexanderson	Western Small Entity Comment Group			X	X						X		
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	Eric Scott	City of Palo Alto	WECC		3									
2.	Kathy Zancanella	South Feather Water & Power Agency	WECC		5									
3.	Steven J. Grega	Public Utility District #1 of Lewis County	WECC		5									
4.	Russ Noble	Cowlitz County PUD No. 1	WECC		3, 4, 5									
5.	Russ Schneider	Flathead Electric Cooperative, Inc.	WECC		3, 4									
11.	Group Albert DiCaprio	ISO/RTO Standards Review Committee		X										
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	Greg Campoli	NYISO NPCC	2											
2.	Ali Miremadi	CAISO WECC												
3.	Kathleen Goodman	ISONE NPCC												
4.	Charles Yeung	SPP SPP												
5.	Stephanie Monzon	PJM RFC												
6.	Ben Li	IESO NPCC												
12.	Group Ben Engelby	ACES Standards Collaborators							X					
<b>Additional Member Additional Organization Region Segment Selection</b>														
1.	Bill Watson	Old Dominion Electric Cooperative	RFC		3, 4									
2.	Scott Brame	North Carolina Electric Membership Corporation	SERC		1, 3, 5, 6									
3.	John Shaver	Arizona Electric Power Cooperative, Inc and Southwest Transmission Cooperative, Inc.	WECC		1, 4, 5									
4.	Shari Heino	Brazos Electric Power Cooperative, Inc.	ERCOT		1, 5									
5.	Bob Solomon	Hoosier Energy Rural Electric Cooperative, Inc.	RFC		1									
6.	Megan Wagner	Sunflower Electric Power Corporation	SPP		1									
7.	Laurel Heacock	Oglethorpe Power Corporation	SERC											

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
13.	Group	Brent Ingebrigtsen	PPL NERC Registered Affiliates	X		X		X	X				
Additional Member		Additional Organization	Region	Segment Selection									
1.	Brenda Truhe	PPL Electric Utilities Corporaton	RFC	1									
2.	Annette Bannon	PPL Generation, LLC on behalf of Supply NERC Registered Affiliates	RFC	5									
3.			WECC	5									
4.	Elizabeth Davis	PPL EnergyPlus, LLC	MRO	6									
5.			NPCC	6									
6.			SERC	6									
7.			SPP	6									
8.			RFC	6									
9.			WECC	6									
14.	Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X				
Additional Member		Additional Organization	Region	Segment Selection									
1.	Tim Beyrle	City of New Smyrna Beach	FRCC	4									
2.	Jim Howard	Lakeland Electric	FRCC	3									
3.	Greg Woessner	Kissimmee Utility Authority	FRCC	3									
4.	Lynne Mila	City of Clewiston	FRCC	3									
5.	Cairo Vanegas	Fort Pierce Utility Authority	FRCC	4									
6.	Randy Hahn	Ocala Utility Services	FRCC	3									
15.	Group	Robert Rhodes	SPP Standards Review Group		X								
Additional Member		Additional Organization	Region	Segment Selection									
1.	John Allen	City Utilities of Springfield	SPP	1, 4									
2.	Bo Jones	Westar Energy	SPP	1, 3, 5, 6									
3.	Allen Klassen	Westar Energy	SPP	1, 3, 5, 6									
4.	Tiffany Lake	Westar Energy	SPP	1, 3, 5, 6									
5.	Danny McDaniel	Cleco Power	SPP	1, 3, 5									
6.	Mike Murraray	City of Independence, Power & Light Department	SPP	3									
7.	James Nail	City of Independence, Power & Light Department	SPP	3									
8.	Kevin Nincehelser	Westar Energy	SPP	1, 3, 5, 6									

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
			1	2	3	4	5	6	7	8	9	10								
9.	Ashley Stringer	Oklahoma Municipal Power Authority	SPP	4																
10.	Jessica Tucker	Kansas City Power & Light	SPP	1, 3, 5, 6																
11.	Bryan Taggart	Westar Energy	SPP	1, 3, 5, 6																
12.	Jim Useldinger	Kansas City Power & Light	SPP	1, 3, 5, 6																
16.	Group	Terry L. Blackwell	Santee Cooper		X		X		X	X										
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	S. Tom Abrams	Santee Cooper	SERC	1																
2.	Vicky Budreau	Santee Cooper	SERC	1																
3.	Chris Wagner	Santee Cooper	SERC	1																
4.	Rene' Free	Santee Cooper	SERC	1																
17.	Group	Terri Pyle	Oklahoma Gas & Electric		X		X		X											
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Greg McAuley	Oklahoma Gas and Electric	SPP	1, 3, 5																
2.	Sing Tay	Oklahoma Gas and Electric	SPP	1, 3, 5																
3.	Don Hargrove	Oklahoma Gas and Electric	SPP	1, 3, 5																
18.	Group	Brenda Hampton	Luminant							X										
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Rick Terrill	Luminant Generation Company LLC	ERCOT	5																
19.	Group	Dennis Chastain	Tennessee Valley Authority		X		X		X	X										
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Ian Grant	TVA	SERC	3																
2.	Marjorie Parsons	TVA	SERC	6																
3.	DeWayne Scott	TVA	SERC	1																
4.	David Thompson	TVA	SERC	5																
20.	Group	Jamison Dye	Bonneville Power Administration		X		X		X	X										
<b>Additional Member Additional Organization Region Segment Selection</b>																				
1.	Tim Loepker	Process Analyst	WECC	1																
2.	Erika Doot	Generation	WECC	3, 5, 6																
3.	Fran Halpin	Physical Scientist	WECC	3																
21.	Individual	Bob Steiger	Salt River Project		X		X		X	X										

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
22.	Individual	Steve Rueckert	Western Electricity Coordinating Council										X
23.	Individual	Christopher Wood	Platte River Power Authority	X		X		X	X				
24.	Individual	Annamay Luyun	San Diego Gas & Electric	X		X		X					X
25.	Individual	ryan millard	pacificorp	X		X		X	X				
26.	Individual	Janet Smith, Regulatory Affairs Supervisor	Arizona Public Service Company	X		X		X	X				
27.	Individual	Pamela R. Hunter	Southern Company - Southern Company Services, Inc.; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation; Southern Company Generation and Energy Marketing	X		X		X	X				
28.	Individual	Glenn Rounds	Pacific Gas and Electric Company	X		X		X					
29.	Individual	Scott Bos	Muscatine Power and Water	X		X		X	X				
30.	Individual	Herb Schrayshuen	Self									X	
31.	Individual	Scott McGough	Georgia System Operations Corporation			X							
32.	Individual	Greg Travis	Idaho Power Company	X									
33.	Individual	Robert W. Kenyon	NERC										
34.	Individual	Thad Ness	American Electric Power	X		X		X	X				
35.	Individual	John Seelke	Public Service Enterprise Group	X		X		X	X				
36.	Individual	Andrew Gallo	City of Austin dba Austin Energy	X		X	X	X	X				
37.	Individual	John Brockhan	CenterPoint Energy Houston Electric L.L.C.	X									
38.	Individual	John Bee on behalf of Exelon and its' affiliates	Exelon	X		X		X					
39.	Individual	D. Jones	Texas Reliability Entity										X
40.	Individual	Ronnie Hoeinghaus	City of Garland	X		X							
41.	Individual	Jim Howard	Lakeland Electric	X		X		X	X				
42.	Individual	David Jendras	Ameren	X		X		X	X				



Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
43.	Individual	Joe O'Brien	NIPSCO	X		X		X	X				
44.	Individual	Martyn Turner	LCRA Transmission Services Corporation	X			X		X				
45.	Individual	Jack Stamper	Clark Public Utilities	X									
46.	Individual	Alice Ireland	Xcel Energy	X		X		X	X				
47.	Individual	Wayne Sipperly	New York Power Authority	X		X		X	X				
48.	Individual	Julaine Dyke	NIPSCO	X		X		X	X				
49.	Individual	Michelle D'Antuono	Occidental Energy Ventures Corp			X		X		X			
50.	Individual	Jonathan Appelbaum	The United Illuminating Company	X									
51.	Individual	William O. Thompson	NIPSCO	X		X		X	X				
52.	Individual	Michael Falvo	Independent Electricity System Operator		X								
53.	Individual	Nazra Gladu	Manitoba Hydro	X		X		X	X				
54.	Individual	Michiko Sell	Grant County PUD	X		X	X	X	X				
55.	Individual	David Thorne	Pepco Holdings Inc	X		X							
56.	Individual	Cheryl Moseley	Electric Reliability Council of Texas, Inc.		X								
57.	Individual	Richard Vine	California ISO		X								
58.	Individual	RoLynda Shumpert	South Carolina Electric and Gas	X		X		X	X				
59.	Individual	Brenda Frazer	Edison Mission Marketing & Trading					X					
60.	Individual	Scott Berry	Indiana Municipal Power Agency				X						
61.	Individual	Anthony Jablonski	ReliabiltyFirst										X
62.	Individual	Kathleen Goodman	ISO New England Inc.		X								
63.	Individual	Marie Knox	MISO		X								
64.	Individual	James R. Keller	Wisconsin Electric Power Company			X	X	X					
65.	Individual	Brett Holland	Kansas City Power & Light	X		X		X	X				
66.	Individual	Larry Watt	Lakeland Electric	X									
67.	Individual	Andrew Z. Pusztai	American Transmission Company	X									
68.	Individual	Bob Thomas	Illinois Municipal Electric Agency				X						

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
69.	Individual	Mike Hirst	Cogentrix Energy Power Management					X					
70.	Individual	Keith Morissette	Tacoma Power	X		X	X	X	X				
71.	Individual	Gregory Campoli	NYISO		X								
72.	Individual	Jason Snodgrass	Georgia Transmission Corporation	X									
73.	Individual	Bradley Collard	Oncor Electric Delivery Company LLC	X									
74.	Individual	Jose H Escamilla	CPS Energy			X							
75.	Individual	Daniel Duff	Liberty Electric Power					X					
76.	Individual	Banagalore	Vijayraghavan	X									
77.	Individual	Tony Kroskey	Brazos Electric Power Cooperative, Inc.	X									
78.	Individual	Russ Schneider	Flathead Electric Cooperative, Inc.			X	X						

If you support the comments submitted by another entity and would like to indicate you agree with their comments, please select "agree" below and enter the entity's name in the comment section (please provide the name of the organization, trade association, group, or committee, rather than the name of the individual submitter).

**Summary Consideration:**

Organization	Supporting Comments of "Entity Name"
Brazos Electric Power Cooperative, Inc.	ACES Power Marketing.
Wisconsin Electric Power Company	Edison Electric Institute
Luminant	Edison Electric Institute (EEI)
Dominion	EEI
Illinois Municipal Electric Agency	Florida Municipal Power Agency
Lakeland Electric	Florida Municipal Power Agency (FMPA)
Liberty Electric Power	Generator Forum Standards Review Team
Lakeland Electric	LAK supports FMPA comments
Platte River Power Authority	Large Public Power Council
New York Power Authority	Large Public Power Council (LPPC)
Xcel Energy	MRO NERC Standards Review Forum (NSRF)
Oklahoma Gas & Electric	Oklahoma Gas & Electric supports that comments submitted by the Southwest Power Pool and submits its own comments as well.
Pepco Holdings Inc	Pepco Holdings Inc supports the comments submitted by EEI
Grant County PUD	Seattle City Light

Organization	Supporting Comments of “Entity Name”
LCRA Transmission Services Corporation	Seattle City Light
Tennessee Valley Authority	SERC OC Standards Review Group
Kansas City Power & Light	Southwest Power Pool
California ISO	The California ISO is supportive of those comments submitted by the SRC (ISO/RTO Council).
Vijayraghavan	The primary reason for a no vote is that Draft 5 fails to address the communication gaps identified in the Standards Authorization Request (SAR), FERC Order 693 and the recommendations of the August 2003 Blackout Report. The draft as written does not require a consistent application of effective communications protocols but in turn requires each functional entity to develop their own protocols with insufficient guidance on how to achieve better consistency.
Flathead Electric Cooperative, Inc.	Western Small Entity Comment Group submitted by Central Lincoln

1. The SDT has proposed new language in COM-003-1, R1 and R3: “Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop and implement documented communication protocols that outline the communications expectations of its System Operators. The documented communication protocols will address, where applicable, the following:” (the same language exists for R3, except DPs and GOPs listed as applicable entities and the use of “operators” instead of “System Operators”). Do you agree with the changes made to the proposed definition “Operating Instruction” (now proposed as a “A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions. ”) to be added as a term for the NERC Glossary? Do you agree with these proposed requirement changes? If not, please explain in the comment area of the last question.

#### Summary Consideration:

##### **Requirements (Question 1 Comments on R1 and R3):**

A Major theme from draft 5, Question one regarding COM-003-1, R1 and R3 was the term “Reliability Directive” in many Parts of requirements R1 and R3 causing confusion as to which standard would apply and if there was potential conflict between COM-003-1 and COM-002-3.

##### **The OPCPSDT agrees and has removed the term “Reliability Directive” from the Parts of R1**

A similar theme in draft 5 was the use of the term “all call” in COM-003-1, R1 and R3. Commenters are concerned these requirements create a conflict with COM-002-3 where the use of multi-party one way messages is silent. Commenters cited confusion and double jeopardy as concerns.

##### **The OPCPSDT agrees and has removed the term “all call” from the Parts of R1**

An additional major concern in COM-003-1, R1 was Part 1.9 requiring entities to coordinate communication protocols. Commenters believed this was ambiguous and difficult to accomplish.

##### **The OPCPSDT agrees and has removed COM-003-1, R1 Part 1.9 from R1 and now requires applicable entities to jointly develop the communication protocols subject to RC approval.**

In response to Question 1, regarding use of the English language, 24 hour clock and time zone reference, common interface identifiers, and alpha-numeric clarifiers, many commenters still believe that all of subparts are too prescriptive and unnecessary.

**The OPCPSDT believes the protocols must have common elements to ensure uniformity and consistent application for understanding communication.**

Another continuing theme that was repeated in draft 5 comments and previously from draft 2, 3 and 4 was the concern that the work of the OPCPSDT was not addressing the intentions of the SAR, related directives and orders.

**The OPCPSDT disagrees and cites the language from the SAR. The purpose of the SAR for this project is “Require that real time System Operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.” Additionally, the SAR is very specific in that it also includes the term normal operating conditions under Applicability: “Clear and mutually established communications protocols used during real time operations under normal and emergency conditions ensure universal understanding of terms and reduce errors.”**

There were many recommendations for multiple requirement language changes to improve clarity.

**The OPCPSDT agrees and has incorporated many of those recommendations into COM-003-1, draft 6.**

Others expressed a desire to combine COM-002-3 and COM-003-1 into a single standard.

**Based on other feedback, the OPCPSDT has chosen not to combine the two standards. The OPCPSDT also believes draft 6 requirements create a logical delineation between COM-002-3 and COM-003-1.**

Organization	Yes or No	Question 1 Comment
Luminant	No	All comments are shown in response to Question 4.
<b>Response: The OPCPSDT thanks you for your comments. Please see our response to Question 4.</b>		
Oklahoma Gas & Electric	No	Comment for R1.3: Is the intent of R1.3 for applicable entities to maintain a list of common name

Organization	Yes or No	Question 1 Comment
		<p>identifiers which must be utilized in communications with all affected entities? If so, a similar requirement (R18) in TOP-002-2 is currently proposed to be eliminated in TOP-002-3. Therefore, it shouldn't be added back by this requirement. Can the drafting team be more specific as to exactly what is required in R1.3 without going overboard as in the existing wording?</p> <p><b>Response: R1.3 is designed to increase familiarity with interface Transmission Elements and Facilities to prevent confusion and increase situational awareness. The requirement calls for entities to ensure operators are aware of the names or designators of interface equipment between those entities. It is up to the affected entities to determine how they would accomplish this through their communication protocols.</b></p> <p><b>One example may be to designate in the documented Communication Protocols to use the name of the Transmission interface Element/Facility assigned by the owner of such Element/Facility.</b></p> <p>We understand the need to be sure that affected entities do not have any misunderstandings regarding the specific facility that is at issue. However, our experience does not indicate that this is a problem. If we can't relax R1.3, we suggest eliminating it altogether since we believe this not does significantly impact the reliability of the BES.</p> <p><b>Response: The requirement focuses on Transmission interface Elements and Facilities only. The OPCPSDT believes that the draft standard requirements provide flexibility so that an entity may develop the protocols in a manner that supports their unique circumstances.</b></p> <p>Comment for R1.9:</p> <p>The use of the term 'coordination' in R1.9 causes concern in determining exactly what is required to coordinate. This could become a compliance nightmare for applicable entities. We suggest replacing R1.9 with "Provide each affected Reliability Coordinator, Balancing Authority, Transmission Operator, Distribution Provider, and Generator Operator with its communication protocols."</p>

Organization	Yes or No	Question 1 Comment
		<p><b>Response: The OPCPSDT agrees and has changed the wording of R1, to eliminate Part 1.9.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
<p>American Electric Power</p>	<p>No</p>	<p>Due to the manner in which the sub-requirements for R1 are written, there could be misinterpretation at which entities plan would require those sub-requirements. We assume that requirements R1.6 and R1.8 apply to an entity that in that instance is <i>*receiving*</i> an Operating Instruction where Requirement R1.2, R1.3, R1.4, R1.5, R1.7 are reserved for only those cases where an entity is <i>*issuing*</i> the Operating Instruction. As currently drafted, R1.6 and R1.8 could be interpreted as somehow requiring an entity that would normally be issuing an instruction (such as an RC) to implement documented communication protocols for an outside receiving entity (such as a Balancing Authority). A potential solution would be to restructure R1 and R3 in such a way that it is based on entities that would be issuing instructions in one requirement and entities that would be receiving instructions in a separate requirement.</p> <p><b>Response: The OPCPSDT agrees with your comments and have made changes similar to those suggested.</b></p> <p>AEP strongly disagrees with R 1.9, requiring coordination with affected Reliability Coordinators', Balancing Authorities', Transmission Operators', Distribution Providers', and Generator Operators' communication protocols. For AEP, this requirement would require coordination among numerous entities, and keeping all those protocols in sync would be a significant logistical challenge that does not appear to proportionately improve reliability. In addition, exactly what kind of coordination is needed? R1.1 through are robust enough that adding R1.9 is totally redundant and unnecessary.</p> <p><b>Response: T The OPCPSDT agrees and has changed the wording of R1, to eliminate Part 1.9.</b></p> <p>If beyond R1.1 through 1.8 there are additional, specific needs that still need to be addressed, those should be identified so that specific requirements could be developed</p>



Organization	Yes or No	Question 1 Comment
		<p>if necessary. For this requirement alone, AEP must vote negative on this proposed draft.</p> <p><b>Response: If the intended meaning of your comment is that an entity may chose to develop protocols beyond R1.1 through 1.8, there is no restricting language to prevent them from doing so. The standard lists the basic requirements.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
<p>Florida Municipal Power Agency</p>	<p>No</p>	<p>FMPA prefers the prior version which had language on internal controls, e.g., “implement, in a manner that identifies, assesses and corrects deficiencies ...”. As stated, and by using the word “implement” which means: “carry out, accomplish; especially : to give practical effect to and ensure of actual fulfillment by concrete measures”, means that each entity must have evidence (“concrete measures”) of implementing its communications protocol at all times for every instance. Three part communication is watered-down by giving the entity the choice as to whether to follow three-part communication for: 1) all Operating Instructions; 2) for Reliability Directives only; or 3) something in between. Many entities, to manage compliance risk, will only require three-part communications for Reliability Directives in their communication protocols as a result. For reliability reasons, FMPA believes that three-part communication ought to be required for all Operating Instructions, but, at the same time, there should be some tolerance for mistakes through use of the CIP v5 internal controls language “implement, in a manner that identifies, assesses and corrects deficiencies ...”.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes draft 5 continues to permit entities to have protocols to address the standard as they believe the protocols will sustain reliability on the BES. The OPCPSDT agrees with FMPA that all Operating Instructions and Reliability Directives should employ three-part communications and believes FMPA is permitted to develop protocols that require it.</b></p>		
<p>Georgia Transmission Corporation</p>	<p>No</p>	<p>Georgia Transmission Corporation agrees with the new definition. Georgia Transmission Corporation believes that Requirements R3 and R4 should be deleted.</p> <p>A. Georgia Transmission Corporation does not agree with the use of the term</p>

Organization	Yes or No	Question 1 Comment
		<p>“operators” with respect to the functional entity Distribution Providers for R3 and R4. This poses an incomprehensible requirement for non-vertically integrated entities that are registered as Transmission Owner’s also serving as the DPs. NERC does not define or associate anywhere in the Functional Model or NERC registry the term Distribution Provider operator. Specifically, GTC would not understand how to comply with R3 or R4 because GTC does not have any operators yet we are registered as a DP for the functions we perform of our facilities which are directly connected to the BES. GTC believes that Requirements R3 and R4 (applicable to Distribution Providers (“DPs”)) should be deleted from the proposed COM-003 standard, or else disassociate the term “operators” from the DP.</p> <p><b>Response: The OPCSDT has eliminated R2 and R4 and has narrowed the role of GOPs and DP to those who would receive Operating Instructions</b></p> <p>B. Additionally, Georgia Transmission Corporation believes that Requirements R3 and R4 (applicable to Distribution Providers (“DPs”) and Generator Operators (“GOPs”)) should be deleted from the proposed COM-003 standard because the burdens placed on Balancing Authorities (“BAs”), Reliability Coordinators (“RCs”) and Transmission Operators (“TOPs”) by Requirements R1 and R2:</p> <ul style="list-style-type: none"> <li>(a) sufficiently tighten communications protocols with DPs and GOPs,</li> <li>(b) render Requirements R3 and R4 administrative, unnecessary, and redundant, counter to FERC’s objectives as implemented by the NERC Paragraph 81 Task Force, and</li> <li>(c) Potentially expose some Registered Entities to double jeopardy violations of COM-003-1.</li> </ul> <p><b>Response: The SDT has eliminated draft 5 R3 and R4 from draft 6.</b></p> <p>Specifically, Requirement R1 provides that BAs, RCs, and TOPs must develop and implement documented communication protocols that</p> <ul style="list-style-type: none"> <li>(a) address instances where the issuer of an oral two-party communication Operating Instruction is required to confirm that the response of any recipient entity such as a DP or GOP was accurate or to reissue the Operating Instruction to resolve the</li> </ul>

Organization	Yes or No	Question 1 Comment
		<p>misunderstanding (R1.5); and</p> <p>(b) to address coordination with affected recipient entities' communication protocols (R1.9).</p> <p>Requirement R2 further requires BAs, RCs, and TOPs to develop methods that assess communication practices and implement corrective actions necessary to meet the expectations outlined in these same protocols. Note that this assessment method would necessarily include assessment of the expectations included in the protocols regarding any recipient entity as required by R1.5 and R1.9.</p> <p>Meanwhile, proposed Requirement R3 would require the recipient DPs and GOPs to develop their own documented communications protocols that outline the communication expectations already addressed in the R1 protocols. [Note that the Rationale and Technical Justification for COM-003-1 specifies that Requirements R1 and R2 are addressed to entities that both issue and receive Operating instructions (BAs, RCs, and TOPs) whereas Requirements R3 and R4 are addressed to entities that only receive Operating Instructions.] Requiring DPs and GOPs in R3 to develop protocols outlining the communications expectations of its operators -- and requiring DPs and GOPs in R4 to assess those same operators' communications practices and implement corrective actions -- is redundant and unnecessary when those same expectations are already being documented by BAs, RCs, and TOPs in the R1 protocols, are already being coordinated with recipient entities, such as DPs and GOPs under R1.9, and are already being assessed and corrected by the BAs, RCs, and TOPs as required by R2. Therefore, requiring DPs and GOPs to go through the same motions simply creates another layer of documentation that strains limited resources and does little to enhance the reliability of the Bulk Electric System.</p> <p><b>Response: The OPCPSDT has also modified the standard requirements to make the DP and GOP subject to the protocols developed by its directing RC, TOP and BA rather than develop their own. This will hopefully help alleviate any confusion noted in the comments. The OPCPSDT believes assigning the appropriate responsibilities to those functions that will be "receiving" Operating Instructions so that clear and effective communications can occur does enhance reliability. The OPCPSDT supports</b></p>

Organization	Yes or No	Question 1 Comment
		<p>and encourages the effort of affected entities to develop and implement a common set of communication protocols. This adds additional clarity through enhanced uniformity.</p> <p>C. These duplicative exercises created by Requirements R3 and R4 run counter to the objectives directed by FERC in Paragraph 81 of FERC’s March 15, 2012 Order on NERC’s proposed “Find, Fix, and Track” (“FFT”) initiatives (“FFT Order”) as implemented by the P 81 Task Force. In Paragraph 81 of the FFT Order, FERC noted that “some current requirements likely provide little protection for Bulk-Power System reliability or may be redundant.” In complying with FERC’s directives, the Paragraph 81 Task Force set out to identify standards that</p> <ul style="list-style-type: none"> <li>(a) do “little if anything, to benefit or protect the reliable operation of the BES” and</li> <li>(b) among other possible criteria, are either: <ul style="list-style-type: none"> <li>“(a) Administrative in nature, do not support reliability, and are needlessly burdensome; or</li> <li>(b) Require responsible entities to develop documents that are not necessary to protect BES reliability; or</li> <li>(c) Impose documentation updating requirements that are out of sync with the actual BES operations, unnecessary, or duplicative; or</li> <li>(d) Redundant with another FERC-approved Reliability Standard requirement(s), the ERO compliance and monitoring program, or a governmental regulation.” (See Paragraph 81 Task Force Technical White Paper.) With respect to this last criterion of redundancy, the Task Force specifically stated that it is “designed to identify requirements that are redundant with other requirements and are therefore unnecessary. Unlike the other criteria listed ... in the case of redundancy, the task or activity itself may contribute to a reliable BES, but it is not necessary to have two duplicative requirements on the same or similar task or activity.” (emphasis added). By creating duplicative requirements on both ends of a coordinated communication scheme between issuing BAs/RCs/TOPs and recipient DPs/GOPs, the Standards Drafting Team is creating an unnecessary administrative burden that does “little, if</li> </ul> </li> </ul>

Organization	Yes or No	Question 1 Comment
		<p>anything, to benefit or protect the reliable operation of the BES.” Even if it may be argued that requiring double coordination from both issuer and recipient somehow contributes to a reliable BES, “it is not necessary to have the two duplicative requirements on the same or similar task or activity.” Proposed Requirements R3 and R4 would fit all of the criteria listed above that the Paragraph 81 Task Force is using to identify candidates for retirement and/or revision. D. Finally, the risk created by proposed Requirements R3 and R4 in conjunction with R1 and R2 is more than simple administrative duplication. For vertically integrated entities that are registered both as issuing BAs/RC/TOPs and recipient DPs/GOPs, the redundancy created by Requirement R3 and R4 could potentially expose them to double penalties for a single violation. Because of the duplicative documentation and coordination requirements in R1/R2 and R3/R4, an auditor could interpret a single instance where the communications protocol of an issuing BA/RC/TOP did not match up with the recipient DP/GOP as multiple violations. In such an instance, both the issuers and the recipients could conceivably be penalized because the issuer’s communications protocols were not coordinated with the recipient’s communications protocols and this lack of coordination was not assessed and remedied.</p> <p><b>Response: The OPCPSDT has substantially modified the standard, making it “results” oriented and directly tying it to reliability. The draft 6 approach addresses some of the commenters concern, but sustains the applicability of the DP and GOP because they can and do have the potential for impacting reliability on the BES.</b></p> <p>If the Standards Draft Team does not delete Requirement R3 and R4 in their entirety, then Georgia Transmission Corporation suggests that R3 be reworded such that the entities work together to implement and coordinate one set of issuers’ communications protocols (i.e., that of the BAs/RCs/TOPs) instead of two sets of both issuers’ and recipients’ protocols. This should help to “tighten” the communications protocols as directed in Order 693 and to mitigate some of the confusion and duplicative documentation that could arise from Requirements R3 as written:            ”R3. Each Distribution Provider and Generator Operator shall implement the</p>

Organization	Yes or No	Question 1 Comment
		<p>documented communication protocols of its associated BA, RC, and TOP that define the communications expectations of R1. The documented communication protocols will address, where applicable, the following: [Violation Risk Factor: Low] [Time Horizon: Long-term Planning ] ....</p> <p>"and</p> <p>"R4. In addition to the recommendation to eliminate for the reasons above, GTC still believes R4 prescribes elements of internal control language to which is not necessary due to the tightening of communications protocols for issuing entities within R1 and should still be eliminated under this alternate scenario.</p> <p><b>Response: The OPCPSDT changed draft 6 and believes it addresses your concerns.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
Western Small Entity Comment Group	No	In the comment area of the last section as asked.
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
Oncor Electric Delivery Company LLC	No	<p>Oncor believes the specificity in the subparts of R1 is unnecessary. Three-part communication is the preferred method for ensuring that both parties understand an Operating Instruction and it provides a sufficient mechanism for clear, concise and accurate communication. In creating a protocol that requires System Operators to essentially relearn the way to speak (specifically using alpha-numeric identifiers) will only create confusion and inefficiency as operators try to follow protocol and catch/correct themselves.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes the level of specificity is necessary to attain a level of communication uniformity among affected entities. If protocols differ dramatically among entities they could be ineffective.</b></p>		
pacificorp	No	<p>PacifiCorp supports the proposed language referenced under R1 and the definition of "Operating Instruction" but does not support the following language proposed under R1.4:"Instances where alpha-numeric clarifiers are necessary when issuing an oral</p>

Organization	Yes or No	Question 1 Comment
		<p>Operating Instruction or Reliability Directive, and the format for those clarifiers.”Under the proposed draft, instances where alpha-numeric clarifiers are “necessary” are not clearly defined. In the absence of a clear definition, the identification of such instances is open to interpretation by both the entity and the auditor. Moreover, requiring the use of alpha-numeric clarifiers is not warranted when the requirements listed in R1.5 - R1.8 (requiring the strict use of three-way communication) alleviate any possibility of miscommunication, which PacifiCorp understands to be the drafting team’s intent in the development of separate Requirement R1.4. PacifiCorp believes implementing the use of alpha-numeric clarifiers poses additional risk due to the introduction of ambiguous language.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes the current draft allows the flexibility for an entity to determine the instances where R1.4 would be necessary. The OPCPSDT reminds commenters they have significant flexibility on the “how” to develop their communication. The entity is to define the instances where they determine alphanumeric clarifiers shall apply.</b></p>		
Reliability First	No	<p>Reliability First abstains and offers the following comments for consideration:</p> <p>1. Requirement R1 and Requirement R3 - Reliability First questions the reasoning behind the term “where applicable” in the last sentence of Requirement R1 and Requirement R3. Can the SDT provide examples when there would be instances where an Entity would not need to address a sub-part within their documented communication protocols? Reliability First believes all sub-parts under Requirement R1 and Requirement R3 should be addressed within the respected protocols.</p> <p><b>Response: The OPCPSDT agrees that entities should address all protocols that apply to them. Some entities have pointed out their asset density; locations and their organizational structure negate the requirement for some protocols. An example is a BA that would never issue Operating Instructions for Transmission interface Elements/Facilities. The language referenced is how the OPCPSDT addressed these exceptions with those entities.</b></p>

Organization	Yes or No	Question 1 Comment
		<p>2.Requirement R1, Part 1.9 - ReliabilityFirst does not believe it is appropriate for Requirement R1, Part 1.9 to be addressed within the documented communication protocols. It is unclear how an entity would address “coordination” of its protocol within the protocol itself. ReliabilityFirst does agree with the concept of having the responsible entities be aware of each other’s communication protocols and thus recommend elevating this to a stand-alone requirement. ReliabilityFirst recommends the following for consideration as a new R3, “Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall make available its documented communication protocols that outline the communications expectations of its System Operators.”</p> <p><b>Response: The OPCPSDT agrees and has changed the wording of R1, to eliminate Part 1.9.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
CenterPoint Energy Houston Electric L.L.C.	No	See comments below
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
Occidental Energy Ventures Corp	No	See comments below.
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
Southern Company - Southern Company Services, Inc.; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation;	No	<p>Southern Company agrees with the new definition.Southern Company believes that Requirements R3 and R4 should be deleted.</p> <p>A. Southern Company believes that Requirements R3 and R4 (applicable to Distribution Providers (“DPs”) and Generator Operators (“GOPs”)) should be deleted from the proposed COM-003 standard because the burdens placed on Balancing Authorities (“BAs”), Reliability Coordinators (“RCs”) and Transmission Operators (“TOPs”) by Requirements R1 and R2:</p>



Organization	Yes or No	Question 1 Comment
<p>Southern Company Generation and Energy Marketing</p>		<p>(a) sufficiently tighten communications protocols with DPs and GOPs, (b) render Requirements R3 and R4 administrative, unnecessary, and redundant, counter to FERC’s objectives as implemented by the NERC Paragraph 81 Task Force, and (c) potentially expose some Registered Entities to double jeopardy violations of COM-003-1. Specifically, Requirement R1 provides that BAs, RCs, and TOPs must develop and implement documented communication protocols that</p> <p>(a) address instances where the issuer of an oral two-party communication Operating Instruction is required to confirm that the DP or GOP recipient’s response was accurate or to reissue the Operating Instruction to resolve the misunderstanding (R1.5); and (b) to address coordination with affected DPs’ and GOPs’ communication protocols (R1.9). Requirement R2 further requires BAs, RCs, and TOPs to develop methods that assess communication practices and implement corrective actions necessary to meet the expectations outlined in these same protocols. Note that this assessment method would necessarily include assessment of the expectations included in the protocols regarding DPs and GOPs as required by R1.5 and R1.9.</p> <p>Meanwhile, proposed Requirement R3 would require the recipient DPs and GOPs to develop their own documented communications protocols that outline the communication expectations already addressed in the R1 protocols. [Note that the Rationale and Technical Justification for COM-003-1 specifies that Requirements R1 and R2 are addressed to entities that both issue and receive Operating instructions (BAs, RCs, and TOPs) whereas Requirements R3 and R4 are addressed to entities that only receive Operating Instructions.] Requiring DPs and GOPs in R3 to develop protocols outlining the communications expectations of its operators -- and requiring DPs and GOPs in R4 to assess those same operators’ communications practices and implement corrective actions -- is redundant and unnecessary when those same expectations are already being documented by BAs, RCs, and TOPs in the R1 protocols, are already being coordinated with DPs and GOPs under R1.9, and are already being</p>

Organization	Yes or No	Question 1 Comment
		<p>assessed and corrected by the BAs, RCs, and TOPs as required by R2. Therefore, requiring DPs and GOPs to go through the same motions simply creates another layer of documentation that strains limited resources and does little to enhance the reliability of the Bulk Electric System.</p> <p>B. These duplicative exercises created by Requirements R3 and R4 run counter to the objectives directed by FERC in Paragraph 81 of FERC’s March 15, 2012 Order on NERC’s proposed “Find, Fix, and Track” (“FFT”) initiatives (“FFT Order”) as implemented by the P 81 Task Force. In Paragraph 81 of the FFT Order, FERC noted that “some current requirements likely provide little protection for Bulk-Power System reliability or may be redundant.” In complying with FERC’s directives, the Paragraph 81 Task Force set out to identify standards that</p> <ul style="list-style-type: none"> <li>(a) do “little if anything, to benefit or protect the reliable operation of the BES” and</li> <li>(b) among other possible criteria, are either: <ul style="list-style-type: none"> <li>“(a) Administrative in nature, do not support reliability, and are needlessly burdensome; or</li> <li>(b) Require responsible entities to develop documents that are not necessary to protect BES reliability; or</li> <li>(c) Impose documentation updating requirements that are out of sync with the actual BES operations, unnecessary, or duplicative; or</li> <li>(d) Redundant with another FERC-approved Reliability Standard requirement(s), the ERO compliance and monitoring program, or a governmental regulation.” (See Paragraph 81 Task Force Technical White Paper.) With respect to this last criterion of redundancy, the Task Force specifically stated that it is “designed to identify requirements that are redundant with other requirements and are therefore unnecessary. Unlike the other criteria listed ... in the case of redundancy, the task or activity itself may contribute to a reliable BES, but it is not necessary to have two duplicative requirements on the same or similar task or activity.” (emphasis added). By creating duplicative requirements on both ends of a coordinated communication</li> </ul> </li> </ul>

Organization	Yes or No	Question 1 Comment
		<p>scheme between issuing BAs/RCs/TOPs and recipient DPs/GOPs, the Standards Drafting Team is creating an unnecessary administrative burden that does “little, if anything, to benefit or protect the reliable operation of the BES.” Even if it may be argued that requiring double coordination from both issuer and recipient somehow contributes to a reliable BES, “it is not necessary to have the two duplicative requirements on the same or similar task or activity.” Proposed Requirements R3 and R4 would fit all of the criteria listed above that the Paragraph 81 Task Force is using to identify candidates for retirement and/or revision. C. Finally, the risk created by proposed Requirements R3 and R4 in conjunction with R1 and R2 is more than simple administrative duplication. For vertically integrated entities that are registered both as issuing BAs/RC/TOPs and recipient DPs/GOPs, the redundancy created by Requirement R3 and R4 could potentially expose them to double penalties for a single violation. Because of the duplicative documentation and coordination requirements in R1/R2 and R3/R4, an auditor could interpret a single instance where the communications protocol of an issuing BA/RC/TOP did not match up with the recipient DP/GOP as multiple violations. In such an instance, both the issuers and the recipients could conceivably be penalized because the issuer’s communications protocols were not coordinated with the recipient’s communications protocols and this lack of coordination was not assessed and remedied.</p> <p>If the Standards Drafting Team chooses not to delete Requirements R3 and R4, then Southern suggests that the following rewording of R3 and R4 would be beneficial. If the Standards Draft Team does not delete Requirement R3 and R4 in their entirety, then Southern suggests that R3 and R4 be reworded such that the entities work together to implement and coordinate one set of issuers’ communications protocols (i.e., that of the BAs/RCs/TOPs) instead of two sets of both issuers’ and recipients’ protocols. This should help to “tighten” the communications protocols as directed in Order 693 and to mitigate some of the confusion and duplicative documentation that could arise from Requirements R3 and R4 as written:</p> <p><i>”R3. Each Distribution Provider and Generator Operator shall implement the</i></p>

Organization	Yes or No	Question 1 Comment
		<p><i>documented communication protocols of its associated BA, RC, and TOP that define the communications expectations of R1. The documented communication protocols will address, where applicable, the following: [Violation Risk Factor: Low] [Time Horizon: Long-term Planning ] ...."and"</i></p> <p><i>R4. Each Distribution Provider and Generator Operator shall develop method(s) to assess its communications practices and implement corrective actions necessary to meet the expectations in the documented communications protocols developed for Requirement R1."Conforming revisions would also need to be made to the language in the Measures, VRFs, and VSLs as applicable.</i></p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT changed draft 6 and believes it addresses your concerns.</b></p>		
Tacoma Power	No	<p>Tacoma Power supports and strongly suggests reverting back to the Draft 2 definition, "Operating Communication - Communication of instruction to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System."</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The definition has been changed in response to past industry comments over several drafts.</b></p>		
City of Austin dba Austin Energy	No	<p>The latest version of COM-003 introduces a potential conflict with COM-002 related to the use of one-way burst messaging systems to issue a Reliability Directive. In COM-003, the follow Requirements apply:</p> <p>R1.7 Instances where the issuer of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) is required to verbally or electronically confirm receipt from at least one receiving party.R1.8 Require the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the issuer if the communication is not understood.R3.3 Require the receiver of an oral Operating</p>

Organization	Yes or No	Question 1 Comment
		<p>Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the issuer if the communication is not understood. In other words, COM-003 allows one-way burst messaging for Reliability Directives and prescribes:</p> <ul style="list-style-type: none"> <li>o the issuer confirm receipt from at least one receiving party</li> <li>o the receiver request clarification from the issuer if the communication is not understood</li> </ul> <p>However, COM-002 has the following requirements:</p> <p>R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase, or recapitulate the Reliability Directive.</p> <p>R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall either:</p> <ul style="list-style-type: none"> <li>o Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or</li> <li>o Reissue the Reliability Directive to resolve a misunderstanding.</li> </ul> <p>In other words, in the case of a one-way burst message used for Reliability Directives, COM-002 does not allow for only those responses required in COM-003 but instead requires a full 3 way communication from all parties. This potentially sets up both the issuer and receiver for violating COM-002 if they respond to a one-way burst message Reliability Directive as the requirements indicate in COM-003. In order to fully comply with BOTH standards, the receiver would have to contact the issuer and repeat what was said on the original burst message; then, the issuer would confirm the response was accurate before acting on the message.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has eliminated R1, Parts 1.7, 1.8, and 3.3, which reference requirements for all calls.</b></p>		
NERC	No	<p>This will require each entity to develop its own unique protocol. This will not "tighten up" communications. Having each entity follow its own protocol will complicate and confuse communications. One entity will be attempting to communicate with another entity which is not familiar with the protocol being used by the first entity because the second entity uses a different protocol. Protocols if required should be standardized. Moreover, the proposed language requires a protocol that "meets the expectations of</p>

Organization	Yes or No	Question 1 Comment
		<p>its System Operators". The plain meaning of that sentence as writtem is that the protocol meet the expectations of the individual workers, not the entity itself. If this change is going to be approved, should not it read "Each (entity) shall develop protocols that PROVIDE ITS expectations of its System Operators"?</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has substantially altered the standard by changing the R1 language to require the TOP, BA and RC to develop the protocols subject to approval of the RC.</b></p>		
<p>Independent Electricity System Operator</p>	<p>No</p>	<p>We agree with most of the changes made. We offer a preferred wording for Part 1.4, and have a concern over the ambiguity of Part 1.6 and Part 1.8.</p> <p>Part 1.4 states that:1.4 Instances that alpha-numeric clarifiers are necessary when issuing an oral Operating Instruction or Reliability Directive, and the format for those clarifiers. A preferable description would say that the protocol should address the risk of miscommunication arising from alpha-numeric identifiers. This could be addressed through the use of the phonetic alphabet or through different means if local conditions dictate a different approach.</p> <p><b>Response: The requirement permits the entity to determine the circumstances where they would employ alphanumeric clarifiers. The examples you cited: “The phonetic alphabet or through different means if local conditions dictate a different approach” would be acceptable.</b></p> <p>As noted above, we are concerned over the ambiguity of Part 1.6, which states that:            1.6 Require the recipient of an oral two party, person-to-person Operating Instruction to repeat, restate, rephrase, or recapitulate the Operating Instruction, if requested by the issuer.</p> <p>When read together with the last sentence in R1, “The documented communication protocols will address, where applicable, the following:”, this part is unclear as to whether it is to identify the instances that the repeat is required, or that the documentation needs to include explicit statements that the issuer needs to request a repeat when issuing an operating instruction or reliability directive which the issuer</p>

Organization	Yes or No	Question 1 Comment
		<p>feels a repeat is necessary. This sub-requirement part, as written, is ambiguous and appears to be more applicable to the instruction recipient than the issuer. When read together with Part 3.2, Part 1.6 appears to be requiring the issuer to identify the instances that a repeat is required. We therefore suggest the SDT to revise Part 3.2 as follows:</p> <p>1.6 Instances where it requires the recipient of an oral two party, person-to-person Operating Instruction to repeat, restate, rephrase, or recapitulate the Operating Instruction, if requested by the issuer.</p> <p><b>Response: The OPCPSDT agrees and has reworded R1, Part 1.6 (Now Part 1.5) to reflect its intent that a repeat back is required. The OPCPSDT has elected to eliminate R3 in its entirety.</b></p> <p>Similar concerns with Part 1.8 except the mirror part 3.3 does not contain the wording “if requested by the issuer”. Hence, we assume that the recipient is required to request clarification from the issuer if the communication is not understood without having to be asked. Therefore, we propose Part 1.8 be revised as follow:1.8 A stipulation that the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the issuer if the communication is not understood.</p> <p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has eliminated R1, Parts 1.7, 1.8, and 3.3, which reference requirements for all calls.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
Tennessee Valley Authority	No	<p>We agree with the definition of Operating Instruction. While we also can agree to the changes made to R1, we feel R3 in its entirety is unnecessary and duplicative. Removal of the word “develop” would eliminate double-jeopardy concerns. R3 could be acceptable if “develop and” is omitted and “as developed in R1” is inserted after “protocols” and before “that.” It should be noted that this suggestion only applies to the sub-requirements in R1 that correspond to the proposed sub-requirements in R3.</p>

Organization	Yes or No	Question 1 Comment
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has eliminated R3 in draft 6.</b></p>		
<p>Western Electricity Coordinating Council</p>	<p>No</p>	<p>We do not agree with the revisions to the language of R1 and R3. The changes are a lowering of the bar for reliability. Earlier versions identified specific communication protocols for each BA, RC, and TOP. These specific requirements would have resulted in a consistent approach to communications between all system operators. The proposed revisions couple result in varying procedures that do not close the gap in communications. The watered-down versions of the requirements are essentially a fill-in-the-blank type of standard allowing each applicable entity to develop their own protocols.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes WECC is permitted to create communication protocols that are robust and as comprehensive as it desires. The OPCPSDT would recommend that all entities create strong protocols.</b></p>		
<p>Ameren</p>	<p>No</p>	<p>We do not believe that we need a definition for the term “Operating Instruction” and we would like to see this defined in the entities protocol. However if a definition is included, we ask the SDT to require an RC, TOP, or BA to identify when an Operating Instruction is used to communication to a GOP or DP.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has considered this request often and believes it has merit, but it may create undue burdens on some operators. If an entity wishes to announce an “Operating Instruction”, it may incorporate that in its communication protocols.</b></p>		
<p>Public Service Enterprise Group</p>	<p>No</p>	<p>We found what we believe to be a typo in the definition of "Operating Instruction." The defined term “Operating Instruction” has this phrase: “...where the recipient of the command is expected to act, to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.” The comma after “act” should be removed because it is not grammatically correct. If removed, the phrase would become: “...where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.</p>



Organization	Yes or No	Question 1 Comment
<p>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has corrected the error.</p>		
<p>SPP Standards Review Group</p>	<p>No</p>	<p>We suggest adding 'as determined by the Functional Entity' to R1 to clarify that the protocols are those specifically determined by the applicable responsible entity:                      'The documented communication protocols will address, where applicable as determined by the Functional Entity, the following:'</p> <p><b>Response: The OPCPSDT believes that is redundant based on the previous addition of "where applicable".</b></p> <p>Is the intent of R1.3 for applicable entities to maintain a list of common name identifiers which must be utilized in communications with all affected entities? If so, a similar requirement (R18) in TOP-002-2 is currently proposed to be eliminated in TOP-002-3. Therefore it shouldn't be added back by this requirement. Can the drafting team be more specific as to exactly what is required in R1.3 without going overboard as in the existing wording? We understand the need to be sure that affected entities do not have any misunderstandings regarding the specific facility that is at issue. However, our experience does not indicate that this is a problem. If we can't relax R1.3, we suggest eliminating it altogether.</p> <p><b>Response: R1.3 is designed to increase familiarity with Transmission interface Elements and Facilities to prevent confusion and increase situational awareness. The requirement calls for entities to ensure that operators are aware of the names or designators of interface equipment between those entities. It is up to the affected entities to determine how they would accomplish this through their communication protocols. One example may be designate in the documented Communication Protocols to use the name of the Transmission interface Element/Facility assigned by the owner of such Element/Facility.</b></p> <p>We understand the need to be sure that affected entities do not have any misunderstandings regarding the specific facility that is at issue. However, our experience does not indicate that this is a problem. If we can't relax R1.3, we suggest eliminating it altogether since we believe this not does significantly impact the</p>

Organization	Yes or No	Question 1 Comment
		<p>reliability of the BES.</p> <p><b>Response: The requirement focuses on interface Elements and Facilities only. An entity may develop the protocols in a manner that supports their unique operating footprint.</b></p> <p>The use of the term ‘coordination’ in R1.9 causes concern in determining exactly what is required to coordinate. This could become a compliance nightmare for applicable entities. We suggest replacing R1.9 with “Provide each affected Reliability Coordinator, Balancing Authority, Transmission Operator, Distribution Provider, and Generator Operator with its communication protocols.”</p> <p><b>Response: The OPCPSDT agrees and has changed the wording of R1, to eliminate Part 1.9.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
Idaho Power Company	No	<p>Yes for R1 and R3. No for the definition of "Operating Instructions". It is not written very well and is difficult to understand. The language below is offered as a suggestion to simplify the definition.</p> <p>Operating Instruction -A command by a System Operator of a Reliability Coordinator, Transmission Operator, or Balancing Authority where the recipient is instructed to change or preserve the state, status, output, or input of any portion of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has considered your comments and elects to maintain the existing definition of an Operating Instruction because it reflects the response to many other comments from previous drafts.</b></p>		
SERC OC Standards Review Group	No	
ISO/RTO Standards Review	No	

Organization	Yes or No	Question 1 Comment
Committee		
South Carolina Electric and Gas	No	
ISO New England Inc.	No	
Cogentrix Energy Power Management	No	
Vijayraghavan	No	
Manitoba Hydro	Yes	(1) Definition “Operating Instruction” - reference is made to both ‘Bulk Electric System’ and ‘BES’. For consistency, either the words or acronym should be used.
<b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has made the correction.</b>		
ACES Standards Collaborators	Yes	(1) We appreciate the efforts of the drafting team in developing this standard and the steps the team took to resolve industry’s concerns. (2) We continue to have concerns that the glossary term “Operating Instruction” overlaps with “Reliability Directive.” The standard as written allows flexibility on how to deal with these two terms/situations and gives the registered entity the responsibility to handle these types of communications in its protocol. Because of the flexibility and in the spirit of moving forward, we can support the approach by the drafting team that would allow NERC to address FERC concerns. This represents a good balance.
<b>Response: The OPCPSDT thanks you for your comments. The intention of the OPCPSDT is to balance uniformity with enough flexibility. Draft 6 includes more language to further separate Operating Instructions and Reliability Directives</b>		
Duke Energy	Yes	R1.7, R1.8, and R3.3 - All Call should not be capitalized since it is not a defined term. It should instead be placed in quotation (“All Call”).R1.6, R1.8, R3.2, and R3.3 - Change the word “Require” to “Requirement for” to better align grammar with R1.
<b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has eliminated R1, Parts 1.7, 1.8, and R3, Part 3.3, which</b>		

Organization	Yes or No	Question 1 Comment
reference requirements for all calls. Also, The OPCPSDT has eliminated R1, Parts 1.6 and R3, Part 3.2.		
MISO	Yes	While MISO is not opposed to the current version of COM-003-1, it remains concerned regarding the overlap between COM-002-3 and COM-003-1. As written, the definition of “operating instruction” encompasses “reliability directives”. This overlap and the application of multiple separate standards to operator communications in general is likely to result in ambiguity and confusion. Further, that only certain sub-requirements of COM-003-1 also mention reliability directives further confuses the applicability of these standards. While the identified overlap and application is manageable, it is recommended that this overlap be addressed at the earliest opportunity. One clear, succinct standard that addresses both operator communications, whether reliability directives or operating instructions, is respectfully recommended.
<b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has removed references to Reliability Directive.</b>		
Northeast Power Coordinating Council	Yes	
Seattle City Light	Yes	
Hydro One Networks Inc.	Yes	
MRO NSRF	Yes	
Bonneville Power Administration	Yes	
Salt River Project	Yes	
San Diego Gas & Electric	Yes	
Arizona Public Service Company	Yes	
Pacific Gas and Electric Company	Yes	

Organization	Yes or No	Question 1 Comment
Muscatine Power and Water	Yes	
Self	Yes	
Georgia System Operations Corporation	Yes	
Exelon	Yes	
City of Garland	Yes	
Clark Public Utilities	Yes	
NIPSCO	Yes	
The United Illuminating Company	Yes	
Edison Mission Marketing & Trading	Yes	
American Transmission Company	Yes	
CPS Energy	Yes	
SMUD/Balancing Authority of Northern California		<p>SMUD would like to thank the Drafting Team for their efforts. While we agree with the intent of COM-003 SMUD believes the requirements R1.5 &amp; R1.5 are too vague. Requiring the receiving party to repeat back the Operating Instruction only (emphasis added) if requested does not provide insurance that the receiving party would have a clear understanding of the necessary actions intended by the issuing party.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes the requirement for a repeat back of an Operating Instruction is important because it allows the issuer to determine whether a recipient understands a command. The issuer can then reissue the command until they are convinced the recipient understands it.</b></p>		

2. The SDT has proposed new language in COM-003-1, R2 and R4: “Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop method(s) to assess System Operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols. (the same language exists for R3, except DPs and GOPs listed as applicable entities and the use of “operators” instead of “System Operators”). ” Do you agree with these proposed requirement changes? If not, please explain in the comment area of the last question:

**Summary Consideration:**

**Requirements (Question 2 Comments on R2 and R4):**

A majority of the commenters expressed concerns over how an entity’s internal controls to improve System Operators’ communication performance would be audited. The commenters state that auditing internal controls is contrary to both, existing ERO doctrine and ongoing initiatives that are seeking to improve the effectiveness of the audit process. Some commenters also claim the potential for double jeopardy exists. The lack of certainty over how compliance would be administered caused commenters significant concern.

**The OPCPSDT understands the commenters’ concerns. The OPCPSDT decided to eliminate the COM-003-1, draft 5, R2 and R4 requirements in draft 6. Draft 6 features a results based approach that clearly specifies compliance and is linked to reliability results. The draft 6 requirements will also reduce the exposure of entities to voluminous compliance documentation.**

The OPCPSDT points out that many other commenters responded positively to the use of internal controls and preferred the assess and correct requirement.

**After consideration of all of the comments, the OPCPSDT voted for the approach featured in COM-003-1, draft 6.**

Organization	Yes or No	Question 2 Comment
NIPSCO	No	"Each Distribution Provider and Generator Operator shall develop and implement documented communication protocols that outline the communications expectations of its operators." This language is unclear as to the communication expectation to its operators. Does this address the communications between the DP and the TOP only? Or does this apply to the communication between the DP and field personnel?
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified COM-003-1, draft 6 to address your concern.</b></p>		

Organization	Yes or No	Question 2 Comment
Manitoba Hydro	No	(1) Compliance Data Retention, 1.2 - COM-001 and COM-002 standards both read 3 months or 90 days for the retention of evidence. It is unclear as to why the retention has been doubled in this standard to 180 days for R2, M2 and R4, M4. For consistency and simplicity, 90 days should be used.
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified COM-003-1, draft 6 to address your concern.</b></p>		
CPS Energy	No	Distribution Providers (DP) may be co-located in the same room with Transmission Operators (TOP) and would have oral communications and not use a telephone or other messaging system. Generator Operators (GOP) should have a separate standard.
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes the risk of misunderstanding and miscommunication exists in face-to-face communication as you describe. The use of communication protocols reduce that risk and subsequent harm it could cause during BES operations. The current draft of the standard would allow an entity to develop its own communication protocols to identify the instances of when to use the protocols. There is no requirement to use a telephone or messaging system. The OPCPSDT has modified COM-003-1 to address your concern.</b></p>		
American Electric Power	No	If an entity has a control in place, but that control is somehow not viewed favorably during an audit, is that entity potentially in violation of an additional requirement? R2 and R4 appear to have potential double jeopardy implications.
<p><b>Response: The OPCPSDT thanks you for your comments. Draft 6 eliminates R2 and R4 “assess and correct” language and ties performance in avoiding communication related events that would generate a “Reliability Directive.”</b></p>		
Western Small Entity Comment Group	No	In the comment area of the last section as asked.
<p><b>Response: The OPCPSDT thanks you for your comments. We will respond to those comments.</b></p>		
Georgia System Operations Corporation	No	Internal controls-like language was first introduced into draft 3, R3 and R4. We note that after the technical conference held in Atlanta - Feb 2013, draft 5, R2 and R4 appear to still have remnants of this control language. As discussed in length, it is not appropriate to have such control language in reliability requirements. As GSOC recalls,

Organization	Yes or No	Question 2 Comment
		<p>insertion of R2 and R4 was not discussed or agreed upon at the conference.</p> <p><b>Response: The Draft 6 eliminates R2 and R4 “assess and correct” language and ties performance in avoiding communication related events that would generate a Reliability Directive.</b></p> <p>GSOC recalls that statements were made by participants that it was pre-mature to include controls language in the standard/requirement at this time. So it appears that revisions to the contrary when were made when in fact NERC statements were made that the full RAI process would not be in place until 2016.GSOC still supports the RAI as it “proposes to transition away from a process-driven enforcement strategy to a proactive, risk-based strategy that clearly defines, communicates, and promotes desired entity behavior in an effort to improve the reliability of the BPS.” However, this transition has not been implemented yet. Until NERC transitions the Compliance Monitoring and Evaluation Program (CEMP) to the risk-based strategy, we are still under the past/current process-driven enforcement strategy. A primary concern of GSOC is that until the RAI is developed and provides audit guidance regarding treatment of entity control measures, then auditor subjectivity may creep into the audit process. GSOC believes that once a transition to a risk-based strategy is complete, only then will there be an established “set of parameters” to “guide the exercise of enforcement discretion.” “The parameters that would guide the exercise of discretion as well as the protections” “would be in place to ensure due process and to ensure that enforcement decisions are sound and reflect a consistent application of the ERO enterprise enforcement strategy.”More specifically, The “decline to pursue option” will have replaced Find, Fix, and Track “after necessary training of [NERC and Regional] personnel, industry and stakeholder outreach, and development of process improvements.” At that time, “for those violations that pose a serious or substantial risk, or are not proper candidates for the exercise of enforcement discretion, the ability to impose penalties up to the statutory maximum or adopt increased monitoring and broader audit scope must be retained.” At that time, internal controls will be the way to do business (operations/planning) and the process-driven zero-tolerance enforcement process will only apply to those serious or substantial risks. Regarding</p>



Organization	Yes or No	Question 2 Comment
		<p>zero tolerance, some in industry have the false perception that putting internal controls-like language in a reliability requirement NOW will subsequently allow auditors to apply non-zero tolerance. To the contrary, GSOC believes the current process-driven CMEP inclusive of requirements with controls-like language actually requires zero-tolerance treatment. If this standard is passed in its present form an auditor will not have the discretion to “decline to pursue” and must treat every possible violation the same. Of course, NERC/Regional compliance enforcement can now treat some possible violations as applicable to Find, Fix, Track. But that does not require controls language in a requirement. Accordingly, mitigating COMPLIANCE risk has been and still is a driver for the industry’s compliance programs. Once the CMEP is transitioned to the risk-based strategy, then such language will be in place with the CMEP and the industry can focus more on RELIABILITY risk and less on COMPLIANCE risk.</p> <p><b>Response: Draft 6 eliminates R2 and R4 “assess and correct” language and ties performance in avoiding communication related events that would generate a Reliability Directive.</b></p> <p>In addition, GSOC notes that controls-like language is a requirement which is administrative and therefore meets the criteria under P81 for exclusion from reliability requirements. It is not a risk-based reliability requirement. A reliability requirement is one that is (as the statutory definition says) a requirement to provide for reliable operation of the bulk-power system. A reliability requirement includes requirements for the operation of existing bulk-power system facilities, including cyber-security protection, and the design of planned additions or modifications to such facilities to the extent necessary to provide for reliable operation of the bulk-power system. This administrative requirement does not meet the criteria for being a reliability requirement.</p> <p><b>Response: Draft 6 eliminates R2 and R4 “assess and correct” language and ties performance in avoiding communication related events that would generate a Reliability Directive.</b></p>

Organization	Yes or No	Question 2 Comment
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>		
<p>Oncor Electric Delivery Company LLC</p>	<p>No</p>	<p>Oncor supports the shift in compliance to the internal controls approach and we look forward to NERC providing a programmatic/principles framework in a collaborative approach with the industry. In the absence of this framework, it is unknown how the concept of "assess and correct" will evolve. As the framework is developed including the "assess and correct" concept, Oncor requests that continuous focus be placed on implementing principles including this concept and not requiring or specifying internal controls which would place additional compliance burden on entities. The internal controls principles/framework should enable entities to establish internal controls model utilizing deficiency correction approach but should not mandate the approach at the Standard/Requirement level. Internal Controls Program needs to be defined by an Entity, it is not a "One Size Fits All". The standards/RSAs should reflect this understanding. Oncor does not see how the Drafting Team adequately addressed this concern. NERC and the rest of the industry should work together and define the framework around Internal Controls.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. Draft 6 eliminates R2 and R4 "assess and correct" language and ties performance in avoiding communication related events that would generate a Reliability Directive. Draft 6 does not address or reference internal controls in its requirements.</b></p>		
<p>pacificorp</p>	<p>No</p>	<p>PacifiCorp does not support the following language referenced under R2 (with substantially similar language in R4) as it pertains to the Balancing Authority, Reliability Coordinator, Transmission Operator, Generator Operator, and Distribution Provider: "...shall develop method(s) to assess System Operators' communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R1." In the absence of any proposed criteria for measuring how the aforementioned method(s) are developed, determining whether an entity has successfully met the expectations it has established in its communication protocols is subject to a multitude of interpretations. Moreover, Measures M2 and M4 are focused exclusively on the results of an entity's</p>

Organization	Yes or No	Question 2 Comment
		<p>periodic assessment and corrective actions. PacifiCorp believes that a results-based review of an entity’s assessment fails to provide any insight into the quality of the assessment itself.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. Draft 6 eliminates R2 and R4 “assess and correct” language and ties performance in avoiding communication related events that would generate a Reliability Directive. Draft 6 does not address or reference internal controls in its requirements.</b></p>		
City of Garland	No	<p>R2 &amp; R4 Requirements are written assuming that corrective actions will be necessary. Should be written to state corrective actions “if necessary”</p>
<p><b>Response: The OPCPSDT thanks you for your comments. Draft 6 eliminates R2 and R4 “assess and correct” language and ties performance in avoiding communication related events that would generate a Reliability Directive. Draft 6 does not address or reference internal controls in its requirements.</b></p>		
Tennessee Valley Authority	No	<p>R2 is acceptable and R4, as stated above for R3, is unnecessary and duplicative.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. Please refer to the response to your prior comment.</b></p>		
ReliabilityFirst	No	<p>ReliabilityFirst abstains and offers the following comments for consideration:</p> <ol style="list-style-type: none"> <li>1. Requirement R2 - ReliabilityFirst believes the concept of implementation of the method(s) to assess System Operators’ communication should be added to the requirement. If the Entity is not required to implement the method(s), an Entity may never find any deficiencies and get to the point of implementing the corrective actions necessary to meet the expectations in its documented communication protocols. ReliabilityFirst recommends the following for consideration, <i>“Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop and implement method(s) to assess System Operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R1.”</i></li> <li>2. Requirement R4 - Similar to the comment on Requirement R2, ReliabilityFirst believes the concept of implementation of the method(s) to assess System Operators’</li> </ol>

Organization	Yes or No	Question 2 Comment
		<p>communication should be added to the requirement. ReliabilityFirst recommends the following for consideration,</p> <p><i>“Each Distribution Provider and Generator Operator shall develop and implement method(s) to assess operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R3.”</i></p>
<p><b>Response: The OPCPSDT thanks you for your comments. Draft 6 eliminates R2 and R4 “assess and correct” language and ties performance in avoiding communication related events that would generate a Reliability Directive.</b></p>		
<p>North American Generator Forum Standards Review Team</p>	<p>No</p>	<p>See answer to 4 below.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT will address your comments at that location</b></p>		
<p>Exelon</p>	<p>No</p>	<p>See comment #3 in the comment area of the last question</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT will address your comments at that location</b></p>		
<p>NIPSCO</p>	<p>No</p>	<p>See comments submitted on NIPSCO's behalf by Julaine Dyke</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT will address your comments at that location</b></p>		
<p>Georgia Transmission Corporation</p>	<p>No</p>	<p>See GTC’s comments above regarding deletion of R4. GTC also believes the same logic can apply to R2 and recommends to be deleted. Additionally, see GTC’s comments regarding the conflict with the drafting team’s proposal to inadvertently define a new function for the DP “operators”. Lastly, DPs do not issue Operating Instructions; DP field personnel only receive instructions from others.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. Draft 6 eliminates R2 and R4 “assess and correct” language and ties performance in avoiding communication related events that would generate a Reliability Directive. Draft 6 does not address or reference internal controls in its requirements.</b></p>		

Organization	Yes or No	Question 2 Comment
Southern Company - Southern Company Services, Inc.; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation; Southern Company Generation and Energy Marketing	No	See Southern’s comments above regarding deletion and/or modification of R4. If R4 was not part of this question then Southern’s answer would change to yes for this question. Additionally, GOPs do not issue Operating Instructions. They only receive instructions from others. GOPs should have a communications procedure as part of their operations. However, the methods used are proper business decisions made by the GOP. The content, thoroughness and effectiveness of a communications plan are excellent items to consider when assessing an internal compliance program.
<p><b>Response: The OPCPSDT thanks you for your comments. Draft 6 eliminates R2 and R4 “assess and correct” language and ties performance in avoiding communication related events that would generate a Reliability Directive. Draft 6 does not address or reference internal controls in its requirements.</b></p>		
Tacoma Power	No	Tacoma Power supports Draft 2 - The requirement to establish communication protocols should be identical for BA, TO, RC, GO, and DP. To make different requirements for different functions is very confusing for those who perform multiple functions. Go back to basic “3-part communication” (and include an option for push-to-talk). Remove fuzzy language such as “if requested”. The Standard should leave it up to the Entity to establish their communication protocols and procedures based upon the type of communication systems they are using. This draft seems to be trying to write the procedures for every type of possible communication equipment rather than set a standard for how to communicate.
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has substantially altered the standard by changing the R1 language to require the TOP, BA and RC to develop the protocols subject to the approval of the RC. This and other changes address many of your comments.</b></p>		
Indiana Municipal Power Agency	No	The COM-003-1 standard needs to be an independent document used to audit entities and the RSAW should not be used to address items not covered in the standard as to what is acceptable and what is not acceptable when it comes to instances when three-

Organization	Yes or No	Question 2 Comment
		<p>part communication is not properly followed by an entity during an audit. IMPA is concerned that an entity has one instance of a missed repeat back and per the entity's plan they address it and re-train for it; NERC could still call it a violation. The standard language needs to be clear about the latitude that an entity is given to work things out within their internal controls. The main item that the standard should do is to make sure that entities have communication plans and their internal controls within the communication plans contain a process to monitor and self-deal with corrective action of instances where its communication plan was not properly followed. This language needs to be clearly stated in the standard and not somewhat stated in the RSAW. IMPA believes the prior version of this draft standard was close when it used language on internal controls that stated "implement, in a manner that identifies, assesses, and corrects deficiencies...".</p>
<p><b>Response: The OPCPSDT thanks you for your comments. Draft 6 eliminates R2 and R4 "assess and correct" language and ties performance to avoiding communication related events that would generate a Reliability Directive.</b></p>		
<p>Florida Municipal Power Agency</p>	<p>No</p>	<p>Use of the term "System Operators" is ambiguous; does the requirement cause internal evaluation, or evaluation of neighboring System Operators? We assume the former and suggest adding "its" in front of "System Operators".</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The term "System Operator" has been eliminated from the requirements of draft 6 of COM-003-1.</b></p>		
<p>Ameren</p>	<p>No</p>	<p>We ask the SDT to delete requirements R3 and R4 because they are redundant and may cause double jeopardy for entities as these requirements are addressed in requirements R1 and R2 for the BA, RC, and TOP communication protocols with DPs/GOPs.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. Draft 6 eliminates R2 and R4 "assess and correct" language and ties performance to avoiding communication related events that would generate a Reliability Directive.</b></p>		
<p>Oklahoma Gas &amp; Electric</p>	<p>No</p>	<p>We believe that R2 and R4 should already be covered in PER-005</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT disagrees—training is only one of several means of</b></p>		

Organization	Yes or No	Question 2 Comment
<b>accomplishing the goals of COM-003-1.</b>		
SPP Standards Review Group	No	<p>We have concerns with the continued inclusion of Distribution Provider in the list of Applicable Entities. Although this is in response to a FERC directive, the risk that Distribution Providers present to the BES is minimal at best. Actions taken by Distribution Providers which impact the reliability of the BES, load shedding for example, are adequately covered under COM-002-3 which applies to emergency situations.</p> <p>There are also jurisdictional questions associated with FERC directing the inclusion of Distribution Providers. If the Distribution Provider must remain as an Applicable Entity, then we would propose deleting Distribution Provider from R3 and R4 and then follow with the addition of a new R5 and R6.R5.</p> <p>Each Distribution Provider that is the recipient of an oral Operating Instruction, other than Reliability Directives, shall:</p> <p>5.1 Use the English language, unless another language is mandated by law or regulation.</p> <p>5.2 Repeat, restate, rephrase, or recapitulate the oral Operating Instruction.</p> <p>5.3 For oral Operating Instructions issued as a one-way burst message to multiple parties in a short time period (e.g. an All Call system), request clarification from the issuer if the communication is not understood.</p> <p>R6. Each Distribution Provider shall develop method(s) to assess operators' communication practices and implement corrective actions necessary to meet the expectations in Requirement R5.</p>
<b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified COM-003-1 to address your concern.</b>		
Northeast Power Coordinating Council	No	
SERC OC Standards Review Group	No	

Organization	Yes or No	Question 2 Comment
ISO/RTO Standards Review Committee	No	
South Carolina Electric and Gas	No	
Edison Mission Marketing & Trading	No	
ISO New England Inc.	No	
Cogentrix Energy Power Management	No	
Vijayraghavan	No	
<b>Response:</b>		
ACES Standards Collaborators	Yes	(1) We appreciate the drafting team allowing the registered entity to have the flexibility in determining the assessment methods and corrective actions to implement. Further, we appreciate that the measures for these requirements state that the assessment should be “periodic” but do not impose any strict timeline. We recommend that the RSAW state the same or similar language, as the entity should be able to dictate how often the assessments occur in their protocols, policies, and procedures.
<b>Response: The OPCPSDT thanks you for your comments. Draft 6 eliminates R2 and R4 “assess and correct” language and ties performance to avoiding communication related events that would generate a Reliability Directive.</b>		
Seattle City Light	Yes	Seattle City Light is supportive of the proposed "assess and implement" approach to compliance for COM-003 R2 and R4.
<b>Response: The OPCPSDT thanks you for your comments. Draft 6 eliminates R2 and R4 “assess and correct” language and ties performance to avoiding communication related events that would generate a Reliability Directive.</b>		



Organization	Yes or No	Question 2 Comment
MISO	Yes	We believe the drafting team found a very reasonable solution to meet a FERC directive for a situation that deals with managing the quality of the millions of operator communications that occur annually.
<b>Response: The OPCPSDT thanks you for your comments.</b>		
Duke Energy	Yes	
MRO NSRF	Yes	
Luminant	Yes	
Bonneville Power Administration	Yes	
Salt River Project	Yes	
Western Electricity Coordinating Council	Yes	
San Diego Gas & Electric	Yes	
Arizona Public Service Company	Yes	
Pacific Gas and Electric Company	Yes	
Muscatine Power and Water	Yes	
Self	Yes	
Idaho Power Company	Yes	
NERC	Yes	
Public Service Enterprise Group	Yes	

Organization	Yes or No	Question 2 Comment
City of Austin dba Austin Energy	Yes	
Clark Public Utilities	Yes	
Occidental Energy Ventures Corp	Yes	
The United Illuminating Company	Yes	
Independent Electricity System Operator	Yes	
American Transmission Company	Yes	

3. Do you agree with the VRFs and VSLs for Requirements R1, R2, R3 and R4?

Summary Consideration:

VRFs and VSLs (Question 3):

The OPCPSDT acknowledges there were many comments on draft 5 regarding VSLs and VRFs and we appreciate the contributions.

The OPCPSDT has modified draft 6, and all of the VRFs and VSLs have been modified to reflect those changes. The elimination of the “assess and correct” language and the revisions to R1, R2 and R3 have resulted in extensive changes to VRFs and VSLs for draft 6.

Organization	Yes or No	Question 3 Comment
ACES Standards Collaborators	No	(1) There are a few changes that need to be made in the severe VSLs for R1 and R3. The severe VSL states, “The Responsible Entity did not implement any documented communication protocols as required in Requirement R1.” This statement is in direct conflict with the lower, medium and high VSLs because if an entity violated at least one documented communication protocol (low VSL), or two protocols (medium VSL), or three protocols (high VSL), then the entity violated “any.” We recommend striking the statement in the severe VSL to avoid this conflict.
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified draft 6, and all of the VRFs and VSLs have been modified to reflect those changes. The draft 6 approach has required substantial changes to the VSLs and VRFs.</b></p>		
ReliabilityFirst	No	<p>1. VSL for Requirement R1 - In order to capture instances where more than three parts were not addressed, the second VSL under the “High” category needs to be modified to state, “...did not implement three (3) or more of the nine (9) parts of...”</p> <p>2. VSL for Requirement R2 - ReliabilityFirst recommends including a lower bounds</p>

Organization	Yes or No	Question 3 Comment
		<p>around the “Medium VSL”. As written, an entity would fall into the Medium VSL range if they only implemented 1% or implemented 49% of the corrective actions. ReliabilityFirst recommends gradating the VSLs using 25% increments across all four VSLs.3. VSL for Requirement R4 - ReliabilityFirst recommends including a lower bounds around the “Medium VSL”. As written, an entity would fall into the Medium VSL range if they only implemented 1% or implemented 49% of the corrective actions. ReliabilityFirst recommends gradating the VSLs using 25% increments across all four VSLs.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified draft 6, and all of the VRFs and VSLs have been modified to reflect those changes.</b></p>		
Luminant	No	All comments are shown in response to Question 4.
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT will address your comments at that location.</b></p>		
Western Electricity Coordinating Council	No	Based on the changes we believe are necessary for Requirements R1 and R3, we beleive the VSLs should be changed accordingly.
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified draft 6, and all of the VRFs and VSLs have been modified to reflect those changes.</b></p>		
Ameren	No	Concerning the VRF and VSLs we ask the SDT to review the severity levels because we do not believe that any violations of this standard should be at either a High or Severe level since these are documentation requirements.
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes the VSL levels, in addition to adhering to NERC and FERC guidelines, properly reflect the threshold of severity for violations.</b></p>		
CPS Energy	No	I do not agree with the requirements, therefore I do not agree with the VRF's and VSL.
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified draft 6, and all of the VRFs and VSLs have been modified to reflect those changes.</b></p>		

Organization	Yes or No	Question 3 Comment
pacificorp	No	PacifiCorp does not support the VRFs and VSLs for Requirements R2 and R4. In keeping with PacifiCorp’s comment in Question 2, a method of assessment that is not explicitly defined and cannot be measured against a clear set of criteria makes it difficult for an entity or auditor to determine whether any of the corrective actions taken by an entity have fulfilled the expectations documented in their communication protocols. Assigning a severity level based on a percentage of completion is redundant when an entity cannot determine what a “complete” assessment is or the criteria by which it is measured.
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified draft 6, and all of the VRFs and VSLs have been modified to reflect those changes.</b></p>		
Georgia System Operations Corporation	No	R2 & R4 - we believe without any definitive guidance from NERC's still-undeveloped RAI, auditors will apply subjective judgment as to the adequacy of controls used to perform periodic assessments and therefore VRF and VSL are not appropriate.
<p><b>Response: The OPCPSDT thanks you for your comments. Draft 6 eliminates R2 and R4 “assess and correct” language and ties performance to avoiding communication related events that would generate a Reliability Directive. The OPCPSDT has modified draft 6, and all of the VRFs and VSLs have been modified to reflect those changes.</b></p>		
North American Generator Forum Standards Review Team	No	See answer to 4 below.
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our response at that location.</b></p>		
CenterPoint Energy Houston Electric L.L.C.	No	See comments below
<p><b>Response: The OPCPSDT thanks you for your comments. Please see our response at that location.</b></p>		
Salt River Project	No	The VSLs give a higher violation to a GO than a BA for exactly the same error, even though the consequences with the BA are much greater. A GO who fails to require 3-part responses when requested is tagged with a Moderate violation, the BA with a

Organization	Yes or No	Question 3 Comment
		lower. We believe the VRF should be Low rather than Medium for R4.
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified draft 6, and all of the VRFs and VSLs have been modified to reflect those changes.</b></p>		
Seattle City Light	No	The VSLs give a higher violation to a GO than a BA for exactly the same error, even though the consequences with the BA are much greater. A GO who fails to require 3-part responses when requested is tagged with a Moderate violation, the BA with a lower. Both should be lower.
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified draft 6, and all of the VRFs and VSLs have been modified to reflect those changes.</b></p>		
Clark Public Utilities	No	The VSLs give a higher violation to a GO than a BA for exactly the same violation, even though the consequences with the BA are much greater. A GO who fails to require 3-part responses when requested is tagged with a Moderate violation, the BA with a Lower. Both should be Lower.
<p><b>Response: The OPCP SDT thanks you for your comments. The OPCPSDT has modified draft 6, and all of the VRFs and VSLs have been modified to reflect those changes.</b></p>		
Southern Company - Southern Company Services, Inc.; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation; Southern Company Generation and Energy Marketing	No	We agree with the VRFs and VSLs for R1 and R2. As discussed above, R3 and R4 should not be part of the standard. To the extent R3 and R4 should be deleted or modified, the VRFs and VSLs should be modified accordingly.
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified draft 6, and all of the VRFs and VSLs have</b></p>		

Organization	Yes or No	Question 3 Comment
<b>been modified to reflect those changes.</b>		
Tennessee Valley Authority	No	We agree with the VRFs and VSLs for R1 and R2. Based on our previous comments, we do not agree with the need for R3 and R4, and therefore VRFs and VSLs for these requirements are not needed.
<b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified draft 6, and all of the VRFs and VSLs have been modified to reflect those changes.</b>		
Georgia Transmission Corporation	No	We agree with the VRFs and VSLs for R1. As discussed above, R3 and R4 should not be part of the standard. To the extent R3 and R4 should be deleted or modified, the VRFs and VSLs should be modified accordingly.
<b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified draft 6, and all of the VRFs and VSLs have been modified to reflect those changes.</b>		
SPP Standards Review Group	No	While we understand the process that gets us to the point where the VRFs for R1 and R3 are Low and those for R2 and R4 are Medium, in this situation we question the logic of the process. If developing a document only deserves a low VRF then how can we logically say that not implementing the items contained in the document is a medium? What happens if the document is flawed? This appears to be an inverted pyramid. We suggest using Low for all requirements.
<b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified draft 6, and all of the VRFs and VSLs have been modified to reflect those changes.</b>		
Oklahoma Gas & Electric	No	While we understand the process that gets us to the point where the VRFs for R1 and R3 are Low and those for R2 and R4 are Medium; however, in this situation we question the logic of the process. If developing a document only deserves a Low VRF then how can we logically say that not implementing the items contained in the document is a Medium? What happens if the document is flawed? We suggest using Low for all requirements.

Organization	Yes or No	Question 3 Comment
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified draft 6, and all of the VRFs and VSLs have been modified to reflect those changes.</b></p>		
SERC OC Standards Review Group	No	
South Carolina Electric and Gas	No	
Edison Mission Marketing & Trading	No	
Cogentrix Energy Power Management	No	
Tacoma Power	No	
Vijayraghavan	No	
Manitoba Hydro	Yes	<p>Although Manitoba Hydro is in general agreement with the standard, we have the following clarifying comments:</p> <p>(1) VSLs, R1 - the Severe category is missing the concept of ‘The Responsible Entity did not implement four or more documented communication protocols as required in Requirement R1’. As written, it skips from ‘three or more’ to not implementing any of them. There is a gap if there is a Responsible Entity that failed to implement for example, 5 of the protocols.</p> <p>(2) VSLs, R3 - for readability, the first paragraph should be written ‘The Responsible Entity did not address any parts of Requirement R3 in their documented communication protocols as required by Requirement R3.’.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified draft 6, and all of the VRFs and VSLs have been modified to reflect those changes.</b></p>		
Duke Energy	Yes	



Organization	Yes or No	Question 3 Comment
MRO NSRF	Yes	
Bonneville Power Administration	Yes	
San Diego Gas & Electric	Yes	
Arizona Public Service Company	Yes	
Pacific Gas and Electric Company	Yes	
Muscatine Power and Water	Yes	
Self	Yes	
Idaho Power Company	Yes	
NERC	Yes	
City of Austin dba Austin Energy	Yes	
NIPSCO	Yes	
Occidental Energy Ventures Corp	Yes	
The United Illuminating Company	Yes	
NIPSCO	Yes	
Independent Electricity System Operator	Yes	
MISO	Yes	

Organization	Yes or No	Question 3 Comment
American Transmission Company	Yes	
Oncor Electric Delivery Company LLC	Yes	

4. Do you have any other comments or suggestions to improve the draft standard?

**Summary Consideration:**

The content of Question four comments has been addressed in the previous three summaries and the consolidated summary.

Organization	Question 4 Comment
Manitoba Hydro	<p>(1) ‘Reliability Directive’ is referred to in R1, 1.1 of the COM-003-1 standard but is not currently a FERC approved definition, defined in the Glossary of Terms.  <b>Response: The term “Reliability Directive” has been approved by the NERC Board of Trustees. It is appropriate to use the term.</b></p> <p>(2) R1, 1.3 and Rationale and Technical Justification documents - reference is made to ‘interface’, which is not a defined term. Accordingly, its meaning is questionable. Consider removing or clarifying.  <b>Response: Interface refers to Elements and Facilities that border those of other entities and interact more directly between or among those entities. Knowledge of the assigned nomenclature of those Elements and Facilities improves situational awareness.</b></p> <p>(3) R1, 1.6 and 1.8 - requirement language is not consistent. For example, ‘recipient’ and ‘receiver’ are used but have the same meaning. Suggest beginning the requirements with the following text “Instances where....”  <b>Response: The SDT has modified the standard to address your concern.</b></p> <p>(4) R2, R4 - the word ‘periodically’ should be inserted before ‘assess’ in each of these requirements for consistency with the Measures and VSLs, which refer to ‘periodic assessments’.  <b>Response: Draft 6 eliminates R2 and R4 “assess and correct” language and ties performance to avoiding communication related events that would generate a Reliability Directive.</b></p> <p>(5) R2, R4 - the phrase ‘necessary to meet the expectations in its documented communication protocols’ is ambiguous and will be difficult to interpret when assessing compliance. Is this statement to be the</p>

Organization	Question 4 Comment
	<p>interpretation of the drafter of the protocols as to what is, in their opinion ‘reasonably necessary’?  <b>Response: Draft 6 eliminates R2 and R4 “assess and correct” language and ties performance to avoiding communication related events that would generate a Reliability Directive.</b></p> <p>(6) R3, 3.2 and 3.3 - requirement language is not consistent. For example, ‘recipient’ and ‘receiver’ are used but have the same meaning. Suggest beginning the requirements with the following text “Instances where....”  <b>Response: R3, Parts 3.2 and 3.3 have been eliminated in draft 6.</b></p> <p>(7) General Measures - there is lack of guidance with respect to both who the documentation is to be provided, and when. For example, periodically, upon request, etc.  <b>Response: The OPCPSDT has made extensive changes to the draft 6 standard that required full changes to the Measurements.</b></p> <p>(8) M1 and M3 - ‘ / ’ should be placed between the words ‘and’ and ‘or’.  <b>Response: The OPCPSDT has made extensive changes to the draft 6 standard that required full changes to the Measurements.</b></p> <p>(9) Section D, Compliance, 1.1 - the paraphrased definition of ‘Compliance Enforcement Authority’ from the Rules of Procedure is not the standard language for this section. Is there a reason that the standard CEA language is not being used?  <b>Response: The OPCPSDT is using the ERO’s standard Compliance language provided by the NERC legal department.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
<p>ACES Standards Collaborators</p>	<p>(1) The sub-parts of the protocols have grammatical errors, where the sub-parts do not correlate to the lead-in sentence. We recommend replacing the phrase “Require the recipient/receiver...” that is stated in sub-parts 1.6, 1.8, 3.2 and 3.3 with “Instances in which the recipient/receiver is required to...” in order to maintain consistency throughout the standard. Leaving these sections as mandates (verb phrases) could confuse auditors into thinking that these are zero defect requirements.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The SDT has modified the standard to address your concern.</b></p>	

Organization	Question 4 Comment
Exelon	<p>1) In the COM-003 FAQ document the response to question 5 states that R3 and R4 apply to the “recipient of the command” where the recipient is “expected to act, to change or preserve the state, status, output, or Element of the [BES] of Facility of the [BES]. In many Registered Entity organizations, the commands from a TOP, BA or an RC typically go through an intermediary dispatch control center. Then, if necessary, the commands are passed through to the associated DP or GOP. How does COM-003 apply to such organizations with respect to R3 and R4?</p> <p><b>Response: The OPCPSDT has substantially altered the standard making it “results” oriented and directly tying it to reliability. The draft 6 approach addresses some of the commenters concern, but sustains the applicability of the DP and GOP that will receive “Operating Instructions” because they can and do have the potential for impacting reliability on the BES.</b></p> <p>2) In the COM-003 FAQ document the response to question 3 states that entities “develop their own programs that support the requirements of COM-003.” Suggest that the SDT clarify that recorded lines are not specifically required and that other tools such as documented direct supervisory observation could be used.</p> <p><b>Response: That discretion is contained in COM-003-1, D. Compliance: 1.2 Data Retention.</b></p> <p>3) In R3 and R4 the term ‘operators’ is used, in generation stations this term is widely used and relates to different job functions. Suggest clarifying the term by stating ‘operators who receive Operating Instructions or Reliability Directives from a Balancing Authority, Reliability Coordinator or Transmission Operator’.</p> <p><b>Response: The OPCPSDT has substantially altered the standard making it “results” oriented and directly tying it to reliability. The draft 6 approach addresses does not refer to “operators”.</b></p> <p>4) The COM-003 language that includes ‘reliability directives’ has the potential to create a compliance issue with COM-002 related to “all calls” since some Transmission Operations use ‘all calls’ or ‘one way burst messaging’ to communicate reliability directives. These communication methods typically do not allow for a response or repeat back or for an acknowledgement of the response accuracy. The problems with COM-002 cannot be solved by making edits to COM-003. Instead, changes to COM-002 should be made to clarify that "all calls" or burst messaging systems can be used to deliver Reliability Directives.</p> <p><b>Response: The OPCPSDT agrees with your comments and has elected to remove “all calls” from the standard.</b></p>

Organization	Question 4 Comment
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
<p>Western Small Entity Comment Group</p>	<p>1) R3 (formerly R2) apparently now applies to all of DP’s or GO’s operating communication expectations, and not just to Operating Instructions or Reliability Directives. We fail to see what Reliability objective is accomplished by entities presenting all their communication protocols for audit, when the only real reliability concern is if the entity responds appropriately to an Operating Instruction or Reliability Directive. Although 3.1, 3.2, and 3.3 deal only with Operating Instructions and Reliability Directives, R3 itself does not share this limitation.</p> <p><b>Response: The OPCPSDT has substantially altered the standard making it “results” oriented and directly tying it to reliability. The proposed draft 6 approach addresses the commenters concern, but sustains the applicability of the DP and GOP because they can and do have the potential for impacting reliability on the BES. COM-003-1, R3, draft 6 does limit the DPs and GOPs to “Operating Instructions.”</b></p> <p>2) We also note that by removing the “in a manner that identifies, assesses and corrects deficiencies” language, R3 becomes a zero defect requirement and an entity becomes subject to sanction for a single failure to implement the developed protocol. We don’t believe this was the SDT’s intent, but this was the effect of moving the language to R4. R4 is simply an additional separate requirement an entity must comply with. Taken together, we believe most auditors would look first to find failures to implement procedure under R3. If any failure was found, they would assign a violation and move on to R4 to look for evidence of corrective action following the occurrence. If none were found, a second violation would be assigned.</p> <p><b>Response: Draft 6 eliminates R2 and R4 “assess and correct” language and ties performance to avoiding communication related events that would generate a Reliability Directive. The SDT has modified the standard to address your concern. Draft 6 does not address or reference internal controls in its requirements.</b></p> <p>3) We suggest: “R3. Each Distribution Provider and Generator Operator shall develop and implement, in a manner that identifies, assesses and corrects deficiencies, documented communication protocols that outline the communications expectations for receipt of Operating Instructions and Reliability Directives by its operators,” and that R4 be removed.</p> <p><b>Response: Draft 6 eliminates R2 and R4 “assess and correct” language and ties performance to avoiding</b></p>

Organization	Question 4 Comment
	<p>communication related events that would generate a Reliability Directive. The SDT has modified the standard to address your concern. Draft 6 does not address or reference internal controls in its requirements.</p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
<p>City of Garland</p>	<p>1)COM-003 now includes “Reliability Directives” which is why COM-002-3 was developed and approved - COM-002-3 does not need to exist if Reliability Directives are covered in COM-003</p> <p><b>Response: The OPCPSDT agrees and has removed the term “Reliability Directive” from the Parts of Requirement R1.</b></p> <p>2) In the Background Section of the "Unofficial Comment Form", it is stated that the final goal of this standard was to implement 3 part communication. It would seem that it would be simple to state in a requirement that the entity has to develop a procedure to use 3 part communications for Operating Instructions using English except where prohibited by law or regulation and then a 2nd requirement to develop an assessment process with a corrective process if necessary. It is totally unnecessary to write a requirement with 9 sub parts that must be accounted for in a policy and procedure for an industry wide practice that already exists. As written, it only add burdensome and unnecessary paperwork to operations and compliance departments that has to be maintained and audited - again for a process that already exists industry wide.</p> <p><b>Response: The OPCPSDT has reduced the number to five parts, eliminating the all call parts. The OPCPSDT believes the remaining parts are proven protocols that will prevent misunderstandings that could result in a compromised BES.</b></p> <p>3) Why is the Time Horizon stated as "Long Term Planning" instead of "Real-Time"</p> <p><b>Response: Requirements R2 and R3 are now Real Time – Time Horizons.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
<p>Oklahoma Gas &amp; Electric</p>	<p>o We believe that this proposed Standard (COM-003-1) meets the intent of Paragraph 81 of the FERC Order which notes that reliability standards that provide little protection to the reliable operations of the BES are redundant or unnecessary. Although blackout occurrences in the past points to communication issues, we believe it is not related to miscommunication. Instead, we believe it is due to lack of</p>

Organization	Question 4 Comment
	<p>communication and communicating information that was incorrect to begin with.</p> <p><b>Response: The OPCPSDT believes COM-003-1 addresses the recommendations in the 2003 Blackout Report and FERC Order 693.</b></p> <p>o In the Consideration of Comments from the Feb 14-15 conference, the SDT said “The OPCPSDT maintains its position that three-part communication be addressed in documented communication protocols, where applicable.” OG&amp;E believes that while the opinions of the members of SDT are important, the SDT itself should not maintain a “position” as such. Rather, the SDT should attempt to merge direction from FERC with the comments from industry instead of rejecting industry comments out of hand. Per the Standards Process Manual (pg.9), the roles of drafting teams are:</p> <ul style="list-style-type: none"> <li>o Drafts proposed language for the Reliability Standards, definitions, Variances, and/or Interpretations and associated implementation plans.</li> <li>o Solicits, considers, and responds to comments related to the specific Reliability Standards development project.</li> <li>o Participates in industry forums to help build consensus on the draft Reliability Standards, definitions, Variances, and/or Interpretations and associated implementation plans.</li> <li>o Assists in developing the documentation used to obtain governmental approval of the Reliability Standards, definitions, Variances, and/or Interpretations and associated implementation plans.</li> </ul> <p><b>Response: The current draft reflects a culmination of responses to industry’s concerns, which the OPCPSDT, also made up of industry experts, has given careful consideration to in order to balance the direction from FERC with the concerns of the majority of the industry.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
<p>Florida Municipal Power Agency</p>	<p>As commented on several times previously, FMPA will not vote Affirmative (or recommend an Affirmative vote) until the inconsistencies of COM-003-1 and COM-002-3 concerning Reliability Directives are resolved. For a Reliability Directive delivered by an “All Call”, COM-003-1 does not require three part communication whereas COM-002-3 does. This inconsistency will only be a source of confusion during the very time when rapid response to communication is needed, which causes us to be concerned for reliability. FMPA continues to recommend retiring COM-002-3 as part of the implementation plan of COM-003-1 and fails to see a good reason not to do so. All that would need to be done is to retain the definition of Reliability</p>



Organization	Question 4 Comment
	Directive and include R1 of COM-002-3 into COM-003-1, and a slight modification to 1.5 of COM-003-1 to require confirmation of a Reliability Directive.
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT agrees and has removed the term “Reliability Directive” from the Parts of Requirement R1.</b></p>	
NIPSCO	As per the effort of paragraph 81, we feel that COM-002 and COM-003 should be combined into one standard. It is evident there is redundancy between these two standards which should be eliminated.
<p><b>Response: The OPCPSDT thanks you for your comments. Based on other feedback, the OPCPSDT has chosen not to combine the two standards. The OPCPSDT also believes draft 6 requirements create a logical delineation between COM-002-3 and COM-003-1.</b></p>	
CenterPoint Energy Houston Electric L.L.C.	<p>CenterPoint Energy appreciates the opportunity to comment. The Company recognizes the work of the SDT however CenterPoint Energy still has large concerns with Draft 5. Specifically:</p> <ol style="list-style-type: none"> <li>1) The addition of the term “Reliability Directive” to COM-003-1.</li> <li>2) R1.9 coordination with other entities.</li> <li>3) The addition of specifying the alpha-numeric format in R1.4.</li> <li>4) The VSL’s.</li> </ol> <p>1) The addition of the term “Reliability Directive” to COM-003-1 introduces a potential conflict with the already industry and NERC BOD approved COM-002-3. Requirements R1.7 of the current draft of COM-003-1 states: “Instances where the issuer of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) is required to verbally or electronically confirm receipt from at least one receiving party.” (emphasis added) Requirements R1.8 and R3.3 of the current draft of COM-003-1 allow the recipient of a Reliability Directive from a one way burst messaging system communication to “...request clarification from the issuer if the communication is not understood.” (emphasis added) COM-002-3 makes no such distinctions regarding the issuing or receiving of Reliability Directives. COM-002-3 is clear; whether an entity is issuing or receiving a Reliability Directive 3-part communication must be employed. The Company firmly believes this conflict could easily cause entities to follow COM-003-1 yet be non-compliant with COM-002-3. In addition, since COM-002-3 already addresses emergency communications and has been reviewed and</p>

Organization	Question 4 Comment
	<p>approved by industry stakeholders as well as the NERC BOD CenterPoint Energy believes there is no additional reliability benefit to adding “Reliability Directive” to COM-003-1. CenterPoint Energy strongly recommends deleting “Reliability Directive” from COM-003-1.</p> <p><b>Response: The OPCPSDT agrees and has removed the term “Reliability Directive” from the Parts of Requirement R1.</b></p> <p>2) CenterPoint Energy has strong concerns regarding the addition of R1.9 to Draft 5 of COM-003-1. R1.9 requires that an entity’s documented communication protocols address coordination with affected RC’s, BA’s, TOP’s, DP’s, and GOP’s communication protocols. For responsible entities that have interconnections with multiple entities, this will be the equivalent of “herding cats”. The Company does not believe it will be possible to coordinate with and come to a common agreement regarding the items in R1.1 - R1.8 with multiple parties. For example: R1.4 requires the documented communication protocols to address the format to be used when alpha-numeric clarifiers are necessary. Where a responsible entity is a TOP and is interconnected with multiple other TOP’s, DP’s, GOP’s as well as its RC, and BA, it will be extremely difficult for all parties to agree to a common alpha-numeric format. In addition, coordination will become an issue when any of the parties decide to revise or amend its communication protocols. This will be an on-going management issue for all entities. CenterPoint Energy strongly recommends R1.9 be deleted from COM-003-1.</p> <p><b>Response: The OPCPSDT has modified the standard by changing the R1 language to require the TOP, BA and RC to develop the protocols subject to the approval of the RC. There were many comments supporting this decision because it promoted uniformity and relieved the DPs and GOPs from developing their own distinct protocols. Requirement 1 Part 1.9 has been eliminated from draft 6.</b></p> <p>3) CenterPoint Energy believes the addition to R1.4 requiring a responsible entity to specify the format to be used where alpha-numeric clarifiers are necessary is an unnecessary and burdensome requirement. The Company agrees with the SDT’s decision to add to R1 and R3 language that allows an entity to address, where applicable, the items in the sub-requirements instead of requiring these items to be in the communication protocols as it was in Draft 4. However, the addition of specifying the format for those clarifiers is a step backwards. Draft 4 did not require documenting a specific format and therefore would have allowed an entity the flexibility to use, for example, “Baker” or “Bravo” for the letter “B”. The Draft 5 version now sets up an operator for a possible violation if the protocol specifies “Baker” and the operator inadvertently uses “Bravo”. The purpose of using alpha-numeric clarifiers is to ensure the recipient</p>

Organization	Question 4 Comment
	<p>understands that the alpha component, in this case, is the letter “B” and not “E” or “D”. The use of “Baker” or “Bravo” accomplishes that purpose. The Company believes having to specify a format to use does not result in any reliability benefit and therefore CenterPoint Energy strongly recommends the deletion of the format requirement from R1.4.</p> <p><b>Response: The OPCPSDT believes an entity can resolve the concerns you cite by including them in their documented communication protocols.</b></p> <p>4) CenterPoint Energy firmly believes there should be no High or Severe VSL for simply failing to document a process, policy, or procedure. High or Severe VSL’s should only apply to the most egregious violations that have a high impact on the reliability of the BES. As NERC has stated on many occasions, the purpose of the Reliability Standards is to enhance the reliable operation of the BES. Where an entity is performing the process, procedure, or task required in an applicable Standard and therefore is reliably operating its portion of the BES, yet has failed to document that process, procedure, or task, penalizing that entity with a High or Severe VSL will not result in improved reliable operation of the BES. CenterPoint Energy recommends no VSL’s higher than Moderate.</p> <p><b>Response: The OPCPSDT believes that if an entity completely fails to develop and implement communication protocols, it is an egregious violation and warrants a High or Severe VSL.</b></p> <p>CenterPoint Energy supported Draft 4 of COM-003-1 however, the changes made by the SDT in Draft 5 has caused the Company to rethink its position. If the SDT were to make the recommended changes CenterPoint Energy would be able to support the Standard.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
Clark Public Utilities	<p>Clark Public Utilities is concerned about the conflict between COM-002 and COM-003 regarding responses to Reliability Directives. In the case of a one-way burst messaging used to issue a Reliability Directive, COM-002 does not allow for only those responses required in COM-003 but instead requires a full 3-way communication from all parties. This potentially sets up both the issuer and receiver for violating COM-002 if they respond to a one-way burst messaging Reliability Directive as the requirements indicate in COM-003. In order to be fully compliant with BOTH standards, the receiver would have to contact the issuer, repeat</p>

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	<p>what was said on the original burst message, then the issuer would confirm that the response was accurate before acting on the message. Clark appreciates the responsiveness of the OPCPSDT in quickly posting an FAQ once the COM-002/COM-003 issue was raised. The opinion of the OPCPSDT notwithstanding, Clark is not reassured by the secondary documentation cited in the FAQ when the plain language of the two Standards are in conflict. A simple solution would be to eliminate the words "Reliability Directive" from COM-003, which after all is designed to address "Operating Instructions."</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT agrees and has removed the term “Reliability Directive” from the Parts of Requirement R1.</b></p>	
<p>Pacific Gas and Electric Company</p>	<p>Draft 5 fails to address all of the communication gaps identified in the Standards Authorization Request (SAR), FERC Order 693 and the recommendations of the August 2003 Blackout Report. The draft as written does not require a consistent application of effective communications protocols but in turn requires each functional entity to develop their own protocols with insufficient guidance on how to achieve better consistency.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes it has addressed gaps identified in the Standards Authorization Request (SAR), FERC Order 693, and the recommendations of the August 2003 Blackout Report. Industry comment in the last five drafts has stated the opposite of your comment—requesting less prescriptive requirements. The OPCPSDT has modified the standard by changing the R1 language to require the TOP, BA and RC to develop the protocols subject to the approval of the RC. There were many comments supporting this decision because it promoted uniformity and relieved the DPs and GOPs from developing their own distinct protocols.</b></p>	
<p>Edison Mission Marketing &amp; Trading</p>	<p>EMMT agrees with the concepts put forth in COM-003, but have some concerns, particularly with the proposed administrative burden associated with the Standard. EMMT offers the following comments:</p> <ol style="list-style-type: none"> <li>1. R1.9 requires a TOP, BA, and RC to coordinate with affected RC, BA, TOP, DP and GOP communication protocols; this could result in a TOP having to coordinate with a hundred+ different entities communications protocols. This coordination would not improve reliability, but only serve to create confusion and significant communication time delays in real-time operations. Both R1 and R4 create significant documentation and administrative burdens, without providing a comparable improvement to the reliability of the BES. As reliability based Standard, COM-003 should focus on those actions that would have a direct impact on reliability, while minimizing the administrative burden.</li> </ol>

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	<p><b>Response: The OPCPSDT has modified the standard by changing the R1 language to require the TOP, BA and RC to develop the protocols subject to the approval of the RC. The reason for the change is based on other commenters’ recommendations to have the DP and GOP implement the protocols established by the directing RC, BA and TOP. There were many comments supporting this decision because it promoted uniformity and relieved the DPs and GOPs from developing their own distinct protocols.</b></p> <p>2. R3 should end after the first sentence. GOPs do not issue Operating Instructions. They only receive instructions from others. GOPs should have a communications procedure as part of their operations, however, the methods used are properly business decisions made by the GOP. The content, thoroughness and effectiveness of a communications plan are excellent items to consider when assessing an entity’s internal compliance program.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>3. R4 raises the question of sufficiency of an entity’s corrective program. The RSAW requires the GO to turn over records of monitoring communications as well as records of corrective actions and then prove the “problem” is not still in place. This standard could easily turn into a high-profile audit target due to the varying concepts of what does and does not constitute a sufficient corrective action program.</p> <p><b>Response: The OPCPSDT eliminates R2 and R4 “assess and correct” language in Draft 6 and ties performance to avoiding communication related events that would generate a Reliability Directive. The OPCPSDT believes compliance will be uncomplicated and focused on stability on the BES.</b></p> <p>4. EMMT recommends that the language to M4 be changed as follows:</p> <p>M4. Each Distribution Provider and Generator Operator shall provide the results of its periodic assessment and of any corrective actions (if any corrective actions were implemented) developed for Requirement R4. Examples of sufficient periodic assessment programs include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>• Documented review of voice logs for a total of at least one hour per calendar year for each operator (does not need to be a single session)</li> <li>• Documented personal monitoring of communications for a total of at least one hour per calendar year for each operator (does not need to be a single session)</li> <li>• Documented annual training</li> </ul> <p>Examples of sufficient corrective action programs include, but are not</p>

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	<p>limited to, the following:</p> <ul style="list-style-type: none"> <li>• Documented refresher training</li> <li>• Documented meeting</li> <li>• Documented “hot box” communication</li> </ul> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>5. The VSLs give a higher violation to a GOP than a BA for exactly the same error, even though the consequences with the BA are much greater. A GOP who fails to require 3-part responses when requested is tagged with a Moderate violation, while the BA would receive a Lower.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>6. In the RSAW, the following passage should be expunged; “Where practicable, verify that deficient communication practice was indeed corrected by reviewing evidence of Operator communications (such as voice recordings) occurring after the date of the corrective action to determine if deficient communication practice was corrected.” Differentiating between slips of the tongue and “deficient communication practices” involves subjective judgments. The same is true for attempting to identify changes in an operator’s degree of understanding, especially when doing so through the numbing process of making before-and-after voice recording comparisons. This is an open-ended matter that could very quickly become an unreasonable compliance burden. RSAWs in general should not introduce new requirements, measures or forms of evidence, so the GOP materials reviewed should be limited to the protocols/procedures of R3, and the assessment forms and corrective action reports of R4.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
<p>Electric Reliability Council of Texas, Inc.</p>	<p>ERCOT recognizes and commends the drafting team’s efforts to respond to industry comments and is supportive of draft 5 of COM-003-1. It should be clear in the definition and the standard that electronic systematic interchanges are not Operating Instructions. Please consider modifying the last sentence of the definition for Operating Instructions as below: “Discussions of general information and of potential options</p>

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	<p>or alternatives to resolve BES operating concerns as well as electronic, system to system, interchanges are not commands and are not considered Operating Instructions.”</p> <p><b>Response: The OPCPSDT will keep the existing language in the definition of Operating Instructions. The language of the requirements and parts narrow the focus of COM-003-1 to voice communication.</b></p> <p>ERCOT ISO also maintains that the sub-requirements for R1 and R3 are not the “communication protocols” that FERC Order 693 and Blackout Recommendation #26 intended to be addressed as they are solely focused on “miscommunication”. However, ERCOT ISO believes that the structure of COM-003-1, in allowing an entity to address subrequirements through development of its own documented communication protocols and identification of the instances of needing to use such protocols, allows for future revisions to focus on the subrequirements, as needed, leaving the construct in place to easily add, modify, or delete such parts as necessary through such subsequent revisions. An example of such a revision is where IRO-014-1 R1 has a similar construct and was modified to include an additional subrequirement (R1.7) in version 2.</p> <p><b>Response: The OPCPSDT acknowledges your position but believes it has properly addressed the protocols as stated in FERC Order 693 and Blackout Recommendation #26.</b></p> <p>ERCOT believes that oral and written operator communication requirements should be in a single reliability standard and supports further refinement of the requirements and combining COM-002 and COM-003 into a single reliability standard.</p> <p><b>Response: Based on other feedback, the OPCPSDT has chosen not to combine the two standards. The OPCPSDT also believes draft 6 requirements create a logical delineation between COM-002-3 and COM-003-1.</b></p>
	<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>
Georgia System Operations Corporation	GSOC recommends that only R1 and R3 survive; eliminate R2 and R4.
	<p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>
Georgia Transmission	If Requirements R3 and R4 are neither deleted nor reworded as suggested above, then changes should be

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Corporation	made in the standard to clearly define the term “operator” or disassociate the term from the DP function.
<p><b>Response: The OPCSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>	
Indiana Municipal Power Agency	<p>IMPA believes there is a conflict between COM-003-1 and COM-002-3 when it comes to how an entity replies back to an “All Call”. COM-003-1 does not require three part communication and it seems that COM-002-3 does require it. This creates confusion and needs to be corrected. IMPA supports the use of one communication standard to address proper communication protocols for Directives and Operating Instructions. This could be accomplished by retiring COM-002-3 upon the implementation of COM-003-1.</p>
<p><b>Response: The OPCSDT thanks you for your comments. The OPCSDT has removed all “all call” references from COM-003-1. Based on other feedback, the OPCSDT has chosen not to combine the two standards. The OPCSDT also believes draft 6 requirements create a logical delineation between COM-002-3 and COM-003-1.</b></p>	
American Electric Power	<p>It needs to be acknowledged by the project team that there are overlapping requirements between COM-003-1 and COM-002-3. Although the project webpage states that “COM-003-1 establishes the practice of using communication protocols for all Operating Instructions”, COM-003-1 explicitly includes Reliability Directives along with the Operating Instructions. We understand Reliability Directives to be a subset of Operating Instructions, so with respect to Reliability Directives, there are unnecessary overlaps which will only cause confusion in adhering to the standard. In short, COM-003-1 should only be adopted with the understanding that the overlapping requirements in COM-002 would then be retired.</p> <p><b>Response: Based on other feedback, the OPCSDT has chosen not to combine the two standards. The OPCSDT also believes draft 6 requirements create a logical delineation between COM-002-3 and COM-003-1.</b></p> <p>AEP supports the forward-looking approach advocated by NERC’s Reliability Assurance Initiative. We believe this proposed standard puts “the cart before the horse” in that it mandates internal controls for a limited number of requirements rather than taking a wholistic approach where internal controls are generally required for all standards and where that language is housed outside of the standard itself.</p> <p><b>Response: The OPCSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>



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	<p>AEP believes this R 1.3 is redundant with TOP-002 R18. Other requirements in this proposed standard are already in place to drive clarity of communication.</p> <p><b>Response: The OPCPSDT believes that structured awareness of interfaced transmission assets by adjoined entities increases situational awareness, provides clear understanding and removes hesitation or doubt when issuing or receiving Operating Instructions.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
Luminant	<p>Luminant is generally supportive of the direction of this standard and agrees that requiring a documented communication protocol and monitoring processes is the correct approach for this standard. While we understand the need for the some Registered Entities (RE) to use a one-way burst messaging system to make mass communication quicker and easier the inclusion of Reliability Directive in R1.7, R1.8 and R3.3 creates a conflict COM-002-3 R2 and R3. By including Reliability Directives in R1.7, R1.8 and R3.3 which allows and electronic response or only one receipt to restate, the receiving REs will not be able to comply with COM-002-3 R2 that requires EACH recipient of a Reliability Directive to repeat, restate, rephrase or recapitulate the Reliability Directive. Removing Reliability Directive from those section would eliminate any confusion and conflict between COM-002-3 and COM-001-3 and allow COM-001-3 to be passed and implemented. Alternatively, COM-002-3 could be revised to CLEARLY STATE that it only applies to one-on-one verbal (or written?) communication.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>	
Occidental Energy Ventures Corp	<p>Occidental Energy Ventures Corp. (“OEV”) is firmly on board with the strategy taken by the drafting team to incorporate structure in the communication of Operating Instructions, while allowing each entity some flexibility in the process. As a GOP, we take very seriously our responsibility to accurately capture and execute all instructions from RCs, BAs, and TOPs that may affect the state of the Bulk Electric System. This approach will allow us to differentiate between instructions issued orally, via email/messaging, and one-to-many broadcasts - which change rapidly as new communications technologies are introduced. In addition, we agree that a risk-based compliance method is necessary - particularly in the case of oral communications. Even the most perfectly trained operators can stumble on occasion, and the result should not be a compliance violation unless the errors continue to manifest themselves. Furthermore, the amount</p>

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	<p>of overhead necessary to ensure that every oral instruction is repeated back with time stamps, equipment identifiers, and alpha-numeric clarifiers is extraordinary in the zero-defect model. However, we are not convinced that these excellent intentions are captured in a manner that will assure consistent assessments by Compliance Enforcement Authorities. It is clear from our reading of the FAQs recently posted by the drafting team that many industry respondents are unclear how auditors will interpret COM-003-1's requirements over a wide range of operating scenarios - a concern that we share. This means that a common understanding must be reached in an enforceable document that both operators and CEAs can rely on for consistency. In our view, the RSAW is the logical vehicle for this approach. It is a fundamental audit tool and has been traditionally used as a semi-binding reference in the evaluation of reliability compliance. In addition, the concurrent development of the RSAW with COM-003-1 was instituted precisely to ensure uniformity between the SDT's intent and the standard's enforcement. This implies that the RSAW must contain a greater level of detail to address multiple situations - and we have provided specific suggestions in our RSAW feedback form along these lines.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>Lastly, we do not have a clear understanding how Requirement R1.9 will be implemented. As it is presently written, it would seem that GOPs should expect some notification from their RCs, BAs, and TOPs that communication policies are to be "coordinated." Our experience has been that some entities simply post instructions on their web-sites hidden among many other documents - which does not count as coordination in our view. However, we are not sure that the issuers' policies are consistent with all of R1's other sub-requirements. As such, OEVC recommends that R1.9 be removed.</p> <p><b>Response: The OPCPSDT agrees and has changed the wording of R1, to eliminate Part 1.9.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
<p>SPP Standards Review Group</p>	<p>Our comments are listed with the specific question they address.</p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
<p>San Diego Gas &amp; Electric</p>	<p>Please see comments: NEW NERC RELIABILITY STANDARD - COM-003-1 - Version 5 Version 5 comments R1.1 and R3.1 Proposed</p>

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	<p>Updated Language:</p> <p>Use of English language when issuing or responding to an oral or written Operating Instruction or Reliability Directive, unless another language is mandated by law or regulation, or as otherwise agreed to by the parties.</p> <p>Comment: The Western Interconnection is interconnected with Mexico, south of the California, Arizona and New Mexico borders and with Canadian provinces north of the Washington, Idaho and Montana borders. SDG&amp;E, which is located at the California-Mexico border, communicates almost daily with the Mexico utility located in Baja California, CFE. When the standards became mandatory and enforceable, in compliance with COM-001, R4, SDG&amp;E maintained an agreement with CFE which documents that English will typically be used, but in instances where communicating in Spanish is more effective in ensuring system reliability, the personnel involved will use Spanish given that all parties involved are fluent in Spanish. CFE does not have a mandate to be in compliance with the U.S. NERC Reliability Standards. The native language in Mexico is Spanish, and SDG&amp;E staffs its Electric Grid Operations department with personnel who are fluent in Spanish, therefore its agreement with CFE is managed to insure that all communications with its neighbor to the south are clear, concise, and understood. In addition, there are at least two generation stations located south of the California border, interconnected with SDG&amp;E, and the employees at those stations are fluent in Spanish, therefore, because those generation station personnel will also communicate with the California ISO and the WECC RC on occasion, those entities need the flexibility provided in COM-001 R4 to be carried through to COM-003-1, R1.1. &amp; R3.1. All policies and procedures developed by power company entities south of the border are written in Spanish, and at times, written communication between U.S. and entities in Mexico are in Spanish. Since SDG&amp;E's neighbors to the south do not have to comply with U.S. NERC Reliability Standards, and U.S. entities are required to comply with U.S. NERC Reliability Standards, SDG&amp;E proposes the revisions to COM-003-1 R1.1 and R3.1 as identified above. This proposed revision provides for the flexibility that already exists in COM-001 R4 that has effectively worked over the last several years.</p> <p><b>Response: The OPCPSDT developed the standard in a manner to permit the RC to direct the development of the protocols within the RC control area. It is important for clarity that a singular language be used for BES operating commands. Risk of miscommunication increases when multiple languages are permitted.</b></p> <p>R1.2 Proposed Updated Language: Instances that require time identification when issuing an oral or written Operating Instruction or Reliability Directive, and the format for the time identification specified uses a 24-</p>

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	<p>hour clock format and the Entity’s time zone.</p> <p>Comment: SDG&amp;E prefers the language proposed above. The proposed language leaves NO doubt associated with how to reference a specific time for ALL entities. If one entity uses the 24 hour clock, and another is using a.m. and p.m., it simply leaves the opportunity for some confusion that can be eloquently avoided when stating that a 24 hour clock is to be used.</p> <p><b>Response: The OPCPSDT has modified the standard by changing the R1 language to require the TOP, BA and RC to develop the protocols subject to the approval of the RC.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
<p>Oncor Electric Delivery Company LLC</p>	<p>R1.9 states that entities will address “Coordination with affected Reliability Coordinators’, Balancing Authorities’, Transmission Operators’, Distribution Providers’, and Generator Operators’ communication protocols.” Coordination with these entities in the ERCOT market will become cumbersome. Is it the SDT’s intent to ensure all communication protocols are coordinated with multiple entities that a Transmission Operator communicates with, including the RC, BA, other TOs, GOPs, and DPs? Oncor is unclear how an entity with multiple registrations would communicate with itself in different functions. Would this require an entity with multiple registration functions to designate personnel by functional entity and in turn, personnel would have to identify which functional entity each person they interface with? It is impractical and inefficient to require Entities to re-organize all personnel which would foster an inefficient structure and could potentially lead teams to not communicate effectively. In addition, this could have a negative impact on communications between companies. For example, in the ERCOT region, there are approximately 15 local control centers and ERCOT who are all registered as TOPs. One might interpret communications between neighboring TOPs or ERCOT and one of the local control centers are not subject to the requirements of COM-003-1 since these are TOP to TOP communications. We strongly recommend the SDT review this to greatly simplify COM-003-1. Potential alternative to the current language would be “require entities to implement, in a manner ..., protocols that include three-part communication for Operating Instructions” and eliminate the reference to Functional Entity.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT has modified the standard by changing the R1 language to require the TOP, BA and RC to develop the protocols subject to the approval of the RC. The reason for the change is based on other commenters’ recommendations to have the DP and GOP implement the protocols established by the directing RC, BA and TOP. There</b></p>	

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<p>were many comments supporting this decision because it promoted uniformity and relieved the DPs and GOPs from developing their own distinct protocols. The goal is to establish a high degree of communication uniformity within the RC operating area.</p>	
<p>Salt River Project</p>	<p>R4 should be eliminated and R3 should end after the first sentence. GOs do not issue Operating Instructions. They only receive instructions from others. GOs should have a communications procedure as part of their operations. However, the methods used are properly business decisions made by the GO. The content, thoroughness and effectiveness of a communications plan are excellent items to consider when assessing an internal compliance program.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT eliminates R2 and R4 “assess and correct” language in draft 6 and ties performance to avoiding communication related events that would generate a Reliability Directive. The OPCPSDT believes it has properly narrowed the GOPs and DPs roles to those who will only receive Operating Instructions.</b></p>	
<p>SERC OC Standards Review Group</p>	<p>Regarding question #1, the SERC OC Review Group agrees with the definition of Operating Instruction. While we also can agree to the changes made to R1, we feel R3 in its entirety is unnecessary and duplicative. Removal of the word “develop” would eliminate double-jeopardy concerns. R3 could be acceptable if “develop and” are omitted and “as developed in R1” is inserted after “protocols” and before “that.” It should be noted that this suggestion only applies to the sub-requirements in R1 that correspond to the proposed sub-requirements in R3. Regarding question #2, R2 is acceptable and R4, as stated above for R3, is unnecessary and duplicative. Regarding question #3, we agree with the VRFs and VSLs for R1 and R2. Based on our previous comments, we do not agree with the need for R3 and R4, and therefore VRFs and VSLs for these requirements are not needed. Additional SERC OC Standards Review Group supporting these comments are James Wood with Southern Company and Kelly Casteel with TVA. The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review Group only and should not be construed as the position of SERC Reliability Corporation, its board, or its officers.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT eliminates R2 and R4 “assess and correct” language in draft 6 and ties performance to avoiding communication related events that would generate a Reliability Directive. The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>	
<p>Cogentrix Energy Power Management</p>	<p>Regarding question #1, the SERC OC Review Group agrees with the definition of Operating Instruction. While we also can agree to the changes made to R1, we feel R3 in its entirety is unnecessary and</p>

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	<p>duplicative. Removal of the word “develop” would eliminate double-jeopardy concerns. R3 could be acceptable if “develop and” are omitted and “as developed in R1” is inserted after “protocols” and before “that.” It should be noted that this suggestion only applies to the sub-requirements in R1 that correspond to the proposed sub-requirements in R3.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>Regarding question #2, R2 is acceptable and R4, as stated above for R3, is unnecessary and duplicative.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>Regarding question #3, we agree with the VRFs and VSLs for R1 and R2. Based on our previous comments, we do not agree with the need for R3 and R4, and therefore VRFs and VSLs for these requirements are not needed.</p> <p><b>The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.1.</b> R1.9 requires a TOP, BA, and RC to coordinate with affected RC, BA, TOP, DP and GOP communication protocols; this could result in a TOP having to coordinate with a hundred+ different entities communications protocols. This coordination would not improve reliability, but only serve to create confusion and significant communication time delays in real-time operations. Both R1 and R4 create significant documentation and administrative burdens, without providing a comparable improvement to the reliability of the BES. As reliability based Standard, COM-003 should focus on those actions that would have a direct impact on reliability, while minimizing the administrative burden.</p> <p><b>Response: The OPCPSDT has changed the coordination requirement in draft 6 by eliminating requirement 1, Part 1.9 and changing the R1 language to require the TOP, BA and RC to develop the protocols subject to the approval of the RC. The reason for the change is based on other commenters’ recommendations to have the DP and GOP implement the protocols established by the directing RC, BA and TOP. There were many comments supporting this decision because it promoted uniformity and relieved the DPs and GOPs from developing their own distinct protocols.</b></p> <p>2. R3 should end after the first sentence. GOPs do not issue Operating Instructions. They only receive instructions from others. GOPs should have a communications procedure as part of their operations,</p>

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	<p>however, the methods used are properly business decisions made by the GOP. The content, thoroughness and effectiveness of a communications plan are excellent items to consider when assessing an entity’s internal compliance program.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>3. R4 raises the question of sufficiency of an entities corrective program. The RSAW requires the GO to turn over records of monitoring communications as well as records of corrective actions and then prove the “problem” is not still in place. This standard could easily turn into a high-profile audit target due to the varying concepts of what does and does not constitute a sufficient corrective action program.</p> <p><b>Response: The OPCPSDT eliminates R2 and R4 “assess and correct” language in draft 6 and ties performance to avoiding communication related events that would generate a Reliability Directive.</b></p> <p>4. The SRT recommends that the language to M4 be changed as follows:</p> <p>M4. Each Distribution Provider and Generator Operator shall provide the results of its periodic assessment and of any corrective actions (if any corrective actions were implemented) developed for Requirement R4. Examples of sufficient periodic assessment programs include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>• Documented review of voice logs for a total of at least one hour per calendar year for each operator (does not need to be a single session)</li> <li>• Documented personal monitoring of communications for a total of at least one hour per calendar year for each operator (does not need to be a single session)</li> <li>• Documented annual training             <ul style="list-style-type: none"> <li>○ Examples of sufficient corrective action programs include, but are not limited to, the following:                 <ul style="list-style-type: none"> <li>▪ Documented refresher training</li> <li>▪ Documented meeting</li> <li>▪ Documented “hot box” communication</li> </ul> </li> </ul> </li> </ul> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>5. The VSLs give a higher violation to a GOP than a BA for exactly the same error, even though the consequences with the BA are much greater. A GOP who fails to require 3-part responses when requested is</p>

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	<p>tagged with a Moderate violation, while the BA would receive a Lower.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>6. In the RSAW, the following passage should be expunged; “Where practicable, verify that deficient communication practice was indeed corrected by reviewing evidence of Operator communications (such as voice recordings) occurring after the date of the corrective action to determine if deficient communication practice was corrected.” Differentiating between slips of the tongue and “deficient communication practices” involves subjective judgments. The same is true for attempting to identify changes in an operator’s degree of understanding, especially when doing so through the numbing process of making before-and-after voice recording comparisons. This is an open-ended matter that could very quickly become an unreasonable compliance burden. RSAWs in general should not introduce new requirements, measures or forms of evidence, so the GOP materials reviewed should be limited to the protocols/procedures of R3, and the assessment forms and corrective action reports of R4.</p>
<p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>	
<p>NERC</p>	<p>Requirement (R1.5) provides inadequate protection against a misunderstanding when directives are issued. Granted, the Requirement does obligate the party receiving the directive to repeat back the directive. However, if the recipient repeats the directive back to the person issuing the directive, and the "repeat back" indicates the recipient has misunderstood the directive, this Requirement merely obligates the person issuing the directive to state the directive again. The Requirement places no obligation on the person issuing the directive, who knows he has been misunderstood, to explicitly and clearly bring to the attention of the recipient that the recipient has misunderstood. All the party issuing the directive has to do is repeat what he has already said. The party issuing the directive is under no obligation to make it clear that there has been a misunderstanding. With respect, I suggest having the person issuing the directive merely repeat it if he's been misunderstood, with no explicit statement that there has been a mistake, leaves open the potential for the recipient to be unaware he has misunderstood and to execute a misunderstood directive.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>	
<p>American Transmission</p>	<p>Requirement 1.9 requires “Coordination with affected Reliability Coordinators’, Balancing Authorities’,</p>



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Company	<p>Transmission Operators’, Distribution Providers’, and Generator Operators’ communication protocols.” This requirement seems unnecessary since the requirements of COM-3-1 apply to all these entities. If everyone is adhering to the requirements of COM-3-1 then the need for coordination is redundant as it becomes automatic. If individual entities adopt slight nuances to this requirement, or are more restrictive than the requirement then coordination between every entity becomes extremely difficult.</p>
<p><b>Response: The OPCPSDT has modified the standard by changing the R1 language to require the TOP, BA and RC to develop the protocols subject to the approval of the RC.</b></p>	
<p>Northeast Power Coordinating Council</p>	<p>Requirement 3 is an administrative requirement that does little to benefit the reliable operation of the BES.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>By specifically calling out “Directives” in the requirement it creates the potential for double jeopardy with other requirements such as COM-002, IRO-001 and TOP-001 which all speak to following Directives.</p> <p><b>Response: The OPCPSDT believes draft 6 requirements create a logical delineation between COM-002-3 and COM-003-1.</b></p> <p>Requiring a documented communications protocol when the only responsibility is repeat back the instruction as received and seek clarification if the directive is misunderstood is beyond the intended scope of the reliability program in general. This requirement should be removed.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>Requirement 4 should be removed because it is unnecessary and excessive. The smaller entities that this will affect do not record phone conversations and it would be difficult to assess performance based on the very low number of “Operating Instructions” or “Directives” that these entities actually receive. The performance of “Operating Instructions” should be the proof. A better approach would be to amend the above mentioned standards (IRO, TOP, COM) to include “Operating Instructions” along with Directives.</p> <p><b>Response: The OPCPSDT eliminates R2 and R4 “assess and correct” language in draft 6 and ties performance to avoiding communication related events that would generate a Reliability Directive. Operating Instructions.</b></p> <p>The term “All Call” is used in Requirement 1 Part 1.8. It should be defined in the NERC Glossary. If it isn’t to</p>

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	<p>be defined, then it should not be capitalized. Regarding Requirement 1 Part 1.8, and Requirement 3 Part 3.3, the receiver of an oral Operating Instruction or Reliability Directive from a one-way burst messaging system is “to request clarification from the issuer is the communication is not understood.” What if the receiver never gets the issued Operating Instruction or Reliability Directive? Regarding Requirement 1 Part 1.8, and Requirement 3 Part 3.3, suggest changing “using” to “from” to make them read “Require the receiver of an Oral Operating Instruction or Reliability Directive from a one-way burst...”</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
<p>Seattle City Light</p>	<p>Seattle City Light is concerned about the conflict between COM-002 and COM-003 regarding responses to Reliability Directives. In the case of a one-way burst messaging used to issue a Reliability Directives, COM-002 does not allow for only those responses required in COM-003 but instead requires a full 3-way communication from all parties. This potentially sets up both the issuer and receiver for violating COM-002 if they respond to a one-way burst messaging Reliability Directive as the requirements indicate in COM-003. In order to be fully compliant with BOTH standards, the receiver would have to contact the issuer, repeat what was said on the original burst message, then the issuer would confirm that the response was accurate before acting on the message.</p> <p>Seattle City Light appreciates the responsiveness of the OPCPSDT in quickly posting an FAQ once the COM-002/COM-003 issue was raised. The opinion of the OPCPSDT notwithstanding, Seattle is not reassured by the secondary documentation cited in the FAQ when the plain language of the two Standards are in conflict. Past experience, such as illustrated in the 2008 PacifiCorp case, shows that where Standards are unclear or in conflict, auditors have been prone to take the language at face value and disregard secondary documents. In addition, entities charged with implementing the Standards are prone to change practices to avoid ambiguous areas and compliance risk, which in this case could result in the phase-out of effective all-call or burst messaging systems for announcing reliability Directives. As a result, Seattle is sufficiently concerned about the audit and reliability implications created by the present draft of COM-003 to change from a YES position to NO at this time.</p> <p>Seattle is prepared to support COM-003 once this conflict is addressed. A simple solution would be to eliminate the words "Reliability Directive" from COM-003, which after all is designed to address "Operating</p>

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	<p>Instructions."Inclusion of Reliability Directive language in COM-003 creates an additional complication, by making R1.8 incomplete. R1.8 require the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the issuer if the communication is not understood. This language does not address the next step: if an entity receives a burst message from its RC that is unclear, and is unable to reach the RC for clarification (perhaps because the RC is busy handling the emergency situation), what is the entity to do? Implement to Reliability Directive to its best understanding? Wait until it can clarify the Directive? Do nothing? Serious reliability and compliance risks attend all of these possibilities, and the Standard should be clear as to which is preferred. Seattle again recommends removing "Reliability Directive" language from COM-003 as a simple solution. If the Reliability Directive language remains in COM-003, this potentiality should be addressed in the Standard as to which approach is preferred.</p>
<p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments. The OPCPSDT also believes draft 6 requirements create a logical delineation between COM-002-3 and COM-003-1.</b></p>	
NIPSCO	See comments submitted on NIPSCO's behalf by Julaine Dyke
<p><b>Response: The OPCPSDT thanks you for your comments. Please refer to our response at that location.</b></p>	
NIPSCO	see NIPSCO comments from Julaine Dyke, thanks
<p><b>Response: The OPCPSDT thanks you for your comments. Please refer to our response at that location.</b></p>	
<p>Southern Company - Southern Company Services, Inc.; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company</p>	<p>See Southern’s comments for R3 and R4 in the RSAW comments regarding use of the terms “Operator” and “operator”. If Requirements R3 and R4 are neither deleted nor reworded as suggested above, then changes should be made in either the standard or the RSAW to make the two terms consistent and to clearly define the term “operator” if necessary.</p>

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Generation; Southern Company Generation and Energy Marketing	
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>	
CPS Energy	Separate the Distribution Provider (DP) and Generator Operator (GOP) COM requirements into a separate standard.
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes keeping the applicable entities in the same standard is more efficient.</b></p>	
SMUD/Balancing Authority of Northern California	<p>SMUD would like to thank the Drafting Team for their efforts. While we agree with the intent of COM-003 we would like the Drafting Team to provide input on a possible conflict between the Board approved COM-002-3 Requirement and Draft #5 of COM-003-1 Requirements R1, Part 1.7 &amp; R3, Part 3.3. It appears that a “One-way” burst messaging that includes either oral or electronic Operating Instructions or Reliability Directives as depicted in the current COM-003 does not require practice of 3-way communication prior to taking action. Since COM-002 Requirement R2 specifies that the recipient “shall repeat, restate, rephrase, or recapitulate the Reliability Directive” it is unclear whether or not the receiving parties of a blast message adhering to the COM-003 Standards would be in compliance with COM-002 requirement R2.</p>
<p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments. The OPCPSDT also believes draft 6 requirements create a logical delineation between COM-002-3 and COM-003-1.</b></p>	
Tacoma Power	<p>Tacoma Power believes the Standard Drafting Team made Draft 5 overly complex and confusing for the System Operators and Operators to use. The Drafting Team needs to go back to the basics. The standard should apply to all, BA, TO, RC, GO and DPs alike.</p> <ol style="list-style-type: none"> <li>1. Require all parties to develop Communication Protocols, train their operating personnel to use them, review their protocols annually and make improvements if necessary.</li> <li>2. Require all parties to use “3-part communication” and forget the “oral two-party, person-to-person Operating Instruction” that has different requirements for GO and DP. All responsible entities should have the same requirements. The proposed Standard as written allows for the Instruction to be repeated back “if requested” by the issuer. This exception creates a “compliance” trap for the people communicating -</li> </ol>

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	<p>remove it.</p> <p>BASIC 3-PART COMMUNICATION should include:</p> <ul style="list-style-type: none"> <li>* A System Operator or Operator shall issue an Operating Instruction</li> <li>* The person receiving the Operating Instruction shall repeat it back to the issuer, and/or request clarification if needed* The System Operator or Operator will acknowledge as correct and/or discuss clarifications as needed and agree on the final instruction.</li> </ul> <p>3. We are not sure why “address nomenclature for Transmission interface Elements and Transmission interface Facilities” has replaced the term “common line identifiers.” Entities should coordinate their communication protocols with the other Entities that they commonly communicate with and agree on:</p> <ul style="list-style-type: none"> <li>* Nomenclature for Lines and equipment</li> <li>* A common system for Alpha Numeric clarifiers</li> <li>* Use 24-hour clock and identify the time, time-zone and if day-light savings or standard time is in effect.</li> </ul> <p>System Operators and Operators are too busy to be put in the position of trying to maintain compliance with a standard that is so convoluted and confusing as to become a potential violation. Tacoma Power supports the original premise of the proposed COM-003 and the concept to separate the technical communication equipment requirements from communication protocol requirements but the drafting team has gone too far away from the intent of the standard by trying to make exceptions for too many different issues when they do not need to. Get back to the basics, i.e. Draft 2.</p>
<p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>	
Texas Reliability Entity	<p>Texas RE voted "no" on this draft for reasons expressed in our comments submitted on prior drafts. In particular, we are concerned about lack of coordination between COM-003 and COM-002.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments. The OPCPSDT also believes draft 6 requirements create a logical delineation between COM-002-3 and COM-003-1.</b></p>	
Western Electricity Coordinating Council	<p>The apparent conflict beteen COM-002-3 and COM-003-1 needs to be addressed. The information provided in the Frequently Asked Questions document was helpful but it is not clear that a drafting team response to</p>

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	<p>a frequently asked question can alter what is required in another standard. It s not clear that developping a communcations protocol that says three-part communcation is not necessary for a one-way burst message is going to relieve a BA, RC, or TOP from the requirement to use three-part communcations for all Reliability Directives. If the position is that thre-part communcaiton is not required for one-way burst messages, this exception should be included in COM-002-3.</p>
<p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments. The OPCPSDT also believes draft 6 requirements create a logical delineation between COM-002-3 and COM-003-1.</b></p>	
<p>Santee Cooper</p>	<p>The latest version of COM-003 introduces a potential conflict with COM-002 related to use of one-way burst messaging systems to issue a Reliability Directive. COM-002 does not allow for only those responses required in COM-003 but instead requires a full 3 way communication from all parties. This potentially sets up both the issuer and receiver for violating COM-002 if they respond to a one-way burst messaging RD as the requirements indicate in COM-003.</p> <p>In COM-003, the follow Requirements are included:</p> <p>R1.7 Instances where the issuer of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) is required to verbally or electronically confirm receipt from at least one receiving party.</p> <p>R1.8 Require the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the issuer if the communication is not understood.</p> <p>R3.3 Require the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the issuer if the communication is not understood.</p> <p>In other words, COM-003 allows one-way burst messaging to be used for Reliability Directives and prescribes:</p> <ul style="list-style-type: none"> <li>o issuer to confirm receipt from at least one receiving party</li> </ul>

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	o receiver to request clarification from the issuer if the communication is not understood
<p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments. The OPCPSDT also believes draft 6 requirements create a logical delineation between COM-002-3 and COM-003-1.</b></p>	
MRO NSRF	<p>The NSRF recommends the following issues be addressed in order to provide a less ambiguous Requirement.</p> <p>Regarding R1 and the term; ‘implement’. The “Blue Box” explanation is not carried forward when the standard is filed with the Commission. The “Blue Box” explanation greatly expands the meaning “and implement”. Our understanding of ‘implement’ is that you will use the documented communication protocols in the manner outlined in your System Operator communications protocols. Training is not a demonstration of implementing. Only actual System Operator communications demonstrating the use of the communication protocols is demonstrating implementation. Recommend that “training” be removed from the blue text box since training is inherent to assuring that protocols are followed. The Training issue will also need to be removed from the RSAW.</p> <p><b>Response: The OPCPSDT has eliminated the blue box. The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>Suggest R1.8 be removed. This requirement cannot be measured. How do you prove compliance? An entity will be asked to prove the negative and demonstrate that my System Operators were not confused? I can see where I might have to provide an attestation that states: “My System Operators were not confused on any one-way burst messages.” This proposed requirement is a common sense issue.</p> <p><b>Response: The OPCPSDT has removed R1.8.</b></p> <p>R1.9, R3.3: the word “coordination with affected” is vague and open to many interpretations. Suggest this requirement be deleted. Should the requirement be kept, suggest clarifying what is intended in the requirement. Such as “RC, TOP’s BA’s... shall share their communication protocols with applicable RC, BA, TOP, ... “ The NSRF does not understand if the intent is to share or coordinate protocols? Both have different outcomes, please clarify.</p> <p><b>Response: The OPCPSDT has modified the standard by changing the R1 language to require the TOP, BA and RC to develop the protocols subject to the approval of the RC.</b></p> <p>The NSRF believes that the infrequent communications to a Distribution Provider, that are not already in</p>

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	<p>scope of COM-002-3, do not carry any considerable risk to the BES. The administrative burden on the Distribution Provider should be greatly reduced, as there would not be a measurable gain in reliability by requiring them to formally document communication protocols and establish a monitoring program. To address these concerns, we recommend that Distribution Provider be removed from the applicability in R3 and R4. Secondly, we suggest that an R5 be created similarly to COM-002-3, R2. Recommend the following for how the new R5 might read:</p> <p>R5. Each Distribution Provider that is the recipient of an oral Operating Instruction, other than Reliability Directives, shall:</p> <p>5.1 Use the English language, unless another language is mandated by law or regulation.</p> <p>5.2 Repeat, restate, rephrase, or recapitulate the oral Operating Instruction, excluding oral Operating Instructions issued as a one-way burst message.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
<p>Public Service Enterprise Group</p>	<p>The purpose statement needs to have “System Operators” limited to just those of RCs, TOPs, and BAs. The definition of “System Operators” in the NERC Glossary includes GOPs. The capitalizd language added to the Purpose statement below would clarify this:</p> <p>Purpose: To provide System Operators OF RELIABILITY COORDINATORS, TRANSMISSION OPERATORS, AND BALANCING AUTHORITIES predefined communications protocols that reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of BES.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT changed the language of the purpose statement to COM-003-1 to address the commenter’s concern.</b></p>	
<p>ISO/RTO Standards Review Committee</p>	<p>The SRC recognizes and commends the Drafting Team’s efforts to respond to Industry comments and to offer a revised pragmatic solution for this Project. The proposed changes do not create a common results-based standard that addresses let alone resolves any identified reliability problem. The SRC is concerned that the posting as proposed the standard creates a fill-in-the-blanks solution that could discourage a functional entity from employing anything more than a least common denominator solution.</p>



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	<p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>Technically the definition and proposal are improvements and the SRC would agree with the proposed changes, if the definition and proposal were needed. The issue is with the need for this definition, and the continuing debate this definition is generating. The SRC is opposed to having this term defined and added to the NERC Glossary. The term operating instruction does not need to be defined. For years, system operators deal with operating instructions on a daily if not minute-to-minute basis. Having a defined term, and calling such communication as “Command” is unnecessary, and potentially could confuse operators from what they understand to be the meaning of operating instructions. While the SDT has found that their previous definitions were not appropriate for a NERC standard, and the subsequent incremental changes are useful, the debate itself does not seem to be a productive use of the SDT’s or the Industry’s time. The SRC would prefer that the objectives of the SAR (communications protocols) be handled through means other than a Standard (e.g. the Operating Committee’s Reliability Guidelines on Communications). The reason being, a standard requires zero-defect compliance, data retention, self-reporting, and requires these debates over the proposed terms such as “Operating instruction” which diverts the Industry, NERC and the Regional Entities from focusing on more productive reliability issues.</p> <p>The proposed RSAW wording must be more objective as the current test contains too many subjective requirements:</p> <p>Page 3</p> <ul style="list-style-type: none"> <li>o “... Identification of instances ...” - will this be viewed as identification of every instance or will one instance be sufficient?</li> <li>o “...when....necessary...” - who decides when there is a necessity? The auditor or the functional entity?</li> </ul> <p>Page 4</p> <ul style="list-style-type: none"> <li>o “...may include...” - this phraseology may be seen as meaning the listed following items are among the items that are required but are themselves insufficient to meet the requirement.</li> </ul> <p>Page 5</p> <ul style="list-style-type: none"> <li>o “...reviews of System Operator voice recordings...: - it should be made clear that the “review” is of the</li> </ul>

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	<p>sampled recordings used by the entity in its own self-assessments, and not a “review” of any voice recording.</p> <p>o “Where practicable” is subjective and inappropriate for a standard. To avoid confusion and misapplication of the standard, the RSAW should include a statement that messaging systems are not oral communication and not evaluated under the standard.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
<p>North American Generator Forum Standards Review Team</p>	<p>The SRT agrees with the concepts put forth in COM-003, but have some concerns, particularly with the proposed administrative burden associated with the Standard. The SRT offers to following comments:</p> <ol style="list-style-type: none"> <li>1. R1.9 requires a TOP, BA, and RC to coordinate with affected RC, BA, TOP, DP and GOP communication protocols; this could result in a TOP having to coordinate with a hundred+ different entities' communications protocols. This coordination would not improve reliability, but only serve to create confusion and significant communication time delays in real-time operations. Both R1 and R4 create significant documentation and administrative burdens, without providing a comparable improvement to the reliability of the BES. As reliability based Standard, COM-003 should focus on those actions that would have a direct impact on reliability, while minimizing the administrative burden.</li> </ol> <p><b>Response: The OPCPSDT has modified the standard by changing the R1 language to require the TOP, BA and RC to develop the protocols subject to the approval of the RC.</b></p> <ol style="list-style-type: none"> <li>2. R3 should end after the first sentence. GOPs do not issue Operating Instructions. They only receive instructions from others. GOPs should have a communications procedure as part of their operations, however, the methods used are properly business decisions made by the GOP. The content, thoroughness and effectiveness of a communications plan are excellent items to consider when assessing an entity’s internal compliance program.</li> </ol> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <ol style="list-style-type: none"> <li>3. R4 raises the question of sufficiency of an entities corrective program. The RSAW requires the GO to turn over records of monitoring communications as well as records of corrective actions and then prove the</li> </ol>

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	<p>“problem” is not still in place. This standard could easily turn into a high-profile audit target due to the varying concepts of what does and does not constitute a sufficient corrective action program.</p> <p><b>Response: The OPCSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>4. The SRT recommends that the language to M4 be changed as follows:  M4. Each Distribution Provider and Generator Operator shall provide the results of its periodic assessment and of any corrective actions (if any corrective actions were implemented) developed for Requirement R4. Examples of sufficient periodic assessment programs include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>-Documented review of voice logs for a total of at least one hour per calendar year for each operator (does not need to be a single session)</li> <li>-Documented personal monitoring of communications for a total of at least one hour per calendar year for each operator (does not need to be a single session)</li> <li>-Documented annual training Examples of sufficient corrective action programs include, but are not limited to, the following: <ul style="list-style-type: none"> <li>-Documented refresher training-Documented meeting-Documented “hot box” communication</li> </ul> </li> </ul> <p><b>Response: The OPCSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>5. The VSLs give a higher violation to a GOP than a BA for exactly the same error, even though the consequences with the BA are much greater. A GOP who fails to require 3-part responses when requested is tagged with a Moderate violation, while the BA would receive a Lower.</p> <p><b>Response: The OPCSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>6. In the RSAW, the following passage should be expunged; “Where practicable, verify that deficient communication practice was indeed corrected by reviewing evidence of Operator communications (such as voice recordings) occurring after the date of the corrective action to determine if deficient communication practice was corrected.” Differentiating between slips of the tongue and “deficient communication practices” involves subjective judgments. The same is true for attempting to identify changes in an operator’s degree of understanding, especially when doing so through the numbing process of making</p>

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	<p>before-and-after voice recording comparisons. This is an open-ended matter that could very quickly become an unreasonable compliance burden. RSAWs in general should not introduce new requirements, measures or forms of evidence, so the GOP materials reviewed should be limited to the protocols/procedures of R3, and the assessment forms and corrective action reports of R4.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
<p>NYISO</p>	<p>The text presented in the blue box for Requirement 1 should be incorporated into Requirement #1. If the requirement needs to be explained at this point, we recommend clarifying it in the text. In addition, by using this definition we have now introduced a list of controls that we will be audited against.</p> <p><b>Response: The blue text box has been eliminated. The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>The requirement should simply be to have a procedure. The controls assessment can be addressed during the future RAI process. The current draft provides for a fill in the blank framework that allows for an entity to define what is applicable for its communication protocol. A better approach would be to state that an entity may include items from the list provided that the entity identifies them as critical. Then the entity would only be required to show what is critical to its operations, rather than having to prove what is not critical.</p> <p><b>Response: The OPCPSDT eliminates R2 and R4 “assess and correct” language in draft 6 and ties performance to avoiding communication related events that would generate a Reliability Directive.</b></p> <p>The language in requirement 1.5 needs to be clarified. It is not clear on how an entity is required to ‘confirm’ the response was accurate. This could simply be a ‘2 part communication’, where once the receiving entity repeats the instruction, the initiator may move on if he deems it correct. Or does the confirmation need to be ‘confirmed’ with the receiving party as in ‘3 part communications’? If the requirement is meant to initiate 2 part communication, the requirement should say that. If the requirement is meant for ‘3 part communication,’ then we recommend utilizing the language from COM-002 R2 in place of Requirements 1.5 and 1.6.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your</b></p>

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	comments.
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
<p>PPL NERC Registered Affiliates</p>	<p>These comments are submitted on behalf of the following PPL Companies: Louisville Gas and Electric Company and Kentucky Utilities Company; PPL Electric Utilities Corporation, PPL EnergyPlus, LLC; and PPL Generation, LLC, on behalf of its NERC registered subsidiaries. The PPL Companies are registered in six regions (MRO, NPCC, RFC, SERC, SPP, and WECC) for one or more of the following NERC functions: BA, DP, GO, GOP, IA, LSE, PA, PSE, RP, TO, TOP, TP, and TSP. The PPL Companies believe that the revised COM-003 standard represents an improvement over previous drafts. Nevertheless, we have one concern with the proposed standard and urge the Standard Drafting Team to add the following note to Requirements 1.7, 1.8, and 3.3 in the standard before it is submitted to NERC and FERC for their approval: Notwithstanding anything in COM-002, the requirements set forth in COM-003 Requirements R1.7, R1.8 and R3.3 shall govern the manner for responding to Reliability Directives that are issued through one-way burst messages (e.g., an All Call system).</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments. The OPCPSDT also believes draft 6 requirements create a logical delineation between COM-002-3 and COM-003-1.</b></p>	
<p>South Carolina Electric and Gas</p>	<p>This standard is becoming overly complicated. The reason this COM standard is being developed is to reduce the possibility of miscommunication of information when the BES is being altered. This proposed standard is an administrative burden. Operators will be fearful that they will cause a NERC Compliance Violation every time they communicate. Their focus will be on communicating compliantly and not on operating the BES. Consideration should be given to simplifying this standard.</p> <p>Below is an unrefined proposal for consideration:</p> <p>R1: Applicable REs shall have a procedure that requires its personnel (whether as a receiver or as an initiator) to use three-part communication when altering the state of the BES. Three-part communication is defined as when an initiator issues a command, the receiver repeats the command back, and the initiator confirms. Any misunderstandings are resolved during the repeat back. (3-part communication is the only proven way to mitigate miscommunication. If personnel use three way communication then all issues related to alpha-numeric clarifiers, time, etc should be resolved naturally during the repeat</p>

Organization	Question 4 Comment
	<p>back/confirmation. Additionally, this requires operators and field personnel to remember one thing: when changing the state of the BES they must use 3-part communication.)</p> <p>R2: Each calendar month REs required to comply with R1 shall assess a random sample of communications that occurred over the month to ensure that three-way communication was properly being utilized, when the BES was being altered. In instances where deficiencies are found, REs shall require remedial training to be completed by the individuals involved in the deficient communication. (Remedial training will act as a deterrent for those who get lazy about using three-part communication. Additionally, peers will be aware of who had to undergo remedial training, which will further act as deterrent. Requiring remedial training would be an incentive to using three-part communication properly)</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>	
MISO	<p>To avoid confusion and misapplication of the standard, the RSAW should include a statement that electronic messaging systems are not subject to compliance with this standard.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>	
Tennessee Valley Authority	<p>TVA Nuclear Power’s Human Performance program is driven by INPO and includes</p> <ol style="list-style-type: none"> <li>1) requirements for operations to use 3-way communication and the phonetic alphabet; and</li> <li>2) a documented assessment process via an established observation program with corrective actions. Any additional oversight process will contribute to distraction in the control room and promote overreliance on process and procedure with a “checklist mentality” rather than focus on potential impacts of the task being performed. If the RC, TOP, or BA specifically requests confirmation of a verbal communication (R1.6), our nuclear plant operators will respond accordingly as they are already expected to do. The use of “periodic assessment” in the measurements does not provide adequate guidance in the development of consistent, effective measures of compliance.</li> </ol>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments. The OPCPSDT has modified the standard by changing the R1 language to require the TOP, BA and RC to develop the protocols subject to the approval of the RC.</b></p>	

Organization	Question 4 Comment
The United Illuminating Company	<p>UI as its functional role of DP is voting No because of the conflict between COM-003 R 1.7, R1.8 and R3.3 with COM-002 R2. COM-003 allows for the RC/TOP/BA communication protocol when issuing Reliability Directives to override the clearly stated requirement of COM-002 R2 that a DP SHALL REPEAT, RESTATE, REPHRASE, OR RECAPITULATE the Reliability Directive. There is no leeway in COM-002 R2 to allow for solely providing an affirmation of receipt of a verbal reliability directive or not repeating back the message when the RC/TOP requests no repeat. As a DP, UI is placed in a position of attempting to comply with two opposing requirement in the two standards. If the RC/TOP communication protocol clearly stated that there will be no repeat back when receiving a verbal Reliability Directive and COM-003 requires a DP to comply with the RC/TOP communication protocol, UI would have to choose between violating COM-002 or COM-003. Since the VRF for COM-002 R2 is HIGH indicating a greater risk to reliability than COM-003 VRF LOW, UI would comply with COM-002 R2. This issue can be resolved either by correcting COM-002 by assigning the flexibility of opting out of repeat back to the RC/TOP/BA function, or removing the words "Reliability Directive" from COM-003.</p>
<p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments. The OPCPSDT also believes draft 6 requirements create a logical delineation between COM-002-3 and COM-003-1.</b></p>	
Hydro One Networks Inc.	<p>We are not convinced that a Standard is the best approach to routine communications, but we feel that the latest draft is a reasonable compromise.</p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
ISO New England Inc.	<p>We do not believe a Standard is needed, given other developments:</p> <p>A. The SDT materials have not demonstrated the reliability gap/need for this Standard. Without having a better sense of what the scope of the actual reliability risks are (frequency, impact, etc...), it's difficult to know if the proposed solution - as embodied in COM-003 Draft Version 5 - is "necessary to provide for reliable operation of the bulk-power system".</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>

Organization	Question 4 Comment
	<p>B. Moreover, the Requirements that the recipient repeat, restate, etc., if required/requested by the issuer (1.6 &amp; 3.2) suggest that a RC, BA or TOP needs to ensure a repeat back or be non-compliant even though taking this extra time may, in fact, impact reliability.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments. The OPCPSDT has modified the standard by changing the R1 language to require the TOP, BA and RC to develop the protocols subject to the approval of the RC.</b></p> <p>C. Lastly, the fact that the Ballot Body and Standard Drafting Team continue to have so many questions about how to interpret these requirements (see the recently issued FAQs) suggests:</p> <p>(a) that the Operating Committee would serve as a more effective forum for discussing what additional communication practices, if any, are needed, and</p> <p>(b) the requirements themselves may be unduly ambiguous. - Proposed Solution: We support strengthening communications protocols such as contained in the pending COM-002 revisions and in the OC White Paper. NERC Event Analysis Staff should work with the NERC OC to document the reported risks to the system, continue to monitor system operator performance, and periodically report on findings. If, however, it is determined that the Standard will move forward, then we would offer the following suggestions:</p> <p>A. We consider use of one-way burst messaging systems to be electronic and, as such, do not believe they should be included in the Standard. Further, in accordance with 1.5, a one-way burst messaging system is not a “oral two party, person-to-person Operating Instruction,” which would further justify its exclusion.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p> <p>B. Draft Version 5’s Requirements establish that each covered registered Entity shall develop its own communication protocol outlining the communications expectations of its operators. This has the potential for confusion as multiple Registered Entities within a single RC, BA or TOPs’ footprint may establish different communication expectations.</p> <p>- Proposed Solution: The Requirements should establish that if the RC, BA or TOP establish a communication protocol for their System Operators, the RC, BA or TOP should share that protocol with</p>



Organization	Question 4 Comment
	<p>Registered Entities operating within their footprint, those Registered Entities must follow the RC, BA or TOP’s protocol, or adopt a consistent one for their company</p> <p><b>Response: The OPCPSDT has modified the standard by changing the R1 language to require the TOP, BA and RC to develop the protocols subject to the approval of the RC.</b></p> <p>C. We agree with the SDT that the COM Standard need not employ a “zero tolerance/zero defect” approach, because NERC Enforcement need not monitor and assess every Operator-to-Operator communication. In Draft Version 5 (Measurements &amp; RSAW), NERC, however, appears to adopt an approach of establishing “zero tolerance” around a Company’s Internal Controls program. The RSAW states that registered entities must provide “evidence that corrective actions necessary to meet the expectations in its documented communication protocols... are taken” and “deficient communication practice was indeed corrected.” - This type of approach to Standard drafting raises untested questions of how the Standard will be enforced, whether it is a “fill-in-the-blank”-type Standard, and whether a new “zero tolerance” enforcement approach to monitoring will, in fact, be maintained.</p> <p>- Proposed solution: Draft a Standard that sets performance based expectations and allow the ERO to use its enforcement discretion (e.g., through FFT and through review of internal control programs) to determine how stringently to audit and sanction.</p> <p><b>Response: The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments.</b></p>
<p><b>Response: The OPCPSDT thanks you for your comments.</b></p>	
Ameren	<p>We would ask the SDT to consider for clarity to this standard that COM-002 only address Reliability Directives and COM-003 only address Operating Instructions.</p>
<p><b>Response: The OPCPSDT thanks you for your comments. The OPCPSDT believes the proposed draft 6 has incorporated changes that will address your comments. The OPCPSDT also believes draft 6 requirements create a logical delineation between COM-002-3 and COM-003-1.</b></p>	

END OF REPORT

## Standard Development Roadmap

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

### Development Steps Completed:

1. The Standards Committee (SC) approved the Standard Authorization Request (SAR) for posting on March 1, 2007.
2. The SAR was posted for comment from March 19 through April 17, 2007.
3. The SC sought SAR drafting team nominations April 18 through May 2, 2007.
4. The SAR drafting team posted reply comments to industry comments received on the first posting SAR on June 8, 2007
5. Standard drafting team appointed by SC Executive Committee on June 28, 2007
6. Version 1 draft of Standard posted November 2009 for Informal Comments closed January 15 2010.
7. Version 2 draft of Standard posted May 2012 for Formal Comments, Initial Ballot closed June 20 2012.
8. Version 3 draft of Standard posted August 2012 for Formal Comments, Ballot closed September 22, 2012.
9. Version 4 draft of Standard posted November 2012 for Formal Comments, Ballot closed December 13, 2012.
10. Version 5 draft of Standard posted March 2013 for Formal Comments, Ballot closed April 5, 2013.

### Description of Current Draft:

This is the sixth draft of a new standard requiring the use of standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The drafting team requests posting for a 30-day concurrent Formal Comment period and Ballot.

### Future Development Plan:

Anticipated Actions	Anticipated Date
1. Fourth Successive Ballot of Standard	June 2013
2. Recirculation ballot of standard.	July 2013
3. Board adopts standard.	August 2013

### **Definitions of Terms Used in Standard**

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

*When using terms or phrases contained in the Reliability Standards Glossary of Terms for communications it should be cited as the source. When used in written communications, terms or phrases contained in the Reliability Standards Glossary of Terms are capitalized.*

**Operating Instruction** —A command, other than a Reliability Directive, by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.

A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction. An Operating Instruction is exclusive and distinct from a Reliability Directive. There is no overlap between an Operating Instruction and Reliability Directive.

## A. Introduction

1. **Title:** Operating Personnel Communications Protocols
2. **Number:** COM-003-1
3. **Purpose:** To strengthen communications for the issuance of Operating Instructions with predefined communications protocols that reduce the possibility of miscommunication that could adversely impact the reliability of the Bulk Electric System.
4. **Applicability:**
  - 4.1. **Functional Entities**
    - 4.1.1 Balancing Authority
    - 4.1.2 Distribution Provider
    - 4.1.3 Generator Operator
    - 4.1.4 Reliability Coordinator
    - 4.1.5 Transmission Operator
5. **(Proposed) Effective Date:** First day of first calendar quarter, twelve (12) calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter twelve (12) calendar months from the date of Board of Trustee adoption.

## B. Requirements

- R1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator, in each Reliability Coordinator area, shall develop, subject to the Reliability Coordinator's approval, documented communication protocols for the issuance of Operating Instructions in that Reliability Coordinator's area.

The documented communication protocols will address, where applicable, the following: [*Violation Risk Factor: Low*] [*Time Horizon: Long-term Planning*]

- 1.1. The use of the English language when issuing or responding to an oral or written Operating Instruction, unless another language is mandated by law or regulation.
- 1.2. The instances, if any, that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.
- 1.3. The nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.
- 1.4. The instances, if any, where alpha-numeric clarifiers are necessary when issuing an oral Operating Instruction and the format for those clarifiers.
- 1.5. The instances where the issuer of an oral two party, person-to-person Operating Instruction requires the receiver to repeat, restate, rephrase, or recapitulate the Operating Instruction and the issuer to:

- Confirm that the response from the recipient of the Operating Instruction was accurate; or
  - Reissue the Operating Instruction to resolve a misunderstanding.
- R2.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement its communication protocols developed in Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. [*Violation Risk Factor: Medium*][*Time Horizon: Real Time Operations* ]
- R3.** Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider shall repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1 so that the failure to repeat, restate, rephrase, or recapitulate the Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. [*Violation Risk Factor: Medium*][*Time Horizon: Real Time Operations* ]

### C. Measures

- M1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator in each Reliability Coordinator area, shall provide its documented communications protocols developed for Requirement R1.
- M2.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence that it did not issue an Operating Instruction that resulted in an operating condition that required the issuance of a Reliability Directive by the issuer or another Balancing Authority, Reliability Coordinator, or Transmission Operator due to the failure to use documented communications protocols developed for Requirement R1. A Balancing Authority, Reliability Coordinator, and Transmission Operator may need to coordinate with another Reliability Coordinator, Balancing Authority and Transmission Operator to provide this evidence.
- M3.** Each Balancing Authority, Generator Operator, Distribution Provider, and Transmission Operator shall provide evidence that it did not experience a failure to repeat, restate, rephrase, or recapitulate an Operating Instruction, when required, that resulted in an operating condition that required the issuance of a Reliability Directive by the issuer or by another Balancing Authority, Reliability Coordinator, or Transmission Operator due to the failure to use the protocols. A Balancing Authority, Generator Operator, Distribution Provider, and Transmission Operator may need to coordinate with a Reliability Coordinator, Balancing Authority and Transmission Operator to provide this evidence.

## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance Enforcement Authority**

As defined in the NERC Rules of Procedure, “Compliance Enforcement Authority” means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

#### **1.2. Data Retention**

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each Transmission Operator, Balancing Authority, Reliability Coordinator, Generator Operator, and Distribution Provider shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall retain evidence for Requirement R1 Measure M1 for the most recent 90 days.

Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall retain evidence for Requirement R2 Measure M2 for the most recent 90 days.

Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator shall retain evidence for Requirement R3 Measure M3 for the most recent 90 days.

If a Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator or Transmission Operator is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

### **Compliance Monitoring and Assessment Processes**

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

**1.3. Additional Compliance Information**

None

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R1</b>	Long Term Planning	Low	The Responsible Entity did not develop one (1) of the five (5) parts of Requirement R1 in their documented communication protocols as required in Requirement R1. Parts of Requirement R1, (1.1 to 1.5) not applicable to the Responsible Entity are excluded	The Responsible Entity did not develop two (2) of the five (5) parts of Requirement R1 in their documented communication protocols as required in Requirement R1. Parts of Requirement R1, (1.1 to 1.5) not applicable to the Responsible Entity are excluded	The Responsible Entity did not develop three (3) of the five (5) parts of Requirement R1 in their documented communication protocols as required in Requirement R1. Parts of Requirement R1, (1.1 to 1.5) not applicable to the Responsible Entity are excluded	The Responsible Entity did not develop four (4) or more of the five (5) parts of Requirement R1 in their documented communication protocols as required in Requirement R1. Parts of Requirement R1, (1.1 to 1.5) not applicable to the Responsible Entity are excluded
<b>R2</b>	Real Time Operations	Medium	N/A	N/A	N/A	The Responsible Entity failed to use the protocols developed in Requirement R1 which resulted in an operating condition that required the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.



<b>R3</b>	Real Time Operations	Medium	N/A	N/A	N/A	<p>The Responsible Entity failed repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1, which resulted in an operating condition that required the issuance of a Reliability Directive by the original issuer of the Operating Instruction or another Balancing Authority, Reliability Coordinator, or Transmission Operator.</p>
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**E. Regional Variances**

None.

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>

## Standard Development Roadmap

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### Development Steps Completed:

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10. Version 5 draft of Standard posted March 2013 for Formal Comments, Ballot closed April 5, 2013.

### Description of Current Draft:

This is the ~~fifth~~sixth draft of a new standard requiring the use of standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The drafting team requests posting for a 30-day concurrent Formal Comment period and Ballot.

### Future Development Plan:

Anticipated Actions	Anticipated Date
1. <del>Third</del> <u>Fourth</u> Successive Ballot of <del>Standards</del> <u>Standard</u>	<del>March</del> <u>June</u> 2013
2. Recirculation ballot of <del>standards</del> <u>standard</u> .	<del>April</del> <u>July</u> 2013
3. Board adopts <del>standards</del> <u>standard</u> .	<del>May</del> <u>August</u> 2013

## Definitions of Terms Used in Standard

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

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Operating Instruction —A command, other than a Reliability Directive, by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act; to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.

### Discussions

A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns are-is not a commands and are-is not considered Operating Instructionsan Operating Instruction. An Operating Instruction is exclusive and distinct from a Reliability Directive. There is no overlap between an Operating Instruction and Reliability Directive.

## A. Introduction

1. **Title:** Operating Personnel Communications Protocols
2. **Number:** COM-003-1
3. **Purpose:** To ~~provide System Operators~~ strengthen communications for the issuance of Operating Instructions with predefined communications protocols that reduce the possibility of miscommunication that could ~~lead to action or inaction harmful to~~ adversely impact the reliability of ~~the BES~~ Bulk Electric System.
4. **Applicability:**
  - 4.1. **Functional Entities**
    - 4.1.1 Balancing Authority
    - 4.1.2 Distribution Provider
    - 4.1.3 Generator Operator
    - 4.1.4 Reliability Coordinator
    - 4.1.5 Transmission Operator
5. **(Proposed) Effective Date:** First day of first calendar quarter, twelve (12) calendar months following applicable regulatory approval; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter twelve (12) calendar months from the date of Board of Trustee adoption.

## B. Requirements

- R1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator, in each Reliability Coordinator area, shall ~~jointly~~ develop and implement, subject to the Reliability Coordinator's approval, documented, documented communication protocols for the issuance of Operating Instructions in that outline the communications expectations of its System Operators. Reliability Coordinator's area.

~~Implementation means (in R1, R2, R3 and R4) incorporating the communication protocols into processes, policies, procedures, training programs and assessment programs to support setting and attaining the communication expectations of operators (R3) and System Operators (R1).~~

The documented communication protocols will address, where applicable, the following: [*Violation Risk Factor: Low*] [*Time Horizon: Long-term Planning*]

- 1.1. ~~Use~~ The use of the English language when issuing or responding to an oral or written Operating Instruction ~~or Reliability Directive~~, unless another language is mandated by law or regulation.
- 1.2. ~~Instances~~ The instances, if any, that ~~require~~ require time identification when issuing an oral or written Operating Instruction ~~or Reliability Directive~~, and the format for that time identification.

- 1.3. ~~Nomenclature~~The nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction ~~or Reliability Directive.~~
- 1.4. ~~Instances~~The instances, if any, where alpha-numeric clarifiers are necessary when issuing an oral Operating Instruction ~~or Reliability Directive,~~ and the format for those clarifiers.
- 1.5. ~~Instances~~The instances where the issuer of an oral two party, person-to-person Operating Instruction ~~is required~~requires the receiver to repeat, restate, rephrase, or recapitulate the Operating Instruction and the issuer to:
  - Confirm that the response from the recipient of the Operating Instruction was accurate;~~;~~ or
  - Reissue the Operating Instruction to resolve a misunderstanding.

- ~~1.6. Require the recipient of an oral two party, person-to-person Operating Instruction to repeat, restate, rephrase, or recapitulate the Operating Instruction, if requested by the issuer.~~
- ~~1.7. Instances where the issuer of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) is required to verbally or electronically confirm receipt from at least one receiving party.~~
- ~~1.8. Require the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the initiator if the communication is not understood.~~
- ~~1.9. Coordination with affected Reliability Coordinators', Balancing Authorities', Transmission Operators', Distribution Providers', and Generator Operators' communication protocols.~~

**R2.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall ~~develop method(s) to assess System Operators' communication practices and implement corrective actions necessary to meet the expectations in its documented-its~~ communication protocols developed forin Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.  
*[Violation Risk Factor: Medium+][Time Horizon: Real Time Operations Planning, Operations Assessment ]*

**R1.**

**R2.**—Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider ~~and Generator Operator~~ shall ~~develop and implement documented communication protocols that outline the communications expectations of its operators. The documented communication protocols will address, where~~

applicable, the following: [*Violation Risk Factor: Low*] [*Time Horizon: Long-term Planning*]

- ~~3.1. Use of the English language repeat, restate, rephrase, or recapitulate an Operating Instruction when responding to required by the issuer of an oral or written Operating Instruction or Reliability Directive, unless another language is mandated by law or regulation.~~
  - ~~3.2. Require the recipient of an oral two party, person-to-person Operating Instruction in its communication protocols developed in Requirement R1 so that the failure to repeat, restate, rephrase, or recapitulate the Operating Instruction, if requested by the issuer.~~
  - ~~3.3. Require the receiver of an oral Operating Instruction or Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the initiator if the communication is does not understood, if required by the issuer.~~
- ~~R3. Each Distribution Provider and Generator Operator shall develop method(s) to assess operators' communication practices and implement corrective actions necessary to meet the expectations result in its documented communication protocols developed for Requirement R3 an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. [*Violation Risk Factor: Medium*] [*Time Horizon: Real Time Operations-Planning /Operations Assessment* ]~~

## C. Measures

- ~~M1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator in each Reliability Coordinator area, shall provide its jointly developed documented communications protocols developed for Requirement R1.~~
- ~~M1-M2. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence that it implemented its documented communication protocols that it developed for Requirement R1 which may include, but is not limited to, its policies, procedures, and or operator training, did not issue an Operating Instruction that resulted in an operating condition that required the issuance of a Reliability Directive by the issuer or another Balancing Authority, Reliability Coordinator, or Transmission Operator due to the failure to use documented communications protocols developed for Requirement R1. A Balancing Authority, Reliability Coordinator, and Transmission Operator may need to coordinate with another Reliability Coordinator, Balancing Authority and Transmission Operator to provide this evidence.~~
- ~~M2. Each Balancing Authority, Reliability Coordinator, Generator Operator, Distribution Provider, and Transmission Operator shall provide the results of its periodic assessment and of any corrective actions (if any corrective actions were implemented) developed for Requirement R2.~~

~~M3. Each Distribution Provider and Generator Operator shall provide its documented communications protocols developed for Requirement R3. Each Distribution Provider, and Generator Operator shall provide evidence that it implemented its documented communication protocols that it developed for Requirement R3 which may include, but is did not limited experience a failure to, its policies, procedures, and repeat, restate, rephrase, or operator training.~~

~~M4.M3. Each Distribution Provider and recapitulate an Operating Instruction, when required, that resulted in an operating condition that required the issuance of a Reliability Directive by the issuer or by another Balancing Authority, Reliability Coordinator, or Transmission Operator due to the failure to use the protocols. A Balancing Authority, Generator Operator shall provide the results of its periodic assessment and of any corrective actions (if any corrective actions were implemented) developed for Requirement R4., Distribution Provider, and Transmission Operator may need to coordinate with a Reliability Coordinator, Balancing Authority and Transmission Operator to provide this evidence.~~

## D. Compliance

### 1. Compliance Monitoring Process

#### 1.1. Compliance Enforcement Authority

As defined in the NERC Rules of Procedure, “Compliance Enforcement Authority” means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

#### 1.2. Data Retention

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each Transmission Operator, Balancing Authority, Reliability Coordinator, Generator Operator, and Distribution Provider shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall retain evidence for Requirement R1 Measure M1 for the most recent 90 days.

Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall retain evidence for Requirement R2 Measure M2 for the most recent ~~180~~90 days.

Each Balancing Authority, Distribution Provider ~~and~~, Generator Operator, and Transmission Operator shall retain evidence for Requirement R3 Measure M3 for the most recent 90 days.



~~Each~~

~~If a Balancing Authority, Distribution Provider ~~and~~, Generator Operator ~~shall retain evidence for Requirement R4 Measure M4 for the most recent 180 days.~~~~

~~If a Transmission Operator, Balancing Authority, Reliability Coordinator, Generator or Transmission Operator or Distribution Provider is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time period specified above, whichever is longer.~~

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

### **Compliance Monitoring and Assessment Processes**

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

### **1.3. Additional Compliance Information**

None

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long Term Planning	Low	<p>The Responsible Entity did not <del>address-develop</del> one (1) of the <del>nine-five (59)</del> parts of <u>Requirement R1</u> in their documented communication protocols -as required in Requirement R1. <u>Parts of Requirement R1, (1.1 to 1.5) justifiably-not applicable to the Responsible Entity are excluded</u></p> <p><del>OR</del></p> <p>The Responsible Entity did not implement one (1) of the nine (9) parts of Requirement R1 in their documented communication protocols -as required in Requirement R1</p>	<p>The Responsible Entity <del>did not address-develop</del> two (2) of the <del>nine-five (59)</del> parts of Requirement R1 in their documented communication protocols as required in Requirement R1. <u>Parts of Requirement R1, (1.1 to 1.5) justifiably-not applicable to the Responsible Entity are excluded</u></p> <p><del>OR</del></p> <p>The Responsible Entity <del>did not implement</del> two (2) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</p>	<p>The Responsible Entity <del>did not address</del> <u>develop</u> three (3) of the <del>nine-five (59)</del> parts of Requirement R1 in their documented communication protocols as required in Requirement R1. <u>Parts of Requirement R1, (1.1 to 1.5) justifiably-not applicable to the Responsible Entity are excluded</u></p> <p><del>OR</del></p> <p>The Responsible Entity <del>did not implement</del> three (3) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</p>	<p>The Responsible Entity did <del>not address-develop</del> four (4) or more of <del>the-the nine-five (95)-parts</del> parts of <u>Requirement of Requirement R1</u> in their documented communication protocols as required in Requirement R1. <u>Parts of Requirement R1, (1.1 to 1.5) -justifiably-not applicable to the Responsible Entity are excluded</u></p> <p><del>OR</del></p> <p>The Responsible Entity <del>did not have any documented communication protocols as required in Requirement R1</del></p> <p><del>OR</del></p> <p>The Responsible Entity <del>did not implement any documented communication protocols as required in Requirement R1</del></p>

<p><b>R2</b></p>	<p><u>Operations Planning</u> <u>Operations Assessment</u> <u>Real Time Operations</u></p>	<p>Medium</p>	<p>The Responsible Entity performed periodic assessments of its System Operators' communication practices and implemented 50% or more but not all corrective action identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1. <u>N/A</u></p>	<p>The Responsible Entity performed periodic assessments of its System Operators' communication practices and implemented less than 50% of the corrective actions identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1. <u>N/A</u></p>	<p>The Responsible Entity performed periodic assessments of its System Operators' communication practices but did not implement any corrective actions identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1. <u>N/A</u></p>	<p>The Responsible Entity failed to use the protocols developed in Requirement R1 which resulted in an operating condition that required the issuance of a <u>Reliability Directive</u> by the <u>original issuer of the Operating Instruction</u> or by <u>another Balancing Authority, Reliability Coordinator, or Transmission Operator.</u> The Responsible Entity did not perform periodic assessments of its System Operators' communication practices identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.</p>
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COM-003-1 Operating Personnel Communications Protocols

<p><b>R3</b></p>	<p><u>Long Term Planning Real Time Operations</u></p>	<p><u>Low/Medium</u></p>	<p><u>N/A</u></p>	<p><del>N/A The Responsible Entity did not address one (1) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</del></p> <p><del>OR</del></p> <p><del>The Responsible Entity did not implement one (1) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</del></p>	<p><del>N/A The Responsible Entity did not address two (2) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</del></p> <p><del>OR</del></p> <p><del>The Responsible Entity did not implement two (2) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</del></p>	<p><del>The Responsible Entity failed repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1, which resulted in an operating condition that required the issuance of a Reliability Directive by the original issuer of the Operating Instruction or another Balancing Authority, Reliability Coordinator, or Transmission Operator. The Responsible Entity did not address three (3) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</del></p> <p><del>OR</del></p> <p><del>The Responsible Entity did not develop any documented communication protocols as required in Requirement R3</del></p> <p><del>OR</del></p> <p><del>The Responsible Entity did not implement any documented communication protocols as required in Requirement R3</del></p>
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<p><b>R4</b></p>	<p>Operations Planning Operations Assessment</p>	<p>Medium</p>	<p>The Responsible Entity performed periodic assessments of its operators' communication practices and implemented 50 % or more but not all corrective action identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3.</p>	<p>The Responsible Entity performed periodic assessments of its operators' communication practices and implemented less than 50 % of the corrective actions identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3.</p>	<p>The Responsible Entity performed periodic assessments of its operators' communication practices but did not implement any corrective actions identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3.</p>	<p>The Responsible Entity did not perform assessments of its operators' communication practices and did not meet the expectations in its documented communication protocols developed for Requirement R3.</p>
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**E. Regional Variances**

None.

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>

## Implementation Plan

Project 2007-02 - Operating Personnel Communications Protocols

### Implementation Plan for COM-003-1 – Operating Personnel Communications Protocols Standard

#### *Approvals Required*

COM-003-1 – Operating Personnel Communications Protocols Standard

#### *Prerequisite Approvals*

None

#### *Revisions to Glossary*

The following term is proposed for addition to the NERC Glossary of Terms:

#### **Operating Instruction —**

Operating Instruction — A command, other than a Reliability Directive, by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.

A discussion of general information and of potential options or alternatives to resolve BES operating concerns is not a command and is not considered an Operating Instruction. An Operating Instruction is exclusive and distinct from a Reliability Directive. There is no overlap between an Operating Instruction and Reliability Directive.

#### *Applicable Entities*

Balancing Authority  
Distribution Provider  
Generator Operator  
Reliability Coordinator  
Transmission Operator

#### *Revisions or Retirements to Approved Standards*

Approved Requirement to be Retired	Proposed Replacement Requirement(s)
COM-001-1.1 Requirement R4 R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use	COM-003-1 Requirement R1 Part 1.1 <b>R1.</b> Each Balancing Authority, Reliability Coordinator, and Transmission Operator, in each Reliability Coordinator area, shall

<p>English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations</p>	<p>develop, subject to the Reliability Coordinator’s approval, documented communication protocols for the issuance of Operating Instructions in that Reliability Coordinator’s area. The documented communication protocols will address, where applicable, the following:[<i>Violation Risk Factor: Low</i>] [<i>Time Horizon: Long-term Planning</i> ]</p> <p>1.1. The use of the English language when issuing or responding to an oral or written Operating Instruction, unless another language is mandated by law or regulation</p>
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***Conforming Changes to Other Standards***

None

***Effective Dates***

COM-003-1 shall become effective the first day of first calendar quarter, twelve calendar months following applicable regulatory approval, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter twelve calendar months from the date of Board of Trustee adoption.

Each Balancing Authority, Reliability Coordinator, and Transmission Operator must develop their communication protocols prior to the effective date of COM-003-1 to satisfy Requirement R1. COM-001-1.1 Requirement R4 shall expire midnight of the day immediately prior to the Effective Date of COM-003-1 in the particular Jurisdiction in which COM-003-1 is becoming effective.



## Implementation Plan

Project 2007-02 - Operating Personnel Communications Protocols

### Implementation Plan for COM-003-1 – Operating Personnel Communications Protocols Standard

**Approvals Required**

COM-003-1 – Operating Personnel Communications Protocols Standard

**Prerequisite Approvals**

None

**Revisions to Glossary**

The following term is proposed for addition to the NERC Glossary of Terms:

**Operating Instruction —**

Operating Instruction — A command, other than a Reliability Directive, by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.

A discussion of general information and of potential options or alternatives to resolve BES operating concerns is not a command and is not considered an Operating Instruction. An Operating Instruction is exclusive and distinct from a Reliability Directive. There is no overlap between an Operating Instruction and Reliability Directive.

~~A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Discussions of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered Operating Instructions.~~

**Applicable Entities**

- Balancing Authority
- Distribution Provider
- Generator Operator
- Reliability Coordinator
- Transmission Operator

**Revisions or Retirements to Approved Standards**

Approved Requirement to be Retired	Proposed Replacement Requirement(s)

<p>COM-001-1.1 Requirement R4</p> <p>R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations</p>	<p>COM-003-1 Requirement R1 Part 1.1</p> <p><b>R1.</b> <u>Each Balancing Authority, Reliability Coordinator, and Transmission Operator, in each Reliability Coordinator area, shall jointly develop, subject to the Reliability Coordinator’s approval, documented communication protocols for the issuance of Operating Instructions in that Reliability Coordinator’s area.</u> <del>Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop and implement documented communication protocols that outline the communications expectations of its System Operators.</del> The documented communication protocols will address, where applicable, the following: [Violation Risk Factor: Low] [Time Horizon: Long-term Planning ]</p> <p>1.1. <del>Use</del> <u>The use</u> of the English language when issuing or responding to an oral or written Operating Instruction <del>or Reliability Directive</del>, unless another language is mandated by law or regulation</p>
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**Conforming Changes to Other Standards**  
None

**Effective Dates**

COM-003-1 shall become effective the first day of first calendar quarter, twelve calendar months following applicable regulatory approval, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities; or, in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter twelve calendar months from the date of Board of Trustee adoption.

Each Balancing Authority, Reliability Coordinator, and Transmission Operator must develop their communication protocols prior to the effective date of COM-003-1 to satisfy Requirement R1.

COM-001-1.1 Requirement R4 shall expire midnight of the day immediately prior to the Effective Date of COM-003-1 in the particular Jurisdiction in which COM-003-1 is becoming effective.

## Project 2007-02 Operating Personnel Communications Protocols

### *Unofficial Comment Form for Standard COM-003-1 —Operating Personnel Communications Protocols*

Please **DO NOT** use this form. Please use the [electronic comment form](#) located at the link below to submit comments on the proposed draft COM-003-1 Operating Personnel Communications Protocols standard. Comments must be submitted by **July 19, 2013**. If you have questions please contact Joseph Krisiak at [Joseph.Krisiak@nerc.net](mailto:Joseph.Krisiak@nerc.net) or by telephone at 609-651-0903.

[http://www.nerc.com/filez/standards/Op\\_Comm\\_Protocol\\_Project\\_2007-02.html](http://www.nerc.com/filez/standards/Op_Comm_Protocol_Project_2007-02.html)

#### *Background Information:*

Effective communication is critical for Bulk Electric System (BES) operations. Failure to successfully communicate clearly can create misunderstandings resulting in improper operations increasing the potential for failure of the BES.

The Standard Authorization Request (SAR) for this project was initiated on March 1, 2007 and approved by the Standards Committee on June 8, 2007. It established the scope of work to be done for Project 2007-02 Operating Personnel Communications Protocols (OPCP SDT). The scope described in the SAR is to establish essential elements of communications protocols and communications paths such that operators and users of the North American Bulk Electric System will efficiently convey information and ensure mutual understanding. The August 2003 Blackout Report, Recommendation Number 26, calls for a tightening of communications protocols. FERC Order 693 paragraph 532 amplifies this need. This proposed standard's goal is to ensure that effective communication is practiced and delivered in clear language and standardized format.

The standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators, and Distribution Providers. These requirements ensure that communications include essential elements such that information is efficiently conveyed and mutually understood for communicating Operating Instructions.

The Purpose statement of COM 003-1 states: "To strengthen communications for the issuance of Operating Instructions with predefined communications protocols that reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System."

- 1) **New NERC Glossary terms:** The SDT has added language to the previous definition of "Operating Instructions" proposed in the Standard version 5 to further clarify the distinction between an "Operating Instruction" and a "Reliability Directive."  
"Operating Instructions" differentiates the broad class of communications that deal with changing or altering the state of the BES from general discussions of options or alternatives; and from Reliability Directives that apply to Adverse Reliability Impacts and Emergencies on the BES. Changes to the BES operating state with unclear communications create increased opportunities for events that could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures.

This term is proposed for addition to the NERC Glossary to establish meaning and usage within the electricity industry.

- 2) **COM-003-1, Draft 6 now features 3 requirements.** The requirement structure and language has been changed in draft 6 based on changes to the standard recommended by Industry representatives who commented on draft 5 and from Industry representatives who participated in the Informal Review of the proposed draft 6 standard. The language in COM-003-1, draft 6, R1 retained from the “Communications in Operations” Conference of February 14-15, 2013, in Atlanta still permits applicable entities flexibility to develop their communication protocols, but requires applicable entities to **develop the protocols, subject to the Reliability Coordinator’s approval**. This addresses commenters’ concerns over uniformity within Reliability Coordinator control areas.

The assess and correct language has been removed (COM-003-1, draft 5, R2 and R4) based on concerns over compliance with internal controls. Rather than focus on internal controls and System Operator performance improvement controls, the COM-003-1, draft 6, R2 and R3 requirements now focus on **misuse or lack of use of the communication protocols (developed in COM-003-1, draft 6, R1) resulting in the issuance of a Reliability Directive**. This approach requires the entity to manage the effective use of their governing communication protocols to avoid a situation that will initiate an Adverse Reliability Impact or an Emergency on the BES. This directly links communication to a reliability result, which is a recommendation offered by commenters in the last 5 drafts.

**Documented Communication Protocols:** The OPCPSDT has retained requirement COM-003-1, draft 5, Requirement R1 and eliminated COM-003-1, draft 5, Requirement R3, which addressed communication protocols for entities that are solely receivers of Operating Communications (DPs and GOPs). R1 in Draft 6 requires an applicable entity to jointly develop, subject to the Reliability Coordinator’s approval, documented communication protocols for the issuance of Operating Instructions in that Reliability Coordinator’s area, that ,if applicable will **address** the following elements:

- a. **English language:** Requirement R1 Part 1.1 – The use of the English language when issuing or responding to an oral or written Operating Instruction, unless another language is mandated by law or regulation.
- b. **Time Identification:** Requirement R1 Part 1.2 – The instances, if any, which require time identification when issuing an oral or written Operating Instruction and the format for that time identification.
- c. **Line and Equipment Identifiers:** Requirement R1 Part 1.3 – The nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing oral or written Operating Instructions.
- d. **Alpha-numeric clarifiers:** Requirement R1 Part 1.4 – The instances, if any, where alpha-numeric clarifiers are necessary when issuing an oral Operating Instruction and the format for those clarifiers.

- e. **Three-part Communication:** Requirement R1 Part 1.5. The instances where the issuer of an oral two party, person-to-person Operating Instruction requires the receiver to repeat, restate, rephrase, or recapitulate the Operating Instruction and the issuer to:
- Confirm that the response from the recipient of the Operating Instruction was accurate, or
  - Reissue the Operating Instruction to resolve a misunderstanding.

**Eliminated in Draft 6 by OPCPSDT:**

- **One-way burst messaging system to multiple parties (all call)** based on industry comments. Requirement R1 Part 1.7, Requirement R1 Part 1.8
- **One-way burst messaging system to multiple parties (all call)** based on industry comments. Requirement R3 Part 3.3
- **Uniformity of communication protocols among entities** (Requirement R1 Part 1.9) Based on industry comments replaced 1.9 with change to R1 language to jointly develop and issue communication protocols within a Reliability Control area.

- 3) **VSL and VRF Changes from version five:** The OPCPSDT modified the VRFs and VSLs associated with R1, R2, and R3, to conform to NERC and FERC guidelines.

The SDT is proposing to retire Requirement R4 from COM-001-1 and incorporate it into Requirement R1 of COM-003-1. Since Requirement R4 from COM-001-1 carries over essentially unchanged there is no specific question related to it in this Comment Form.

The choice of VRFs was made on the basis of the potential impact on the Bulk Electric System of a miscommunication during Operating Instructions. Requirements R1 is assigned a Low Violation Risk Factor due to its level of risk on BES operations. Requirements R2 and R3 are assigned a Medium Violation Risk Factor due to their more direct impact on BES reliability.

Time Horizons were selected to reflect the period within which the requirements applied. Requirements R1 must be implemented in long term planning operations and therefore is assigned a Time Horizon of Long Term Planning. R2 and R3 must be implemented in the Real Time Horizon. The drafting team is posting the standard for industry comment for a 30-day comment period.

The Operating Personnel Communications Protocols Drafting Team would like to receive industry comments on this draft standard. Accordingly, we request that you include your comments on this form by **July XX, 2013**.

**Comment Form**

**\*Please use the [electronic comment form](#) to submit your final comments to NERC.**

- 1. The OPCPSDT has proposed significant changes to the COM-003-1, draft 6. Do you agree that COM-003-1, draft 6 addresses the August 2003 Blackout Report Recommendation number 26, FERC Order 693 and the COM-003-1 SAR? If not, please explain in the comment area of the last question.**

Yes

No

Comments:

- 2. Do you agree with the VRFs and VSLs for Requirements R1, R2, and R3?**

Yes

No

Comments:

# Project 2007-02, COM-003-1 Operating Personnel Communication Protocols Rationale and Technical Justification

Justification for Requirements in Draft 6

## Rationale and Technical Justification

### I. Introduction and Background

#### A. Order No. 693

On March 16, 2007, the Federal Energy Regulatory Commission (“FERC” or “Commission”) issued Order No. 693. Specifically, in paragraphs 512, 513 and 531-535 the Commission stated:<sup>1</sup>

512. The Commission finds that, *during both normal* and emergency operations, it is essential that the transmission operator, balancing authority and reliability coordinator have communications with distribution providers. In response to APPA, as discussed above, any distribution provider that is not a user, owner or operator of the Bulk-Power System would not be required to comply with COM-002-2, even though the Commission is requiring the ERO to modify the Reliability Standard to include distribution providers as applicable entities. APPA’s concern that 2,000 public power systems would have to be added to the compliance registry is misplaced, since, as we explain in our Applicability discussion above, we are approving NERC’s registry process, including the registry criteria. Therefore, we adopt our proposal to require the ERO to modify COM-002-2 to apply to distribution providers through its Reliability Standards development process.

513. The Commission believes that this Reliability Standard does not alter who would operate a distribution provider’s system. It only concerns communications, not the operation of the distribution system.

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<sup>1</sup> In Order No. 693-A at paragraph 41, the Commission also noted that “. . . as to COM-001-1 and COM-002-2, the Commission was concerned [in Order 693] about having a reliability gap during normal and emergency operations.”



531. We adopt our proposal to require the ERO to establish tightened communication protocols, especially for communications during alerts and emergencies, either as part of COM-002-2 or as a new Reliability Standard. We note that the ERO's response to the Staff Preliminary Assessment supports the need to develop additional Reliability Standards addressing consistent communications protocols among personnel responsible for the reliability of the Bulk-Power System.

532. While we agree with EEI that EOP-001-0, Requirement R4.1 requires communications protocols to be used during emergencies, we believe, and the ERO agrees, that the communications protocols need to be tightened to ensure Reliable Operation of the Bulk-Power System. *We also believe an integral component in tightening the protocols is to establish communication uniformity as much as practical on a continent-wide basis. This will eliminate possible ambiguities in communications during normal, alert and emergency conditions. This is important because the Bulk- Power System is so tightly interconnected that system impacts often cross several operating entities' areas. (Emphasis added)*

533. Regarding APPA's suggestion that it may be beneficial to include communication protocols in the relevant Reliability Standard that governs those types of emergencies, we direct that it be addressed in the Reliability Standards development process.

534. In response to MISO's contention that Blackout Report Recommendation No. 26 has been fully implemented, we note that Recommendation No. 26 addressed two matters. We believe MISO is referring to the second part of the recommendation requiring NERC to "[u]pgrade communication system hardware where appropriate" instead of tightening communications protocols. While we commend the ERO for taking appropriate action in upgrading its NERCNet, *we remind the industry to continue their efforts in addressing the first part of Blackout Recommendation No. 26.*

535. Accordingly, we direct the ERO to either modify COM-002-2 or develop a new Reliability Standard that requires tightened communications protocols, especially for communications during alerts and emergencies.

540. ... In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to COM-002-2 through the Reliability Standards development process that: (1) expands the applicability to include

distribution providers as applicable entities; (2) includes a new Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area view of a transmission operator or balancing authority and (3) *requires tightened communications protocols, especially for communications during alerts and emergencies. Alternatively, with respect to this final issue, the ERO may develop a new Reliability Standard that responds to Blackout Report Recommendation No. 26 in the manner described above.* Finally, we direct the ERO to include APPA's suggestions to complete the Measures and Levels of Non-Compliance in its modification of COM-002-2 through the Reliability Standards development process. (Emphasis added)(footnotes omitted).

### **B. 2003 Blackout Report**

The 2003 Blackout Report Recommendation No. 26 reads:

NERC should work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations, and ensure that all key parties, including state and local officials, receive timely and accurate information. NERC should task the regional councils to work together to develop communications protocols by December 31, 2004, and to assess and report on the adequacy of emergency communications systems within their regions against the protocols by that date.

### **C. COM-002-3**

In response to the Commission's determinations in Order No. 693, the NERC Board of Trustees has approved COM-002-3 that addresses effective communications during emergency circumstances. COM-002-3 states that:

**R1.** When a Reliability Coordinator, Transmission Operator, or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator, or Balancing Authority shall identify the action as a Reliability Directive to the recipient.

**R2.** Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase, or recapitulate the Reliability Directive.

**R3.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall either:

- Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or
- Reissue the Reliability Directive to resolve a misunderstanding.

COM-002-3 also adds the following new definition:

**Reliability Directive:** A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.

In COM-002-3, the identification of a communication as a Reliability Directive is required to address communications related to an Emergency or Adverse Reliability Impact, which are defined in the NERC *Glossary of Terms Used in Reliability Standards* or are approved by the NERC Board of Trustees and pending FERC approval as follows:

**Emergency:** Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

**Adverse Reliability Impact:** The impact of an event that results in Bulk Electric System instability or Cascading.

#### D. NERC's Operating Committee guideline

On September 19, 2012, the NERC Operating Committee issued a Reliability Guideline entitled: "System Operator Verbal Communications – Current Industry Practices." As stated on page one, the purpose of the Reliability Guideline ". . . is to document and share current verbal BES communications practices and procedures from across the industry that have been found to enhance the effectiveness of system operator communications programs." Specifically, in the context of routine or normal operation communications, the Guideline on pages 4-5 states that:

There are two schools of thought regarding utilization of three-part communication for routine operating instructions. Every routine communication opportunity has a different impact on the reliability of the BES, and many routine communication opportunities have no impact on reliability. While the industry has disparate viewpoints on the necessity of the use of three-part communication for all real-time communications, *most agree that the point is to be effective when it counts for reliability — not that every communication opportunity has a reliability impact. . . .* If an entity determines it would utilize the three-part communication protocol for routine operating instructions, that entity should define when its System Operators are expected to utilize the protocol, including coordinating with entities regarding when the use of three-part communication is expected. (Emphasis added).

The Guideline goes on to address barriers to effective communications and other related subjects.

## II. COM-003-1

Because COM-002-3 addresses effective communications during emergency circumstances, COM-003-1 needs to focus on those communications during normal operations that impact reliability. The latest draft of COM-003-1 implements a results-based approach to strengthening normal operating communications, which focuses entities on communicating Operating Instructions in a way that does not result in an operating condition that requires the issuance of a Reliability Directive. Accordingly, COM-003-1 is reliability-driven, results-based approach that appropriately focuses on those communications during normal operations that impact reliability. To elaborate on this approach, the definition of Operating Instruction and the COM-003-1 requirements are set forth below followed by a discussion of the impacts of the requirements.

### A. Operating Instruction

The definition of Operating Instruction reads:

A command, other than a Reliability Directive, by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. A discussion of general information and of potential options or alternatives to resolve BES operating concerns are not commands and are not considered an Operating Instruction. An Operating Instruction is exclusive and distinct from a Reliability Directive. There is no overlap between an Operating Instruction and Reliability Directive.

This version of the definition of Operating Instruction clearly sets forth the types of communications that are and are not Operating Instructions. It also clearly states that there is no overlap between COM-003-1 with the requirements of COM-002-3 and its definition of Reliability Directive. This emphasis on the exclusive and distinct difference between an Operating Instruction and a Reliability Directive creates separation between the two standards, ensuring that there is no confusion between the implementation of COM-002-3 and COM-003-1 and eliminating any risk for double jeopardy with the two standards. The separate definitions also convey the importance of issuing a Reliability Directive versus an Operating Instruction.

### B. Requirement R1

Requirement R1 requires the development of documented communication protocols for the issuance of Operating Instructions in a Reliability Coordinator's area. The development of documented communication protocols is designed to strengthen the issuance of Operating Instructions to guard against a miscommunication (*i.e.*, failure to

follow the protocols) of an Operating Instruction that results in an operating condition that requires the issuance of a Reliability Directive (see Requirements 2 and 3).

Requirement R1 and its Parts read:

**R1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator, in each Reliability Coordinator area, shall develop, subject to the Reliability Coordinator's approval, documented communication protocols for the issuance of Operating Instructions in that Reliability Coordinator's area.

The documented communication protocols will address, where applicable, the following: [Violation Risk Factor: Low] [Time Horizon: Long-term Planning]

1.1. The use of the English language when issuing or responding to an oral or written Operating Instruction, unless another language is mandated by law or regulation.

1.2. The instances, if any, that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.

1.3. The nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.

1.4. The instances, if any, where alpha-numeric clarifiers are necessary when issuing an oral Operating Instruction and the format for those clarifiers.

1.5. The instances where the issuer of an oral two party, person-to-person Operating Instruction requires the receiver to repeat, restate, rephrase, or recapitulate the Operating Instruction and the issuer to:

- Confirm that the response from the recipient of the Operating Instruction was accurate; or
- Reissue the Operating Instruction to resolve a misunderstanding.

It is appropriate for the entities with system responsibilities and a wide-area view of the Bulk Electric System (*i.e.*, Reliability Coordinators, Transmission Operators and Balancing Authorities) to develop the documented communication protocols. Development does not require that the protocols of a Reliability Coordinator, Transmission Operator and Balancing Authority be identical, but rather requires these entities to coordinate to develop protocols for their Reliability Coordinator area. Also, given the reliability-driven, results-based construct set forth in Requirements R2 and R3, there is no need, and, therefore, no requirement that the Distribution Provider or Generator Operator develop documented protocols. The Distribution Provider and Generator Operator are simply required to repeat, restate, rephrase, or recapitulate the Operating Instruction when required by the issuer, following the protocol of the issuance of the Operating Instruction.

In addition, consistent with Order No. 693 and the Reliability Guideline, the Requirement R1 documented communication protocols are appropriately tied to the execution of Operating Instructions (Requirements R2 and R3), so that an Emergency or Adverse Reliability Impact does not result due to miscommunication (*i.e.*, need to issue a Reliability Directive). Working in concert with Requirement R1, Requirements R2 and R3 implement a results-based approach that promotes reliability, while eliminating any operational and compliance environment that requires a mining of hundreds, thousands or millions of routine/normal communications to prove compliance or make a finding of reasonable assurance of compliance, and, instead, properly focuses on those Operating Instructions that impact reliability.

### C. Requirement R2

Requirement R2 is a reliability-driven, results-based requirement that is designed to prevent miscommunications during normal operating conditions that would result in an operating condition that requires the issuance of a Reliability Directive. To that end, the requirement focuses entities' behavior on implementing its documented communication protocols, but focuses the compliance risk on instances where failure to use the protocols by the issuer of an Operating Instruction results in an operating condition that requires the issuance of a Reliability Directive. The requirement reads:

R2. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement its communication protocols developed in Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.

*[Violation Risk Factor: Medium][Time Horizon: Real Time Operations]*

The intent of Requirement R2 is to focus entities on use of the documented communications protocols when a Balancing Authority, Reliability Coordinator, or Transmission Operator issues an Operating Instruction. Rather than focus on all miscommunications, the standard focuses compliance risk on instances where an entity fails to follow its documented communication protocols **and** that failure to follow its documented communication protocols results in an operating condition that requires the issuance of a Reliability Directive. This captures those Operating Instructions that impact reliability. This construct creates an operational defense-in-depth approach with the use of Operating Instructions and Reliability Directives. COM-003-1 requires implementation of documented communications protocols to prevent operating conditions that would require the issuance of a Reliability Directive and even if that does occur, a Reliability Directive would be issued to maintain the reliable operation of the bulk electric system.

This approach also appropriately focuses compliance on the instances in which both an entity fails to follow its documented communication protocols **and** that failure to follow its documented communication protocols results in an operating condition that requires the issuance of a Reliability Directive, rather than all communications during normal operating conditions. Accordingly, Requirement R2 is a reliability-driven, results-based requirement that appropriately focuses operations and compliance on Operating Instructions that impact reliability.

#### D. Requirement R3

Requirement R3 is designed to prevent miscommunications during normal operating conditions where the failure to repeat, restate, rephrase, or recapitulate the Operating Instruction, when required, would result in an operating condition that requires the issuance of a Reliability Directive. The requirement reads:

R3. Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider shall repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1 so that the failure to repeat, restate, rephrase, or recapitulate the Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.  
[Violation Risk Factor: Medium][Time Horizon: Real Time Operations]

Similar to Requirement R2, the intent of Requirement R3 is to focus on those instances in which the recipient fails to follow the issuer's three-way instructions (which are instructions consistent with its protocols) and there is an impact to reliability, *i.e.*, an operating condition that requires the issuance of a Reliability Directive. Rather than focus on all instances where three-way instructions are used, the standard focuses compliance on instances where: (1) a Balancing Authority, Transmission Operator, Generator Operator or Distribution Provider fails to repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer; **and** (2) the use of this repeat back protocol is required in the issuers communication protocols developed in Requirement 1; **and** (3) the failure to use the repeat back protocol results in an operating condition that requires the issuance of a Reliability Directive.<sup>2</sup>

<sup>2</sup> To assist in those instances where a Generator Operator or Distribution Provider, etc. may need an attestation or other evidence such as log or voice recording from a Reliability Coordinator, Transmission Operator or Balancing Authority, the Measures for Requirement 3 indicates the potential need for coordination between the entities.

#### **E. VRF/VSLs**

The VRF/VSLs and measures compliment the results-based approach by focusing on the impact to reliability resulting from miscommunications and not the volume of Operating Instructions or solely the development of communication protocols. By focusing on communications that create operating conditions that result in the issuance of a Reliability Directive, only those communications tied directly to the eventual issuance of a Reliability Directive would be necessary from a compliance standpoint. As written, there will likely be a smaller subset of Operating Instructions that are relevant to a finding of a violation of Requirement R2 and R3, particularly given the instructional value of the Requirement R1 communication protocols. However, a violation of Requirements R2 and R3 are considered significant and thus the VRFs and VLSs reflect that impact on reliability.

### **III. Conclusion**

COM-003-1 is scoped and designed to complement COM-002-3. COM-003-1 represents a results-based standard that protects the reliability of the bulk electric system and that appropriately balances compliance risk by focusing entities on the development and implementation of documented communication protocols during normal operating conditions that only impact reliability. The Operating Committee's Reliability Guideline on System Operator communications acts as a complimentary guidance document that will be useful to entities during their joint development of documented communication protocols under COM-003-1.



# Project 2007-02: Operating Personnel Communication Protocols

Mapping Document

## 1. Mapping Document Showing Translation of COM-001-1.1, R4– Telecommunications into COM-003-1–Operating Personnel Communications Protocol

Requirement in Approved Standard	Translation to New Standard or Other Action	Comments
<p>R4.Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations</p>	<p>Moved into COM 003-1 R1.1</p>	<p>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator, in each Reliability Coordinator area, shall develop, subject to the Reliability Coordinator’s approval, documented communication protocols for the issuance of Operating Instructions in that Reliability Coordinator’s area. The documented communication protocols will address, where applicable, the following:[Violation Risk Factor: Low] [Time Horizon: Long-term Planning ]</p> <p>1.1. The use of the English language when issuing or responding to an oral or written Operating Instruction, unless another language is mandated by law or regulation.</p>

## Project 2007-02: Operating Personnel Communication Protocols

Mapping Document

### 1. Mapping Document Showing Translation of COM-001-1.1, R4– Telecommunications into COM-003-1–Operating Personnel Communications Protocol

Requirement in Approved Standard	Translation to New Standard or Other Action	Comments
<p>R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations</p>	<p>Moved into COM 003-1 R1.1</p>	<p>R1. <u>Each Balancing Authority, Reliability Coordinator, and Transmission Operator, in each Reliability Coordinator area, shall jointly develop, subject to the Reliability Coordinator’s approval, documented communication protocols for the issuance of Operating Instructions in that Reliability Coordinator’s area.</u> <del>Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop and implement documented communication protocols that outline the communications expectations of its System Operators.</del> The documented communication protocols will address, where applicable, the following: [Violation Risk Factor: Low] [Time Horizon: Long-term Planning ]</p>

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Requirement in Approved Standard	Translation to New Standard or Other Action	Comments
		1.1. <del>The u</del> Use of the English language when issuing or responding to an oral or written Operating Instruction <del>or Reliability Directive</del> , unless another language is mandated by law or regulation.

## Project 2007-2 – Operating Personnel Communications Protocol

### VRF and VSL Justifications

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in COM 003-1 Operating Personnel Communications Protocols.

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Operations Personnel Communications Protocol Standard Drafting Team applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSLs for the requirements under this project:

### NERC Criteria - Violation Risk Factors

#### **High Risk Requirement**

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a

cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

### **Medium Risk Requirement**

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

### **Lower Risk Requirement**

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

## **FERC Violation Risk Factor Guidelines**

### **Guideline (1) — Consistency with the Conclusions of the Final Blackout Report**

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief

#### **Guideline (2) — Consistency within a Reliability Standard**

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

#### **Guideline (3) — Consistency among Reliability Standards**

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

#### **Guideline (4) — Consistency with NERC's Definition of the Violation Risk Factor Level**

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC's definition of that risk level.

**Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation**

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC's VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC's Reliability Standards and implies that these requirements should be assigned a "High" VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

VRF for COM-003-1:

There are three requirements in COM-003-1, draft 6 with the deletion of R4 (draft 5). Requirement R1 is assigned a “Low” VRF. R1 now reads: *“Each ..... in each Reliability Coordinator area, shall develop, subject to the Reliability Coordinator’s approval, documented communication protocols for the issuance of Operating Instructions in that Reliability Coordinator’s area. The documented communication protocols will address, where applicable, the following: ”*. Requirements R2 and R3 are assigned a “Medium” VRF. The language change to R2 , which now reads: *“Each ..... shall implement its communication protocols developed in Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.”* R2 warrants a VRF of “Medium” because it links failed use of communication protocols to events that impact the reliability of the BES. The language change to R3, which now reads: *“Each ..... shall repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1 so that the failure to repeat, restate, rephrase, or recapitulate the Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator”* warrants a VRF of “Medium” because it links failed use of three-part communication to events that impact the reliability of the BES.

## NERC Criteria - Violation Severity Levels

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
Missing a minor element (or	Missing at least one	Missing more than one	Missing most or all of the significant



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<p>a small percentage) of the required performance The performance or product measured has significant value as it almost meets the full intent of the requirement.</p>	<p>significant element (or a moderate percentage) of the required performance. The performance or product measured still has significant value in meeting the intent of the requirement.</p>	<p>significant element (or is missing a high percentage) of the required performance or is missing a single vital component. The performance or product has limited value in meeting the intent of the requirement.</p>	<p>elements (or a significant percentage) of the required performance. The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.</p>
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**FERC Order on Violation Severity Levels**

In its June 19, 2008 Order on Violation Severity Levels, FERC indicated it would use the following four guidelines for determining whether to approve VSLs:

**Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance**

Compare the VSLs to any prior Levels of Non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when Levels of Non-compliance were used.

**Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties**

Guideline 2a: A violation of a “binary” type requirement must be a “Severe” VSL.

Guideline 2b: Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

**Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement**

VSLs should not expand on what is required in the requirement.

**Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations**

. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

The drafting team will complete the following table, providing of analysis and justification for each VRF and VSL, for each requirement.

VRF and VSL Justifications – COM 003-1, R1	
<b>Proposed VRF</b>	Low
NERC VRF Discussion	R1 is a requirement in a long term planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system The VRF for this requirement is “Low” which is consistent with NERC guidelines
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R1 establishes communication protocols, which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-parts that are of equal importance and similarly address communication

VRF and VSL Justifications – COM 003-1, R1			
	protocols; only one VRF was assigned so there is no conflict.		
FERC VRF G3 Discussion	<p><b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for the development of documented communication protocols by entities that issue “Operating Instructions” that reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.</p>		
FERC VRF G4 Discussion	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Low” which is consistent with NERC guidelines for similar requirements.</p>		
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R1 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.</p>		
Proposed VSL			
Lower	Moderate	High	Severe
The Responsible Entity did not develop one (1) of the five (5) parts of Requirement R1 in their documented communication protocols as	The Responsible Entity did not develop two (2) of the five (5) parts of Requirement R1 in their documented communication protocols as	The Responsible Entity did not develop three of the five (5) parts of Requirement R1 in their documented communication protocols as required in	The Responsible Entity did not develop four or more of the five (5) parts of Requirement R1 in their documented communication protocols as required in

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**VRF and VSL Justifications – COM 003-1, R1**

required in Requirement R1	required in Requirement R1	Requirement R1	Requirement R1

**VRF and VSL Justifications – COM 003-1, R1**

<b>VRF and VSL Justifications – COM 003-1, R1</b>	
<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of common communication protocols. If no communication protocols were addressed at all or if the number of required protocols falls below the listed thresholds, then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R1 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

VRF and VSL Justifications – COM 003-1, R1	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 003-1, R2	
Proposed VRF	Medium
NERC VRF Discussion	R2 is a requirement in Real Time Operations time frame that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R2 falls under Recommendation 26 of the Blackout Report. The VRF for this requirement is “Medium” which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for implementation of communication protocols developed in Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator in order to reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to implement communication protocols developed in Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction results in an operating condition that requires the issuance of a Reliability Directive could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines

VRF and VSL Justifications – COM 003-1, R2			
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>            COM-003-1, Requirement R2 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.</p>		
Proposed VSL			
Lower	Moderate	High	Severe
N/A	N/A	N/A	The Responsible Entity failed to use the protocols developed in Requirement R1 which resulted in an operating condition that required the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.



**VRF and VSL Justifications – COM 003-1, R2**

<b>VRF and VSL Justifications – COM 003-1, R2</b>	
<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed a single binary , VSL, therefore it is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R2 is binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

**VRF and VSL Justifications – COM 003-1, R2**

VRF and VSL Justifications – COM 003-1, R2	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 003-1, R3	
<b>Proposed VRF</b>	Low
NERC VRF Discussion	R3 is a requirement in a Real Time, time frame that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R3 establishes communication protocols, which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for an entity to repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1 so that the failure to repeat, restate, rephrase, or recapitulate the Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator to reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines

VRF and VSL Justifications – COM 003-1, R3			
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>            COM-003-1, Requirement R3 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.</p>		
Proposed VSL			
Lower	Moderate	High	Severe
N/A	N/A	N/A	The Responsible Entity failed repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1, which resulted in an operating condition that required the issuance of a Reliability Directive by the original issuer of the Operating Instruction or another Balancing Authority, Reliability Coordinator, or Transmission Operator.

**VRF and VSL Justifications – COM 003-1, R3**

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed one VSL based on the failure to repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1, which resulted in an operating condition that required the issuance of a Reliability Directive. Therefore the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R3 is binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

VRF and VSL Justifications – COM 003-1, R3	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

## Project 2007-2 – Operating Personnel Communications Protocol

### VRF and VSL Justifications

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in COM 003-1 Operating Personnel Communications Protocols.

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Operations Personnel Communications Protocol Standard Drafting Team applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSLs for the requirements under this project:

### NERC Criteria - Violation Risk Factors

#### **High Risk Requirement**

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a

cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

### **Medium Risk Requirement**

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

### **Lower Risk Requirement**

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

## **FERC Violation Risk Factor Guidelines**

### **Guideline (1) — Consistency with the Conclusions of the Final Blackout Report**

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.



In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief

#### **Guideline (2) — Consistency within a Reliability Standard**

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

#### **Guideline (3) — Consistency among Reliability Standards**

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

#### **Guideline (4) — Consistency with NERC's Definition of the Violation Risk Factor Level**

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC's definition of that risk level.

**Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation**

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC's VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC's Reliability Standards and implies that these requirements should be assigned a "High" VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

VRF for COM-003-1:

There are ~~four~~ three requirements in COM-003-1, draft 5-6 with the addition-deletion of ~~R3 and R4~~ (draft 5). Requirements ~~R1 and R3~~ is are assigned a "Low" VRF. ~~R1 and R3~~ now reads: "*Each ..... in each Reliability Coordinator area, shall develop, subject to the Reliability Coordinator's approval, documented communication protocols for the issuance of Operating Instructions in that Reliability Coordinator's area. shall develop and implement documented communication protocols that outline the communications expectations of its operators. The documented communication protocols will address, where applicable, the following: ". Requirements R2 and ~~R4~~ R3 are assigned a "Medium" VRF. ~~and t~~ The language change to R2 and R4, which now reads: "Each ..... shall implement its communication protocols developed in Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. shall perform a quarterly assessment of its System Operators' communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement RX" - R2 warrants raising the VRF to of "Medium" because it features evaluation and correction of operating links failed use of communication protocols to events that impact the reliability of the BES. The language change to R3, which now reads: "Each ..... shall repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1 so that the failure to repeat, restate, rephrase, or recapitulate the Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator" warrants raising the VRF to of "Medium" because it links failed use of three-part communication to events that impact the reliability of the BES.*

### NERC Criteria - Violation Severity Levels

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple "degrees" of noncompliant performance and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

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Lower	Moderate	High	Severe
<p>Missing a minor element (or a small percentage) of the required performance</p> <p>The performance or product measured has significant value as it almost meets the full intent of the requirement.</p>	<p>Missing at least one significant element (or a moderate percentage) of the required performance.</p> <p>The performance or product measured still has significant value in meeting the intent of the requirement.</p>	<p>Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component.</p> <p>The performance or product has limited value in meeting the intent of the requirement.</p>	<p>Missing most or all of the significant elements (or a significant percentage) of the required performance.</p> <p>The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.</p>

**FERC Order on Violation Severity Levels**

In its June 19, 2008 Order on Violation Severity Levels, FERC indicated it would use the following four guidelines for determining whether to approve VSLs:

**Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance**

Compare the VSLs to any prior Levels of Non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when Levels of Non-compliance were used.

**Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties**

Guideline 2a: A violation of a “binary” type requirement must be a “Severe” VSL.

Guideline 2b: Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

**Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement**

VSLs should not expand on what is required in the requirement.

**Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations**

. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

The drafting team will complete the following table, providing of analysis and justification for each VRF and VSL, for each requirement.

VRF and VSL Justifications – COM 003-1, R1	
Proposed VRF	Low
NERC VRF Discussion	R1 is a requirement in a long term planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system The VRF for this requirement is “Low” which is consistent with NERC guidelines

VRF and VSL Justifications – COM 003-1, R1			
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R1 establishes communication protocols, which is consistent with FERC guideline G1.		
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub- <del>requirements parts</del> that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.		
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for the development <del>and implementation</del> of documented communication protocols by entities that <del>will both</del> issue <del>and receive</del> “Operating Instructions” that reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.		
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “-Low” which is consistent with NERC guidelines for similar requirements.		
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R1 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.		
Proposed VSL			
Lower	Moderate	High	Severe
<u>The Responsible Entity did not</u>	<u>The Responsible Entity did not</u>	<u>The Responsible Entity did not</u>	<u>The Responsible Entity did not</u>

VRF and VSL Justifications – COM 003-1, R1

<p><u>develop one (1) of the five (5) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</u></p> <p><del>The Responsible Entity did not address one (1) of the nine(9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</del></p> <p>OR</p> <p><del>The Responsible Entity did not implement one (1) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</del></p>	<p><u>develop two (2) of the five (5) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</u></p> <p><del>The Responsible Entity did not address two (2) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</del></p> <p>OR</p> <p><del>The Responsible Entity did not implement two (2) of the nine (9) parts of Requirement R1 in</del></p>	<p><u>develop three of the five (5) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</u></p> <p><del>The Responsible Entity did not address three (3) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</del></p> <p>OR</p> <p><del>The Responsible Entity did not implement three (3) of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</del></p>	<p><u>develop four or more of the five (5) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</u></p> <p><del>The Responsible Entity did not address four (4) or more of the nine (9) parts of Requirement R1 in their documented communication protocols as required in Requirement R1</del></p> <p>OR</p> <p><del>The Responsible Entity did not have any documented communication protocols as required in Requirement R1</del></p> <p>OR</p> <p><del>The Responsible Entity did not</del></p>
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## VRF and VSL Justifications – COM 003-1, R1

	<del>their documented communication protocols as required in Requirement R1</del>		<del>implement any documented communication protocols as required in Requirement R1</del>
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**VRF and VSL Justifications – COM 003-1, R1**

<b>VRF and VSL Justifications – COM 003-1, R1</b>	
<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of common communication protocols. If no communication protocols were addressed at all or if the number of required protocols falls below the listed thresholds, then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R1 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

**VRF and VSL Justifications – COM 003-1, R1**

VRF and VSL Justifications – COM 003-1, R1	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 003-1, R2	
<b>Proposed VRF</b>	Medium
NERC VRF Discussion	R2 is a requirement in <del>an Operations planning and Operations Assessment</del> <u>Real Time, Operations-</u> time frame that, <u>if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system.</u> However, <u>violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures.</u> <del>if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system</del> The VRF for this requirement is “Medium” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R2 falls under Recommendation 26 of the Blackout Report. The VRF for this requirement is “Medium” which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for <u>implementation of communication protocols developed in Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator</u> <del>the assessment and correction of System Operators’ performance with documented communication protocols by entities that will both issue and receive “Operating Instructions”</del> <u>in order</u> to reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure <u>to implement communication protocols developed in Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction results in an operating condition that requires the</u>

VRF and VSL Justifications – COM 003-1, R2			
	<p><del>issuance of a Reliability Directive to assess and correct System Operators' performance with proper utilization of communication protocols</del> could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is "Medium" which is consistent with NERC guidelines</p>		
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R2 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.</p>		
Proposed VSL			
Lower	Moderate	High	Severe
<p><del>N/A The Responsible Entity performed periodic assessments of its System Operators' communication practices and implemented 50% or more but not all corrective action identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.</del></p>	<p><del>N/A The Responsible Entity performed periodic assessments of its System Operators' communication practices and implemented less than 50% of the corrective actions identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.</del></p>	<p><del>N/A The Responsible Entity performed periodic assessments of its System Operators' communication practices but did not implement any corrective actions identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.</del></p>	<p><u>The Responsible Entity failed to use the protocols developed in Requirement R1 which resulted in an operating condition that required the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. The Responsible Entity did not perform periodic assessments of its System Operators' communication</u></p>

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VRF and VSL Justifications – COM 003-1, R2

			<del>practices identified in Requirement R2 necessary to meet the expectations in its documented communication protocols developed for Requirement R1.</del>
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VRF and VSL Justifications – COM 003-1, R2

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed <del>four VSLs based on quarterly assessments of an entity's System Operators' communication practices and the administration of corrective actions. If no quarterly assessments of an entity's System Operators' communication practices are conducted a single binary, then the</del>VSL, <u>therefore it</u> is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R2 is <del>not</del> binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

**VRF and VSL Justifications – COM 003-1, R2**

VRF and VSL Justifications – COM 003-1, R2	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 003-1, R3	
<b>Proposed VRF</b>	Low
NERC VRF Discussion	R3 is a requirement in a <del>long term planning</del> <u>Real Time</u> , time frame that, if violated, <u>could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system.</u> However, violation of a medium risk requirement is unlikely to lead to <u>bulk electric system instability, separation, or cascading failures</u> <del>would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system.</del> The VRF for this requirement is “ <u>LowMedium</u> ” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R3 establishes communication protocols, which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has <u>no</u> sub-requirements <del>that are of equal importance and similarly address communication protocols</del> ; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for <u>an entity to repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1 so that the failure to repeat, restate, rephrase, or recapitulate the Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator</u> <del>the development and implementation of documented communication protocols by entities that will only receive “Operating Instructions” that to</del> reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to utilize communication protocols properly could directly affect the electrical state or the



VRF and VSL Justifications – COM 003-1, R3			
	<p>capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “<del>Low</del><u>Medium</u>” which is consistent with NERC guidelines <del>for requirements that are administrative.</del></p>		
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R3 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one VRF was assigned.</p>		
Proposed VSL			
Lower	Moderate	High	Severe
<u>N/A</u>	<p><del>N/AThe Responsible Entity did not address one (1) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</del></p> <p><del>OR</del></p> <p><del>The Responsible Entity did not implement one (1) of the three(3) parts of Requirement</del></p>	<p><del>N/AThe Responsible Entity did not address two (2) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</del></p> <p><del>OR</del></p> <p><del>The Responsible Entity did not implement two (2) of the three(3) parts of Requirement R3 in their</del></p>	<p><del>The Responsible Entity failed to repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1, which resulted in an operating condition that required the issuance of a Reliability Directive by the original issuer of the Operating Instruction or another</del></p>

VRF and VSL Justifications – COM 003-1, R3

	<p><del>R3</del></p> <p><del>in their documented communication protocols as required in Requirement R3</del></p>	<p><del>documented communication protocols as required in Requirement R3</del></p>	<p><del>Balancing Authority, Reliability Coordinator, or Transmission Operator. The Responsible Entity did not address three (3) of the three(3) parts of Requirement R3 in their documented communication protocols as required in Requirement R3</del></p> <p><del>OR</del></p> <p><del>The Responsible Entity did not develop any documented communication protocols as required in Requirement R3</del></p> <p><del>OR</del></p> <p><del>The Responsible Entity did not implement any documented communication protocols as required in Requirement R3</del></p>
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VRF and VSL Justifications – COM 003-1, R3

<p>VRF and VSL Justifications – COM 003-1, R3</p>	
<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed <del>four</del><u>one</u> VSLs based on <u>the failure to repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1, which resulted in an operating condition that required the issuance of a Reliability Directive. Therefore, <del>misapplication or absence of common communication protocols. If no communication protocols are used at all or if the number of required protocols falls below the listed thresholds, then</del> the VSL is Severe.</u></p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for <del>R1-R3</del> is <del>not</del> binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

**VRF and VSL Justifications – COM 003-1, R3**

Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	<p>Non CIP</p>
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	<p>Non CIP</p>

<del>VRF and VSL Justifications – COM-003-1, R4</del>	
<del>Proposed VRF</del>	<del>Medium</del>
<del>NERC VRF Discussion</del>	<del>R4 is a requirement in an Operations planning and Operations Assessment time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system. The VRF for this requirement is “Medium” which is consistent with NERC guidelines.</del>
<del>FERC VRF G1 Discussion</del>	<del><b>Guideline 1 – Consistency w/ Blackout Report:</b> R4 falls under Recommendation 26 of the Blackout Report. The VRF for this requirement is “Medium” which is consistent with FERC guideline G1.</del>
<del>FERC VRF G2 Discussion</del>	<del><b>Guideline 2 – Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.</del>
<del>FERC VRF G3 Discussion</del>	<del><b>Guideline 3 – Consistency among Reliability Standards:</b> This requirement calls for the assessment and correction of operators’ performance with documented communication protocols that reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of BES.</del>
<del>FERC VRF G4 Discussion</del>	<del><b>Guideline 4 – Consistency with NERC Definitions of VRFs:</b> Failure to assess and correct operators’ performance with proper utilization of communication protocols could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium” which is consistent with NERC guidelines</del>
<del>FERC VRF G5 Discussion</del>	<del><b>Guideline 5 – Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-003-1, Requirement R4 contains only one objective which is to specify clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of BES. Since the requirement has only one objective, only one</del>

<b>VRF and VSL Justifications — COM-003-1, R4</b>			
		<b>VRF was assigned:</b>	
<b>Proposed VSL</b>			
<b>Lower</b>	<b>Moderate</b>	<b>High</b>	<b>Severe</b>
<del>The Responsible Entity performed periodic assessments of its operators' communication practices and implemented 50 % or more but not all corrective action identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3.</del>	<del>The Responsible Entity performed periodic assessments of its operators' communication practices and implemented less than 50 % of the corrective actions identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3.</del>	<del>The Responsible Entity performed periodic assessments of its operators' communication practices but did not implement any corrective actions identified in Requirement R4 necessary to meet the expectations in its documented communication protocols developed for Requirement R3.</del>	<del>The Responsible Entity did not perform assessments of its operators' communication practices and did not meet the expectations in its documented communication protocols developed for Requirement R3.</del>

~~VRF and VSL Justifications – COM-003-1, R4~~

<p><del><b>FERC-VSL-G1</b></del>  <del>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</del></p>	<p><del>Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of quarterly assessments or correction of an entity's System Operators' communication practices. If no quarterly assessments of an entity's System Operators' communication practices are conducted, then the VSL is Severe.</del></p>
<p><del><b>FERC-VSL-G2</b></del>  <del>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</del>  <del>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</del>  <del>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</del></p>	<p><del>Guideline 2a:</del>  <del>The VSL assignment for R4 is not binary.</del></p> <p><del>Guideline 2b:</del>  <del>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</del></p>
<p><del><b>FERC-VSL-G3</b></del>  <del>Violation Severity Level Assignment Should Be Consistent with the</del></p>	<p><del>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</del></p>

VRF and VSL Justifications — COM-003-1, R4	
<b>Corresponding Requirement</b>	
<p><del><b>FERC-VSL-G4</b></del>            Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>
<p><del><b>FERC-VSL-G5</b></del>            Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	<p>Non-CIP</p>
<p><del><b>FERC-VSL-G6</b></del>            VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	<p>Non-CIP</p>



# Standards Announcement

## Project 2007-02 Operating Personnel Communications Protocols COM-003-1

**Successive Ballot and Non-binding Poll now open through July 19, 2013**

### [Now Available](#)

A successive ballot of **COM-003-1- Operating Personnel Communications Protocols** and non-binding poll of the associated Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs) is now open through **8 p.m. Eastern on Friday, July 19, 2013.**

Background information for this project can be found on the [project page](#).

### **Instructions for Balloting**

Members of the ballot pools associated with this project may log in and submit their vote for the standard and non-binding poll of the associated VRFs and VSLs by clicking [here](#).

### **Next Steps**

The ballot results for **COM-003-1** will be announced and posted on the project page. The drafting team will consider all comments received during the formal comment period and, if needed, make revisions to the standard. If the comments do not show the need for significant revisions, the standard will proceed to a final ballot.

### **Standards Process**

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact Wendy Muller,  
Standards Development Administrator, at [wendy.muller@nerc.net](mailto:wendy.muller@nerc.net) or at 404-446-2560.*

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# Standards Announcement

## Project 2007-02 Operating Personnel Communications Protocols COM-003-1

**Formal Comment Period:** June 20, 2013 – July 19, 2013

Upcoming

Successive Ballot and Non-binding Poll: July 10, 2013 - July 19, 2013

### [Now Available](#)

A 30-day formal comment period for **COM-003-1- Operating Personnel Communications Protocols** is open through **8 p.m. Eastern on Friday, July 19, 2013**.

Background information for this project can be found on the [project page](#).

### Instructions for Commenting

Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact [Wendy Muller](#). An off-line, unofficial copy of the comment form is posted on the [project page](#).

### Next Steps

A successive ballot of **COM-003-1** and non-binding poll of the associated Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs) will be conducted from July 10, 2013 through July 19, 2013.

### Standards Process

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

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# Standards Announcement

## Project 2007-02 Operating Personnel Communications Protocols COM-003-1

### Successive Ballot and Non-binding Poll Results

#### [Now Available](#)

A successive ballot of **COM-003-1- Operating Personnel Communications Protocols** and non-binding poll of the associated Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs) concluded at **8 p.m. Eastern on Friday, July 19, 2013.**

Voting statistics are listed below, and the [Ballot Results](#) page provides a link to the detailed results for the successive ballot.

Approval	Non-binding Poll Results
Quorum: 76.32%	Quorum: 76.20%
Approval: 58.36%	Supportive Opinions: 55.37%

Background information for this project can be found on the [project page](#).

### Next Steps

Options for the next step in the standards development process for this project are currently being discussed and considered.

### Standards Process

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

User Name

Password

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- Ballot Pools
- Current Ballots
- Ballot Results
- Registered Ballot Body
- Proxy Voters

[Home Page](#)

Ballot Results	
<b>Ballot Name:</b>	Project 2007-02 COM-003-1 Successive Ballot
<b>Ballot Period:</b>	7/10/2013 - 7/19/2013
<b>Ballot Type:</b>	Successive
<b>Total # Votes:</b>	332
<b>Total Ballot Pool:</b>	435
<b>Quorum:</b>	<b>76.32 % The Quorum has been reached</b>
<b>Weighted Segment Vote:</b>	58.36 %
<b>Ballot Results:</b>	<b>The drafting team will review comments received.</b>

Summary of Ballot Results									
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Abstain # Votes	No Vote	
			# Votes	Fraction	# Votes	Fraction			
1 - Segment 1.	110	1	44	0.543	37	0.457	7	22	
2 - Segment 2.	11	1	4	0.364	7	0.636	0	0	
3 - Segment 3.	103	1	43	0.558	34	0.442	3	23	
4 - Segment 4.	39	1	17	0.68	8	0.32	0	14	
5 - Segment 5.	93	1	40	0.556	32	0.444	2	19	
6 - Segment 6.	53	1	23	0.676	11	0.324	4	15	
7 - Segment 7.	0	0	0	0	0	0	0	0	
8 - Segment 8.	12	0.5	3	0.3	2	0.2	0	7	
9 - Segment 9.	5	0.1	1	0.1	0	0	1	3	
10 - Segment 10.	9	0.9	6	0.6	3	0.3	0	0	
<b>Totals</b>	<b>435</b>	<b>7.5</b>	<b>181</b>	<b>4.377</b>	<b>134</b>	<b>3.123</b>	<b>17</b>	<b>103</b>	

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Ameren Services	Kirit Shah	Affirmative	
1	American Electric Power	Paul B Johnson	Negative	
1	American Transmission Company, LLC	Andrew Z Pusztai	Negative	
1	Arizona Public Service Co.	Robert Smith	Negative	
1	Associated Electric Cooperative, Inc.	John Bussman	Negative	
1	ATCO Electric	Glen Sutton	Abstain	
1	Austin Energy	James Armke	Affirmative	
1	Avista Corp.	Scott J Kinney		

1	Balancing Authority of Northern California	Kevin Smith	Affirmative
1	Baltimore Gas & Electric Company	Gregory S Miller	Abstain
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative
1	Beaches Energy Services	Joseph S Stonecipher	
1	Black Hills Corp	Eric Egge	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	
1	Bryan Texas Utilities	John C Fontenot	Affirmative
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Negative
1	Central Electric Power Cooperative	Michael B Bax	Negative
1	City of Pasadena	Marco A Sustaita	Negative
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative
1	City Utilities of Springfield, Missouri	Jeff Knottek	
1	City Water, Light & Power of Springfield	Shaun Anders	
1	Clark Public Utilities	Jack Stamper	Negative
1	Cleco Power LLC	Danny McDaniel	Abstain
1	Colorado Springs Utilities	Paul Morland	Negative
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative
1	Consumers Power Inc.	Stuart Sloan	
1	CPS Energy	Richard Castrejana	Affirmative
1	Dairyland Power Coop.	Robert W. Roddy	Negative
1	Dayton Power & Light Co.	Hertzel Shamash	Negative
1	Deseret Power	James Tucker	Abstain
1	Dominion Virginia Power	Michael S Crowley	Affirmative
1	Duke Energy Carolina	Douglas E. Hils	Negative
1	Empire District Electric Co.	Ralph F Meyer	Affirmative
1	Entergy Services, Inc.	Edward J Davis	Negative
1	FirstEnergy Corp.	William J Smith	Affirmative
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	
1	Florida Power & Light Co.	Mike O'Neil	Affirmative
1	Gainesville Regional Utilities	Richard Bachmeier	Abstain
1	Georgia Transmission Corporation	Jason Snodgrass	Affirmative
1	Great River Energy	Gordon Pietsch	Negative
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon	
1	Hydro One Networks, Inc.	Ajay Garg	Affirmative
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Affirmative
1	Idaho Power Company	Molly Devine	Affirmative
1	Imperial Irrigation District	Tino Zaragoza	
1	International Transmission Company Holdings Corp	Michael Moltane	Affirmative
1	JEA	Ted Hobson	Affirmative
1	KAMO Electric Cooperative	Walter Kenyon	Negative
1	Kansas City Power & Light Co.	Michael Gammon	
1	Keys Energy Services	Stanley T Rząd	Affirmative
1	Lakeland Electric	Larry E Watt	
1	Lee County Electric Cooperative	John W Delucca	
1	LG&E Energy Transmission Services	Bradley C. Young	
1	Long Island Power Authority	Robert Ganley	Affirmative
1	Los Angeles Department of Water & Power	John Burnett	
1	Lower Colorado River Authority	Martyn Turner	Abstain
1	M & A Electric Power Cooperative	William Price	Negative
1	Manitoba Hydro	Joe D Petaski	Affirmative
1	MEAG Power	Danny Dees	Affirmative
1	MidAmerican Energy Co.	Terry Harbour	Affirmative
1	Minnesota Power, Inc.	Randi K. Nyholm	Negative
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Negative
1	National Grid USA	Michael Jones	Affirmative
1	Nebraska Public Power District	Cole C Brodine	Negative
1	New York Power Authority	Bruce Metruck	Affirmative
1	New York State Electric & Gas Corp.	Raymond P Kinney	Abstain
1	Northeast Missouri Electric Power Cooperative	Kevin White	Negative
1	Northeast Utilities	David Boguslawski	Affirmative
1	Northern Indiana Public Service Co.	Kevin M Largura	Negative
1	NorthWestern Energy	John Canavan	Affirmative
1	NStar Gas and Electric	John Robertson	
1	Ohio Valley Electric Corp.	Robert Matthey	Negative

1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Negative	
1	Omaha Public Power District	Doug Peterchuck		
1	Oncor Electric Delivery	Jen Fiegel	Negative	
1	Orlando Utilities Commission	Brad Chase		
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan		
1	PacifiCorp	Ryan Millard	Affirmative	
1	PECO Energy	Ronald Schloendorn	Affirmative	
1	Platte River Power Authority	John C. Collins	Negative	
1	Portland General Electric Co.	John T Walker	Negative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Negative	
1	Public Service Company of New Mexico	Laurie Williams	Affirmative	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative	
1	Public Utility District No. 2 of Grant County, Washington	Rod Noteboom		
1	Puget Sound Energy, Inc.	Denise M Lietz	Negative	
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell	Negative	
1	Seattle City Light	Pawel Krupa	Negative	
1	Sho-Me Power Electric Cooperative	Denise Stevens	Negative	
1	Sierra Pacific Power Co.	Rich Salgo	Affirmative	
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	
1	South California Edison Company	Steven Mavis	Affirmative	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison		
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	
1	Tampa Electric Co.	Beth Young	Negative	
1	Tennessee Valley Authority	Larry G Akens	Affirmative	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Negative	
1	Tucson Electric Power Co.	John Tolo	Negative	
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Negative	
1	Western Area Power Administration	Brandy A Dunn		
1	Xcel Energy, Inc.	Gregory L Pieper	Affirmative	
2	Alberta Electric System Operator	Mark B Thompson	Affirmative	
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
2	California ISO	Rich Vine	Negative	
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Affirmative	
2	Independent Electricity System Operator	Barbara Constantinescu	Negative	
2	ISO New England, Inc.	Kathleen Goodman	Negative	
2	Midwest ISO, Inc.	Marie Knox	Negative	
2	New Brunswick System Operator	Alden Briggs	Negative	
2	New York Independent System Operator	Gregory Campoli	Affirmative	
2	PJM Interconnection, L.L.C.	stephanie monzon	Negative	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Negative	
3	Alabama Power Company	Richard J. Mandes	Affirmative	
3	Alameda Municipal Power	Douglas Draeger		
3	Ameren Services	Mark Peters	Affirmative	
3	APS	Steven Norris		
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Negative	
3	Atlantic City Electric Company	NICOLE BUCKMAN	Affirmative	
3	Avista Corp.	Robert Lafferty		
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blachly-Lane Electric Co-op	Bud Tracy		
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham		
3	Central Electric Power Cooperative	Adam M Weber	Negative	
3	Central Lincoln PUD	Steve Alexanderson	Affirmative	
3	City of Austin dba Austin Energy	Andrew Gallo	Affirmative	
3	City of Bartow, Florida	Matt Culverhouse	Affirmative	
3	City of Clewiston	Lynne Mila		
3	City of Farmington	Linda R Jacobson	Abstain	

3	City of Garland	Ronnie C Hoeinghaus	Negative	
3	City of Green Cove Springs	Gregg R Griffin		
3	City of Lodi, California	Elizabeth Kirkley	Negative	
3	City of Palo Alto	Eric R Scott	Affirmative	
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey		
3	City Water, Light & Power of Springfield	Roger Powers	Affirmative	
3	Clearwater Power Co.	Dave Hagen		
3	Cleco Corporation	Michelle A Corley	Abstain	
3	Colorado Springs Utilities	Charles Morgan	Negative	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy	Richard Blumenstock	Negative	
3	Consumers Power Inc.	Roman Gillen		
3	Coos-Curry Electric Cooperative, Inc	Roger Meader		
3	Cowlitz County PUD	Russell A Noble		
3	CPS Energy	Jose Escamilla	Affirmative	
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Detroit Edison Company	Kent Kujala	Negative	
3	Dominion Resources, Inc.	Connie B Lowe	Affirmative	
3	Duke Energy Carolina	Henry Ernst-Jr		
3	Entergy	Joel T Plessinger	Negative	
3	Fall River Rural Electric Cooperative	Bryan Case		
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Affirmative	
3	Florida Power Corporation	Lee Schuster	Negative	
3	Georgia Power Company	Danny Lindsey	Affirmative	
3	Georgia System Operations Corporation	Scott McGough	Affirmative	
3	Great River Energy	Brian Glover	Negative	
3	Gulf Power Company	Paul C Caldwell	Affirmative	
3	Hydro One Networks, Inc.	David Kiguel	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Negative	
3	Kansas City Power & Light Co.	Charles Locke	Negative	
3	Kissimmee Utility Authority	Gregory D Woessner	Abstain	
3	Lakeland Electric	Mace D Hunter		
3	Lane Electric Cooperative, Inc.	Rick Crinklaw		
3	Lincoln Electric System	Jason Fortik	Negative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Louisville Gas and Electric Co.	Charles A. Freibert	Negative	
3	M & A Electric Power Cooperative	Stephen D Pogue	Negative	
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Mississippi Power	Jeff Franklin	Affirmative	
3	Modesto Irrigation District	Jack W Savage		
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Negative	
3	Nebraska Public Power District	Tony Eddleman	Negative	
3	New York Power Authority	David R Rivera	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann	Negative	
3	Northern Indiana Public Service Co.	William SeDoris	Negative	
3	Northern Lights Inc.	Jon Shelby		
3	NW Electric Power Cooperative, Inc.	David McDowell	Negative	
3	Omaha Public Power District	Blaine R. Dinwiddie	Affirmative	
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative	
3	Owensboro Municipal Utilities	Thomas T Lyons	Negative	
3	Pacific Gas and Electric Company	John H Hagen	Negative	
3	Pacific Northwest Generating Cooperative	Rick Paschall		
3	PacifiCorp	Dan Zollner	Affirmative	
3	Platte River Power Authority	Terry L Baker	Negative	
3	PNM Resources	Michael Mertz	Affirmative	
3	Portland General Electric Co.	Thomas G Ward	Negative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Progress Energy Carolinas	Sam Waters		
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Affirmative	
3	Puget Sound Energy, Inc.	Erin Apperson	Negative	

3	Raft River Rural Electric Cooperative	Heber Carpenter		
3	Rutherford EMC	Thomas M Haire	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salmon River Electric Cooperative	Ken Dizes	Negative	
3	Salt River Project	John T. Underhill	Affirmative	
3	Santee Cooper	James M Poston	Negative	
3	Seattle City Light	Dana Wheelock	Negative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Negative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Negative	
3	South Carolina Electric & Gas Co.	Hubert C Young	Negative	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L. Donahey		
3	Tennessee Valley Authority	Ian S Grant	Affirmative	
3	Tri-County Electric Cooperative, Inc.	Mike Swearingen	Affirmative	
3	Tri-State G & T Association, Inc.	Janelle Marriott	Negative	
3	Umatilla Electric Cooperative	Steve Eldrige		
3	Westar Energy	Bo Jones	Negative	
3	Wisconsin Electric Power Marketing	James R Keller	Negative	
3	Xcel Energy, Inc.	Michael Ibold	Affirmative	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Negative	
4	American Municipal Power	Kevin Koloini		
4	Blue Ridge Power Agency	Duane S Dahlquist		
4	Central Lincoln PUD	Shamus J Gamache	Affirmative	
4	City of Austin dba Austin Energy	Reza Ebrahimian	Affirmative	
4	City of Clewiston	Kevin McCarthy		
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle		
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Negative	
4	Consumers Energy	David Frank Ronk	Negative	
4	Cowlitz County PUD	Rick Syring		
4	Detroit Edison Company	Daniel Herring	Negative	
4	Flathead Electric Cooperative	Russ Schneider	Negative	
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Cairo Vanegas	Affirmative	
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative	
4	Imperial Irrigation District	Diana U Torres		
4	Indiana Municipal Power Agency	Jack Alvey	Affirmative	
4	LaGen	Richard Comeaux		
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	
4	Modesto Irrigation District	Spencer Tacke		
4	Northern California Power Agency	Tracy R Bibb	Affirmative	
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Oklahoma Municipal Power Authority	Ashley Stringer	Affirmative	
4	Old Dominion Electric Coop.	Mark Ringhausen	Affirmative	
4	Pacific Northwest Generating Cooperative	Aleka K Scott		
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Negative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Negative	
4	South Mississippi Electric Power Association	Steven McElhanev		
4	Southern Minnesota Municipal Power Agency	Richard L Koch		
4	Tacoma Public Utilities	Keith Morissette	Affirmative	
4	Turlock Irrigation District	Steven C Hill		
4	West Oregon Electric Cooperative, Inc.	Marc M Farmer		
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative	
4	WPPI Energy	Todd Komplin		
5	AEP Service Corp.	Brock Ondayko	Negative	
5	AES Corporation	Leo Bernier		
5	Amerenue	Sam Dwyer	Affirmative	
5	Arizona Public Service Co.	Edward Cambridge	Negative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Negative	
5	Avista Corp.	Edward F. Groce		
5	BC Hydro and Power Authority	Clement Ma	Affirmative	



5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative
5	Calpine Corporation	Phillip Porter	
5	City and County of San Francisco	Daniel Mason	Negative
5	City of Austin dba Austin Energy	Jeanie Doty	Affirmative
5	City of Redding	Paul A. Cummings	Affirmative
5	City of Tallahassee	Karen Webb	Negative
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative
5	Cleco Power	Stephanie Huffman	Abstain
5	Cogentrix Energy, Inc.	Mike D Hirst	Affirmative
5	Colorado Springs Utilities	Jennifer Eckels	Negative
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Affirmative
5	Consumers Energy Company	David C Greyerbiehl	Negative
5	Cowlitz County PUD	Bob Essex	
5	Dairyland Power Coop.	Tommy Drea	Negative
5	Deseret Power	Philip B Tice Jr	Negative
5	Detroit Edison Company	Christy Wicke	Negative
5	Dominion Resources, Inc.	Mike Garton	Affirmative
5	Duke Energy	Dale Q Goodwine	Negative
5	Dynegy Inc.	Dan Roethemeyer	Affirmative
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	
5	Edison Mission Marketing & Trading Inc.	Brenda J Frazer	
5	Electric Power Supply Association	John R Cashin	
5	Essential Power, LLC	Patrick Brown	Negative
5	Exelon Nuclear	Michael Korchynsky	Affirmative
5	ExxonMobil Research and Engineering	Martin Kaufman	
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative
5	Florida Municipal Power Agency	David Schumann	Affirmative
5	Great River Energy	Preston L Walsh	Negative
5	Hydro-Québec Production	Roger Dufresne	Affirmative
5	ICF International	Brent B Hebert	
5	Imperial Irrigation District	Marcela Y Caballero	
5	JEA	John J Babik	Affirmative
5	Kansas City Power & Light Co.	Brett Holland	Negative
5	Kissimmee Utility Authority	Mike Blough	Affirmative
5	Lakeland Electric	James M Howard	
5	Liberty Electric Power LLC	Daniel Duff	Negative
5	Lincoln Electric System	Dennis Florom	
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative
5	Luminant Generation Company LLC	Mike Laney	
5	Manitoba Hydro	S N Fernando	Affirmative
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Affirmative
5	MEAG Power	Steven Grego	Affirmative
5	MidAmerican Energy Co.	Christopher Schneider	Affirmative
5	Muscatine Power & Water	Mike Avesing	Negative
5	Nebraska Public Power District	Don Schmit	Negative
5	New York Power Authority	Wayne Sipperly	Affirmative
5	NextEra Energy	Allen D Schriver	Negative
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Affirmative
5	Northern Indiana Public Service Co.	William O. Thompson	Negative
5	Occidental Chemical	Michelle R DAntuono	Affirmative
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative
5	Orlando Utilities Commission	Richard K Kinas	Affirmative
5	Pacific Gas and Electric Company	Richard J. Padilla	
5	PacifiCorp	Sandra L. Shaffer	Affirmative
5	Platte River Power Authority	Roland Thiel	Negative
5	Portland General Electric Co.	Matt E. Jastram	Affirmative
5	PowerSouth Energy Cooperative	Tim Hattaway	Affirmative
5	PPL Generation LLC	Annette M Bannon	Negative
5	Progress Energy Carolinas	Wayne Lewis	
5	PSEG Fossil LLC	Tim Kucey	Affirmative
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Affirmative

5	Puget Sound Energy, Inc.	Tom Flynn	Negative
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative
5	Salt River Project	William Alkema	Affirmative
5	Santee Cooper	Lewis P Pierce	Negative
5	Seattle City Light	Michael J. Haynes	Negative
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Negative
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative
5	South Carolina Electric & Gas Co.	Edward Magic	Negative
5	Southeastern Power Administration	Douglas Spencer	Affirmative
5	Southern California Edison Co.	Denise Yaffe	
5	Southern Company Generation	William D Shultz	Affirmative
5	Tacoma Power	Chris Mattson	Affirmative
5	Tampa Electric Co.	RJames Rocha	Affirmative
5	Tenaska, Inc.	Scott M. Helyer	Abstain
5	Tennessee Valley Authority	David Thompson	Affirmative
5	TransAlta Corporation	Rebbekka McFadden	
5	U.S. Army Corps of Engineers	Melissa Kurtz	
5	U.S. Bureau of Reclamation	Martin Bauer	Negative
5	Westar Energy	Bryan Taggart	Negative
5	Wisconsin Electric Power Co.	Linda Horn	Negative
5	WPPI Energy	Steven Leovy	Negative
5	Xcel Energy, Inc.	Liam Noailles	Affirmative
6	AEP Marketing	Edward P. Cox	Negative
6	Ameren Energy Marketing Co.	Jennifer Richardson	Affirmative
6	APS	Randy A. Young	Negative
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Negative
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative
6	City of Austin dba Austin Energy	Lisa L Martin	Affirmative
6	City of Redding	Marvin Briggs	Affirmative
6	Cleco Power LLC	Robert Hirschak	Abstain
6	Colorado Springs Utilities	Lisa C Rosintoski	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative
6	Constellation Energy Commodities Group	Donald Schopp	Affirmative
6	Discount Power, Inc.	David Feldman	
6	Dominion Resources, Inc.	Louis S. Slade	Affirmative
6	Duke Energy	Greg Cecil	
6	Entergy Services, Inc.	Terri F Benoit	
6	FirstEnergy Solutions	Kevin Querry	Affirmative
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative
6	Florida Municipal Power Pool	Thomas Washburn	Abstain
6	Florida Power & Light Co.	Silvia P. Mitchell	Affirmative
6	Great River Energy	Donna Stephenson	
6	Imperial Irrigation District	Cathy Bretz	
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative
6	Lakeland Electric	Paul Shipps	
6	Lincoln Electric System	Eric Ruskamp	Negative
6	Los Angeles Department of Water & Power	Brad Packer	Affirmative
6	Luminant Energy	Brad Jones	Abstain
6	Manitoba Hydro	Daniel Prowse	Affirmative
6	MidAmerican Energy Co.	Dennis Kimm	Affirmative
6	Modesto Irrigation District	James McFall	
6	Muscatine Power & Water	John Stolley	
6	New York Power Authority	Saul Rojas	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Negative
6	NRG Energy, Inc.	Alan Johnson	Abstain
6	Omaha Public Power District	David Ried	
6	PacifiCorp	Scott L Smith	Affirmative
6	Platte River Power Authority	Carol Ballantine	Negative
6	Progress Energy	John T Sturgeon	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative
6	Public Utility District No. 1 of Chelan County	Hugh A. Owen	
6	Sacramento Municipal Utility District	Diane Enderby	Affirmative
6	Salt River Project	Steven J Hulet	Affirmative
6	Santee Cooper	Michael Brown	Negative
6	Seattle City Light	Dennis Sismaet	Negative
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Negative
6	Snohomish County PUD No. 1	William T Moojen	Affirmative

6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Southern Company Generation and Energy Marketing	John J. Ciza	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative	
6	Westar Energy	Grant L Wilkerson	Negative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F Lemmons		
8		Roger C Zaklukiewicz	Negative	
8		James A Maenner		
8		Edward C Stein	Affirmative	
8	APX	Michael Johnson		
8	INTELLIBIND	Kevin Conway		
8	JDRJC Associates	Jim Cyrulewski		
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Pacific Northwest Generating Cooperative	Margaret Ryan		
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon		
8	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman	Affirmative	
8	Volkman Consulting, Inc.	Terry Volkman	Negative	
9	California Energy Commission	William M Chamberlain		
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J. Barney	Abstain	
9	Oregon Public Utility Commission	Jerome Murray		
9	Public Utilities Commission of Ohio	Klaus Lambeck		
10	Florida Reliability Coordinating Council	Linda Campbell	Affirmative	
10	Midwest Reliability Organization	William S Smith	Negative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Negative	
10	SERC Reliability Corporation	Carter B Edge	Affirmative	
10	Southwest Power Pool RE	Emily Pennel	Affirmative	
10	Texas Reliability Entity, Inc.	Donald G Jones	Negative	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Affirmative	

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A New Jersey Nonprofit Corporation

# Non-binding Poll Results

Project 2007-02 COM-003-1

Non-binding Poll Results	
<b>Non-binding Poll Name:</b>	Project 2007-02 COM-003-1 Non-binding Poll March 2013_sc_1
<b>Poll Period:</b>	7/10/2013 - 7/19/2013
<b>Total # Opinions:</b>	301
<b>Total Ballot Pool:</b>	395
<b>Summary Results:</b>	76.20% of those who registered to participate provided an opinion or an abstention; 55.37% of those who provided an opinion indicated support for the VRFs and VSLs.

Individual Ballot Pool Results				
Segment	Organization	Member	Opinions	Comments
1	Ameren Services	Kirit Shah	Affirmative	
1	American Electric Power	Paul B Johnson	Abstain	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman	Negative	
1	ATCO Electric	Glen Sutton	Abstain	
1	Austin Energy	James Armke	Affirmative	
1	Avista Corp.	Scott J Kinney		
1	Balancing Authority of Northern California	Kevin Smith	Abstain	
1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher		
1	Black Hills Corp	Eric Egge		
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey		
1	Bryan Texas Utilities	John C Fontenot	Affirmative	
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Negative	
1	Central Electric Power Cooperative	Michael B Bax	Negative	
1	City of Pasadena	Marco A Sustaita	Negative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City Utilities of Springfield, Missouri	Jeff Knottek		
1	City Water, Light & Power of Springfield	Shaun Anders		
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Negative	
1	Colorado Springs Utilities	Paul Morland	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Negative	

1	CPS Energy	Richard Castrejana	Affirmative
1	Dairyland Power Coop.	Robert W. Roddy	Negative
1	Dayton Power & Light Co.	Hertzel Shamash	Negative
1	Deseret Power	James Tucker	Abstain
1	Dominion Virginia Power	Michael S Crowley	Abstain
1	Duke Energy Carolina	Douglas E. Hils	Negative
1	Empire District Electric Co.	Ralph F Meyer	Affirmative
1	Entergy Services, Inc.	Edward J Davis	Negative
1	FirstEnergy Corp.	William J Smith	Affirmative
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	
1	Florida Power & Light Co.	Mike O'Neil	Affirmative
1	Gainesville Regional Utilities	Richard Bachmeier	Abstain
1	Georgia Transmission Corporation	Jason Snodgrass	Affirmative
1	Great River Energy	Gordon Pietsch	Negative
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon	
1	Hydro One Networks, Inc.	Ajay Garg	Affirmative
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Affirmative
1	Idaho Power Company	Molly Devine	Affirmative
1	Imperial Irrigation District	Tino Zaragoza	
1	International Transmission Company Holdings Corp	Michael Moltane	Abstain
1	JEA	Ted Hobson	Affirmative
1	KAMO Electric Cooperative	Walter Kenyon	Negative
1	Kansas City Power & Light Co.	Michael Gammon	
1	Keys Energy Services	Stanley T Rzac	Affirmative
1	Lakeland Electric	Larry E Watt	
1	Lee County Electric Cooperative	John W Delucca	
1	LG&E Energy Transmission Services	Bradley C. Young	
1	Long Island Power Authority	Robert Ganley	Affirmative
1	Los Angeles Department of Water & Power	John Burnett	
1	Lower Colorado River Authority	Martyn Turner	Affirmative
1	M & A Electric Power Cooperative	William Price	Negative
1	Manitoba Hydro	Joe D Petaski	Affirmative
1	MEAG Power	Danny Dees	Affirmative
1	MidAmerican Energy Co.	Terry Harbour	Affirmative
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Negative
1	National Grid USA	Michael Jones	Affirmative
1	Nebraska Public Power District	Cole C Brodine	Abstain
1	New York Power Authority	Bruce Metruck	Affirmative
1	New York State Electric & Gas Corp.	Raymond P Kinney	Abstain
1	Northeast Missouri Electric Power Cooperative	Kevin White	Negative
1	Northeast Utilities	David Boguslawski	Affirmative
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative
1	NorthWestern Energy	John Canavan	
1	NStar Gas and Electric	John Robertson	

1	Ohio Valley Electric Corp.	Robert Matthey	Abstain	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Negative	
1	Omaha Public Power District	Doug Peterchuck		
1	Oncor Electric Delivery	Jen Fiegel	Negative	
1	Orlando Utilities Commission	Brad Chase		
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan		
1	PacifiCorp	Ryan Millard	Abstain	
1	PECO Energy	Ronald Schloendorn	Affirmative	
1	Platte River Power Authority	John C. Collins	Abstain	
1	Portland General Electric Co.	John T Walker	Negative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Negative	
1	Public Service Company of New Mexico	Laurie Williams	Affirmative	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Abstain	
1	Public Utility District No. 2 of Grant County, Washington	Rod Noteboom		
1	Puget Sound Energy, Inc.	Denise M Lietz	Negative	
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Abstain	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell	Negative	
1	Seattle City Light	Pawel Krupa	Negative	
1	Sho-Me Power Electric Cooperative	Denise Stevens	Negative	
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	
1	South California Edison Company	Steven Mavis	Affirmative	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison		
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	
1	Tampa Electric Co.	Beth Young	Negative	
1	Tennessee Valley Authority	Larry G Akens	Affirmative	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Negative	
1	Tucson Electric Power Co.	John Tolo	Negative	
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Negative	
1	Western Area Power Administration	Brandy A Dunn		
1	Xcel Energy, Inc.	Gregory L Pieper		
2	Alberta Electric System Operator	Mark B Thompson		
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Rich Vine	Negative	
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Affirmative	
2	Independent Electricity System Operator	Barbara Constantinescu	Negative	
2	ISO New England, Inc.	Kathleen Goodman		

2	Midwest ISO, Inc.	Marie Knox	Negative	
2	New Brunswick System Operator	Alden Briggs	Abstain	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	stephanie monzon	Abstain	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Abstain	
3	Alabama Power Company	Richard J. Mandes	Affirmative	
3	Alameda Municipal Power	Douglas Draeger		
3	Ameren Services	Mark Peters	Affirmative	
3	APS	Steven Norris		
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Negative	
3	Avista Corp.	Robert Lafferty		
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Power Cooperative	Adam M Weber	Negative	
3	Central Lincoln PUD	Steve Alexanderson	Abstain	
3	City of Austin dba Austin Energy	Andrew Gallo	Affirmative	
3	City of Bartow, Florida	Matt Culverhouse	Affirmative	
3	City of Clewiston	Lynne Mila		
3	City of Farmington	Linda R Jacobson	Abstain	
3	City of Garland	Ronnie C Hoeinghaus	Negative	
3	City of Green Cove Springs	Gregg R Griffin		
3	City of Lodi, California	Elizabeth Kirkley	Negative	
3	City of Palo Alto	Eric R Scott	Affirmative	
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey	Negative	
3	Cleco Corporation	Michelle A Corley	Negative	
3	Colorado Springs Utilities	Charles Morgan	Affirmative	
3	ComEd	Bruce Krawczyk		
3	Consolidated Edison Co. of New York	Peter T Yost	Negative	
3	Consumers Energy	Richard Blumenstock	Negative	
3	Cowlitz County PUD	Russell A Noble		
3	CPS Energy	Jose Escamilla	Affirmative	
3	Detroit Edison Company	Kent Kujala	Negative	
3	Duke Energy Carolina	Henry Ernst-Jr		
3	Entergy	Joel T Plessinger	Negative	
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Affirmative	
3	Florida Power Corporation	Lee Schuster	Negative	
3	Georgia Power Company	Danny Lindsey	Affirmative	
3	Georgia System Operations Corporation	Scott McGough	Affirmative	
3	Great River Energy	Brian Glover	Negative	
3	Gulf Power Company	Paul C Caldwell	Affirmative	
3	Hydro One Networks, Inc.	David Kiguel	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Negative	
3	Kansas City Power & Light Co.	Charles Locke	Negative	
3	Kissimmee Utility Authority	Gregory D Woessner	Abstain	

3	Lakeland Electric	Mace D Hunter		
3	Lincoln Electric System	Jason Fortik	Negative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Louisville Gas and Electric Co.	Charles A. Freibert	Negative	
3	M & A Electric Power Cooperative	Stephen D Pogue	Negative	
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Mississippi Power	Jeff Franklin	Affirmative	
3	Modesto Irrigation District	Jack W Savage		
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Negative	
3	Nebraska Public Power District	Tony Eddleman	Abstain	
3	New York Power Authority	David R Rivera	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann	Negative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	NW Electric Power Cooperative, Inc.	David McDowell	Negative	
3	Orange and Rockland Utilities, Inc.	David Burke	Negative	
3	Owensboro Municipal Utilities	Thomas T Lyons	Negative	
3	Pacific Gas and Electric Company	John H Hagen	Negative	
3	PacifiCorp	Dan Zollner	Abstain	
3	Platte River Power Authority	Terry L Baker	Abstain	
3	PNM Resources	Michael Mertz	Affirmative	
3	Portland General Electric Co.	Thomas G Ward		
3	Potomac Electric Power Co.	Robert Reuter	Abstain	
3	Progress Energy Carolinas	Sam Waters		
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Abstain	
3	Puget Sound Energy, Inc.	Erin Apperson	Negative	
3	Rutherford EMC	Thomas M Haire	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Abstain	
3	Salmon River Electric Cooperative	Ken Dizes	Negative	
3	Salt River Project	John T. Underhill	Affirmative	
3	Santee Cooper	James M Poston	Negative	
3	Seattle City Light	Dana Wheelock	Negative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Negative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Negative	
3	South Carolina Electric & Gas Co.	Hubert C Young	Negative	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L. Donahey		
3	Tennessee Valley Authority	Ian S Grant	Abstain	
3	Tri-County Electric Cooperative, Inc.	Mike Swearingen	Affirmative	
3	Tri-State G & T Association, Inc.	Janelle Marriott	Negative	
3	Westar Energy	Bo Jones	Negative	
3	Wisconsin Electric Power Marketing	James R Keller		
3	Xcel Energy, Inc.	Michael Ibold	Abstain	



4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Abstain	
4	American Municipal Power	Kevin Koloini		
4	Blue Ridge Power Agency	Duane S Dahlquist		
4	Central Lincoln PUD	Shamus J Gamache	Abstain	
4	City of Austin dba Austin Energy	Reza Ebrahimian	Affirmative	
4	City of Clewiston	Kevin McCarthy		
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle		
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Negative	
4	Consumers Energy	David Frank Ronk		
4	Cowlitz County PUD	Rick Syring		
4	Detroit Edison Company	Daniel Herring	Negative	
4	Flathead Electric Cooperative	Russ Schneider	Negative	
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Cairo Vanegas	Abstain	
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Imperial Irrigation District	Diana U Torres		
4	Indiana Municipal Power Agency	Jack Alvey	Abstain	
4	LaGen	Richard Comeaux		
4	Madison Gas and Electric Co.	Joseph DePoorter	Abstain	
4	Modesto Irrigation District	Spencer Tacke		
4	Northern California Power Agency	Tracy R Bibb		
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Oklahoma Municipal Power Authority	Ashley Stringer	Negative	
4	Old Dominion Electric Coop.	Mark Ringhausen	Affirmative	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	
4	Sacramento Municipal Utility District	Mike Ramirez	Abstain	
4	Seattle City Light	Hao Li	Negative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Negative	
4	South Mississippi Electric Power Association	Steven McElhaney		
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative	
4	WPPI Energy	Todd Komplin		
5	AEP Service Corp.	Brock Ondayko	Abstain	
5	AES Corporation	Leo Bernier		
5	Amerenue	Sam Dwyer	Affirmative	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Negative	
5	Avista Corp.	Edward F. Groce		
5	BC Hydro and Power Authority	Clement Ma	Affirmative	
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla		

5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative	
5	Calpine Corporation	Phillip Porter		
5	City and County of San Francisco	Daniel Mason		
5	City of Austin dba Austin Energy	Jeanie Doty	Affirmative	
5	City of Redding	Paul A. Cummings	Affirmative	
5	City of Tallahassee	Karen Webb	Negative	
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative	
5	Cleco Power	Stephanie Huffman	Negative	
5	Cogentrix Energy, Inc.	Mike D Hirst	Affirmative	
5	Colorado Springs Utilities	Jennifer Eckels	Affirmative	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Negative	
5	Consumers Energy Company	David C Greyerbiehl	Negative	
5	Cowlitz County PUD	Bob Essex		
5	Dairyland Power Coop.	Tommy Drea	Negative	
5	Deseret Power	Philip B Tice Jr	Negative	
5	Detroit Edison Company	Christy Wicke	Negative	
5	Dominion Resources, Inc.	Mike Garton	Abstain	
5	Duke Energy	Dale Q Goodwine	Negative	
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	E.ON Climate & Renewables North America, LLC	Dana Showalter		
5	Edison Mission Marketing & Trading Inc.	Brenda J Frazer		
5	Electric Power Supply Association	John R Cashin		
5	Essential Power, LLC	Patrick Brown	Negative	
5	Exelon Nuclear	Michael Korchynsky		
5	ExxonMobil Research and Engineering	Martin Kaufman		
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	
5	Great River Energy	Preston L Walsh	Negative	
5	Hydro-Québec Production	Roger Dufresne	Affirmative	
5	Imperial Irrigation District	Marcela Y Caballero		
5	JEA	John J Babik	Affirmative	
5	Kansas City Power & Light Co.	Brett Holland	Negative	
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard		
5	Liberty Electric Power LLC	Daniel Duff	Negative	
5	Lincoln Electric System	Dennis Florom		
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative	
5	Luminant Generation Company LLC	Mike Laney		
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider	Affirmative	

5	Muscatine Power & Water	Mike Avesing	Negative	
5	Nebraska Public Power District	Don Schmit	Abstain	
5	New York Power Authority	Wayne Sipperly	Affirmative	
5	NextEra Energy	Allen D Schriver	Negative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Affirmative	
5	Northern Indiana Public Service Co.	William O. Thompson	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard K Kinas	Affirmative	
5	Pacific Gas and Electric Company	Richard J. Padilla		
5	PacifiCorp	Sandra L. Shaffer	Abstain	
5	Platte River Power Authority	Roland Thiel	Negative	
5	Portland General Electric Co.	Matt E. Jastram	Affirmative	
5	PowerSouth Energy Cooperative	Tim Hattaway		
5	PPL Generation LLC	Annette M Bannon	Negative	
5	Progress Energy Carolinas	Wayne Lewis		
5	PSEG Fossil LLC	Tim Kucey	Abstain	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Abstain	
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Affirmative	
5	Puget Sound Energy, Inc.	Tom Flynn	Negative	
5	Sacramento Municipal Utility District	Bethany Hunter	Abstain	
5	Salt River Project	William Alkema	Affirmative	
5	Santee Cooper	Lewis P Pierce	Negative	
5	Seattle City Light	Michael J. Haynes	Negative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Negative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	South Carolina Electric & Gas Co.	Edward Magic	Negative	
5	Southeastern Power Administration	Douglas Spencer	Affirmative	
5	Southern California Edison Co.	Denise Yaffe		
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tacoma Power	Chris Mattson	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Affirmative	
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz		
5	U.S. Bureau of Reclamation	Martin Bauer		
5	Wisconsin Electric Power Co.	Linda Horn		
5	WPPI Energy	Steven Leovy	Negative	
5	Xcel Energy, Inc.	Liam Noailles		
6	AEP Marketing	Edward P. Cox	Abstain	
6	Ameren Energy Marketing Co.	Jennifer Richardson	Affirmative	
6	APS	Randy A. Young	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Affirmative	
6	City of Redding	Marvin Briggs	Affirmative	

6	Cleco Power LLC	Robert Hirchak	Negative	
6	Colorado Springs Utilities	Lisa C Rosintoski		
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Negative	
6	Duke Energy	Greg Cecil		
6	Entergy Services, Inc.	Terri F Benoit		
6	FirstEnergy Solutions	Kevin Querry	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	
6	Florida Municipal Power Pool	Thomas Washburn	Abstain	
6	Florida Power & Light Co.	Silvia P. Mitchell	Affirmative	
6	Great River Energy	Donna Stephenson		
6	Imperial Irrigation District	Cathy Bretz		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	
6	Lakeland Electric	Paul Shipps		
6	Lincoln Electric System	Eric Ruskamp	Negative	
6	Los Angeles Department of Water & Power	Brad Packer	Affirmative	
6	Luminant Energy	Brad Jones	Abstain	
6	Manitoba Hydro	Daniel Prowse	Affirmative	
6	MidAmerican Energy Co.	Dennis Kimm	Affirmative	
6	Modesto Irrigation District	James McFall		
6	Muscatine Power & Water	John Stolley		
6	New York Power Authority	Saul Rojas		
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	NRG Energy, Inc.	Alan Johnson	Abstain	
6	Omaha Public Power District	David Ried		
6	PacifiCorp	Scott L Smith	Abstain	
6	Platte River Power Authority	Carol Ballantine	Negative	
6	Progress Energy	John T Sturgeon		
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Abstain	
6	Sacramento Municipal Utility District	Diane Enderby	Abstain	
6	Salt River Project	Steven J Hulet	Affirmative	
6	Santee Cooper	Michael Brown	Negative	
6	Seattle City Light	Dennis Sismaet	Negative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Negative	
6	Snohomish County PUD No. 1	William T Moojen	Affirmative	
6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Southern Company Generation and Energy Marketing	John J. Ciza	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Abstain	
6	Westar Energy	Grant L Wilkerson	Negative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
8		Edward C Stein	Affirmative	
8		James A Maenner		
8		Roger C Zaklukiewicz	Negative	
8	APX	Michael Johnson		

8	JDRJC Associates	Jim Cyrulewski		
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon		
8	Utility System Efeciencias, Inc. (USE)	Robert L Dintelman		
8	Volkman Consulting, Inc.	Terry Volkman	Negative	
9	California Energy Commission	William M Chamberlain		
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative	
9	Public Utilities Commission of Ohio	Klaus Lambeck		
10	Florida Reliability Coordinating Council	Linda Campbell	Affirmative	
10	Midwest Reliability Organization	William S Smith	Negative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Negative	
10	SERC Reliability Corporation	Carter B Edge	Abstain	
10	Southwest Power Pool RE	Emily Pennel	Affirmative	
10	Texas Reliability Entity, Inc.	Donald G Jones	Abstain	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Abstain	

**Individual or group. (80 Responses)**

**Name (50 Responses)**

**Organization (50 Responses)**

**Group Name (30 Responses)**

**Lead Contact (30 Responses)**

**IF YOU WISH TO EXPRESS SUPPORT FOR ANOTHER ENTITY'S COMMENTS WITHOUT ENTERING ANY ADDITIONAL COMMENTS, YOU MAY DO SO HERE. (13 Responses)**

**Comments (80 Responses)**

**Question 1 (63 Responses)**

**Question 1 Comments (67 Responses)**

**Question 2 (44 Responses)**

**Question 2 Comments (67 Responses)**

Individual
Tammy Porter
Oncor Electric Delivery
No
Draft 6 of COM-003-1 appears to go beyond the recommendations and FERC 693 directives which were the basis for the SAR. The main objective to develop an operating protocol in alignment with other communications standards to improve reliability. Oncor's concerns with Draft 6 are: (1) R1 - subject to the Reliability Coordinator's approval: adding this to R1 potentially adds an administrative burden to an Entity/Industry without clear reliability benefits. Operating protocol should support an Entity's operations and functions which are not a "one size fits all". By requiring a RC's approval, the requirement empowers the RC to interpret the requirement (as well as defining "Operating Instructions") which may not be consistent with an Entity as well as the Regional Entity who will be enforcing the requirement. (2) R2/R3 - there is the potential for multiple levels of interpretation of these requirements; these requirement potentially creates a situation in which Operators will need to be able to assess the transition from normal to emergency operations and could quite impact efficiency and productivity of operations which is the opposite of the objective. In addition based on M2 & M3, Oncor has concerns with the administrative burden versus the reliability benefits gained in proving a negative condition.
No
R2 – it is unclear how a "failure" of using an operating protocol results in a reliability directive therefore the VSL indicates a zero tolerance level of performance which does not align to reliability based performance. R3 – not all failures of using three-part communication will automatically led to a Reliability Directive so the VSL should be designed to support more than a failure to use the protocols by the issuer of an Operating Instruction does not result
Individual
Scott McGough

Georgia System Operations
Yes
No
No, regarding R2 and R3, GSOC recommends to revise the wording as follows. In particular, we believe it advantageous to use NERC's definition of Emergency (BES Emergency) to provide entities escalating levels of severity as opposed to the single VSL - severe that appears in the current Draft 6. R2 - Each Balancing Authority, Reliability Coordinator, and Transmission Operator (R3 - Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider) shall implement its communication protocols developed in Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction does not result in any of the following: <ul style="list-style-type: none"> <li>• Any abnormal system condition that requires automatic or immediate manual action to prevent the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.</li> <li>• The failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System and automatic or immediate manual action to limit the failure was required.</li> <li>• An Adverse Reliability Impact</li> </ul>
Group
Northeast Power Coordinating Council
Guy Zito
No
The introduction of the condition in R2 “so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.” creates a number of issues with the standard. <p>a. The issuance of a Reliability Directive may be caused by a number of reasons, for example, the operating instruction (repeated or otherwise) may not be sufficient to address a potential condition that has an Adverse Reliability Impact; b. The operating instruction that is communicated, with or without adhering to the protocols developed in R1, is in fact moving other system conditions from a reliable state to one that has a potential of having Adverse Reliability Impact, for which a Reliability Directive needs to be issued after implementing the communicated operating instruction. c. The operating personnel may second guess whether or not a Reliability Directive will be issued if the established communication protocols are not implemented (such as by requiring 3-part communication) before it takes the required action. This puts the need to comply with a requirement into a condition assessment mode, which defeats the purpose of having a reliability standard to manage risk and meet performance expectation whose reliability outcome are predetermined, not on the fly. d. The added condition is a compliance assessment element with which to gauge violation severity or sanction; itself not a requirement. By introducing this to the requirement, it convolutes the</p>

requirement, adds nothing to meeting the reliability objectives, and may in fact jeopardize reliability. And what if a Reliability Directive was not issued despite the failure of Responsible Entity to implement its communication protocol? Is the Responsible Entity deemed compliant with the requirement? If so, do Requirements R2 and R3 drive the right behaviors? If not, then what's the value and influence of the added condition in the assessment outcome?

Requirement R1 clearly requires the responsible entity to develop documented communication protocols for the issuance of Operating Instructions. By Part 1.5, the instances where the issuer of an oral two party, person-to-person Operating Instruction requiring the receiver to repeat, restate, rephrase, or recapitulate the Operating Instruction and subsequent actions by the issuer are already clearly stipulated in the documented communication protocols. Responsible entities simply need to implement the protocols as documented, regardless of whether failure to do so would result in having to issue a Reliability Directive, or any other possible outcomes, for that matter. Similar comments apply to Requirement R3 when the responsible entities are required to close out the last part of the 3-part communication. The suggested rephrasing of the Purpose statement "To strengthen communications..." could be misleading. Communications could be strengthened with better equipment as well, but the intent of COM-003 is to deal only with communications protocols. Suggest changing the language to that which is found in the technical guidance document, "Enhance the effectiveness of communications..."

No

We agree with the VRFs, but not the VSLs because of the concerns with Requirements R2 and R3. We do not agree with the Long-term Planning Time Horizon for R1. Developing and documenting communication protocols for use during real-time operations is an operational planning process (or mid-term planning, at most), not a long-term planning process. We suggest to change the Time Horizon to Operations Planning. Regarding the Implementation Plan, it conflicts with Ontario regulatory practice with regards to the effective date of the standard. It is suggested that this conflict be removed by appending to the effective date wording, after "applicable regulatory approval" in the Effective Dates Section of the Implementation Plan: ", or, in those jurisdictions as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities."

Individual

Bill Fowler

City of Tallahassee

No

TAL has voted NO because the standard is still not "clear and unambiguous". TAL is concerned at the degree to which the proposed standard complicates compliance for Operating Instructions without benefit to reliability. The FERC Directive was to tighten communications during Emergencies and Alerts. Operating Instructions deserve separate consideration under the standards. Requiring an entity's procedure to be subject to the Reliability Coordinator's approval creates an undue burden on the RC with no measurable improvement in reliability. While this addressed a commenter's concerns over uniformity within RC control areas, it would



be simpler and more efficient to have the RC create a procedure and provide it to all the entities in the footprint. Measure 3 should be changed to “when required by the issuer” in order to provide clarity and consistency with R3.

Individual

Nazra Gladu

Manitoba Hydro

Yes

Although Manitoba Hydro is in general support of the proposed draft, we suggest the following: (1) For clarity, consider rewriting the second paragraph of the definition of Operating Instruction as follows, An Operating Instruction is not: (1) A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns (2) Exclusive and distinct from a Reliability Directive. There is no overlap between an Operating Instruction and Reliability Directive. (2) R1 and M1 - for consistency, add an “s” to the second instance of “Reliability Coordinator” as follows: “Each Balancing Authority, Reliability Coordinator, and Transmission Operator, in each Reliability Coordinator’s area, shall...” (3) R1 – the requirement instructs each BA, RC and TO develop separate communication protocols. Are these duplicative efforts practical? (4) R1, 1.4 – alpha-numeric clarifiers are limited to oral Operating Instructions only. For consistency with R1.1, 1.2 and 1.3, consider adding applicability to written Operating Instructions as well. (5) R1, 1.5 – is limited to oral Operating Instructions while R3 (which deals with the same situation) does not specify whether it is oral or written or both. (6) M2 – the measure does not seem to match the requirement. The requirement R2 states that the responsible entity implement its communication protocols so that there is no failure to use the protocols which results in a certain operating condition. The measure however requires that the responsible entity provide evidence that they did not create the certain operating condition. Manitoba Hydro suggests that the measure should more accurately require that the responsible entity provide evidence that it implemented its communication protocol so that...

Yes

Group

Pepco Holdings Inc & Affiliates

David Thorne

Agree

Group

NERC Compliance Group

Bill Thompson

Yes
As far as the August 2003 Blackout Report Recommendation, the COM-003-1 revisions address this concern. However, the criteria for communication protocols that need to be used should be established. The criteria needs to be applied to both COM-002 and COM-003. There is too much room for interpretation when it comes to measuring compliance.
Yes
Individual
Si Truc PHAN
Hydro-Quebec TransEnergie
Yes
Yes
Hydro Québec TransÉnergie proposes to change the wording of R2 to reflect the language used in M2. The current text has too many negative connotations and is difficult to understand. The requirement should be written : Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement its communication protocols developed in Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.
Group
PacifiCorp
Ryan Millard
Yes
No
PacifiCorp does not agree with the VRFs and VSLs associated with R2 because it is not clear how R2 is measured. M2 would require an entity to provide evidence that it did not issue an Operating Instruction that resulted in an operating condition that required the issuance of a Reliability Directive by the issuer or another Balancing Authority, Reliability Coordinator, or Transmission Operator due to the failure to use documented communications protocols developed for Requirement R1. In essence, an entity is required to prove that it did not do something that resulted in a condition which caused another entity to be issued a directive (that it may or may not be privy to, depending upon whether or not it was the original issuer of said directive). A requirement that is measured by the absence of evidence creates a challenging auditing environment for the industry. PacifiCorp strongly recommends that the drafting team reconsider the measures required for proving compliance with R2.

Individual
Joe O'Brien
NIPSCO
Agree
Julie Dyke , NIPSCO comments submitted Also, We would like to see COM-002 & 003 combined into a single standard. In R1 1.5 it appears that three way communication need only to be addressed in the communication protocol and not necessarily required. An operator may be reluctant to issue an RD which would possibly expose entities to R2 & R3 non-compliance.
Individual
Thomas Foltz
American Electric Power
No
AEP cannot vote in the affirmative for COM-003-1 as long as COM-002-2 R2 would be in effect at the same time. The standard establishes a higher bar for more routine communications than would be required for emergency situations. This would only confuse operators in determining which rules are to be followed under which specific circumstances. AEP still contends that it is unnecessary to obtain Reliability Coordinator's approval on the resulting documented communication protocols for the issuance of Operating Instructions in that Reliability Coordinator's area. Why would it be necessary to develop and document internal procedures regarding communication protocols when the proposed standard itself already provides specific instruction on the required communication? Is R 1.3 in any way redundant with TOP-002-2 R18? AEP proposes the elimination of COM-002-2 R2 and changing COM-003-1 as proposed below so that it covers all commands rather than a subset of commands. Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction. R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall adhere to the following communication protocols for the issuance of Operating Instructions in that entity's area. 1.1. The use of the English language when issuing or responding to an oral or written Operating Instruction, unless another language is mandated by law or regulation. 1.2. The instances, if any, that require time identification when issuing an oral or written Operating Instruction, specify the time zone unless the RC has previously established an operational timezone. 1.3. The nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction. 1.4. The instances, when referencing letters, utilize the phonetic alphabet when issuing an oral Operating Instruction (Reference prior draft(s)) 1.5. In instances where the issuer of an oral two party, person-to-person Operating Instruction requires the receiver to repeat, restate, rephrase, or recapitulate the Operating Instruction and the issuer to: * Confirm that the response from the recipient of the

Operating Instruction was accurate; or \* Reissue the Operating Instruction to resolve a misunderstanding. R2. Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider shall repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction

Individual

Angela P Gaines

Portland General Electric Company

No

Portland General Electric Company (PGE) thanks you for the opportunity to provide comments. PGE is supportive of the intent of COM-003-1 and appreciates the work that the drafting team has put into the development of the proposed standard. However, the language in R2 and R3 is convoluted and confusing. The following is a suggestion for both R2 and R3: R2. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement its communication protocols developed in Requirement R1. Delete: so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. [Violation Risk Factor: Medium][Time Horizon: Real Time Operations] R3. Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider shall repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1. Delete: so that the failure to repeat, restate, rephrase, or recapitulate the Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. [Violation Risk Factor: Medium][Time Horizon: Real Time Operations] Then add the following to each Measure, (and RSAW) respectively: R2.1. Did the issuer of the Operating Instruction fail to use its approved Operating Instruction protocols it developed in R1? (yes/no) R2.2. Did the failure to use the approved Operating Instructions produce an operating condition requiring the issuance of an Reliability Directive? R3.1. Did the BA, TOP, GOP and DP fail to repeat, restate, rephrase, or recapitulate an Operating Instruction in its communications protocols developed in R1? R3.2 Did the failure to repeat, restate, rephrase, or recapitulate an Operating Instruction produce a condition requiring the issuance of an Reliability Directive? Also in R3, the phrase, "...in its communications protocols" do you mean in the issuer's protocol or the receiver's protocol?

Group

Arizona Public Service Company

Janet Smith, Regulatory Affairs Supervisor

Yes
Negative ballot cast on the Standard: For communication purposes, R1 should not include Reliability Coordinator (RC) approval. If a regional requirement (RC approval) is deemed necessary, then a regional standard should be developed that includes the procedure(s) and requirements to obtain RC approval of communication protocols.
Yes
Individual
Chris de Graffenried
Consolidated Edison Co. of NY, Inc.
No
Add the word "verbal" before the word "Operating Instructions" so that Requirement R1 reads: "R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator, in each Reliability Coordinator area, shall develop, subject to the Reliability Coordinator's approval, documented communication protocols for the issuance of verbal Operating Instructions in that Reliability Coordinator's area." Also make similar changes where required elsewhere.
No
FERC requires that VSL's be graded. The Requirement R3 VSL should be modified to reflect the following graded proposal: "The first failure following the effective date of this standard is a "Low VSL." However, should failures be more frequent, then the severity level for such failures should be increased. "For the second and subsequent failures following the effective date of the standard a single failure within a given 12-month rolling period is a Moderate VSL. "For the second and subsequent failures following the effective date of the standard and when there is more than one failure within a given 12-month rolling period the failure is a Severe VSL."
Individual
Russ Schneider
Flathead Electric Cooperative, Inc.
No
No, the 2003 Blackout recommendations were specific to control center and reliability coordinator entities. This standard appears to push down below to small DP entities that don't have control centers. Also, the Blackout recommendations were clearly concerned with "reliability" directives and did not contemplate a new category of Operating Instructions. The existing authority in other standards for registered entities to respond to reliability directives should be sufficient to address the recommendations without this standard.
No
Individual
Michelle R D'Antuono

Occidental Energy Ventures Corp.
Yes
<p>Occidental Energy Ventures Corp. (“OEVC”) would like to compliment the drafting team for finding a compliance solution that focuses only on the results of an improperly executed Operating Instruction. The approaches in previous drafts could be construed that entities retain proof that every applicable communication was monitored and verified – an impossible administrative task. We believe that Draft 6 of COM-003-1 removes the onerous compliance burden without freeing Operating entities from the obligation to perform responsibly. They are free to choose the level of sample communications to monitor, the amount of training they perform, and the internal disciplinary actions they take for non-compliance to the required protocols. However, there are consequences if their oversight is inadequate. We do have two concerns which we would like to air. First, that recipients of Operating Instructions must be informed that formal communication is being done. Although front-line Operators will be trained to comply with the appropriate protocol documents, they will be naturally inclined to follow the lead of the issuing entity – particularly if the communication is a borderline instruction. For example, a request for equipment status may be part of discussion concerning available alternatives, or information needed to confirm real-time stability. The recipient should not be left in a position to guess what the needs of the immediate situation are. Secondly, we would hope that the protocols developed by the various RCs, BAs, and TOPs are generally consistent. Even though we agree that each individual organization may have specific communications needs, it is in no one’s interest to have minor preferential differences between entities. Perhaps this is an issue that NERC’s performance management team can monitor – particularly as they have a highly vested interest in the resolution of Operating Instruction errors. These comprise a high percentage of outage root causes, and we are sure that uniformity will be a key improvement indicator.</p>
Yes
Individual
Anthony Jablonski
ReliabilityFirst
No
<p>ReliabilityFirst believes the newly included language in Requirement R1 “...subject to the Reliability Coordinator’s approval...” introduces three issues which need to be addressed prior to the draft standard being enforceable. The three issues include: 1) With the Reliability Coordinator being an Applicable Entity within this requirement, it is unclear which entity will be approving the Reliability Coordinator’s documented communication protocols? Based on the current language, the Reliability Coordinator would need to seek approval from themselves as the Reliability Coordinator. 2) There is no companion requirement requiring the Reliability Coordinator to approve the Balancing Authority’s and Transmission Operator’s documented</p>

communication protocols. It is inferred, but there is no requirement which explicitly requires the Reliability Coordinator to take action. Based on the current language in Requirement R1, if a Reliability Coordinator never takes action (approval or disapproval), where does this leave an entity for compliance purposes? 3) In the scenario where the Applicable Entity (Balancing Authority, Transmission Operator) develops documented communication protocols (which address the elements in sub parts 1.1 through 1.5) but the Reliability Coordinator disapproves, will the Applicable Entity be non-compliant with Requirement R1? The Applicable Entity has no control over action taken (approval or disapproval) by the Reliability Coordinator. Furthermore, since Requirement R2 and Requirement R3 depend on the documented communication protocols developed in Requirement R1, would the Applicable Entity be automatically found non-compliant with those two requirements as well? ReliabilityFirst offers the following two recommendations for the SDT to consider to address the ReliabilityFirst concerns with the newly included language "...subject to the Reliability Coordinator's approval...": 1) Remove the "...subject to the Reliability Coordinator's approval..." language from Requirement R1. Add a new requirement requiring the Applicable Entities to make their documented communication protocols available to all the other Applicable Entities within in each Reliability Coordinator area. 2) Make Requirement R1 applicable to only the Reliability Coordinator and remove the "...subject to the Reliability Coordinator's approval..." language. This will require the Reliability Coordinator to develop one consistent set of documented communication protocols for all entities within their Reliability Coordinator area. This will also allow the Reliability Coordinator to tailor the documented communication protocols to address uniqueness among Balancing Authorities and Transmission Operators (e.g., asset density, locations and organizational structure) within their area. If the SDT agrees with either of these recommendations, the sub-parts for Requirement R1 and both Requirement R2 and Requirement R3 would remain relatively unchanged.

No

ReliabilityFirst has a concern with the VSLs for Requirement R1. In the previous draft, the VSLs for Requirement R1 were gradated based on missing "x" out of nine sub-parts. For example, missing 44% (four out of nine) of the sub-parts was a Severe VSL). With the current draft only including five sub-parts under Requirement R1, the gradation should be adjusted accordingly. ReliabilityFirst believes that an entity not addressing more than half of the sub-parts within the documented communication protocols is missing the intent of the requirement and should be a Severe VSL. Furthermore, if the "...subject to the Reliability Coordinator's approval..." language continues to remain in Requirement R1 (against our recommendations in previous comments), this "Reliability Coordinator approval" needs to be included in the VSLs as well. ReliabilityFirst offers the following as an example for consideration: i. Lower VSL – none ii. Moderate VSL – "...did not develop one (1) of the five (5) parts..." iii. High VSL – "...did not develop one (2) of the five (5) parts..." iv. Severe VSL - "...did not develop one (3) of the five (5) parts..." v. Severe VSL - "The Responsible Entity did not receive Reliability Coordinator approval of its documented communication protocols as required in Requirement R1."

Individual

Texas Reliability Entity

Texas Reliability Entity

No

(1) Definition of Operating Instruction: We remain concerned about potential interference between COM-002 and COM-003. While it has been made abundantly clear in this draft that a Reliability Directive is not an Operating Instruction, it remains unclear exactly where the boundary between them is. We are concerned that an operator faced with an imminent emergency situation will have to stop to consider whether he needs to issue a Reliability Directive or an Operating Instruction, and entities will be subject to second-guessing as to whether they picked the right one. COM-002 and COM-003 should be melded into one coherent standard that will not interfere with system operations. (2) The present draft does not address one-to-many communications (hot-line calls, all-calls), which are commonly used to convey Operating Instructions in critical situations. A repeat-back procedure for those calls should be included in an entity's documented communications protocols. (3) While we respect the desire to avoid writing a "zero-defect" standard, we strongly object to the approach taken in requirements R2 and R3. Compliance with these requirements should not be based on whether a subsequent Reliability Directive was issued. Instead, compliance should be based on whether the communication protocols are routinely and effectively implemented (perhaps using an "identify/assess/correct" approach). The present draft allows system conditions over which the entity may have little control (i.e. luck) to determine whether a deviation from its protocols results in a violation. Importantly, the current draft may create an undesirable incentive for an operator to avoid issuing a Reliability Directive in order to avoid scrutiny of prior Operating Instructions. (4) We also object to basing compliance with R2 and R3 on whether the entity's conduct "resulted in" an adverse operating condition. The existence of a violation should be based solely on the entity's conduct, not on the results of that conduct on system conditions. The proposed approach creates an unmanageable compliance assessment burden, as parties will dispute whether events were causally related, which can be very difficult to conclusively assess. Furthermore, what does "result in" mean? Does it require proximate cause, direct cause, contributing cause, or some other measure of causal relationship? (5) The proposed revisions in COM-003 interact with the revisions in TOP-001-2 to create a reliability gap that will reduce the performance level required by the standards. The existing requirements 3 and 4 of TOP-001-1a require TOP, BA, GOP, DP and LSE entities to comply with reliability directives (not capitalized) issued by a TOP. We interpret "reliability directives" in that standard to include all operating instructions related to reliable system operation, including those that are proposed to be defined as both Reliability Directives and as Operating Instructions. The new version TOP-001-2 (pending at FERC) limits the compliance requirement to only Reliability Directives (defined term), and will no longer require compliance with Operating Instructions issued by TOPs. This problem is enhanced by the proposed definition of Operating Instructions, which now emphasizes that Operating Instructions and Reliability Directives are mutually exclusive. There needs to be a reliability standard that requires compliance with Operating Instructions issued by TOPs, and the absence of such a standard creates a reliability gap.



Group
City of Garland
Ronnie Hoeinghaus
No
Three part communications is a standard business practice in transmission and distribution operations across the country. If by chance there is / was a company that was not using three part communications, that company would have had to develop a procedure / policy for three part communications to be compliant with COM-002-2 R2 (COM-002-3 R2 future). Therefore, the proposed COM-003 R1 requiring companies to develop “documented communication protocols” that have to be approved by the Reliability Coordinator is nothing more than a compliance burden to maintain documentation for an audit. Furthermore, COM-003 R3 requires use of three part communications and should be the only requirement in COM-003. Because of COM-002-2 R2 and COM-003 R3, COM-003 R1 is merely a paperwork compliance burden and should be deleted. COM-003 R2 relies on R1 and therefore it should be deleted also. As previously stated, COM-003 should only contain the requirement listed in the current R3.
No
R2 & R3 only have a “Severe VSL” listing - As I understand it, NERC has recognized that “perfect” historical compliance is not practical and is one of the reasons NERC is moving to implement the RAI program. R2 & R3 Severe VSL only listings require 100% perfection - Real life operations is not perfect (as recongnized by the RAI) – VSLs should be a gradient from “lower” to “severe”
Individual
Dennis Schmidt
City of Anaheim
Yes
The proposed Standard language appears to address the requirements of FERC Order 693. However, R3 is still confusing and appears to assume that the distribution provider or generator operator would have some way of knowing if an Operating Instruction would “result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.” Also, more clarification is needed with respect to the terms "restate", "rephrase" and "recapitulate". We suggest the the following language for R3: “Balancing Authorities, Transmission Operators, Generator Operators and Distribution Providers shall repeat or restate an Operating Instruction given to them when required by the issuer of that Operating Instruction.”
Group
Dominion

Connie Lowe
Yes
Dominion appreciates the SDT efforts on this project as we know it has not been an easy task to satisfy industry concerns while at the same time, addressing FERC directives relative to this issue. We believe that having a requirement that the communication protocol be approved by the RC, while possibly considered an administrative burden by them, greatly enhances consistency of such protocols. And, we greatly appreciate the fact that recipients are required to repeat, restate, rephrase, or recapitulate only when required by those approved protocol.
Yes
Group
PPL NERC Registered Affiliates
Brent Ingebrigtson
No
These comments are submitted on behalf of the following PPL NERC Registered Affiliates (PPL): Louisville Gas and Electric Company and Kentucky Utilities Company; PPL Electric Utilities Corporation, PPL EnergyPlus, LLC; and PPL Generation, LLC, on behalf of its NERC registered affiliates. The PPL NERC Registered Affiliates are registered in six regions (MRO, NPCC, RFC, SERC, SPP, and WECC) for one or more of the following NERC functions: BA, DP, GO, GOP, IA, LSE, PA, PSE, RP, TO, TOP, TP, and TSP. PPL has generally supported draft 4 and draft 5 of the COM-003 standard. However, the significant changes proposed in draft 6 introduce ambiguity, as well as several other issues that need to be addressed. First, the proposed definition of an “Operating Instruction” continues to require clarification. PPL NERC Registered Affiliates suggest the following definition to address the above issue: “Operating Instruction - A Real-time Operations command, other than a Reliability Directive, by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the Real-time Operations command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. A discussion of general information, potential options and/or alternatives to resolve Bulk Electric System operating concerns is not a command and is not an Operating Instruction. An Operating Instruction is exclusive and distinct from a Reliability Directive. There is no overlap between an Operating Instruction and Reliability Directive.” The focus of COM-003 is on operations, and therefore the communications subject to the COM-003 requirement should be those requiring action in the Real-time Operations time horizon — i.e., actions required within one hour or less. (See definition provided in a NERC document at: <a href="http://www.nerc.com/files/Time_Horizons.pdf">http://www.nerc.com/files/Time_Horizons.pdf</a> ). During the Q/A portion of the November 27, 2012 conference call hosted by the SDT, the SDT stated that they intended to narrow the focus of the timeframe of an Operating Instruction to the Real-time Operations time horizon. . Second, there is inconsistency in the wording of some parts of R1. Specifically, PPL

recommends revising part 1.5 as follows: “The instances, if any, where the issuer...” or removing the ‘if any’ from R1.2 and R1.4, since it is redundant to the R1 ‘where applicable’ and the use of ‘when, that, etc.’ in the sub requirements. Third, both R2 and R3 as currently written may not aid in enhancing reliability. PPL suggests R2 be revised to require the BA, RC, and/or TOP provide their communication protocols to the GOPs, DPs with whom they communicate. PPL suggests language for R3 be revised to read as follows: “Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, and Transmission Operator shall assess its adherence to the applicable documented communication protocols developed for R1 and R2.” As currently drafted, R2 and R3 appear to require that entities issuing or receiving Operating Instructions must prove that no BA, RC or TOP issued a Reliability Directive as a result of their lack of use of the R1 protocol or of three-part communication. The R2 draft language says that the BA/RC/TOP communication protocols must be developed such that even when the communication protocols are not used, there is still no need for a Reliability Directive. This could imply that if no Reliability Directive is required, the failure to use the protocols created no risk and the communication protocol was not needed. This appears to make inconsequential any reliability benefit of R1 of the Standard. Also, R3 has requirements for entities that may not have received the communication protocols developed by the BA/RC/TOP. Fourth, there is ambiguity introduced in R2 and R3 through the use of the phrase “that requires the issuance.” It is unclear who would determine whether the Reliability Directive was “required.” Likewise, if there are multiple incidents which contribute to the issuance of a Reliability Directive, it is not clear what weight would be given to the lack of use of communication protocols, nor is it clear how that determination is made. Finally, M2 and M3 introduce an expectation that applicable entities will need to coordinate to produce evidence. PPL recommends that M2 and M3 be revised to align with the changes made to R2 and R3 as noted above.

Individual

Matthew P Beilfuss

Wisconsin Electric Power Company

No

Version 6 of the standard does not explicitly limit the timeframe prior to the issuance of a Directive subject to review for compliance with communication protocol requirements. Additionally, the draft Standard and definition of Operating Instruction do not adequately define instances where Operating Instructions would require 3-way communications. The process by which a Reliability Coordinator approves instances where communication protocols are required will define the substantial requirements in the standard. Establishing the Reliability Coordinator as an approval authority for BA or TOP internal procedures implies the RC will have responsibility for operational activities and/or procedures owned by the BA or TOP and essentially outsources the standard development to the Reliability Coordinator.

Individual

Kathleen Goodman
ISO New England Inc.
Agree
ISO/RTO Standards Review Committee (SRC)
Individual
Joe Tarantino
Sacramento Municipal Utility District
Yes
<p>Although SMUD agrees with the draft 6 of COM-003-1. Also, we are in support of the finding from the Independent Standards Review Panel’s final report for mitigating BPS risks as noted:</p> <p>~~~~~</p> <p>~~~~~ Resolve COM-002 and COM-003 by requiring three-part communication for operational directives and for registered entity defined operational instructions that involve taking specific actions or steps that would cause a change in status or output of the BPS or a generator. This does not include three-part communication for myriad of conversations where information is being exchanged or options are being discussed.</p> <p>~~~~~</p> <p>~~~~~</p>
Group
North American Generator Forum Standards Review Team
Patrick Brown
No
<p>R3 can present an excessive or even impossible compliance burden, in that all parties receiving Operating Instructions must prove that no BA, RC or TOP issued a Reliability Directive as a result of their lack of three-part communication. This is not a matter of simply obtaining annually a “No known errors” letter from the BA, RC and TOP with which a receiving-end entity is directly involved, since all the neighboring BAs, RCs and TOPs are drawn-in by R3 as well. There is meanwhile no requirement that BAs, RCs or TOPs issue such letters when requested to do so, or that they must share any information at all regarding Reliability Directives issued. This leaves GOPs and other entities that receive Operating Instructions in danger of self-certifying compliance to R3, then being later confronted with evidence of non-compliance from a source from whom they had previously heard nothing. The issue of interpretation also creates undue ambiguity. Who will make the determination of cause when a Reliability Directive is issued, and is that opinion subject to review if objections are raised? If all GOPs in a region were instructed to bring all available generators online at their Emergency Rating due to tripping of a 2000 MW nuclear plant, for example, and the operator of a 10 MW blackstart unit did not respond in the prescribed fashion, and a Reliability Directive ultimately had to be issued to shed some load, did that 10 MW unit “cause” the load shedding? R3 should be revised to match the draft that</p>

was issued for comments several weeks ago, and which the NAGF found acceptable. That is, R3 should state that “Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, and Transmission Operator shall develop method(s) to assess, as applicable, System Operators’ and operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R1 and R2.”

No

The VRF and VSL language for R3 should be changed to that of the draft version of Draft 6 that was commented-on by the NAGF several weeks ago.

Individual

Michael Falvo

Independent Electricity System Operator

No

Despite we have always held a position that this standard was not needed given the approved COM-002-3 and the NERC OC’s operating guide on operating personnel communication, we supported the previous version of COM-003-1 (Draft 5) as it was a clearly written standard which would be an acceptable compromise for meeting the FERC directive and BoT’s direction without overburdening industry participants having to repeat every operating instruction. This latest version, Draft 6, however, turns an acceptable standard into one that is ambiguous and provides an escape clause for operating personnel to not comply with the basic requirement (R1). The introduction of the condition in R2 “so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.” creates a number of issues with the standard, as follows: a. The issuance of a Reliability Directive may be caused by a number of reasons, for example: the operating instruction (repeated or otherwise) may not be sufficient to address a potential condition that has an Adverse Reliability Impact; b. The operating instruction that is communicated, with or without adhering to the protocols developed in R1, is in fact moving other system conditions from a reliable state to one that has a potential of having Adverse Reliability Impact, for which a Reliability Directive needs to be issued after implementing the communicated operating instruction. c. The operating personnel may second guess whether or not a Reliability Directive will be issued if the established communication protocols are not implemented (such as by requiring 3-part communication) before it takes the required action. This puts the need to comply with a requirement into a “condition assessment” mode, which defeats the purpose of having a reliability standard to manage risk and meet performance expectation whose reliability outcome are predetermined, not on the fly. d. The added condition is a compliance assessment element with which to gauge violation severity or sanction; itself is not a requirement. By introducing this to the requirement, it convolutes the requirement, adds nothing to meeting the reliability objectives, and may in fact jeopardize reliability. And what if a Reliability Directive was not issued despite the failure of Responsible Entity to implement its communication protocol. Is the Responsible

Entity deemed compliant with the requirement? If so, do Requirements R2 and R3 drive the right behaviors? If not, then what's the value and influence of the added condition in the assessment outcome? Requirement R1 clearly requires the responsible entity to develop documented communication protocols for the issuance of Operating Instructions. By Part 1.5, the instances where the issuer of an oral two party, person-to-person Operating Instruction requiring the receiver to repeat, restate, rephrase, or recapitulate the Operating Instruction and subsequent actions by the issuer are already clearly stipulated in the documented communication protocols. Responsible entities simply need to implement the protocols as documented, regardless of whether failure to do so would result in having to issue a Reliability Directive, or any other possible outcomes, for that matter. Similar comments apply to Requirement R3 when the responsible entities are required to close out the last part of the 3-part communication.

Yes

We agree with the VRFs, but not the VSL since we do not agree with Requirements R2 and R3. We offer the following two additional comments: 1. We do not agree with the Long-term Planning Time Horizon for R1. Developing and documenting communication protocols for use during real-time operations is an operational planning process (or mid-term planning, at most), not a long-term planning process. We suggest to change the Time Horizon to Operations Planning. 2. The proposed Implementation Plan conflicts with Ontario regulatory practice with respect to the effective date of the standard. It is suggested that this conflict be removed by appending to the effective date wording, after "applicable regulatory approval" in the Effective Dates Section of the Implementation Plan, to the following effect: ", or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities." Prior to the wording "; or, In those jurisdiction....". Alternatively, the same language in the Effective Dates Section of the Implementation Plan could be used.

Individual

Terry Bilke

MISO

No

The blackout recommendation 26 had little or nothing to do with operator communications. The recommendation was to implement some type of communication system to keep Regions, NERC and regulators informed during emergencies. Here is the recommendation: "NERC should work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations, and ensure that all key parties, including state and local officials, receive timely and accurate information. NERC should task the regional councils to work together to develop communications protocols by December 31, 2004, and to assess and report on the adequacy of emergency communications systems within their regions against the protocols by that date." These are our comments on what is presented in this revision of COM-003-1. • We're generally OK with a requirement to develop a set of communication protocols and whereby the applicable entity does a periodic assessment of its operators' adherence to the protocols. •

While we believe that it is acceptable for a BA and TOP to develop their own protocols, it would be preferable that they be allowed to use a set of protocols developed by the RC. • We disagree that the RC should approve others' protocols. What are the criteria for approval? NERC should not put RCs in the role of de-facto compliance monitors. • There is a likely unintended consequence of the latest draft. This will plant a seed of doubt in an operator's mind whether or not to issue a reliability directive due to the scrutiny and second guessing that will be the outcome of each investigation associated with a directive. This standard will result in investigations associated with each directive. • We were OK with the previous version. We'd be OK with a revision to the current draft if there was an ex post assessment of operating instructions following the issuance of a directive. There should not be a rabbit-trail investigation following the issuance of each directive.

Group

Bonneville Power Administration

Jamison Dye

Yes

Yes

Individual

Alice Ireland

Xcel Energy

We are electing to not respond directly to this question, as we have expressed concern with the advancement of this project many times in the past. While this draft seems far superior to the others, the proposed change to R1 raises concern over the portion that dictates that the Reliability Coordinator has approval authority over the communications protocols for Operating Instructions. The majority of the Operating Instructions, as defined by the standard, will be between the System Operator at a Balancing Authority or Transmission Operator and their respective field personnel. Communications between System Operators of BAs and TOPs and field personnel have well-established protocols and should not necessarily be held to the same protocol as communications between BAs or TOPs and the Reliability Coordinator. In essence, the proposed change to R1 places the Reliability Coordinator in a position to dictate communication protocols that may breakdown the well-established protocols of the BAs and TOPs and create more burdensome communication with their field personnel.

Individual

Mary Downey

City of Redding

Agree
SMUD
Individual
Jack Stamper
Clark Public Utilities
No
<p>Requirement 1 does adequately address the concerns. Requirements 2 and 3 are confusing and difficult interpret. It was not until I rea the FAQ on COM-003 that I understood R2 and R3. I believe R2 and R3 should be revsed as described below. R2. R2 needs to indicate that it is only applicable to issuers of Operating Instructions. R2 should be revised to read as follows: Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues an Operating Instruction shall implement its communication protocols developed in Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. With the change it is clearer that the standard is saying that an issuer of an Operating Instruction is supposed to have a communication protocol(R1). R2 is stating the issuer of an Operating Instruction needs to use the communication protocol and if the issuer's failure to use the communication protocol results in the issuance of a Reliabilty Directive, a violation has occured. R3. R3 needs to indicate that it is only applicable to recipients of Operating Instructions. R3 should be revised to read as follows: Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider that receives an Operating Instruction shall repeat, restate, rephrase, or recapitulate the Operating Instruction when required by the issuer of the Operating Instruction (in accordance with the issuer's communication protocols developed in Requirement R1) so that the failure to repeat, restate, rephrase, or recapitulate the Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. With the change it is clearer that the standard is saying that a recipient of an Operating Instruction is supposed to to repeat, restate, rephrase, or recapitulate the Operating Instruction when required by the issuer and if the recipient's failure to repeat, restate, rephrase, or recapitulate the Operating Instruction (as long as it is required in the issuer's communication protocol) results in the issuance of a Reliabilty Directive, a violation has occured.</p>
Yes
Group
Southern Company: Southern Company Services, Inc; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation and Energy Marketing



Marcus Pelt
Yes
Yes
<p>R1 • The phrase “subject to the Reliability Coordinator’s approval” is included in the requirement, but there is no reference to RC approval in the measure. It is unclear exactly what the expectations are for TOPs and BAs in this requirement. Are they to develop protocols and submit to the RC for approval, and have a record of this approval for compliance evidence? If so, the SDT needs to modify this requirement to make the required actions very clear. EOP-005-2 is an example of the TOP getting approval from the RC on its restoration plan. This may be a better model to use as it is more clear. • In addition, the RC is required to approve its TOPs / BAs protocols; however there is no guidance on what criteria to base this approval on. There needs to be very clear guidance that RCs are to ensure that the protocols are compatible with its protocol and that RCs are not “auditing” the TOPs / BAs protocols to confirm they include all the subparts of requirement R1. R3 • R3 can present an excessive or even impossible compliance burden, in that all parties receiving Operating Instructions must prove that no BA, RC or TOP issued a Reliability Directive as a result of their lack of three-part communication. This is not a matter of simply obtaining annually a “No known errors” letter from the BA, RC and TOP with which a receiving-end entity is directly involved, since all the neighboring BAs, RCs and TOPs are drawn-in by R3 as well. There is meanwhile no requirement that BAs, RCs or TOPs issue such letters when requested to do so, or that they must share any information at all regarding Reliability Directives issued. This leaves GOPs and other entities that receive Operating Instructions in danger of self-certifying compliance to R3, then being later confronted with evidence of non-compliance from a source from whom they had previously heard nothing.</p>
Individual
Bob Thomas
Illinois Municipal Electric Agency
Agree
Florida Municipal Power Agency, and SERC OC Standards Working Group
Group
Oklahoma Gas & Electric
Terri Pyle
Yes
<p>There is still concern that the intent of Recommendation 26 was strictly for emergency situations which are covered by COM-002-3. While well intentioned, based upon the spirit of the Paragraph 81 initiative, OG&amp;E believes the current draft of the COM-003-1 standard to be more of an administrative burden than an improvement to reliability.</p>
Yes

There were a couple of typos in the VSLs: R1 – Insert a space between ‘R1’ and ‘in’ in the Lower VSL. R3 – Insert ‘to’ between ‘failed’ and ‘repeat’ in the Severe VSL.

Individual

Don Weaver

New Brunswick System Operator

No

The introduction of the condition in R2 “so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.” creates a number of issues. • The issuance of a Reliability Directive may be caused by a number of reasons, for example: the operating instruction may not be sufficient to address a potential condition that has an Adverse Reliability Impact; • R2 has the unintended consequence of making Reliability Directives a subject of a Root Cause analysis. Whenever a Reliability Directive is issued it would be necessary for the issuer to prove that that Reliability Directive was not linked to an Operating Instruction protocol failure.

Individual

Steven R. Wallace

Seminole Electric Cooperative, Inc.

No

While the draft may meet the Blackout Recommendation and Order 693, the draft is problematic and is resulting in Seminole changing its votes from prior affirmation to negative with this ballot. The reasons are: 1. The requirement for RC approval of entity developed communications protocols (R1), which impose an unreasonable administrative and associated cost burden upon all of the applicable entities. 2. The new connection to Reliability Directives issued by an RC, TOP, or BA, which are due to the failure of an applicable entity to properly implement its communication protocols for Operating Instructions, seemingly implies compliance investigation following the issuance of any RC Reliability Directive, for all entities affecting the RC area’s footprint (R2&3). 3. The term Operating Instruction is so broad, that every System Operator communication might require logging, recording and compliance review.

No

The VSL’s are far too high given the ambiguity inherent to the R2 and R3 requirements as written.

Individual

Greg LeGrave

Wisconsin Public Service Corp

Yes

Also, since enforcement and compliance under Version 6 hinges on a Reliability Directive being issued, am I correct to assume that if emergency conditions requiring actions on the BES were to occur, but an issuing entity failed to announce their request for action as a Reliability Directive – then NO Directive was issued, and therefore there could be no COM-003 violation for that event and no need to analyze if preceding Operating Instructions were given which may have lead up to the Emergency condition? Note: COM-003 Rev. 6, R3 “... an operating condition that requires the issuance of a Reliability Directive...” so put another way, what if a Reliability Directive was required – but not clearly identified as in COM-002 V3, R1? The future COM-002 V3, R1 requires an issuing RC, TOP, or BA (or LBA) in part, to clearly call a Reliability Directive a Reliability Directive. I couldn’t find similar language for Operating Instructions in Rev. 6 of COM-003. Is it intended that this will need to be included in each entities communications protocol, along with the need for the issuing entity to clearly communicate “...and I will need you to repeat this back.”? My concern here is that while I like the SDT’s approach with R3 in Rev. 6, if only R3 applies to DP’s and GOP’s (and therefore they are not required to have or to implement communications protocols), if the issuer of an Operating Instruction doesn’t clearly identify it as such AND tell the recipient in advance that he requires a repeat-back, it will be difficult for the recipient who is a DP or GOP to meet the R3 requirement. Conversely, based on the high number of Operating Instructions occurring each day, perhaps it was the intent of the SDT that DP’s and GOP’s which are limited to simply how to respond to Directives and/or Instructions with repeat-backs. Please clarify. Lastly, I mentioned the concern under M3. Rather than just stating it is confusing, I’m listing a proposed change for consideration if the Standard doesn’t get approved as is. We hope it is more clear in its wording and its expectation that the issuer of any Directive should lead efforts to complete an analysis of what lead up to a Directive. Draft 6 proposal for M3: Each Balancing Authority, Generator Operator, Distribution Provider, and Transmission Operator shall provide evidence that it did not experience a failure to repeat, restate, rephrase, or recapitulate an Operating Instruction, when required, that resulted in an operating condition that required the issuance of a Reliability Directive by the issuer or by another Balancing Authority, Reliability Coordinator, or Transmission Operator due to the failure to use the protocols. A Balancing Authority, Generator Operator, Distribution Provider, and Transmission Operator may need to coordinate with a Reliability Coordinator, Balancing Authority and Transmission Operator to provide this evidence. WPS proposal for M3: The issuer of a Reliability Directive shall provide evidence that a failure to repeat, restate, rephrase, or recapitulate an Operating Instruction, when required, resulted in an operating condition that required the issuance of a Reliability Directive. A Balancing Authority, Generator Operator, Distribution Provider, and Transmission Operator may need to coordinate with a Reliability Coordinator, Balancing Authority and Transmission Operator to provide this evidence.

Yes

Individual

Carter B. Edge
SERC Reliability Corporation
Yes
It addresses parts of each. While a reliability standard may not be the most appropriate control to address the reliability concern, this standard, in conjunction with COM-003-2 does address the Standards Authorization Request to require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. There is concern with making protocols (and any revisions) available to those who are expected to comply. R1 states that the RC must approve; M1 states that each...shall provide. It is not clear that those who must comply will have the latest version. Suggest that the Measure be tightened up to state that the RC must provide the approved communication protocols to the .... in thier footprint.
No comment
Individual
Randi Nyholm
Minnesota Power
Minnesota Power supports comments submitted by the MRO NERC Standards Review Forum (NSRF).
No
Similar to Restoration Plans, Registered Entities are capable of coordinating communication protocols with their neighbors without Reliability Coordinator approval. Minnesota Power recommends removing Reliability Coordinator approval from the Requirements.
No
Group
SERC OC Review Group
Stuart Goza
Yes
We agree on a very limited view that Recommendation 26 is addressed. However, when looking at reliability we are concerned that the administrative burden, and uncertainty of which Operating Instruction will become a Reliability Directive may negatively impact BES reliability in the reluctance of issuing a Reliability Directive. Therefore, we strongly recommend that the SDT review this draft and redraft to clarify these points. Measure 3 should be changed to "when required by the issuer" in order to provide clarity and consistency with R3. In addition, we believe that a statement needs to be added in R1 that includes providing or distributing those communication protocols developed by a BA or TOP to their associated DPs and GOPs. This would address a potential gap of DPs and GOPs not aware of the communication expectations when communicating with BAs and TOPs when given an

Operating Instruction.
The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Review Group only and should not be construed as the position of the SERC Reliability Corporation, or its board or its officers.
Group
ACES Standards Collaborators
Ben Engelby
No
(1) While we understand that there are numerous approaches to satisfy the FERC order and the 2003 Blackout Report, we disagree that the drafting team addresses these concerns in a measurable and uniform process. The FERC Order and the Blackout Report both call for a “tightening of communications.” We are not convinced that giving the RC the authority to approve communication protocols will result in less confusion and a tightening of communications. There are currently 15 Reliability Coordinators in the NERC Compliance Registry, which leaves 15 opportunities for inconsistent application of what constitutes an “Operating Instruction.” (2) Further, we are concerned that by granting the Reliability Coordinator the authority to approve a registered entity’s communication protocol, there may be differing protocols among the various RC areas, which would negatively impact registered entities that are located in more than one RC area. For entities that operate in multiple RC areas, there could be different criteria for what constitutes an Operating Instruction, differing line and equipment identifiers, and other nuances that result in confusion and lead to an increase in miscommunication. The standard does not require uniform communication protocols among the various Reliability Coordinators. (3) In addition, how would an entity communicate to a neighboring BA and TOP who are in a different RC area with different protocols? This draft poses significant issues for registered entities located on the seams of RC areas that communicate to other entities in other RC areas. (4) We have an issue with the language in the Measure M2. Measure M2 requires a registered entity to prove the negative that no reliability directives occurred. This presents an issue because some regions are reluctant to accept attestations as evidence. This approach is an increased compliance burden on registered entities. This draft did not include an RSAW for review and we recommend the drafting team provide further clarification that an attestation is acceptable for compliance and continue to work with NERC compliance on this issue. (5) Finally, we disagree with the revised definition of Operating Instruction and the approach of Requirement R2 and R3. Under the revised definition, an Operating Instruction is separate from a Reliability Directive, but an entity will only be in violation for failing to communicate effectively that would result in the issuance of a Reliability Directive. This is double jeopardy. An entity could be in violation of both COM-002 and COM-003 for failing to communicate effectively that results in an event on the Bulk Electric System. This issue has been stated in our earlier comments that the definitions and the two COM standards would be better as a combined standard instead of the separate projects to avoid this potential compliance issue.
No

(1) We disagree with the VSL for R1. The compliance violation should fall on the RC for failing to approve the communication protocol and it should be up to the RC to ensure the sub-parts 1.1 through 1.5 are included in the protocol. Under the current draft, the RC has approval authority without any accountability. The VSL would find the entity in violation of R1, even though it would be at the mercy of the RC to approve its protocol. (2) The VSLs for R2 and R3 imply that a violation of COM-002 also occurred. We cannot support a standard that has the potential for multiple violations.

Group

Southwest Power Pool Regional Entity

Emily Pennel

Yes

What is the expected time frame for the RC's initial approval of the protocols? NERC needs to clarify the protocol approval dates in relation to the effective/enforceable date.

Yes

Group

Associated Electric Cooperative, Inc. - JRO00088

David Dockery

No

AECI strongly supports the SERC OC Q1 comments posted for this draft. In addition, AECI believes that COM-003 fails to properly address related topics found within the August 2003 Blackout Report Recommendation number 26 and FERC Order 693, primarily because of the SDT's having included DPs within the COM-003 scope, and thereby overreaching these two citation's intended scope. In the case of the August 2003 Blackout Recommendation 26, while its terse two-sentences appear to be met by COM-003, the same report's pp 161-162 clarifies its intended scope being "during alerts, emergencies or critical situations." That same section's "particularly during alerts and emergencies", might be stretched to include COM-003 Operating Instructions for DPs, yet FERC's determination, expressed within Order 693 paragraphs 493, 509-512, suggests that NERC COM-003 is attempting to tread where FERC itself dared not go. Within that paragraph 493, FERC's rationale cites no more than "when generators with blackstart capability must be placed in service and nearby loads restored as an initial step in system restoration", in support of exercising governance over DP telecommunications. These two limited conditions for communication appear confined to COM-002, and not COM-003's drafted governance over external communications with DPs. Paragraph 509's real-time staffing requirement omits DPs. Paragraph 510.3 cites DPs as applicable under COM-002, and 510.4 "requires tightened communications protocols, especially for communications during alerts and emergencies" and then par 510 goes on to propose a new standard (COM-003?) for addressing the Blackout Report Recommendation 26. Paragraph 512's assertion "that, during both normal and emergency operations, it is essential that the transmission operator,

balancing authority and reliability coordinator have communications with distribution providers" appears to conflict with earlier par 509 with regard to levels of "essential", and then asserts that many DPs are "not a user, owner or operator of the Bulk-Power System" so not required to comply with COM-002 (nor therefore COM-003). However COM-003 fails to provide for such differentiation within its Applicability section 4.1.2, for its scope of governance over DP communications during "normal operations". AECI recommends that DP applicability be dropped from COM-003 and reserved for COM-002 where these citations rationale for inclusion is clear. Finally, because industry balloting appears highly conflicted over the terms under which COM-003's rules would be developed, AECI strongly suggests that the SDT limit scope to only communications between RCs and their external communicating parties. This stance would have stronger backing from the above citations, and would make more sense, because only RCs communicate changes to the BES. New governance over the exact manner in which communicated changes become executed, is where industry appears to have heartburn. This may be occurring because much of industry has already tweaked and tuned those operational methodologies long before RCs came into existence, and therefore see much greater Compliance risk being ventured, for relatively little BES-reliability gains.

No

See AECI comment to Q1 above, with respect to DPs. While the SDT did follow Guideline 5, the resulting VSLs with respect to communication with these functional entities under normal operating conditions, hardly merits a medium risk assessment, whereas COM-002 might. Further, the SDT's VRF and VSL justification for COM 003-1, R2 "FERC VRF G1 Discussion" assertion that R2 is consistent with Recommendation of 26...", ignores the same report's "particularly during..." qualifier. See AECI response to Q1 above.

Group

seattle city light

paul haase

No

Seattle remains confused as to the intent of the draft Standard. R1 appears to require a protocol for communications that need not be followed in R2 or R3, because only communications problems leading to a Reliability Directive are to be audited. Seattle does not know if this position satisfies the FERC Order or the SAR. As proposed, the present Standard draft could be simplified to a single requirement to "communicate in such a way as to avoid Reliability Directives." On the other hand, if the intent is to REQUIRE three-way communications, then present draft R2 and R3 do not do so.

Yes

Individual

Kayleigh Wilkerson

Lincoln Electric System

Agree

MRO NERC Standards Review Forum (NSRF)
Group
Tennessee Valley Authority
Brandy Spraker
Agree
SERC OC Standards Review Group
Group
MRO NERC Standards Review Forum (NSRF)
Russel Mountjoy
No
The NSRF does not believe that this Standard is necessary to address recommendation 26 of the Blackout Report, thus this project should be terminated. The NSRF suggests that COM-002-3 be filed with FERC as approved by the NERC BOT, as we believe it adequately addresses the Blackout recommendation 26 and FERC Order 693. However, if the NERC SC wants to continue with this development, we provide the following recommendations. For Measure 2 and Measure 3, the SDT is requiring each registered entity to 'prove the negative' by requiring each entity to demonstrate that each Operating Instruction issued by its System Operators did not result in an operating condition that required the issuance of a Reliability Directive. From the webinar on July 2, the SDT stated that all an entity needs to do is request an attestation letter from its, RC and neighboring TOPs and BAs. Some entities are reluctant to issue such blanket attestation letters and some Regional Entities do not accept attestation letters as proof of compliance. The SDT went on to say the Reliability Directives are rare. The NSRF suggests changing M2 & M3 to state: M2. When a Reliability Directive is issued, demonstrate that it was not the result of a Reliability Coordinator, Transmission Operator or Balancing Authority's failure to use documented protocols when issuing an Operating Instruction developed for Requirement 1. M3. When a Reliability Directive is issued, demonstrate that it was not the result of a failure of the Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator or Distribution Provider to repeat, restate, rephrase, or recapitulate an Operating Instruction, when required by another Reliability Coordinator, Transmission Operator or Balancing Authority.
No
Individual
Kenneth A Goldsmith
Alliant Energy
Agree
MRO NSRF
Individual
Andrew Z. Pusztai



American Transmission Company, LLC
Yes
<p>And ATC supports the communication protocols identified in R1. However, ATC proposes changing R2 and R3 to make the protocols for issuing and receiving Operational Instructions consistent with the protocols for issuing and receiving Reliability Directives as defined in R2 and R3 of proposed Reliability Standard COM-002-3 as follows: R2. When instructed by a Balancing Authority, Reliability Coordinator, or Transmission Operator to repeat, restate, rephrase, or recapitulate an Operational Instruction, each Balancing Authority, Transmission Operator, Generator Operator, or Distribution Provider, that is the recipient of a Operational Instruction, shall repeat, restate, rephrase, or recapitulate the Operational Instruction. R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Operational Instruction shall either: • Confirm that the response from the recipient of the Operational Instruction (in accordance with Requirement R2) was accurate, or • Reissue the Operational Instruction to resolve a misunderstanding. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement its communication protocols developed in Requirement R1 in a manner which identifies and corrects deficiencies in said communication protocols.</p>
Individual
John Bee
Exelon and its affiliates
Yes
<p>Exelon supports COM-003 Draft 6 but would like to submit the following comments for consideration by the SDT: Suggest rewording the last sentence of M2 to read: A Balancing Authority, Reliability Coordinator, and Transmission Operator shall coordinate with another Reliability Coordinator, Balancing Authority and Transmission Operator to provide this evidence. Suggest rewording the last sentence of M3 to read: A Balancing Authority, Generator Operator, Distribution Provider, and Transmission Operator shall coordinate with a Reliability Coordinator, Balancing Authority and Transmission Operator to provide this evidence.</p>
Individual
Ryan Walter
Tri-State Generation and Transmission Association, Inc.
No
<p>We appreciate the drafting team’s efforts and persistence in the drafting of this new standard. We believe that this proposal goes beyond what was contemplated in the Blackout Recommendation as well as FERC Order 693 directives 1 and 3 of paragraph 540. We urge the drafting team to reconsider the need for a new COM-003 standard, we already have a standard</p>

for communication (COM-002), the requirements of the FERC Order can be added to COM-002 with minimal effort reducing the need for yet another standard. Additionally, we feel that a new term to define "Operating Instruction" is not warranted or required to fulfill either the FERC directive or Blackout Recommendations.

No

No, we believe that the minimal changes to address the FERC directives and Blackout Recommendations should be included as a revision to COM-002, not in a new Standard. Additionally, the requirements to develop and document protocols were not contemplated or warranted in either the FERC Directives or the Blackout Recommendations. We recommend that the drafting team reconsider their decision to develop a new COM-003 and investigate incorporating the requirements into the existing COM-002.

Group

DTE Electric

Kathleen Black

Agree

DTE Electric

Group

Florida Municipal Power Agency

Frank Gaffney

No

Although FMPA voted affirmative, there are still significant improvements that can be made, and enough significant weaknesses remain to make this a difficult voting decision for FMPA. It still artificially separates COM-002-3 and Reliability Directives and COM-003-1 and Operating Instructions when in reality Reliability Directives (RD) are a subset of Operating Instructions. Contrary to the white paper, there will likely be confusion as to whether an instruction should or should not be a Reliability Directive, i.e., the only real difference is whether an Emergency condition exists or not. The only certain distinguishing factor in practice is that the issuer of an RD needs to identify it as an RD per COM-002-3. There will still be significant Monday morning quarterbacking after an event as to whether an Operating Instruction should have been issued as an RD or not, i.e., whether or not the issuer should have recognized an Emergency or not. The better solution is to treat RD and Operating Instructions the same and only differentiate with VRFs (as an analogy, look at difference between R1 and R2 of FAC-003-2) and whether there should be a difference in treatment regarding "zero tolerance" for RDs and some tolerance for Operating Instructions. Reliability Directives on "all-calls" are still a problem It still makes 3-part communication optional for Operating Instructions. Does "optional" meet FERC's directive, i.e." requires tightened communications protocols, especially for communications during alerts and emergencies" (Order 693, P 540) and "(w)e also believe an integral component in tightening the protocols is to establish communication uniformity as much as practical on a continent-wide basis ... This is important because the Bulk- Power System is so tightly interconnected that system impacts often cross several operating entities' areas."

(Order 693, P 532)? At minimum, the standard should require 3-part communication for alerts in addition to Emergencies. R2 and R3 try to limit potential violations for failure to follow the subject of the requirement (i.e., R2: “Each (responsible entity) shall implement its communication protocols developed in Requirement R1”) would not actually result in a violation unless an Emergency occurred as described in the predicate, (e.g., R2: “so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive ....”). Remember, Reliability Directives are only given in a state of Emergency (Reliability Directive: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact”). Does this serve reliability well, must we get to a state of Emergency to have a violation to the standard – and doesn’t that just highlight potential double jeopardy and overlap between COM-002-3 and COM-003-1, e.g., if an Operating Instruction is issued in COM-003-1 that is not followed that results in the same instruction being given as a Reliability Directive? This of course begs the question of whether or not the System Operator should have issued an RD in the first place. Does this address FERC’s requirement to tighten communication protocols, including emergencies and alerts? In addition, we don’t think the actual language limits the potential violations to those that meet the predicate as intended (i.e., we do not think the predicate – “so that ...” – modifies the subject so much as it describes and repeats the purpose of the standard. In other words, to us the requirements can be interpreted that the subject must always be met “so that” the purpose/predicate is accomplished. Hence, we do not think that it solves the zero tolerance issue without stating the requirement in a similar manner as the Measure is stated). Note that the Measure confirms that an Emergency is intended for potential violation: “Each (responsible entity) shall provide evidence that it did not issue an Operating Instruction that resulted in an operating condition that required the issuance of a Reliability Directive ...”. We still strongly believe that the better solution is to cause COM-003-1 to address Reliability Directives and retire COM-002-3. After all, when issuing a Reliability Directive, don’t we want the issuer to speak English, use a consistent clock time with their neighbors, etc., for which COM-002-3 is silent but COM-003-1 specifies? We still have not heard a good reason why this is not being done. We also think that it is necessary to require 3-part communication for “alerts” to meet FERC’s directives. Don’t we want 3-part communication to be followed during alerts?

Individual

John Brockhan

CenterPoint Energy Houston Electric LLC.

No

No

As stated in its Draft 5 comments, CenterPoint Energy firmly believes there should be no High or Severe VSL for simply failing to document a process, protocol, or procedure. It is

counterintuitive to allow for a scenario where an entity's System Operators are communicating effectively and correctly and yet that has the entity penalized with the highest severity level for not having the appropriate documentation. Additionally, CenterPoint Energy disagrees with the assignment of Severe VSL for R3, when a comparable violation in COM-002-3 R2 is also a Severe VSL. The VSL for failing to repeat an O.I. and for failing to repeat an R.D. should not be the same. CenterPoint Energy also has concerns with the following two aspects of Draft 6: 1. CenterPoint Energy disagrees with R1's stipulation that the RC must approve the BA's and the TOP's communication protocols, especially given the SDT's assertion that a possible outcome is for the RC to unilaterally develop the protocols and impose them on the BA and the TOP. Instead, CenterPoint Energy recommends that R1 be modified to state "Each Reliability Coordinator shall develop, and each Balancing Authority and Transmission Operator shall develop collaboratively with the Reliability Coordinator, documented communication protocols..." 2. CenterPoint Energy appreciates the efforts of the SDT to revamp COM-003-1 so that its Operating Instruction is compartmentalized from COM-002-3's Reliability Directive, effectively reducing the industry's compliance burden. However, the revision does not ease a System Operator's practical operational burden of having to distinguish in real-time whether a command that is about to be issued is an O.I. or an R.D. Rather than focusing solely on maintaining the integrity of the BES, an Operator may now be distracted by what to label that command and the consequences of assigning the incorrect label. The industry and NERC have been working on the proposed COM-003 standard for nearly four years, ever since the posting of draft 1 in 2009. The proposed standard is now at draft 6, and it is becoming apparent that the industry is struggling to achieve consensus on the specifications for COM-003. Furthermore, it's been more than nine years since the release of the Blackout Report and six years since Order 693. In that interim, the industry has improved and evolved in numerous areas, including operator communication effectiveness. Most of all, the industry and NERC have already approved COM-002-3 and its associated definition of Reliability Directive, which, once enforceable, will undoubtedly further tighten communication. Perhaps it is time then for NERC and the industry to start a dialogue with FERC to reevaluate the purpose and the need for COM-003 and to request from FERC refreshed, clear guidance on this subject.

Individual

Stanley T Rzad

Keys Energy Services

Agree

Florida Municipal Power Agency

Individual

Scott Berry

Indiana Municipal Power Agency

There is no place to submit "other" comments, so Indiana Municipal Power Agency (IMPA) is submitting comments under this question. For requirement R3, how will entities (BA, TOP,

GOP, and DP) who are responsible for the repeat back of the Operating Instruction know the “when required by the issuer” part of the requirement is in place or being required by the issuer? Will the issuer be stating their request is an Operating Instruction or be asking for the receiver to please repeat the Operating Instruction back to them? Maybe the issuer of the Operating Instruction can make their communication protocol available to the receiving entities in Requirement R3 to allow them to be familiar with their protocols which may help with know when a repeat back is required by the issuer.

Individual

Daniel Mason

HHWP

No

The draft standard does not clearly articulate the purpose nor an appropriate results based approach to addressing FERC objective to ensure clear communications between operators and users of the BES.

Group

Bureau of Reclamation

Erika Doot

No

The Bureau of Reclamation believes that the proposed changes to COM-003-1 do not adequately address Order 693 directives or 2003 Blackout Report Recommendation No. 26. First, Order 693 Paragraph 512 directed the ERO to modify COM-002-2 to address “both normal and emergency operations,” and because each Transmission Operator (TOP), Balancing Authority (BA), and Reliability Coordinator (RC) is able to design their own Operating Instructions under R1 of the proposed revision, Reclamation is unable to ascertain whether Operating Instructions will apply to normal operations. Second, Paragraph 532 of Order 693 specified that “an integral component in tightening [communication] protocols is to establish communication uniformity as much as practical on a continent-wide basis.” As written, R1 would allow each BA and TOP to develop their own Operating Instructions, which does not promote the continent-wide uniformity called for by FERC in Order 693. Third, the 2003 Blackout Report Recommendation No. 26 specified that NERC should improve internal and external communications during “alerts, emergencies, or other critical situations.” Under the proposed definition of Operating Instruction and R1, it seems that BAs and TOPs have discretion to determine under what conditions Operating Instructions are issued in their operating area, so it is not possible for Reclamation to determine whether Recommendation No. 26 is adequately addressed by the standard. In addition, Reclamation would like to emphasize that the revised definition of Operating Instruction is not clear enough to distinguish between real-time operations coordination (“discussion of general information and potential options?”), Operating Instructions (applicable in circumstances as defined by various TOPs and

BAAs), and Reliability Directives (real-time emergency conditions addressed by COM-002). COM-003 does not clearly define the timeframe for Operating Instructions, and should make clear what the line of demarcation is between “real-time emergency” communications governed by COM-002 and other alert conditions governed by COM-003. If each BA and TOP is allowed to define separate circumstances under which “Operating Instructions” apply, Reclamation believes that COM-003 will not achieve continent-wide standardization of communications protocol that FERC recommended in Order 693. Also, Reclamation does not believe that violations of R3 should be tied to a failure to repeat an Operating Instruction only if it “result[s] in an operating condition that required the issuance of a Reliability Directive.” To reinforce the importance of repeat-back communications, repeat-back communications should be required under all circumstances like in the aviation industry. Further, Reclamation believes that Generator Operators (GOPs) and Distribution Providers should provide concurrence or have a role in Operating Instructions development required under R1 to avoid potential miscommunications (e.g., in nomenclature for Transmission interface elements). Lastly, Reclamation believes that COM-002 should include provisions parallel to IRO-001 and TOP-001 that allow Generator Operators to inform the TOP, BA, or RC that they are unable to comply with an Operating Instruction because the actions requested “would violate safety, equipment, regulatory or statutory requirements” so that the TOP, BA, or RC “can implement alternate remedial actions,” If the intent of the standard is to avoid Operating Instructions escalating to Reliability Directives, GOPs should be able to inform the TOP, BA or RC of their “inability to perform” the Operating Instruction like they are able to inform the TOP, BA, or RC of the inability to perform a Reliability Directive. The Bureau is proactive about assisting with transmission system events, but at certain times of year dramatic changes in reservoir levels could endanger the public in reservoirs or on rivers, could cause unlawful total dissolved gas (TDG) levels, or violate Endangered Species Act requirements. Other safety and equipment circumstances could also lead to an inability to follow an Operating Instruction. Reclamation suggests that the previous draft of the standard was clearer and that perhaps the drafting team could revisit it.

No

Reclamation does not believe that R3 should only be accompanied by a Severe Violation Severity Level (VSL), especially because BA and TOP “Operating Instruction” protocols could vary significantly among BAs and TOPS. Reclamation reiterates that if the intent of the standard is to avoid Operating Instructions escalating to Reliability Directives, GOPs should be able to inform the TOP, BA or RC of their “inability to perform” an Operating Instruction because it “would violate safety, equipment, regulatory, or statutory requirements” so that the Operating Instruction does not become a Reliability Directive. Reclamation suggests that the drafting team develop thresholds for failure to repeat that would amount to low, medium, high or severe violations.

Individual

Daniel Duff

Liberty Electric Power

Agree

Essential Power
Group
Hydro One Networks Inc.
Sasa Maljukan
No
<p>We support this proposed draft (version 6) of the standard on the basis of it being a compromise between what the industry would like to see and what the US regulator is mandating. That said, we still have concerns with the proposed standard (comment below). As proposed, the standard may be ambiguous and difficult to measure. For example, Requirement 2, states that the entity shall implement its communication protocols in such a way that failure to use them would not result in an operating condition that requires the issuance of a Reliability Directive. How does the SDT envision enforcing such requirement? It is difficult to determine if the failure to follow the protocols when addressing Operating Instructions is truly the reason for a new operating condition that requires issuance of a Reliability Directive or is the result of the original instruction being insufficient or in error. Also, the corresponding measure M2 puts the burden on the entities to provide evidence that it did not have any such cases. We see this as an ever encompassing and burdensome approach for collecting and presenting evidence. The issue of three-part communications has always been very central to the development of this standard. So far the SDT has not been able to produce a draft standard to achieve industry consensus on this issue. While at least partially addressing FERC orders, we believe that the approach the SDT chose, makes the day-to-day duties inside the control room more complicated, cumbersome and hard to implement. If the current version 6 does not achieve the required industry approval rate, we still stand by our prior comments and consideration should be given to modify the COM-002 standard to incorporate into it the matters that COM-003 has been trying to address, all in one communications standard.</p>
Yes
Group
FirstEnergy
Larry Raczkowski
Yes
<p>(1) FirstEnergy (FE) believes that Requirement 2 is confusing as worded, and as such, we propose the following for clarity: [R2. Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues an Operating Instruction shall follow its documented communication protocols developed in Requirement R1 such that it does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.] (2) FE believes that clarity will also be attained with clear and precise RSAWs. The latest RSAW that has been posted is applicable to Draft 4 and provides no</p>

guidance to stakeholders the intent of the requirements from Draft 6. FE appreciates the FAQs from July 2, 2013 Industry Webinar the SDT has provided and would recommend the SDT incorporate into the RSAW for Requirement 2 the intent of the response to Question 2 regarding when an evaluation to an Operating Instruction shall be used as evidence.

Yes

Individual

John Seelke

Public Service Enterprise Group

Agree

Essential Power, LLC

Individual

Karen Webb

City of Tallahassee - Electric Utility

No

TAL has voted NO because the standard is still not “clear and unambiguous”. TAL is concerned at the degree to which the proposed standard complicates compliance for Operating Instructions without benefit to reliability. The FERC Directive was to tighten communications during Emergencies and Alerts. Operating Instructions deserve separate consideration under the standards. Requiring an entity’s procedure to be subject to the Reliability Coordinator’s approval creates an undue burden on the RC with no measurable improvement in reliability. While this addressed a commenter’s concerns over uniformity within RC control areas, it would be simpler and more efficient to have the RC create a procedure and provide it to all the entities in the footprint. Measure 3 should be changed to “when required by the issuer” in order to provide clarity and consistency with R3.

Group

DTE Electric

Kathleen Black

Agree

Individual

Scott Langston

City of Tallahassee

No

TAL has voted NO because the standard is still not “clear and unambiguous”. TAL is concerned at the degree to which the proposed standard complicates compliance for Operating



Instructions without benefit to reliability. The FERC Directive was to tighten communications during Emergencies and Alerts. Operating Instructions deserve separate consideration under the standards. Requiring an entity's procedure to be subject to the Reliability Coordinator's approval creates an undue burden on the RC with no measurable improvement in reliability. While this addressed a commenter's concerns over uniformity within RC control areas, it would be simpler and more efficient to have the RC create a procedure and provide it to all the entities in the footprint. Measure 3 should be changed to "when required by the issuer" in order to provide clarity and consistency with R3.

Individual

Philip Tice

Deseret Power Electric Cooperative

No

As written, R1 would allow each BA and TOP to develop their own Operating Instructions, which does not promote the continent-wide uniformity called for by FERC in Order 693. The revised definition of Operating Instruction is not clear enough to distinguish between real-time operations coordination ("discussion of general information and potential options"?), Operating Instructions (applicable in circumstances as defined by various TOPs and BAs), and Reliability Directives (real-time emergency conditions addressed by COM-002). COM-003 does not clearly define the time frame for Operating Instructions, and should make clear what the line of demarcation is between "real-time emergency" communications governed by COM-002 and other alert conditions governed by COM-003. If each BA and TOP is allowed to define separate circumstances under which "Operating Instructions" apply, Reclamation believes that COM-003 will not achieve continent-wide standardization of communications protocol that FERC recommended in Order 693. COM-003 should include provisions parallel to IRO-001 and TOP-001 that allow Generator Operators to inform the TOP, BA, or RC that they are unable to comply with an Operating Instruction because the actions requested "would violate safety, equipment, regulatory or statutory requirements" so that the TOP, BA, or RC "can implement alternate remedial actions," If the intent of the standard is to avoid Operating Instructions escalating to Reliability Directives, GOPs should be able to inform the TOP, BA or RC of their "inability to perform" the Operating Instruction like they are able to inform the TOP, BA, or RC of the inability to perform a Reliability Directive.

No

R3 should only be accompanied by a Severe Violation Severity Level (VSL), especially because BA and TOP "Operating Instruction" protocols could vary significantly among BAs and TOPS. If the intent of the standard is to avoid Operating Instructions escalating to Reliability Directives, GOPs should be able to inform the TOP, BA or RC of their "inability to perform" an Operating Instruction because it "would violate safety, equipment, regulatory, or statutory requirements" so that the Operating Instruction does not become a Reliability Directive. The drafting team should develop thresholds for failure to repeat that would amount to low, medium, high or severe violations.

Individual
Michael Lowman
Duke Energy
Yes
<p>Duke Energy agrees in part that draft 6 of the proposed COM-003-1 does address the recommendations of the 2003 Blackout Report, FERC Order 693, and the COM-003-1 SAR. However, Duke Energy believes that this draft has gone beyond the expectations outlined in the documents mentioned above. Measure 3 should be changed to “when required by the issuer” in order to provide clarity and consistency with R3. Requirement 2 language leads to uncertainty (risk) as to when an Operating Instruction will become a Reliability Directive. This could negatively impact BES reliability in creating reluctance, by the entity, to issue a Reliability Directive and furthermore places Operators in the position of acting in compliance with the Requirement at the time only to be deemed non-compliant later when circumstances change. This is an untenable position and leads to less reliability. Such a finding of non-compliance cannot be mitigated leaving the Responsible Entity without means to “control” performance. We are also concerned with the language in Requirement 2 “so that”. This vague language can be interpreted as to intent which is unmeasurable and therefore adds to the uncertainty (risk). In addition, Duke Energy believes that a statement needs to be added in R1 that includes providing or distributing those communication protocols developed by a BA or TOP to their associated DPs and GOPs. This would address a potential gap of DPs and GOPs not aware of the communication expectations when communicating with BAs and TOPs when given an Operating Instruction. Lastly, while Duke Energy applauds the efforts made by the SDT, we are not convinced that a standard can be developed that will garner the requisite support from industry stakeholders. Duke Energy recommends the SDT to delineate other options, such as a Guideline document or White Paper, before addressing the recommendations in the 2003 Blackout Report.</p>
No
<p>Duke Energy believes that the VSL(s) need to use the same language as in the standard requirements. In order to stay consistent with the VSL(s), we believe that “Functional Entities” should be replaced with “Responsible Entities” in the Applicability Section of this standard.</p>
Individual
Wryan Feil
Northeast Utilities
Yes
No
<p>Requirements R2 and R3 need to be written to clarify requirements. The current draft could result in differing interpretations.</p>
Individual

John Hagen

Pacific Gas and Electric Company

No

Pacific Gas and Electric believes that the proposed changes to COM-003-1 do not adequately address Order 693 directives or 2003 Blackout Report Recommendation No. 26. First, Order 693 Paragraph 512 directed the ERO to modify COM-002-2 to address "both normal and emergency operations," and because each Transmission Operator (TOP), Balancing Authority (BA), and Reliability Coordinator (RC) is able to design their own Operating Instructions under R1 of the proposed revision, PG&E is unable to ascertain whether Operating Instructions will apply to normal operations. Second, Paragraph 532 of Order 693 specified that "an integral component in tightening [communication] protocols is to establish communication uniformity as much as practical on a continent-wide basis." As written, R1 would allow each BA and TOP to develop their own Operating Instructions, which does not promote the continent-wide uniformity called for by FERC in Order 693. Third, the 2003 Blackout Report Recommendation No. 26 specified that NERC should improve internal and external communications during "alerts, emergencies, or other critical situations." Under the proposed definition of Operating Instruction and R1, it seems that BAs and TOPs have discretion to determine under what conditions Operating Instructions are issued in their operating area, so it is not possible to determine whether Recommendation No. 26 is adequately addressed by the standard. In addition, PG&E would like to emphasize that the revised definition of Operating Instruction is not clear enough to distinguish between real-time operations coordination ("discussion of general information and potential options?"), Operating Instructions (applicable in circumstances as defined by various TOPs and BAs), and Reliability Directives (real-time emergency conditions addressed by COM-002). COM-003 does not clearly define the timeframe for Operating Instructions, and should make clear what the line of demarcation is between "real-time emergency" communications governed by COM-002 and other alert conditions governed by COM-003. If each BA and TOP is allowed to define separate circumstances under which "Operating Instructions" apply, PG&E believes that COM-003 will not achieve continent-wide standardization of communications protocol that FERC recommended in Order 693. Also, PG&E does not believe that violations of R3 should be tied to a failure to repeat an Operating Instruction only if it "result[s] in an operating condition that required the issuance of a Reliability Directive." To reinforce the importance of repeat-back communications, repeat-back communications should be required under all circumstances like in the aviation industry. The use of three-way communication has been proven as an effective error prevention tool in the military, aviation, and in the nuclear power industry. It is time that the same discipline and rigor be implemented in the electric industry. The current version of this Standard is moving away from reliability and will be difficult for compliance and enforcement. Further, Generator Operators (GOPs) and Distribution Providers should provide concurrence or have a role in Operating Instructions development required under R1 to avoid potential miscommunications (e.g., in nomenclature for Transmission interface elements). PG&E suggests that the previous draft of the standard was clearer and that perhaps the drafting team could revisit it.

No
PG&E does not believe that R3 should only be accompanied by a Severe Violation Severity Level (VSL), especially because BA and TOP "Operating Instruction" protocols could vary significantly among BAs and TOPS. Reclamation reiterates that if the intent of the standard is to avoid Operating Instructions escalating to Reliability Directives, GOPs should be able to inform the TOP, BA or RC of their "inability to perform" an Operating Instruction because it "would violate safety, equipment, regulatory, or statutory requirements" so that the Operating Instruction does not become a Reliability Directive.
Group
Puget Sound Energy
Denise Lietz
No
Puget Sound Energy appreciates the drafting team's work to simplify the requirements of this standard and believes that the standard's language is moving in the right direction. However, Puget Sound Energy cannot vote to approve this standard for the following reasons. Requirement R1, by requiring the Reliability Coordinator (RC) to approve each communication protocol, is unnecessarily burdensome on the RC and all the entities that must receive that approval. This type of approval makes sense for restoration plans (EOP-005-2) because of the required coordination in an emergency situation, but not for the communications protocols that apply in non-emergency situations. There is certainly a benefit to uniformity of communication protocols within an interconnection; however, uniformity should be achieved by requiring the RC to specify its requirements for communication protocols and then requiring Balancing Authorities and Transmission Operators to comply with that specification (similar to the approach of IRO-010). There should be an additional requirement for Reliability Coordinators, Balancing Authorities and Transmission Operators to provide information about the communication protocol requirements that apply to other entities within their area to those entities. It is only appropriate to hold an entity responsible for complying with communication protocol requirements when it has advance notice of what those requirements will be. The language connecting miscommunications to Reliability Directives in requirements R2 and R3, along with the associated VSLs, should address degrees of compliance. While the approach does narrow the scope of possible violations, it seems that the language could easily lead to a debate on whether a miscommunication "results in" an impact. Typically, events have many elements that contribute to their occurrence and in some cases a miscommunication might only indirectly or tangentially relate to the event. Given the assigned VSL of severe for all violations of these requirements, a miscommunication with an indirect relationship to a subsequent Reliability Directive will likely have the same compliance impact as one that has a more direct and substantial relationship. Thank you for your consideration of these comments.
Individual
Clay Young

SCE&G
No
<p>FERC Order 693 states "We also believe an integral component in tightening the protocols is to establish communication uniformity as much as practical on a continent-wide basis." R1 allows each BA, RC, and TOP to develop their own, separate communication protocols. Criteria 1.1 thru 1.5 are open-ended. As a result, each BA and TOP will have different protocols that they submit to the RC for approval. The standard does not give RCs guidance on how to evaluate submitted protocols for consistency/uniformity before approval. Without such guidance, it is unclear how consistency and uniformity will be promoted among the various BA/TOP documented protocols. Furthermore, if such criteria were added, the standard would still only promote uniformity within an RC footprint. It would not promote uniformity across the continent, as directed within Order 693, or even the regions. It seems the only way for the SDT to fully address the FERC directive, is for the SDT to specify the specific protocols they want BAs TOPs and RCs to use. Many entities are opposed to this approach because they are concerned about monitoring and maintaining compliance with such a standard. These concerns could be alleviated if the SDT writes the standard in a way such that a violation only occurs if a BES Emergency results from failure to use the specified protocols.</p>
Individual
Catherine Wesley
PJM Interconnection, L.L.C.
No
<p>PJM does not support Draft 6 of this standard. There is a concern specific to the potential, unintended compliance responsibility in R2 because of the way the requirement is written, as well as the associated M2. Applicable entities will be required to prove a negative which may result in unnecessary Root Cause Analysis (RCA) efforts that are not required and are solely performed to satisfy an administrative, compliance item, yet adds no discernible reliability value.</p>
Group
Santee Cooper
S. Tom Abrams
No
<p>Santee Cooper believes the issuing authority should specifically identify a communication as an Operating Instruction, thereby triggering the need for three-part communications, and the receiver to use three part.</p>
Yes

Group
Cooper Compliance Corp
Mary Jo Cooper
No
While we agree that the proposed Standard addresses the FERC Order 693, we do not feel that R3 is well drafted and assumes that the distribution provider or generator operator would be able to determine if the Operating Instruction would “result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.” In addition, the dictionary term for restate, rephrase, or recapitulate all have the same meaning and it seems odd that an auditor would be able to distinguish any difference. We suggest the drafting team simplify R3 as follows: “Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider shall repeat or restate an Operating Instruction when required by the issuer of an Operating Instruction.”
Yes
Individual
Brenda Hampton
Luminant Energy Company LLC
Yes
While draft 6 of COM-003-1 is largely acceptable, the wording of R3 may create confusion about what is required. R3 reads, in part: R3. Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider shall repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1 so ... This language suggests that the receiving entity must know what is in the issuer's communication protocol and repeat, restate, rephrase or recapitulate the Operating Instruction without any prompts from the issuer. If that is the case, then there needs to be a requirement that the developer of a communication protocol must provide that communication protocol to all relevant parties prior to implementation. However, after reading the Technical Justification, that doesn't appear to be the intent. Rather the intent is that the issuer will request the receiver to repeat the Operating Instruction back during the phone call. To make that clear, Luminant suggests the following language change to R3: R3. Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider shall repeat, restate, rephrase, or recapitulate an Operating Instruction when requested by the issuer of an Operating Instruction in accordance with the communication protocols developed in Requirement R1 so ... With this change, we would be in support of this draft standard.
Yes

Group
IRC Standards Review Committee
Gregory Campoli
<p>The SRC has reviewed the current COM-003 posting and offer the following comments that augments previously provided comments on the standard. • Requirement R1 now requires each BA and TOP’s to have protocols approved by the RC. One question certain SRC Members have is whether the RC is being asked to “assess” whether the BA/TOP’s protocols are “compliant” with the Standard. Another question is whether the RC is being asked to “approve” the TOP communication protocols with other Registered Entities (e.g., TOs). Depending on the answers to these questions, the SRC proposes that the “approval” requirement could be revised to a “coordination” obligation. • Requirement R2 now has add a trigger for non compliance for not implementing the communications protocol if following an operating instruction, a reliability directive is issued to correct the problem caused by a failure to implement its communication protocol. We ask NERC to comment on whether this will produce an obligation for compliance authorities to begin a compliance investigation on every Reliability Directive to assess whether communication protocols were followed. Reliability Directives are an important means of communications to address all emergencies. Poor communications have yet to be clearly identified as a root cause. The SRC would also like NERC and the SDT to consider comments provided by NERC at the recent FERC Technical Conference stating, ‘complementary approaches should also be examined where the risks to reliability can effectively be mitigated through other means, such as through guidelines, data collection or other technical approaches.’ NERC should continue to consider the effectiveness of the NERC Operating Committee communications protocol. Note, ERCOT and PJM, members of the IRC Standards Review Committee did not join these joint comments and have submitted individual comments.</p>
Individual
Brett Holland
Kansas City Power & Light
No
We feel that this standard is not necessary if the COM-002 standard is properly followed. Also, R3 could cause an over burdensome amount of effort to prove compliance with COM-003.
No
Group
SPP Standards Review Group
Robert Rhodes

Yes
Although there still remain some concerns that the intent of Recommendation 26 was strictly for emergency situations which are covered by COM-002-3.
Yes
There were a couple of typos in the VSLs. R1 – Insert a space between ‘R1’ and ‘in’ in the Lower VSL. R3 – Insert ‘to’ between ‘failed’ and ‘repeat’ in the Severe VSL.
Individual
Kaleb Brimhall
Colorado Springs Utilities
No
<p>Colorado Springs Utilities appreciates the commitment and long, hard work of the Drafting Team as well as the opportunity to comment on this draft. R.1: The clause, “subject to the Reliability Coordinator’s approval” is unclear in its intent. If the intent is that the RC must review and approve all Communication Protocols, there should be discrete requirements (a la EOP-005-2 &amp; EOP-006-2) in the Standard. If that is not the explicit intent, what is? If the intent is to make it optional or suggested for the RC to review and approve Protocols, then that is not a Standard – it is a suggestion. Please state whatever is the intent clearly in the requirement. CSU proposes the clause be removed entirely. R1.3: Should be removed. This requirement is redundant to TOP-002-2.1b, R18; “Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network.” R2 &amp; R3: CSU prefers the language along the lines of the previous draft (R2 &amp; R4). The clause, “failure to use the protocols by the issuer of an (or R3- failure to repeat, restate, rephrase, or recapitulate the) Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive” is unworkable, probably unauditible, and definitely an evidentiary nightmare. If one entity issues a Reliability Directive, what chain of evidence from how many other entities is required to prove that no other entity failed to use its communications protocols in such a way that failure resulted in the operating condition requiring the first entity to issue a Reliability Directive? Or, to view it from the other direction: if CSU is being audited on compliance with COM-003-1, how shall it prove that it did not have a failure to properly implement any communication protocol which then contributed to operating conditions which may have required any other reliability entity in the western interconnect to have to issue a Reliability Directive? How does one establish the causal relationship, or lack thereof? In lieu of a return to the previous draft’s language, CSU recommends adding another sub-part to R1, “R1.6 A method to assess System Operator’s communication practices and implement improvements as necessary to meet the expectations in its documented communications protocols developed for this Requirement.” Then R2 could be written, “Each ... shall implement its communication protocols developed in R1.” R3 could state, “Each ... shall repeat, restate, rephrase, or recapitulate an Operating Instruction, when required by the issuer in its communication protocols developed in requirement R1, to the</p>



satisfaction of the issuing System Operator.” M2 & M3: Reliability Standards need to get away from asking for negative evidence. The Standard is probably written incorrectly if negative evidence is required for compliance. Even sticking with the negative theme; “Each ... shall provide evidence that it did not fail to use its documented communications protocols developed for Requirement R1 in a way that resulted in an operating condition that required <anyone> to issue a Reliability Directive,” comes closer to supporting the Requirement as drafted. Thank you! Sincerely, Colorado Springs Utilities

Yes

No Comments

“...current comments and voting on behalf of DTE Electric Co. The vote is still negative and both Kent Kujala and Daniel Herring agree with this vote and comments.”

**Comments - Eizans:**

In response to request for comment number 1 and a literal reading of the question and associated documents:

The August 2003 Blackout Report Recommendation number 26 speaks to “tightening communication protocols, especially for communications during alerts and emergencies.” In the context of the entire document, it highlights the lack of sharing of critical information during the blackout event. It does not really address “Operating Instructions” or mention a failure to correctly understand, follow or execute a direction/instruction. The focus is on what information would have assisted the operators in dealing with the event, not mistakes in execution of Operating Instructions. Page 109 of the report summarizes “Effectiveness of Communications” and states “Under normal conditions, parties with reliability responsibility need to communicate important and prioritized information to each other in a timely way, to help preserve the integrity of the grid. This is especially important in emergencies. During emergencies, operators should be relieved of duties unrelated to preserving the grid. A common factor in several of the events described above was that information about outages occurring in one system was not provided to neighboring systems.” Information exchange seems to be the focus, not communication of Operating Instruction.

FERC Order 693 (which refers back to the Blackout Report) also requires tightening communication protocols “especially for communications during alerts and emergencies” to “establish communication uniformity” and “eliminate ambiguities.” The proposed standard is focused on Operating Instructions and lacks requirements regarding consistency in information sharing.

Regarding COM-003-1 SAR, the SAR states its’s scope is “to establish essential elements of communications protocols and communications paths such that operators and users of the North American bulk electric system will efficiently convey information and ensure mutual understanding. “ It also states that the purpose of the standard is “to ensure that effective

communication is practiced and delivered in clear language via pre-established communications paths among pre-identified operating entities.” Version 6 of COM-003-1 does not address Applicability number 1 “relay critical reliability-related information in a timely and effective manner.” It also does not address Applicability number 3: “requirements for entities that experience abnormal conditions to use pre-defined terms such as proposed in the “Alert Level Guideline” (attached) to communicate the operating condition to other entities that are in a position to either assist in resolving the operating situation condition or to entities that are impacted by the operating condition.” It only focuses on Operating Instructions, not communication of the status/condition of the electrical system. The SAR Scope mentions “consistency across regions,” yet the standard does not address RC to RC communications within/across regions.

The purpose of COM-003-1 revision 1 was closer to addressing the above than the purpose in revision 6. It seems the standard has strayed from the intent and although there may be value in having a standard that addresses protocols for issuance of Operating Instructions, this version does not address the concerns laid out in the documents listed above. Items such as sharing of tie line trips, major generation loss trips, high risk situations/evolutions (possibly tripping critical items), loss of EMS capabilities/control center functionality, declared alerts/emergencies and other pertinent information would be the types of information would be standardized and addressed in a standard in order to meet the objectives of the SAR and FERC rather than Operating Instructions.

General comments regarding revision 6 of the standard “as written,” the purpose of which is different from the question asked in the comment form:

As this standard seems to focus on verbal communication, written communications should not be included this standard. It is not clear what is intended to be in scope for “written” Operating Instruction. The standard should not introduce vague terminology subject to different interpretations. If there is a need (or reliability reason) to address written Operating Instructions, they should be included in a separate standard. Focus on 3-way communication and use of alpha-numeric clarifiers in COM-003-1 do not readily fit written communications. Not sure how R2 and R3 would be applied to written Operating Instruction.

Since COM-003-1 has emphasized the difference between Operating Instruction and Reliability Directive as exclusive and distinct, it appears that COM-003-1 communication protocols are more strict for Operating Instruction (regarding use of time zone, alpha-numeric clarifiers, etc.) than COM-002-3 requiring only 3-way communication (no time zone, etc.). If COM-003-1 protocols (other than 3-way communication) are not followed for Reliability Directives, there is no standard violation of either COM-002-3 or COM-003-1. This seems to leave a reliability gap.

Should NOT require RC approval of an entity’s communication protocol. By requiring RC approval of each responsible entity’s communication protocol document, it sets up the possibility of disagreements. Entities should be responsible to develop protocols that are compatible with RC protocols, but that may differ on the “downstream” side (i.e. with entity’s

field personnel). This may be required if RC demands use of Standard Time and BA must communicate with field personnel in Daylight Time. RC should not be able to dictate these types of issues. No defined resolution process in cases of disagreement. If RC is final word, then standard should require RC to develop protocol with input from other entities and all entities should use RC protocol (no requirement for individual protocols). Who would “approve” RC to RC communication protocols?

R2 and R3 documentation is onerous. It really requires a coordinated investigation into every Reliability Directive that is issued to verify it was NOT caused by a communication protocol violation somewhere in the chain (as it may not be between just two responsible entities/protocol documents).

How wide a net needs to be cast in gathering attestations of “No Reliability Directives issued?” How deep in connected systems or entities? An entity may issue a Reliability Directive to a different entity than violated the communication protocol if that problem surfaces in their system.

**Comments - Stefaniak:**

R1.1, R 1.2, R1.3: It is not clear what is intended to be in scope for “written” Operating Instruction. The standard should not introduce vague terminology subject to different interpretations.

R2, R3: Failing to use communication protocols would not directly lead to an operating condition that requires the issuance of a Reliability Directive. It is more likely that failing to use communication protocols could cause an Operating Instruction to be incorrectly executed. Such an error could lead to an operating condition that requires the issuance of a Reliability Directive. Consider changing R2 and R3 as follows:

R2. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement its communication protocols developed in Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an Operating Instruction to be incorrectly executed thus leading to an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. [Violation Risk Factor: Medium][Time Horizon: Real Time Operations ]

R3. Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider shall repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1 so that the failure to repeat, restate, rephrase, or recapitulate the Operating Instruction does not result in an Operating Instruction to be incorrectly executed thus leading to an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. [Violation Risk Factor: Medium][Time Horizon: Real Time Operations ]

## Consideration of Comments

### Project 2007-02 Operating Personnel Communications

The Project 2007-02 Drafting Team thanks all commenters who submitted comments on COM-003-1 standard for System Protection Coordination. The standard was posted for a 30-day formal comment period from June 20, 2013 through July 19, 2013. Stakeholders were asked to provide feedback on the standard and associated documents through a special electronic comment form. There were 80 responses from approximately 50 different organizations or individuals.

All comments submitted may be reviewed in their original format on the standard's project page.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Mark Lauby, at 404-446-2560 or at [mark.lauby@nerc.net](mailto:mark.lauby@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.

#### Summary Consideration of all Comments Received

1. The OPCPSDT has proposed significant changes to the COM-003-1, draft 6. Do you agree that COM-003-1, draft 6 addresses the August 2003 Blackout Report Recommendation number 26, FERC Order 693 and the COM-003-1 SAR? If not, please explain in the comment area of the last question.

Since the last posting, the Board of Trustees - Standards Oversight and Technology Committee (SOTC) issued a recommendation to the NERC Board of Trustees for consideration at its November 2013 meeting. The recommendation suggests that the Board direct the Standards Committee and the relevant standard drafting team to develop a combined COM-002 and COM-003 standard that addresses, at a minimum, certain essential elements. In light of the recommendation to combine the COM-002 and COM-003 standard and because the OPCPSDT has not had the opportunity to ballot a combined standard, the OPCPSDT has created draft 7 as COM-002-4, which creates a single combined standard. The OPCPSDT also considered the essential elements and evaluated whether they should be included within the combined standard.

Commenters provided various comments in response to Question 1 on whether COM-003-1 draft 6 addresses the August 2003 Blackout Report Recommendation number 26, FERC Order 693 and the COM-003-1 SAR. The OPCPSDT appreciates the feedback on draft 6 regarding these issues. The comments were considered by the drafting team in deciding to move away from the approach in draft 6. Numerous commenters provided comments on the Reliability Coordinator (RC) approval of the protocols in

Requirement R1 and on aspects of Requirements R2 and R3 and the associated Measures. Because the OPCPSDT has taken a different approach in draft 7 that moves away from the construct reflected in Requirements R2 and R3, the standard drafting team will not address each comment individually. The comments were considered by the drafting team to understand the industry’s perspective on the approach in draft 6 and will be useful in crafting solutions in draft 7 and to NERC staff in creating a compliance approach to draft 7. In response to comments, the OCPCSDT has removed the approval of the RC from Requirement R1.

The OPCPSDT responds to other comments not addressed above in the responses below.

Organization	Yes/No	Comment
Oncor Electric Delivery	No	<p>Draft 6 of COM-003-1 appears to go beyond the recommendations and FERC 693 directives which were the basis for the SAR. The main objective to develop an operating protocol in alignment with other communications standards to improve reliability. Oncor’s concerns with Draft 6 are: (1) R1 - subject to the Reliability Coordinator’s approval: adding this to R1 potentially adds an administrative burden to an Entity/Industry without clear reliability benefits. Operating protocol should support an Entity’s operations and functions which are not a “one size fits all”. By requiring a RC’s approval, the requirement empowers the RC to interpret the requirement (as well as defining “Operating Instructions”) which may not be consistent with an Entity as well as the Regional Entity who will be enforcing the requirement.</p> <p>(2) R2/R3 - there is the potential for multiple levels of interpretation of these requirements; these requirement potentially creates a situation in which Operators will need to be able to assess the transition from normal to emergency operations and could quite impact efficiency and productivity of operations which is the opposite of the objective. In addition based on M2 &amp; M3, Oncor has concerns with the administrative burden versus the reliability benefits gained in proving a negative condition.</p> <p><b>Response:</b> The RC approval has been removed from the draft 7. Also, the language of R2 and R3 has been</p>

		changed to reflect the new approach.
Georgia System Operations	Yes	No response
Guy Zito/NPCC	No	The introduction of the condition in R2 “so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.” creates a number of issues with the standard. a. The issuance of a Reliability Directive may be caused by a number of reasons, for example, the operating instruction (repeated or otherwise) may not be sufficient to address a potential condition that has an Adverse Reliability Impact; b. The operating instruction that is communicated, with or without adhering to the protocols developed in R1, is in fact moving other system conditions from a reliable state to one that has a potential of having Adverse Reliability Impact, for which a Reliability Directive needs to be issued after implementing the communicated operating instruction. c. The operating personnel may second guess whether or not a Reliability Directive will be issued if the established communication protocols are not implemented (such as by requiring 3-part communication) before it takes the required action. This puts the need to comply with a requirement into a condition assessment mode, which defeats the purpose of having a reliability standard to manage risk and meet performance expectation whose reliability outcome are predetermined, not on the fly. d. The added condition is a compliance assessment element with which to gauge violation severity or sanction; itself not a requirement. By introducing this to the requirement, it convolutes the requirement, adds nothing to meeting the reliability objectives, and may in fact jeopardize reliability. And what if a Reliability Directive was not issued despite the failure of Responsible Entity to implement its communication protocol? Is the Responsible Entity

		<p>deemed compliant with the requirement? If so, do Requirements R2 and R3 drive the right behaviors? If not, then what’s the value and influence of the added condition in the assessment outcome? Requirement R1 clearly requires the responsible entity to develop documented communication protocols for the issuance of Operating Instructions. By Part 1.5, the instances where the issuer of an oral two party, person-to-person Operating Instruction requiring the receiver to repeat, restate, rephrase, or recapitulate the Operating Instruction and subsequent actions by the issuer are already clearly stipulated in the documented communication protocols. Responsible entities simply need to implement the protocols as documented, regardless of whether failure to do so would result in having to issue a Reliability Directive, or any other possible outcomes, for that matter. Similar comments apply to Requirement R3 when the responsible entities are required to close out the last part of the 3-part communication.</p> <p><b>Response: The language of R2 and R3 has been changed to reflect the new approach.</b></p> <p>The suggested rephrasing of the Purpose statement “To strengthen communications...” could be misleading. Communications could be strengthened with better equipment as well, but the intent of COM-003 is to deal only with communications protocols. Suggest changing the language to that which is found in the technical guidance document, “Enhance the effectiveness of communications...”</p>
City of Tallahassee	No	<p>TAL has voted NO because the standard is still not “clear and unambiguous”. TAL is concerned at the degree to which the proposed standard complicates compliance for Operating Instructions without benefit to reliability. The FERC Directive was to tighten communications during Emergencies and Alerts. Operating Instructions deserve separate consideration under the standards. Requiring an entity’s procedure to be subject to the</p>

		<p>Reliability Coordinator’s approval creates an undue burden on the RC with no measurable improvement in reliability. While this addressed a commenter’s concerns over uniformity within RC control areas, it would be simpler and more efficient to have the RC create a procedure and provide it to all the entities in the footprint. Measure 3 should be changed to “when required by the issuer” in order to provide clarity and consistency with R3.</p> <p><b>Response:</b> The RC approval has been removed from the draft 7.</p>
Manitoba Hydro	Yes	<p>Although Manitoba Hydro is in general support of the proposed draft, we suggest the following: (1) For clarity, consider rewriting the second paragraph of the definition of Operating Instruction as follows, An Operating Instruction is not: (1) A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns (2) Exclusive and distinct from a Reliability Directive. There is no overlap between an Operating Instruction and Reliability Directive. (2) R1 and M1 - for consistency, add an “s” to the second instance of “Reliability Coordinator” as follows: “Each Balancing Authority, Reliability Coordinator, and Transmission Operator, in each Reliability Coordinator’s area, shall...” (3) R1 – the requirement instructs each BA, RC and TO develop separate communication protocols. Are these duplicative efforts practical? (4) R1, 1.4 – alpha-numeric clarifiers are limited to oral Operating Instructions only. For consistency with R1.1, 1.2 and 1.3, consider adding applicability to written Operating Instructions as well.</p> <p><b>Response:</b> The SDT is unclear what added benefit alpha-numeric clarifiers would provide for written Operating Instructions.</p> <p>(5) R1, 1.5 – is limited to oral Operating Instructions while R3 (which deals with the same situation) does not</p>



		specify whether it is oral or written or both. (6) M2 – the measure does not seem to match the requirement. The requirement R2 states that the responsible entity implement its communication protocols so that there is no failure to use the protocols which results in a certain operating condition. The measure however requires that the responsible entity provide evidence that they did not create the certain operating condition. Manitoba Hydro suggests that the measure should more accurately require that the responsible entity provide evidence that it implemented its communication protocol so that...
Pepco Holdings Inc & Affiliates	Yes	No response
NERC Compliance Group	Yes	As far as the August 2003 Blackout Report Recommendation, the COM-003-1 revisions address this concern. However, the criteria for communication protocols that need to be used should be established. The criteria needs to be applied to both COM-002 and COM-003. There is too much room for interpretation when it comes to measuring compliance.  <b>Response:</b> The posted version of COM-002-4 combines COM-002-3 and COM-003-1 into a single standard.
Hydro-Quebec TransEnergie	Yes	
PacifiCorp	Yes	
NIPSCO	Yes	Julie Dyke , NIPSCO comments submitted Also, We would like to see COM-002 & 003 combined into a single standard. In R1 1.5 it appears that three way communication need only to be addressed in the communication protocol and not necessarily required. An operator may be reluctant to issue an RD which would possibly expose entities to R2 & R3 non-compliance.  <b>Response:</b> The posted version of COM-002-4 combines COM-002-3 and COM-003-1 into a single standard.
American Electric Power	No	AEP cannot vote in the affirmative for COM-003-1 as long as COM-002-2 R2 would be in effect at the same

	<p>time. The standard establishes a higher bar for more routine communications than would be required for emergency situations. This would only confuse operators in determining which rules are to be followed under which specific circumstances.</p> <p><b>Response:</b> The posted version of COM-002-4 combines COM-002-3 and COM-003-1 into a single standard.</p> <p>AEP still contends that it is unnecessary to obtain Reliability Coordinator’s approval on the resulting documented communication protocols for the issuance of Operating Instructions in that Reliability Coordinator’s area. Why would it be necessary to develop and document internal procedures regarding communication protocols when the proposed standard itself already provides specific instruction on the required communication?</p> <p><b>Response:</b> The RC approval has been removed from the draft 7.</p> <p>Is R 1.3 in any way redundant with TOP-002-2 R18?</p> <p><b>Response:</b> Project 2007-03 chose to eliminate TOP-002-2a Requirement R18 when it developed TOP-002-3. This Requirement states “Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network.” This standard, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are readily familiar with each other’s interface Elements and Facilities, eliminating hesitation and confusion when referring to equipment for the Operating Instruction. This shortens response time and improves situational awareness.</p>
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	<p>AEP proposes the elimination of COM-002-2 R2 and changing COM-003-1 as proposed below so that it covers all commands rather than a subset of commands.</p> <p>Operating Instruction —A command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction. R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall adhere to the following communication protocols for the issuance of Operating Instructions in that entity’s area. 1.1. The use of the English language when issuing or responding to an oral or written Operating Instruction, unless another language is mandated by law or regulation. 1.2. The instances, if any, that require time identification when issuing an oral or written Operating Instruction, specify the time zone unless the RC has previously established an operational timezone. 1.3. The nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction. 1.4. The instances, when referencing letters, utilize the phonetic alphabet when issuing an oral Operating Instruction (Reference prior draft(s)) 1.5. In instances where the issuer of an oral two party, person-to-person Operating Instruction requires the receiver to repeat, restate, rephrase, or recapitulate the Operating Instruction and the issuer to: * Confirm that the response from the recipient of the Operating Instruction was accurate; or * Reissue the Operating Instruction to resolve a misunderstanding. R2. Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider shall repeat, restate, rephrase, or recapitulate an Operating Instruction when</p>
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		<p>required by the issuer of an Operating Instruction</p> <p><b>Response:</b> The posted version of COM-002-4 combines COM-002-3 and COM-003-1 into a single standard.</p>
<p>Portland General Electric Company</p>	<p>No</p>	<p>Portland General Electric Company (PGE) thanks you for the opportunity to provide comments. PGE is supportive of the intent of COM-003-1 and appreciates the work that the drafting team has put into the development of the proposed standard. However, the language in R2 and R3 is convoluted and confusing. The following is a suggestion for both R2 and R3: R2. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement its communication protocols developed in Requirement R1. Delete: so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. [Violation Risk Factor: Medium][Time Horizon: Real Time Operations] R3. Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider shall repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1. Delete: so that the failure to repeat, restate, rephrase, or recapitulate the Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. [Violation Risk Factor: Medium][Time Horizon: Real Time Operations] Then add the following to each Measure, (and RSAW) respectively: R2.1. Did the issuer of the Operating Instruction fail to use its approved Operating Instruction protocols it developed in R1? (yes/no) R2.2. Did the failure to use the approved Operating Instructions produce an operating condition requiring</p>

		<p>the issuance of an Reliability Directive? R3.1. Did the BA, TOP, GOP and DP fail to repeat, restate, rephrase, or recapitulate an Operating Instruction in its communications protocols developed in R1? R3.2 Did the failure to repeat, restate, rephrase, or recapitulate an Operating Instruction produce a condition requiring the issuance of an Reliability Directive? Also in R3, the phrase, "...in its communications protocols" do you mean in the issuer's protocol or the receiver's protocol?</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
Arizona Public Service Company	Yes	<p>Negative ballot cast on the Standard: For communication purposes, R1 should not include Reliability Coordinator (RC) approval. If a regional requirement (RC approval) is deemed necessary, then a regional standard should be developed that includes the procedure(s) and requirements to obtain RC approval of communication protocols.</p> <p><b>Response:</b> The RC approval has been removed from the draft 7.</p>
Consolidated Edison Co. of NY, Inc.	No	<p>Add the word "verbal" before the word "Operating Instructions" so that Requirement R1 reads: "R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator, in each Reliability Coordinator area, shall develop, subject to the Reliability Coordinator's approval, documented communication protocols for the issuance of verbal Operating Instructions in that Reliability Coordinator's area." Also make similar changes where required elsewhere.</p> <p><b>Response:</b> The standard is intended to cover both oral and written communication.</p>
Flathead Electric Cooperative, Inc.	No	<p>No, the 2003 Blackout recommendations were specific to control center and reliability coordinator entities. This standard appears to push down below to small DP</p>

		<p>entities that don't have control centers. Also, the Blackout recommendations were clearly concerned with "reliability" directives and did not contemplate a new category of Operating Instructions. The existing authority in other standards for registered entities to respond to reliability directives should be sufficient to address the recommendations without this standard.</p> <p><b>Response:</b> The DP was added in response to directive in FERC Order 693.</p>
Occidental Energy Ventures Corp.	Yes	<p>Occidental Energy Ventures Corp. ("OEVC") would like to compliment the drafting team for finding a compliance solution that focuses only on the results of an improperly executed Operating Instruction. The approaches in previous drafts could be construed that entities retain proof that every applicable communication was monitored and verified – an impossible administrative task. We believe that Draft 6 of COM-003-1 removes the onerous compliance burden without freeing Operating entities from the obligation to perform responsibly. They are free to choose the level of sample communications to monitor, the amount of training they perform, and the internal disciplinary actions they take for non-compliance to the required protocols. However, there are consequences if their oversight is inadequate. We do have two concerns which we would like to air. First, that recipients of Operating Instructions must be informed that formal communication is being done. Although front-line Operators will be trained to comply with the appropriate protocol documents, they will be naturally inclined to follow the lead of the issuing entity – particularly if the communication is a borderline instruction. For example, a request for equipment status may be part of discussion concerning available alternatives, or information needed to confirm real-time stability. The recipient should not be left in a position to guess what the needs of the immediate situation are. Secondly, we would hope that the protocols developed by the various RCs, BAs, and TOPs are generally consistent. Even</p>

		<p>though we agree that each individual organization may have specific communications needs, it is in no one’s interest to have minor preferential differences between entities. Perhaps this is an issue that NERC’s performance management team can monitor – particularly as they have a highly vested interest in the resolution of Operating Instruction errors. These comprise a high percentage of outage root causes, and we are sure that uniformity will be a key improvement indicator.</p> <p><b>Response:</b> The posted version of COM-002-4 combines COM-002-3 and COM-003-1 into a single standard. Hopefully this will address your concern.</p>
ReliabilityFirst	No	<p>ReliabilityFirst believes the newly included language in Requirement R1 “...subject to the Reliability Coordinator’s approval...” introduces three issues which need to be addressed prior to the draft standard being enforceable. The three issues include: 1) With the Reliability Coordinator being an Applicable Entity within this requirement, it is unclear which entity will be approving the Reliability Coordinator’s documented communication protocols? Based on the current language, the Reliability Coordinator would need to seek approval from themselves as the Reliability Coordinator. 2) There is no companion requirement requiring the Reliability Coordinator to approve the Balancing Authority’s and Transmission Operator’s documented communication protocols. It is inferred, but there is no requirement which explicitly requires the Reliability Coordinator to take action. Based on the current language in Requirement R1, if a Reliability Coordinator never takes action (approval or disapproval), where does this leave an entity for compliance purposes? 3) In the scenario where the Applicable Entity (Balancing Authority, Transmission Operator) develops documented communication protocols (which address the elements in sub parts 1.1 through 1.5) but the Reliability Coordinator disapproves, will the Applicable</p>

		<p>Entity be non-compliant with Requirement R1? The Applicable Entity has no control over action taken (approval or disapproval) by the Reliability Coordinator. Furthermore, since Requirement R2 and Requirement R3 depend on the documented communication protocols developed in Requirement R1, would the Applicable Entity be automatically found non-compliant with those two requirements as well? ReliabilityFirst offers the following two recommendations for the SDT to consider to address the ReliabilityFirst concerns with the newly included language "...subject to the Reliability Coordinator's approval...": 1) Remove the "...subject to the Reliability Coordinator's approval..." language from Requirement R1. Add a new requirement requiring the Applicable Entities to make their documented communication protocols available to all the other Applicable Entities within in each Reliability Coordinator area. 2) Make Requirement R1 applicable to only the Reliability Coordinator and remove the "...subject to the Reliability Coordinator's approval..." language. This will require the Reliability Coordinator to develop one consistent set of documented communication protocols for all entities within their Reliability Coordinator area. This will also allow the Reliability Coordinator to tailor the documented communication protocols to address uniqueness among Balancing Authorities and Transmission Operators (e.g., asset density, locations and organizational structure) within their area. If the SDT agrees with either of these recommendations, the sub-parts for Requirement R1 and both Requirement R2 and Requirement R3 would remain relatively unchanged.</p> <p><b>Response:</b> The RC approval has been removed from the draft 7.</p>
Texas Reliability Entity	No	(1) Definition of Operating Instruction: We remain concerned about potential interference between COM-002 and COM-003. While it has been made abundantly clear in this draft that an Reliability Directive is not an



	<p>Operating Instruction, it remains unclear exactly where the boundary between them is. We are concerned that an operator faced with an imminent emergency situation will have to stop to consider whether he needs to issue a Reliability Directive or an Operating Instruction, and entities will be subject to second-guessing as to whether they picked the right one. COM-002 and COM-003 should be melded into one coherent standard that will not interfere with system operations.</p> <p><b>Response:</b> The RC approval has been removed from the draft 7.</p> <p>(2) The present draft does not address one-to-many communications (hot-line calls, all-calls), which are commonly used to convey Operating Instructions in critical situations. A repeat-back procedure for those calls should be included in an entity's documented communications protocols.</p> <p><b>Response:</b> The concept of all-calls is addressed in draft 7.</p> <p>(3) While we respect the desire to avoid writing a "zero-defect" standard, we strongly object to the approach taken in requirements R2 and R3. Compliance with these requirements should not be based on whether a subsequent Reliability Directive was issued. Instead, compliance should be based on whether the communication protocols are routinely and effectively implemented (perhaps using an "identify/assess/correct" approach). The present draft allows system conditions over which the entity may have little control (i.e. luck) to determine whether a deviation from its protocols results in a violation. Importantly, the current draft may create an undesirable incentive for an operator to avoid issuing a Reliability Directive in order to avoid scrutiny of prior Operating Instructions. (4) We also object to basing compliance with R2 and R3 on whether the entity's conduct</p>
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	<p>“resulted in” an adverse operating condition. The existence of a violation should be based solely on the entity’s conduct, not on the results of that conduct on system conditions. The proposed approach creates an unmanageable compliance assessment burden, as parties will dispute whether events were causally related, which can be very difficult to conclusively assess. Furthermore, what does “result in” mean? Does it require proximate cause, direct cause, contributing cause, or some other measure of causal relationship?</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p> <p>(5) The proposed revisions in COM-003 interact with the revisions in TOP-001-2 to create a reliability gap that will reduce the performance level required by the standards. The existing requirements 3 and 4 of TOP-001-1a require TOP, BA, GOP, DP and LSE entities to comply with reliability directives (not capitalized) issued by a TOP. We interpret “reliability directives” in that standard to include all operating instructions related to reliable system operation, including those that are proposed to be defined as both Reliability Directives and as Operating Instructions. The new version TOP-001-2 (pending at FERC) limits the compliance requirement to only Reliability Directives (defined term), and will no longer require compliance with Operating Instructions issued by TOPs. This problem is enhanced by the proposed definition of Operating Instructions, which now emphasizes that Operating Instructions and Reliability Directives are mutually exclusive. There needs to be a reliability standard that requires compliance with Operating Instructions issued by TOPs, and the absence of such a standard creates a reliability gap.</p> <p><b>Response:</b> This scope of this standard, as defined by the SAR, only considers communication protocols. The obligation to follow “directives” is defined elsewhere in the body of standards. The gap you have identified</p>
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		would be present whether or not this project existed.
City of Garland	No	<p>Three part communications is a standard business practice in transmission and distribution operations across the country. If by chance there is / was a company that was not using three part communications, that company would have had to develop a procedure / policy for three part communications to be compliant with COM-002-2 R2 (COM-002-3 R2 future). Therefore, the proposed COM-003 R1 requiring companies to develop “documented communication protocols” that have to be approved by the Reliability Coordinator is nothing more than a compliance burden to maintain documentation for an audit. Furthermore, COM-003 R3 requires use of three part communications and should be the only requirement in COM-003. Because of COM-002-2 R2 and COM-003 R3, COM-003 R1 is merely a paperwork compliance burden and should be deleted. COM-003 R2 relies on R1 and therefore it should be deleted also. As previously stated, COM-003 should only contain the requirement listed in the current R3.</p> <p><b>Response:</b> This scope of this standard, as defined by the SAR, considers communication protocols, not just three-part communications.</p>
City of Anaheim	Yes	<p>The proposed Standard language appears to address the requirements of FERC Order 693. However, R3 is still confusing and appears to assume that the distribution provider or generator operator would have some way of knowing if an Operating Instruction would “result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.” Also, more clarification is needed with respect to the terms "restate", "rephrase" and "recapitulate". We suggest the the following language for R3: “Balancing Authorities, Transmission Operators, Generator Operators and Distribution Providers shall repeat or restate an Operating Instruction given to them when required by</p>

		<p>the issuer of that Operating Instruction.”</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
Dominion	Yes	<p>Dominion appreciates the SDT efforts on this project as we know it has not been an easy task to satisfy industry concerns while at the same time, addressing FERC directives relative to this issue. We believe that having a requirement that the communication protocol be approved by the RC, while possibly considered an administrative burden by them, greatly enhances consistency of such protocols. And, we greatly appreciate the fact that recipients are required to repeat, restate, rephrase, or recapitulate only when required by those approved protocol.</p> <p><b>Response:</b> The RC approval has been removed from the draft 7.</p>
PPL NERC Registered Affiliates	No	<p>These comments are submitted on behalf of the following PPL NERC Registered Affiliates (PPL): Louisville Gas and Electric Company and Kentucky Utilities Company; PPL Electric Utilities Corporation, PPL EnergyPlus, LLC; and PPL Generation, LLC, on behalf of its NERC registered affiliates. The PPL NERC Registered Affiliates are registered in six regions (MRO, NPCC, RFC, SERC, SPP, and WECC) for one or more of the following NERC functions: BA, DP, GO, GOP, IA, LSE, PA, PSE, RP, TO, TOP, TP, and TSP. PPL has generally supported draft 4 and draft 5 of the COM-003 standard. However, the significant changes proposed in draft 6 introduce ambiguity, as well as several other issues that need to be addressed. First, the proposed definition of an “Operating Instruction” continues to require clarification. PPL NERC Registered Affiliates suggest the following definition to address the above issue: “Operating Instruction - A Real-time Operations command, other than a Reliability Directive, by a System Operator of a Reliability Coordinator, or of a</p>

	<p>Transmission Operator, or of a Balancing Authority, where the recipient of the Real-time Operations command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. A discussion of general information, potential options and/or alternatives to resolve Bulk Electric System operating concerns is not a command and is not an Operating Instruction. An Operating Instruction is exclusive and distinct from a Reliability Directive. There is no overlap between an Operating Instruction and Reliability Directive.” The focus of COM-003 is on operations, and therefore the communications subject to the COM-003 requirement should be those requiring action in the Real-time Operations time horizon — i.e., actions required within one hour or less. (See definition provided in a NERC document at: <a href="http://www.nerc.com/files/Time_Horizons.pdf">http://www.nerc.com/files/Time_Horizons.pdf</a>). During the Q/A portion of the November 27, 2012 conference call hosted by the SDT, the SDT stated that they intended to narrow the focus of the timeframe of an Operating Instruction to the Real-time Operations time horizon. . Second, there is inconsistency in the wording of some parts of R1. Specifically, PPL recommends revising part 1.5 as follows: “The instances, if any, where the issuer...” or removing the ‘if any’ from R1.2 and R1.4, since it is redundant to the R1 ‘where applicable’ and the use of ‘when, that, etc.’ in the sub requirements.</p> <p><b>Response:</b> The posted version of COM-002-4 combines COM-002-3 and COM-003-1 into a single standard. Hopefully this will address your concern.</p> <p>Third, both R2 and R3 as currently written may not aid in enhancing reliability. PPL suggests R2 be revised to require the BA, RC, and/or TOP provide their communication protocols to the GOPs, DPs with whom they communicate. PPL suggests language for R3 be revised to read as follows: “Each Balancing Authority, Distribution Provider, Generator Operator, Reliability</p>
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		<p>Coordinator, and Transmission Operator shall assess its adherence to the applicable documented communication protocols developed for R1 and R2.” As currently drafted, R2 and R3 appear to require that entities issuing or receiving Operating Instructions must prove that no BA, RC or TOP issued a Reliability Directive as a result of their lack of use of the R1 protocol or of three-part communication. The R2 draft language says that the BA/RC/TOP communication protocols must be developed such that even when the communication protocols are not used, there is still no need for a Reliability Directive. This could imply that if no Reliability Directive is required, the failure to use the protocols created no risk and the communication protocol was not needed. This appears to make inconsequential any reliability benefit of R1 of the Standard. Also, R3 has requirements for entities that may not have received the communication protocols developed by the BA/RC/TOP. Fourth, there is ambiguity introduced in R2 and R3 through the use of the phrase “that requires the issuance.” It is unclear who would determine whether the Reliability Directive was “required.” Likewise, if there are multiple incidents which contribute to the issuance of a Reliability Directive, it is not clear what weight would be given to the lack of use of communication protocols, nor is it clear how that determination is made. Finally, M2 and M3 introduce an expectation that applicable entities will need to coordinate to produce evidence. PPL recommends that M2 and M3 be revised to align with the changes made to R2 and R3 as noted above.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
Wisconsin Electric Power Company	No	Version 6 of the standard does not explicitly limit the timeframe prior to the issuance of a Directive subject to review for compliance with communication protocol requirements. Additionally, the draft Standard and definition of Operating Instruction do not adequately

		<p>define instances where Operating Instructions would require 3-way communications. The process by which a Reliability Coordinator approves instances where communication protocols are required will define the substantial requirements in the standard. Establishing the Reliability Coordinator as an approval authority for BA or TOP internal procedures implies the RC will have responsibility for operational activities and/or procedures owned by the BA or TOP and essentially outsources the standard development to the Reliability Coordinator.</p> <p><b>Response:</b> The posted version of COM-002-4 combines COM-002-3 and COM-003-1 into a single standard. Hopefully this will address your concern.</p>
ISO New England Inc.	Yes	
Sacramento Municipal Utility District	Yes	<p>Although SMUD agrees with the draft 6 of COM-003-1. Also, we are in support of the finding from the Independent Standards Review Panel’s final report for mitigating BPS risks as noted: Resolve COM-002 and COM-003 by requiring three-part communication for operational directives and for registered entity defined operational instructions that involve taking specific actions or steps that would cause a change in status or output of the BPS or a generator. This does not include three-part communication for myriad of conversations where information is being exchanged or options are being discussed.</p> <p><b>Response:</b> The posted version of COM-002-4 combines COM-002-3 and COM-003-1 into a single standard. Hopefully this will address your concern.</p>
North American Generator Forum Standards Review Team	No	<p>R3 can present an excessive or even impossible compliance burden, in that all parties receiving Operating Instructions must prove that no BA, RC or TOP issued a Reliability Directive as a result of their lack of three-part communication. This is not a matter of simply</p>

		<p>obtaining annually a “No known errors” letter from the BA, RC and TOP with which a receiving-end entity is directly involved, since all the neighboring BAs, RCs and TOPs are drawn-in by R3 as well. There is meanwhile no requirement that BAs, RCs or TOPs issue such letters when requested to do so, or that they must share any information at all regarding Reliability Directives issued. This leaves GOPs and other entities that receive Operating Instructions in danger of self-certifying compliance to R3, then being later confronted with evidence of non-compliance from a source from whom they had previously heard nothing. The issue of interpretation also creates undue ambiguity. Who will make the determination of cause when a Reliability Directive is issued, and is that opinion subject to review if objections are raised? If all GOPs in a region were instructed to bring all available generators online at their Emergency Rating due to tripping of a 2000 MW nuclear plant, for example, and the operator of a 10 MW blackstart unit did not respond in the prescribed fashion, and a Reliability Directive ultimately had to be issued to shed some load, did that 10 MW unit “cause” the load shedding? R3 should be revised to match the draft that was issued for comments several weeks ago, and which the NAGF found acceptable. That is, R3 should state that “Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, and Transmission Operator shall develop method(s) to assess, as applicable, System Operators’ and operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R1 and R2.”</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
Independent Electricity System Operator	No	Despite we have always held a position that this standard was not needed given the approved COM-002-3 and the NERC OC’s operating guide on operating



	<p>personnel communication, we supported the previous version of COM-003-1 (Draft 5) as it was a clearly written standard which would be an acceptable compromise for meeting the FERC directive and BoT’s direction without overburdening industry participants having to repeat every operating instruction. This latest version, Draft 6, however, turns an acceptable standard into one that is ambiguous and provides an escape clause for operating personnel to not comply with the basic requirement (R1). The introduction of the condition in R2 “so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.” creates a number of issues with the standard, as follows: a. The issuance of a Reliability Directive may be caused by a number of reasons, for example: the operating instruction (repeated or otherwise) may not be sufficient to address a potential condition that has an Adverse Reliability Impact; b. The operating instruction that is communicated, with or without adhering to the protocols developed in R1, is in fact moving other system conditions from a reliable state to one that has a potential of having Adverse Reliability Impact, for which a Reliability Directive needs to be issued after implementing the communicated operating instruction. c. The operating personnel may second guess whether or not a Reliability Directive will be issued if the established communication protocols are not implemented (such as by requiring 3-part communication) before it takes the required action. This puts the need to comply with a requirement into a “condition assessment” mode, which defeats the purpose of having a reliability standard to manage risk and meet performance expectation whose reliability outcome are predetermined, not on the fly. d. The added condition is a compliance assessment element with which to gauge violation severity or sanction; itself is not a requirement. By introducing this to the</p>
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		<p>requirement, it convolutes the requirement, adds nothing to meeting the reliability objectives, and may in fact jeopardize reliability. And what if a Reliability Directive was not issued despite the failure of Responsible Entity to implement its communication protocol. Is the Responsible Entity deemed compliant with the requirement? If so, do Requirements R2 and R3 drive the right behaviors? If not, then what’s the value and influence of the added condition in the assessment outcome? Requirement R1 clearly requires the responsible entity to develop documented communication protocols for the issuance of Operating Instructions. By Part 1.5, the instances where the issuer of an oral two party, person-to-person Operating Instruction requiring the receiver to repeat, restate, rephrase, or recapitulate the Operating Instruction and subsequent actions by the issuer are already clearly stipulated in the documented communication protocols. Responsible entities simply need to implement the protocols as documented, regardless of whether failure to do so would result in having to issue a Reliability Directive, or any other possible outcomes, for that matter. Similar comments apply to Requirement R3 when the responsible entities are required to close out the last part of the 3-part communication.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
MISO	No	<p>The blackout recommendation 26 had little or nothing to do with operator communications. The recommendation was to implement some type of communication system to keep Regions, NERC and regulators informed during emergencies. Here is the recommendation: “NERC should work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations, and ensure that all key parties, including state and local officials, receive timely and accurate information. NERC</p>

		<p>should task the regional councils to work together to develop communications protocols by December 31, 2004, and to assess and report on the adequacy of emergency communications systems within their regions against the protocols by that date.” These are our comments on what is presented in this revision of COM-003-1. • We’re generally OK with a requirement to develop a set of communication protocols and whereby the applicable entity does a periodic assessment of its operators’ adherence to the protocols. • While we believe that it is acceptable for a BA and TOP to develop their own protocols, it would be preferable that they be allowed to use a set of protocols developed by the RC. • We disagree that the RC should approve others’ protocols. What are the criteria for approval? NERC should not put RCs in the role of de-facto compliance monitors. • There is a likely unintended consequence of the latest draft. This will plant a seed of doubt in an operator’s mind whether or not to issue a reliability directive due to the scrutiny and second guessing that will be the outcome of each investigation associated with a directive. This standard will result in investigations associated with each directive. • We were OK with the previous version. We’d be OK with a revision to the current draft if there was an ex post assessment of operating instructions following the issuance of a directive. There should not be a rabbit-trail investigation following the issuance of each directive.</p> <p><b>Response:</b> The posted version of COM-002-4 combines COM-002-3 and COM-003-1 into a single standard. Hopefully this will address your concern.</p>
Bonneville Power Administration	Yes	
Xcel Energy	No	We are electing to not respond directly to this question, as we have expressed concern with the advancement of this project many times in the past. While this draft seems far superior to the others, the proposed change

		<p>to R1 raises concern over the portion that dictates that the Reliability Coordinator has approval authority over the communications protocols for Operating Instructions. The majority of the Operating Instructions, as defined by the standard, will be between the System Operator at a Balancing Authority or Transmission Operator and their respective field personnel. Communications between System Operators of BAs and TOPs and field personnel have well-established protocols and should not necessarily be held to the same protocol as communications between BAs or TOPs and the Reliability Coordinator. In essence, the proposed change to R1 places the Reliability Coordinator in a position to dictate communication protocols that may breakdown the well-established protocols of the BAs and TOPs and create more burdensome communication with their field personnel.</p> <p><b>Response:</b> The RC approval has been removed from the draft 7.</p>
City of Redding	Yes	
Clark Public Utilities	No	<p>Requirement 1 does adequately address the concerns. Requirements 2 and 3 are confusing and difficult interpret. It was not until I read the FAQ on COM-003 that I understood R2 and R3. I believe R2 and R3 should be revised as described below. R2. R2 needs to indicate that it is only applicable to issuers of Operating Instructions. R2 should be revised to read as follows: Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues an Operating Instruction shall implement its communication protocols developed in Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. With the change it is clearer that the standard is saying that an issuer of an Operating Instruction is supposed to have</p>

		<p>a communication protocol(R1). R2 is stating the issuer of an Operating Instruction needs to use the communication protocol and if the issuer's failure to use the communication protocol results in the issuance of a Reliability Directive, a violation has occurred. R3. R3 needs to indicate that it is only applicable to recipients of Operating Instructions. R3 should be revised to read as follows: Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider that receives an Operating Instruction shall repeat, restate, rephrase, or recapitulate the Operating Instruction when required by the issuer of the Operating Instruction (in accordance with the issuer's communication protocols developed in Requirement R1) so that the failure to repeat, restate, rephrase, or recapitulate the Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. With the change it is clearer that the standard is saying that a recipient of an Operating Instruction is supposed to repeat, restate, rephrase, or recapitulate the Operating Instruction when required by the issuer and if the recipient's failure to repeat, restate, rephrase, or recapitulate the Operating Instruction (as long as it is required in the issuer's communication protocol) results in the issuance of a Reliability Directive, a violation has occurred.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
<p>Southern Company: Southern Company Services, Inc; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power</p>	<p>Yes</p>	

Company; Southern Company Generation and Energy Marketing		
Illinois Municipal Electric Agency	Yes	
Florida Municipal Power Agency, and SERC OC Standards Working Group	Yes	
Oklahoma Gas & Electric	Yes	There is still concern that the intent of Recommendation 26 was strictly for emergency situations which are covered by COM-002-3. While well intentioned, based upon the spirit of the Paragraph 81 initiative, OG&E believes the current draft of the COM-003-1 standard to be more of an administrative burden than an improvement to reliability.
New Brunswick System Operator	No	<p>The introduction of the condition in R2 “so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.” creates a number of issues. • The issuance of a Reliability Directive may be caused by a number of reasons, for example: the operating instruction may not be sufficient to address a potential condition that has an Adverse Reliability Impact; • R2 has the unintended consequence of making Reliability Directives a subject of a Root Cause analysis. Whenever a Reliability Directive is issued it would be necessary for the issuer to prove that that Reliability Directive was not linked to an Operating Instruction protocol failure.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
Seminole Electric Cooperative, Inc.	No	While the draft may meet the Blackout Recommendation and Order 693, the draft is problematic and is resulting in Seminole changing its votes from prior affirmation to negative with this ballot.

	<p>The reasons are: 1. The requirement for RC approval of entity developed communications protocols (R1), which impose an unreasonable administrative and associated cost burden upon all of the applicable entities.</p> <p><b>Response:</b> The RC approval has been removed from the draft 7.</p> <p>2. The new connection to Reliability Directives issued by an RC, TOP, or BA, which are due to the failure of an applicable entity to properly implement its communication protocols for Operating Instructions, seemingly implies compliance investigation following the issuance of any RC Reliability Directive, for all entities affecting the RC area’s footprint (R2&amp;3).</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p> <p>3. The term Operating Instruction is so broad, that every System Operator communication might require logging, recording and compliance review.</p>
<p>Wisconsin Public Service Corp</p>	<p>Also, since enforcement and compliance under Version 6 hinges on a Reliability Directive being issued, am I correct to assume that if emergency conditions requiring actions on the BES were to occur, but an issuing entity failed to announce their request for action as a Reliability Directive – then NO Directive was issued, and therefore there could be no COM-003 violation for that event and no need to analyze if preceding Operating Instructions were given which may have lead up to the Emergency condition? Note: COM-003 Rev. 6, R3 “... an operating condition that requires the issuance of a Reliability Directive...” so put another way, what if a Reliability Directive was required – but not clearly identified as in COM-002 V3, R1? The future COM-002 V3, R1 requires an issuing RC, TOP, or BA (or LBA) in part, to clearly call a Reliability Directive a Reliability Directive. I couldn’t find similar language for Operating Instructions in Rev. 6 of COM-003. Is it intended that this</p>

	<p>will need to be included in each entities communications protocol, along with the need for the issuing entity to clearly communicate "...and I will need you to repeat this back."? My concern here is that while I like the SDT's approach with R3 in Rev. 6, if only R3 applies to DP's and GOP's (and therefore they are not required to have or to implement communications protocols), if the issuer of an Operating Instruction doesn't clearly identify it as such AND tell the recipient in advance that he requires a repeat-back, it will be difficult for the recipient who is a DP or GOP to meet the R3 requirement. Conversely, based on the high number of Operating Instructions occurring each day, perhaps it was the intent of the SDT that DP's and GOP's which are limited to simply how to respond to Directives and/or Instructions with repeat-backs. Please clarify. Lastly, I mentioned the concern under M3. Rather than just stating it is confusing, I'm listing a proposed change for consideration if the Standard doesn't get approved as is. We hope it is more clear in its wording and its expectation that the issuer of any Directive should lead efforts to complete an analysis of what lead up to a Directive. Draft 6 proposal for M3: Each Balancing Authority, Generator Operator, Distribution Provider, and Transmission Operator shall provide evidence that it did not experience a failure to repeat, restate, rephrase, or recapitulate an Operating Instruction, when required, that resulted in an operating condition that required the issuance of a Reliability Directive by the issuer or by another Balancing Authority, Reliability Coordinator, or Transmission Operator due to the failure to use the protocols. A Balancing Authority, Generator Operator, Distribution Provider, and Transmission Operator may need to coordinate with a Reliability Coordinator, Balancing Authority and Transmission Operator to provide this evidence. WPS proposal for M3: The issuer of a Reliability Directive shall provide evidence that a failure to repeat, restate, rephrase, or recapitulate an Operating Instruction, when required, resulted in an operating condition that required the issuance of a</p>
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		<p>Reliability Directive. A Balancing Authority, Generator Operator, Distribution Provider, and Transmission Operator may need to coordinate with a Reliability Coordinator, Balancing Authority and Transmission Operator to provide this evidence.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
SERC Reliability Corporation	Yes	<p>It addresses parts of each. While a reliability standard may not be the most appropriate control to address the reliability concern, this standard, in conjunction with COM-003-2 does address the Standards Authorization Request to require that real time system operators use standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. There is concern with making protocols (and any revisions) available to those who are expected to comply. R1 states that the RC must approve; M1 states that each...shall provide. It is not clear that those who must comply will have the latest version. Suggest that the Measure be tightened up to state that the RC must provide the approved communication protocols to the .... in thier footprint.</p> <p><b>Response:</b> The posted version of COM-002-4 combines COM-002-3 and COM-003-1 into a single standard. Hopefully this will address your concern.</p>
Minnesota Power	No	<p>Minnesota Power supports comments submitted by the MRO NERC Standards Review Forum (NSRF).</p>
SERC OC Review Group	Yes	<p>We agree on a very limited view that Recommendation 26 is addressed. However, when looking at reliability we are concerned that the administrative burden, and uncertainty of which Operating Instruction will become a Reliability Directive may negatively impact BES reliability in the reluctance of issuing a Reliability Directive. Therefore, we strongly recommend that the</p>

		<p>SDT review this draft and redraft to clarify these points. Measure 3 should be changed to “when required by the issuer” in order to provide clarity and consistency with R3. In addition, we believe that a statement needs to be added in R1 that includes providing or distributing those communication protocols developed by a BA or TOP to their associated DPs and GOPs. This would address a potential gap of DPs and GOPs not aware of the communication expectations when communicating with BAs and TOPs when given an Operating Instruction.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
<p>ACES Standards Collaborators</p>	<p>No</p>	<p>(1) While we understand that there are numerous approaches to satisfy the FERC order and the 2003 Blackout Report, we disagree that the drafting team addresses these concerns in a measurable and uniform process. The FERC Order and the Blackout Report both call for a “tightening of communications.” We are not convinced that giving the RC the authority to approve communication protocols will result in less confusion and a tightening of communications. There are currently 15 Reliability Coordinators in the NERC Compliance Registry, which leaves 15 opportunities for inconsistent application of what constitutes an “Operating Instruction.” (2) Further, we are concerned that by granting the Reliability Coordinator the authority to approve a registered entity’s communication protocol, there may be differing protocols among the various RC areas, which would negatively impact registered entities that are located in more than one RC area. For entities that operate in multiple RC areas, there could be different criteria for what constitutes an Operating Instruction, differing line and equipment identifiers, and other nuances that result in confusion and lead to an increase in miscommunication. The standard does not require uniform communication protocols among the various Reliability Coordinators. (3) In addition, how would an entity communicate to a neighboring BA and</p>

		<p>TOP who are in a different RC area with different protocols? This draft poses significant issues for registered entities located on the seams of RC areas that communicate to other entities in other RC areas.</p> <p><b>Response:</b> The RC approval has been removed from the draft 7.</p> <p>(4) We have an issue with the language in the Measure M2. Measure M2 requires a registered entity to prove the negative that no reliability directives occurred. This presents an issue because some regions are reluctant to accept attestations as evidence. This approach is an increased compliance burden on registered entities. This draft did not include an RSAW for review and we recommend the drafting team provide further clarification that an attestation is acceptable for compliance and continue to work with NERC compliance on this issue. (5) Finally, we disagree with the revised definition of Operating Instruction and the approach of Requirement R2 and R3. Under the revised definition, an Operating Instruction is separate from a Reliability Directive, but an entity will only be in violation for failing to communicate effectively that would result in the issuance of a Reliability Directive. This is double jeopardy. An entity could be in violation of both COM-002 and COM-003 for failing to communicate effectively that results in an event on the Bulk Electric System. This issue has been stated in our earlier comments that the definitions and the two COM standards would be better as a combined standard instead of the separate projects to avoid this potential compliance issue.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
<p>Southwest Power Pool Regional Entity</p>	<p>Yes</p>	<p>What is the expected time frame for the RC’s initial approval of the protocols? NERC needs to clarify the protocol approval dates in relation to the</p>

		<p>effective/enforceable date.</p> <p><b>Response:</b> The RC approval has been removed from the draft 7.</p>
<p>Associated Electric Cooperative, Inc. - JRO00088</p>	<p>No</p>	<p>AECI strongly supports the SERC OC Q1 comments posted for this draft. In addition, AECI believes that COM-003 fails to properly address related topics found within the August 2003 Blackout Report Recommendation number 26 and FERC Order 693, primarily because of the SDT's having included DPs within the COM-003 scope, and thereby overreaching these two citation's intended scope. In the case of the August 2003 Blackout Recommendation 26, while its terse two-sentences appear to be met by COM-003, the same report's pp 161-162 clarifies its intended scope being "during alerts, emergencies or critical situations." That same section's "particularly during alerts and emergencies", might be stretched to include COM-003 Operating Instructions for DPs, yet FERC's determination, expressed within Order 693 paragraphs 493, 509-512, suggests that NERC COM-003 is attempting to tread where FERC itself dared not go. Within that paragraph 493, FERC's rationale cites no more than "when generators with blackstart capability must be placed in service and nearby loads restored as an initial step in system restoration", in support of exercising governance over DP telecommunications. These two limited conditions for communication appear confined to COM-002, and not COM-003's drafted governance over external communications with DPs. Paragraph 509's real-time staffing requirement omits DPs. Paragraph 510.3 cites DPs as applicable under COM-002, and 510.4 "requires tightened communications protocols, especially for communications during alerts and emergencies" and then par 510 goes on to propose a new standard (COM-003?) for addressing the Blackout Report Recommendation 26. Paragraph 512's assertion "that, during both normal and emergency operations, it is</p>

		<p>essential that the transmission operator, balancing authority and reliability coordinator have communications with distribution providers" appears to conflict with earlier par 509 with regard to levels of "essential", and then asserts that many DPs are "not a user, owner or operator of the Bulk-Power System" so not required to comply with COM-002 (nor therefore COM-003). However COM-003 fails to provide for such differentiation within its Applicability section 4.1.2, for its scope of governance over DP communications during "normal operations". AECI recommends that DP applicability be dropped from COM-003 and reserved for COM-002 where these citations rationale for inclusion is clear. Finally, because industry balloting appears highly conflicted over the terms under which COM-003's rules would be developed, AECI strongly suggests that the SDT limit scope to only communications between RCs and their external communicating parties. This stance would have stronger backing from the above citations, and would make more sense, because only RCs communicate changes to the BES. New governance over the exact manner in which communicated changes become executed, is where industry appears to have heartburn. This may be occurring because much of industry has already tweaked and tuned those operational methodologies long before RCs came into existence, and therefore see much greater Compliance risk being ventured, for relatively little BES-reliability gains.</p>
seattle city light	No	<p>Seattle remains confused as to the intent of the draft Standard. R1 appears to require a protocol for communications that need not be followed in R2 or R3, because only communications problems leading to a Reliability Directive are to be audited. Seattle does not know if this position satisfies the FERC Order or the SAR. As proposed, the present Standard draft could be simplified to a single requirement to "communicate in such a way as to avoid Reliability Directives." On the other hand, if the intent is to REQUIRE three-way communications, then present draft R2 and R3 do not</p>

		do so.  <b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.
Lincoln Electric System	Yes	
Tennessee Valley Authority	Yes	
MRO NERC Standards Review Forum (NSRF)	No	The NSRF does not believe that this Standard is necessary to address recommendation 26 of the Blackout Report, thus this project should be terminated. The NSRF suggests that COM-002-3 be filed with FERC as approved by the NERC BOT, as we believe it adequately addresses the Blackout recommendation 26 and FERC Order 693. However, if the NERC SC wants to continue with this development, we provide the following recommendations. For Measure 2 and Measure 3, the SDT is requiring each registered entity to 'prove the negative' by requiring each entity to demonstrate that each Operating Instruction issued by its System Operators did not result in an operating condition that required the issuance of a Reliability Directive. From the webinar on July 2, the SDT stated that all an entity needs to do is request an attestation letter from its, RC and neighboring TOPs and BAs. Some entities are reluctant to issue such blanket attestation letters and some Regional Entities do not accept attestation letters as proof of compliance. The SDT went on to say the Reliability Directives are rare. The NSRF suggests changing M2 & M3 to state: M2. When a Reliability Directive is issued, demonstrate that it was not the result of a Reliability Coordinator, Transmission Operator or Balancing Authority's failure to use documented protocols when issuing an Operating Instruction developed for Requirement 1. M3. When a Reliability Directive is issued, demonstrate that it was not the result of a failure of the Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator or Distribution Provider to repeat, restate, rephrase, or recapitulate an Operating Instruction, when required by

		<p>another Reliability Coordinator, Transmission Operator or Balancing Authority.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
Alliant Energy	Yes	
American Transmission Company, LLC	Yes	<p>And ATC supports the communication protocols identified in R1. However, ATC proposes changing R2 and R3 to make the protocols for issuing and receiving Operational Instructions consistent with the protocols for issuing and receiving Reliability Directives as defined in R2 and R3 of proposed Reliability Standard COM-002-3 as follows: R2. When instructed by a Balancing Authority, Reliability Coordinator, or Transmission Operator to repeat, restate, rephrase, or recapitulate an Operational Instruction, each Balancing Authority, Transmission Operator, Generator Operator, or Distribution Provider, that is the recipient of a Operational Instruction, shall repeat, restate, rephrase, or recapitulate the Operational Instruction. R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Operational Instruction shall either: • Confirm that the response from the recipient of the Operational Instruction (in accordance with Requirement R2) was accurate, or • Reissue the Operational Instruction to resolve a misunderstanding. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement its communication protocols developed in Requirement R1 in a manner which identifies and corrects deficiencies in said communication protocols.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
Exelon and its affiliates	Yes	<p>Exelon supports COM-003 Draft 6 but would like to submit the following comments for consideration by the SDT: Suggest rewording the last sentence of M2 to read: A Balancing Authority, Reliability Coordinator, and</p>

		Transmission Operator shall coordinate with another Reliability Coordinator, Balancing Authority and Transmission Operator to provide this evidence. Suggest rewording the last sentence of M3 to read: A Balancing Authority, Generator Operator, Distribution Provider, and Transmission Operator shall coordinate with a Reliability Coordinator, Balancing Authority and Transmission Operator to provide this evidence.
Tri-State Generation and Transmission Association, Inc.	No	We appreciate the drafting team’s efforts and persistence in the drafting of this new standard. We believe that this proposal goes beyond what was contemplated in the Blackout Recommendation as well as FERC Order 693 directives 1 and 3 of paragraph 540. We urge the drafting team to reconsider the need for a new COM-003 standard, we already have a standard for communication (COM-002), the requirements of the FERC Order can be added to COM-002 with minimal effort reducing the need for yet another standard. Additionally, we feel that a new term to define “Operating Instruction” is not warranted or required to fulfill either the FERC directive or Blackout Recommendations.
DTE Electric	Yes	
Florida Municipal Power Agency	No	Although FMPA voted affirmative, there are still significant improvements that can be made, and enough significant weaknesses remain to make this a difficult voting decision for FMPA. It still artificially separates COM-002-3 and Reliability Directives and COM-003-1 and Operating Instructions when in reality Reliability Directives (RD) are a subset of Operating Instructions. Contrary to the white paper, there will likely be confusion as to whether an instruction should or should not be a Reliability Directive, i.e., the only real difference is whether an Emergency condition exists or not. The only certain distinguishing factor in practice is that the issuer of an RD needs to identify it as an RD per COM-002-3. There will still be significant Monday morning quarterbacking after an event as to whether an Operating Instruction should have been issued as an RD or not, i.e., whether or not the issuer should have



	<p>recognized an Emergency or not. The better solution is to treat RD and Operating Instructions the same and only differentiate with VRFs (as an analogy, look at difference between R1 and R2 of FAC-003-2) and whether there should be a difference in treatment regarding “zero tolerance” for RDs and some tolerance for Operating Instructions.</p> <p><b>Response:</b> The posted version of COM-002-4 combines COM-002-3 and COM-003-1 into a single standard.</p> <p>Reliability Directives on “all-calls” are still a problem It still makes 3-part communication optional for Operating Instructions. Does “optional” meet FERC’s directive, i.e.” requires tightened communications protocols, especially for communications during alerts and emergencies” (Order 693, P 540) and “(w)e also believe an integral component in tightening the protocols is to establish communication uniformity as much as practical on a continent-wide basis ... This is important because the Bulk- Power System is so tightly interconnected that system impacts often cross several operating entities’ areas.” (Order 693, P 532)? At minimum, the standard should require 3-part communication for alerts in addition to Emergencies. R2 and R3 try to limit potential violations for failure to follow the subject of the requirement (i.e., R2: “Each (responsible entity) shall implement its communication protocols developed in Requirement R1”) would not actually result in a violation unless an Emergency occurred as described in the predicate, (e.g., R2: “so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive ....”). Remember, Reliability Directives are only given in a state of Emergency (Reliability Directive: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact”). Does this serve reliability</p>
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	<p>well, must we get to a state of Emergency to have a violation to the standard – and doesn't that just highlight potential double jeopardy and overlap between COM-002-3 and COM-003-1, e.g., if an Operating Instruction is issued in COM-003-1 that is not followed that results in the same instruction being given as a Reliability Directive? This of course begs the question of whether or not the System Operator should have issued an RD in the first place. Does this address FERC's requirement to tighten communication protocols, including emergencies and alerts? In addition, we don't think the actual language limits the potential violations to those that meet the predicate as intended (i.e., we do not think the predicate – "so that ..." – modifies the subject so much as it describes and repeats the purpose of the standard. In other words, to us the requirements can be interpreted that the subject must always be met "so that" the purpose/predicate is accomplished. Hence, we do not think that it solves the zero tolerance issue without stating the requirement in a similar manner as the Measure is stated). Note that the Measure confirms that an Emergency is intended for potential violation: "Each (responsible entity) shall provide evidence that it did not issue an Operating Instruction that resulted in an operating condition that required the issuance of a Reliability Directive ...". We still strongly believe that the better solution is to cause COM-003-1 to address Reliability Directives and retire COM-002-3. After all, when issuing a Reliability Directive, don't we want the issuer to speak English, use a consistent clock time with their neighbors, etc., for which COM-002-3 is silent but COM-003-1 specifies? We still have not heard a good reason why this is not being done. We also think that it is necessary to require 3-part communication for "alerts" to meet FERC's directives. Don't we want 3-part communication to be followed during alerts?</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
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CenterPoint Energy Houston Electric LLC.	No	No explanation
Keys Energy Services	Yes	
Indiana Municipal Power Agency		<p>There is no place to submit “other” comments, so Indiana Municipal Power Agency (IMPA) is submitting comments under this question. For requirement R3, how will entities (BA, TOP, GOP, and DP) who are responsible for the repeat back of the Operating Instruction know the “when required by the issuer” part of the requirement is in place or being required by the issuer? Will the issuer be stating their request is an Operating Instruction or be asking for the receiver to please repeat the Operating Instruction back to them? Maybe the issuer of the Operating Instruction can make their communication protocol available to the receiving entities in Requirement R3 to allow them to be familiar with their protocols which may help with know when a repeat back is required by the issuer.</p> <p><b>Response: The language of R2 and R3 has been changed to reflect the new approach.</b></p>
HHWP	No	The draft standard does not clearly articulate the purpose nor an appropriate results based approach to addressing FERC objective to ensure clear communications between operators and users of the BES.
Bureau of Reclamation	No	The Bureau of Reclamation believes that the proposed changes to COM-003-1 do not adequately address Order 693 directives or 2003 Blackout Report Recommendation No. 26. First, Order 693 Paragraph 512 directed the ERO to modify COM-002-2 to address “both normal and emergency operations,” and because each Transmission Operator (TOP), Balancing Authority (BA), and Reliability Coordinator (RC) is able to design their own Operating Instructions under R1 of the proposed revision, Reclamation is unable to ascertain whether Operating Instructions will apply to normal operations. Second, Paragraph 532 of Order 693

	<p>specified that “an integral component in tightening [communication] protocols is to establish communication uniformity as much as practical on a continent-wide basis.” As written, R1 would allow each BA and TOP to develop their own Operating Instructions, which does not promote the continent-wide uniformity called for by FERC in Order 693. Third, the 2003 Blackout Report Recommendation No. 26 specified that NERC should improve internal and external communications during “alerts, emergencies, or other critical situations.” Under the proposed definition of Operating Instruction and R1, it seems that BAs and TOPs have discretion to determine under what conditions Operating Instructions are issued in their operating area, so it is not possible for Reclamation to determine whether Recommendation No. 26 is adequately addressed by the standard. In addition, Reclamation would like to emphasize that the revised definition of Operating Instruction is not clear enough to distinguish between real-time operations coordination (“discussion of general information and potential options”?), Operating Instructions (applicable in circumstances as defined by various TOPs and BAs), and Reliability Directives (real-time emergency conditions addressed by COM-002). COM-003 does not clearly define the timeframe for Operating Instructions, and should make clear what the line of demarcation is between “real-time emergency” communications governed by COM-002 and other alert conditions governed by COM-003. If each BA and TOP is allowed to define separate circumstances under which “Operating Instructions” apply, Reclamation believes that COM-003 will not achieve continent-wide standardization of communications protocol that FERC recommended in Order 693. Also, Reclamation does not believe that violations of R3 should be tied to a failure to repeat an Operating Instruction only if it “result[s] in an operating condition that required the issuance of a Reliability Directive.” To reinforce the importance of repeat-back communications, repeat-back communications should be required under all circumstances like in the aviation</p>
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		<p>industry. Further, Reclamation believes that Generator Operators (GOPs) and Distribution Providers should provide concurrence or have a role in Operating Instructions development required under R1 to avoid potential miscommunications (e.g., in nomenclature for Transmission interface elements).</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p> <p>Lastly, Reclamation believes that COM-002 should include provisions parallel to IRO-001 and TOP-001 that allow Generator Operators to inform the TOP, BA, or RC that they are unable to comply with an Operating Instruction because the actions requested “would violate safety, equipment, regulatory or statutory requirements” so that the TOP, BA, or RC “can implement alternate remedial actions,” If the intent of the standard is to avoid Operating Instructions escalating to Reliability Directives, GOPs should be able to inform the TOP, BA or RC of their “inability to perform” the Operating Instruction like they are able to inform the TOP, BA, or RC of the inability to perform a Reliability Directive. The Bureau is proactive about assisting with transmission system events, but at certain times of year dramatic changes in reservoir levels could endanger the public in reservoirs or on rivers, could cause unlawful total dissolved gas (TDG) levels, or violate Endangered Species Act requirements. Other safety and equipment circumstances could also lead to an inability to follow an Operating Instruction. Reclamation suggests that the previous draft of the standard was clearer and that perhaps the drafting team could revisit it.</p> <p><b>Response:</b> This scope of this standard, as defined by the SAR, only considers communication protocols. The obligation to follow “directives” is defined elsewhere in the body of standards.</p>
Liberty Electric Power	Yes	

<p>Hydro One Networks Inc.</p>	<p>No</p>	<p>We support this proposed draft (version 6) of the standard on the basis of it being a compromise between what the industry would like to see and what the US regulator is mandating. That said, we still have concerns with the proposed standard (comment below). As proposed, the standard may be ambiguous and difficult to measure. For example, Requirement 2, states that the entity shall implement its communication protocols in such a way that failure to use them would not result in an operating condition that requires the issuance of a Reliability Directive. How does the SDT envision enforcing such requirement? It is difficult to determine if the failure to follow the protocols when addressing Operating Instructions is truly the reason for a new operating condition that requires issuance of a Reliability Directive or is the result of the original instruction being insufficient or in error. Also, the corresponding measure M2 puts the burden on the entities to provide evidence that it did not have any such cases. We see this as an ever encompassing and burdensome approach for collecting and presenting evidence.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p> <p>The issue of three-part communications has always been very central to the development of this standard. So far the SDT has not been able to produce a draft standard to achieve industry consensus on this issue. While at least partially addressing FERC orders, we believe that the approach the SDT chose, makes the day-to-day duties inside the control room more complicated, cumbersome and hard to implement. If the current version 6 does not achieve the required industry approval rate, we still stand by our prior comments and consideration should be given to modify the COM-002 standard to incorporate into it the matters that COM-003 has been trying to address, all in one communications standard.</p>
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		<p><b>Response:</b> The posted version of COM-002-4 combines COM-002-3 and COM-003-1 into a single standard.</p>
FirstEnergy	yes	<p>(1) FirstEnergy (FE) believes that Requirement 2 is confusing as worded, and as such, we propose the following for clarity: [R2. Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues an Operating Instruction shall follow its documented communication protocols developed in Requirement R1 such that it does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.] (2) FE believes that clarity will also be attained with clear and precise RSAWs. The latest RSAW that has been posted is applicable to Draft 4 and provides no guidance to stakeholders the intent of the requirements from Draft 6. FE appreciates the FAQs from July 2, 2013 Industry Webinar the SDT has provided and would recommend the SDT incorporate into the RSAW for Requirement 2 the intent of the response to Question 2 regarding when an evaluation to an Operating Instruction shall be used as evidence.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
Public Service Enterprise Group	Yes	
Deseret Power Electric Cooperative	No	<p>As written, R1 would allow each BA and TOP to develop their own Operating Instructions, which does not promote the continent-wide uniformity called for by FERC in Order 693. The revised definition of Operating Instruction is not clear enough to distinguish between real-time operations coordination ("discussion of general information and potential options?"), Operating Instructions (applicable in circumstances as defined by various TOPs and BAs), and Reliability Directives (real-</p>

		<p>time emergency conditions addressed by COM-002). COM-003 does not clearly define the time frame for Operating Instructions, and should make clear what the line of demarcation is between "real-time emergency" communications governed by COM-002 and other alert conditions governed by COM-003. If each BA and TOP is allowed to define separate circumstances under which "Operating Instructions" apply, Reclamation believes that COM-003 will not achieve continent-wide standardization of communications protocol that FERC recommended in Order 693. COM-003 should include provisions parallel to IRO-001 and TOP-001 that allow Generator Operators to inform the TOP, BA, or RC that they are unable to comply with an Operating Instruction because the actions requested "would violate safety, equipment, regulatory or statutory requirements" so that the TOP, BA, or RC "can implement alternate remedial actions," If the intent of the standard is to avoid Operating Instructions escalating to Reliability Directives, GOPs should be able to inform the TOP, BA or RC of their "inability to perform" the Operating Instruction like they are able to inform the TOP, BA, or RC of the inability to perform a Reliability Directive.</p> <p><b>Response:</b> This scope of this standard, as defined by the SAR, only considers communication protocols. The obligation to follow "directives" is defined elsewhere in the body of standards.</p>
Duke Energy	Yes	<p>Duke Energy agrees in part that draft 6 of the proposed COM-003-1 does address the recommendations of the 2003 Blackout Report, FERC Order 693, and the COM-003-1 SAR. However, Duke Energy believes that this draft has gone beyond the expectations outlined in the documents mentioned above. Measure 3 should be changed to "when required by the issuer" in order to provide clarity and consistency with R3. Requirement 2 language leads to uncertainty (risk) as to when an Operating Instruction will become a Reliability Directive. This could negatively impact BES reliability in creating reluctance, by the entity, to issue a Reliability Directive</p>



		<p>and furthermore places Operators in the position of acting in compliance with the Requirement at the time only to be deemed non-compliant later when circumstances change. This is an untenable position and leads to less reliability. Such a finding of non-compliance cannot be mitigated leaving the Responsible Entity without means to “control” performance. We are also concerned with the language in Requirement 2 “so that”. This vague language can be interpreted as to intent which is unmeasurable and therefore adds to the uncertainty (risk).</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p> <p>In addition, Duke Energy believes that a statement needs to be added in R1 that includes providing or distributing those communication protocols developed by a BA or TOP to their associated DPs and GOPs. This would address a potential gap of DPs and GOPs not aware of the communication expectations when communicating with BAs and TOPs when given an Operating Instruction. Lastly, while Duke Energy applauds the efforts made by the SDT, we are not convinced that a standard can be developed that will garner the requisite support from industry stakeholders. Duke Energy recommends the SDT to delineate other options, such as a Guideline document or White Paper, before addressing the recommendations in the 2003 Blackout Report.</p>
Northeast Utilities	Yes	
Pacific Gas and Electric Company	No	<p>Pacific Gas and Electric believes that the proposed changes to COM-003-1 do not adequately address Order 693 directives or 2003 Blackout Report Recommendation No. 26. First, Order 693 Paragraph 512 directed the ERO to modify COM-002-2 to address "both normal and emergency operations," and because each Transmission Operator (TOP), Balancing Authority (BA), and Reliability Coordinator (RC) is able to design their own Operating Instructions under R1 of the</p>

	<p>proposed revision, PG&amp;E is unable to ascertain whether Operating Instructions will apply to normal operations. Second, Paragraph 532 of Order 693 specified that "an integral component in tightening [communication] protocols is to establish communication uniformity as much as practical on a continent-wide basis." As written, R1 would allow each BA and TOP to develop their own Operating Instructions, which does not promote the continent-wide uniformity called for by FERC in Order 693. Third, the 2003 Blackout Report Recommendation No. 26 specified that NERC should improve internal and external communications during "alerts, emergencies, or other critical situations." Under the proposed definition of Operating Instruction and R1, it seems that BAs and TOPs have discretion to determine under what conditions Operating Instructions are issued in their operating area, so it is not possible to determine whether Recommendation No. 26 is adequately addressed by the standard. In addition, PG&amp;E would like to emphasize that the revised definition of Operating Instruction is not clear enough to distinguish between real-time operations coordination ("discussion of general information and potential options?"), Operating Instructions (applicable in circumstances as defined by various TOPs and BAs), and Reliability Directives (real-time emergency conditions addressed by COM-002). COM-003 does not clearly define the timeframe for Operating Instructions, and should make clear what the line of demarcation is between "real-time emergency" communications governed by COM-002 and other alert conditions governed by COM-003. If each BA and TOP is allowed to define separate circumstances under which "Operating Instructions" apply, PG&amp;E believes that COM-003 will not achieve continent-wide standardization of communications protocol that FERC recommended in Order 693. Also, PG&amp;E does not believe that violations of R3 should be tied to a failure to repeat an Operating Instruction only if it "result[s] in an operating condition that required the issuance of a Reliability Directive." To reinforce the importance of</p>
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		<p>repeat-back communications, repeat-back communications should be required under all circumstances like in the aviation industry. The use of three-way communication has been proven as an effective error prevention tool in the military, aviation, and in the nuclear power industry. It is time that the same discipline and rigor be implemented in the electric industry. The current version of this Standard is moving away from reliability and will be difficult for compliance and enforcement. Further, Generator Operators (GOPs) and Distribution Providers should provide concurrence or have a role in Operating Instructions development required under R1 to avoid potential miscommunications (e.g., in nomenclature for Transmission interface elements).</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p> <p>PG&amp;E suggests that the previous draft of the standard was clearer and that perhaps the drafting team could revisit it.</p>
Puget Sound Energy	No	<p>Puget Sound Energy appreciates the drafting team's work to simplify the requirements of this standard and believes that the standard's language is moving in the right direction. However, Puget Sound Energy cannot vote to approve this standard for the following reasons. Requirement R1, by requiring the Reliability Coordinator (RC) to approve each communication protocol, is unnecessarily burdensome on the RC and all the entities that must receive that approval. This type of approval makes sense for restoration plans (EOP-005-2) because of the required coordination in an emergency situation, but not for the communications protocols that apply in non-emergency situations. There is certainly a benefit to uniformity of communication protocols within an interconnection; however, uniformity should be achieved by requiring the RC to specify its requirements for communication protocols and then requiring Balancing Authorities and Transmission Operators to</p>

		<p>comply with that specification (similar to the approach of IRO-010). There should be an additional requirement for Reliability Coordinators, Balancing Authorities and Transmission Operators to provide information about the communication protocol requirements that apply to other entities within their area to those entities. It is only appropriate to hold an entity responsible for complying with communication protocol requirements when it has advance notice of what those requirements will be.</p> <p><b>Response:</b> The RC approval has been removed from the draft 7.</p> <p>The language connecting miscommunications to Reliability Directives in requirements R2 and R3, along with the associated VSLs, should address degrees of compliance. While the approach does narrow the scope of possible violations, it seems that the language could easily lead to a debate on whether a miscommunication "results in" an impact. Typically, events have many elements that contribute to their occurrence and in some cases a miscommunication might only indirectly or tangentially relate to the event. Given the assigned VSL of severe for all violations of these requirements, a miscommunication with an indirect relationship to a subsequent Reliability Directive will likely have the same compliance impact as one that has a more direct and substantial relationship. Thank you for your consideration of these comments.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
SCE&G	No	<p>FERC Order 693 states "We also believe an integral component in tightening the protocols is to establish communication uniformity as much as practical on a continent-wide basis." R1 allows each BA, RC, and TOP to develop their own, separate communication protocols. Criteria 1.1 thru 1.5 are open-ended. As a</p>

		<p>result, each BA and TOP will have different protocols that they submit to the RC for approval. The standard does not give RCs guidance on how to evaluate submitted protocols for consistency/uniformity before approval. Without such guidance, it is unclear how consistency and uniformity will be promoted among the various BA/TOP documented protocols. Furthermore, if such criteria were added, the standard would still only promote uniformity within an RC footprint. It would not promote uniformity across the continent, as directed within Order 693, or even the regions. It seems the only way for the SDT to fully address the FERC directive, is for the SDT to specify the specific protocols they want BAs TOPs and RCs to use. Many entities are opposed to this approach because they are concerned about monitoring and maintaining compliance with such a standard. These concerns could be alleviated if the SDT writes the standard in a way such that a violation only occurs if a BES Emergency results from failure to use the specified protocols.</p> <p><b>Response:</b> The RC approval has been removed from the draft 7.</p>
<p>PJM Interconnection, L.L.C.</p>	<p>No</p>	<p>PJM does not support Draft 6 of this standard. There is a concern specific to the potential, unintended compliance responsibility in R2 because of the way the requirement is written, as well as the associated M2. Applicable entities will be required to prove a negative which may result in unnecessary Root Cause Analysis (RCA) efforts that are not required and are solely performed to satisfy an administrative, compliance item, yet adds no discernible reliability value.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
<p>Santee Cooper</p>	<p>No</p>	<p>Santee Cooper believes the issuing authority should specifically identify a communication as an Operating Instruction, thereby triggering the need for three-part</p>

		communications, and the receiver to use three part.
Cooper Compliance Corp	No	<p>While we agree that the proposed Standard addresses the FERC Order 693, we do not feel that R3 is well drafted and assumes that the distribution provider or generator operator would be able to determine if the Operating Instruction would “result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.” In addition, the dictionary term for restate, rephrase, or recapitulate all have the same meaning and it seems odd that an auditor would be able to distinguish any difference. We suggest the drafting team simplify R3 as follows: “Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider shall repeat or restate an Operating Instruction when required by the issuer of an Operating Instruction.”</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
Luminant Energy Company LLC	Yes	<p>While draft 6 of COM-003-1 is largely acceptable, the wording of R3 may create confusion about what is required. R3 reads, in part: R3. Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider shall repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1 so ... This language suggests that the receiving entity must know what is in the issuer's communication protocol and repeat, restate, rephrase or recapitulate the Operating Instruction without any prompts from the issuer. If that is the case, then there needs to be a requirement that the developer of a communication protocol must provide that communication protocol to all relevant parties prior to implementation. However, after reading the Technical Justification, that doesn't appear to be the intent. Rather the intent is that the</p>

		<p>issuer will request the receiver to repeat the Operating Instruction back during the phone call. To make that clear, Luminant suggests the following language change to R3: R3. Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider shall repeat, restate, rephrase, or recapitulate an Operating Instruction when requested by the issuer of an Operating Instruction in accordance with the communication protocols developed in Requirement R1 so ... With this change, we would be in support of this draft standard.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
<p>IRC Standards Review Committee</p>	<p>No</p>	<p>The SRC has reviewed the current COM-003 posting and offer the following comments that augments previously provided comments on the standard. • Requirement R1 now requires each BA and TOP’s to have protocols approved by the RC. One question certain SRC Members have is whether the RC is being asked to “assess” whether the BA/TOP’s protocols are “compliant” with the Standard. Another question is whether the RC is being asked to “approve” the TOP communication protocols with other Registered Entities (e.g., TOs). Depending on the answers to these questions, the SRC proposes that the “approval” requirement could be revised to a “coordination” obligation.</p> <p><b>Response:</b> The RC approval has been removed from the draft 7.</p> <ul style="list-style-type: none"> <li>• Requirement R2 now has add a trigger for non compliance for not implementing the communications protocol if following an operating instruction, a reliability directive is issued to correct the problem caused by a failure to implement its communication protocol. We ask NERC to comment on whether this will produce an obligation for compliance authorities to begin a compliance investigation on every Reliability</li> </ul>

		<p>Directive to assess whether communication protocols were followed. Reliability Directives are an important means of communications to address all emergencies. Poor communications have yet to be clearly identified as a root cause. The SRC would also like NERC and the SDT to consider comments provided by NERC at the recent FERC Technical Conference stating, ‘complementary approaches should also be examined where the risks to reliability can effectively be mitigated through other means, such as through guidelines, data collection or other technical approaches.’ NERC should continue to consider the effectiveness of the NERC Operating Committee communications protocol. Note, ERCOT and PJM, members of the IRC Standards Review Committee did not join these joint comments and have submitted individual comments.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
Kansas City Power & Light	No	We feel that this standard is not necessary if the COM-002 standard is properly followed. Also, R3 could cause an over burdensome amount of effort to prove compliance with COM-003.
SPP Standards Review Group	Yes	Although there still remain some concerns that the intent of Recommendation 26 was strictly for emergency situations which are covered by COM-002-3.
Colorado Springs Utilities	No	Colorado Springs Utilities appreciates the commitment and long, hard work of the Drafting Team as well as the opportunity to comment on this draft. R.1: The clause, “subject to the Reliability Coordinator’s approval” is unclear in its intent. If the intent is that the RC must review and approve all Communication Protocols, there should be discrete requirements (a la EOP-005-2 & EOP-006-2) in the Standard. If that is not the explicit intent, what is? If the intent is to make it optional or suggested for the RC to review and approve Protocols, then that is not a Standard – it is a suggestion. Please state whatever is the intent clearly in the requirement. CSU proposes the clause be removed entirely.



	<p><b>Response:</b> The RC approval has been removed from the draft 7.</p> <p>R1.3: Should be removed. This requirement is redundant to TOP-002-2.1b, R18; “Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network.”</p> <p><b>Response:</b> Project 2007-03 chose to eliminate TOP-002-2a Requirement R18 when it developed TOP-002-3. This standard, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are readily familiar with each other’s interface Elements and Facilities, eliminating hesitation and confusion when referring to equipment for the Operating Instruction. This shortens response time and improves situational awareness.</p> <p>R2 &amp; R3: CSU prefers the language along the lines of the previous draft (R2 &amp; R4). The clause, “failure to use the protocols by the issuer of an (or R3- failure to repeat, restate, rephrase, or recapitulate the) Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive” is unworkable, probably unauditible, and definitely an evidentiary nightmare. If one entity issues a Reliability Directive, what chain of evidence from how many other entities is required to prove that no other entity failed to use its communications protocols in such a way that failure resulted in the operating condition requiring the first entity to issue a Reliability Directive? Or, to view it from the other direction: if CSU is being audited on compliance with COM-003-1, how shall it prove that it did not have a failure to properly implement any</p>
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		<p>communication protocol which then contributed to operating conditions which may have required any other reliability entity in the western interconnect to have to issue a Reliability Directive? How does one establish the causal relationship, or lack thereof? In lieu of a return to the previous draft’s language, CSU recommends adding another sub-part to R1, “R1.6 A method to assess System Operator’s communication practices and implement improvements as necessary to meet the expectations in its documented communications protocols developed for this Requirement.” Then R2 could be written, “Each ... shall implement its communication protocols developed in R1.” R3 could state, “Each ... shall repeat, restate, rephrase, or recapitulate an Operating Instruction, when required by the issuer in its communication protocols developed in requirement R1, to the satisfaction of the issuing System Operator.” M2 &amp; M3: Reliability Standards need to get away from asking for negative evidence. The Standard is probably written incorrectly if negative evidence is required for compliance. Even sticking with the negative theme; “Each ... shall provide evidence that it did not fail to use its documented communications protocols developed for Requirement R1 in a way that resulted in an operating condition that required &lt;anyone&gt; to issue a Reliability Directive,” comes closer to supporting the Requirement as drafted. Thank you! Sincerely, Colorado Springs Utilities</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p>
DTE Electric Co	No	<p>In response to request for comment number 1 and a literal reading of the question and associated documents:</p> <p>The August 2003 Blackout Report Recommendation number 26 speaks to “tightening communication protocols, especially for communications during alerts and emergencies.” In the context of the entire document, it highlights the lack of sharing of critical</p>

	<p>information during the blackout event. It does not really address “Operating Instructions” or mention a failure to correctly understand, follow or execute a direction/instruction. The focus is on what information would have assisted the operators in dealing with the event, not mistakes in execution of Operating Instructions. Page 109 of the report summarizes “Effectiveness of Communications” and states “Under normal conditions, parties with reliability responsibility need to communicate important and prioritized information to each other in a timely way, to help preserve the integrity of the grid. This is especially important in emergencies. During emergencies, operators should be relieved of duties unrelated to preserving the grid. A common factor in several of the events described above was that information about outages occurring in one system was not provided to neighboring systems.” Information exchange seems to be the focus, not communication of Operating Instruction.</p> <p>FERC Order 693 (which refers back to the Blackout Report) also requires tightening communication protocols “especially for communications during alerts and emergencies” to “establish communication uniformity” and “eliminate ambiguities.” The proposed standard is focused on Operating Instructions and lacks requirements regarding consistency in information sharing.</p> <p>Regarding COM-003-1 SAR, the SAR states its scope is “to establish essential elements of communications protocols and communications paths such that operators and users of the North American bulk electric system will efficiently convey information and ensure mutual understanding. “ It also states that the purpose of the standard is “to ensure that effective communication is practiced and delivered in clear language via pre-established communications paths among pre-identified operating entities.” Version 6 of</p>
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	<p>COM-003-1 does not address Applicability number 1 “relay critical reliability-related information in a timely and effective manner.” It also does not address Applicability number 3: “requirements for entities that experience abnormal conditions to use pre-defined terms such as proposed in the “Alert Level Guideline” (attached) to communicate the operating condition to other entities that are in a position to either assist in resolving the operating situation condition or to entities that are impacted by the operating condition.” It only focuses on Operating Instructions, not communication of the status/condition of the electrical system. The SAR Scope mentions “consistency across regions,” yet the standard does not address RC to RC communications within/across regions.</p> <p>The purpose of COM-003-1 revision 1 was closer to addressing the above than the purpose in revision 6. It seems the standard has strayed from the intent and although there may be value in having a standard that addresses protocols for issuance of Operating Instructions, this version does not address the concerns laid out in the documents listed above. Items such as sharing of tie line trips, major generation loss trips, high risk situations/evolutions (possibly tripping critical items), loss of EMS capabilities/control center functionality, declared alerts/emergencies and other pertinent information would be the types of information would be standardized and addressed in a standard in order to meet the objectives of the SAR and FERC rather than Operating Instructions.</p> <p>General comments regarding revision 6 of the standard “as written,” the purpose of which is different from the question asked in the comment form: As this standard seems to focus on verbal communication, written communications should not be included this standard. It is not clear what is intended to be in scope for “written” Operating Instruction. The standard should not introduce vague terminology</p>
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	<p>subject to different interpretations. If there is a need (or reliability reason) to address written Operating Instructions, they should be included in a separate standard. Focus on 3-way communication and use of alpha-numeric clarifiers in COM-003-1 do not readily fit written communications. Not sure how R2 and R3 would be applied to written Operating Instruction.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p> <p>Since COM-003-1 has emphasized the difference between Operating Instruction and Reliability Directive as exclusive and distinct, it appears that COM-003-1 communication protocols are more strict for Operating Instruction (regarding use of time zone, alpha-numeric clarifiers, etc.) than COM-002-3 requiring only 3-way communication (no time zone, etc.). If COM-003-1 protocols (other than 3-way communication) are not followed for Reliability Directives, there is no standard violation of either COM-002-3 or COM-003-1. This seems to leave a reliability gap.</p> <p><b>Response:</b> The posted version of COM-002-4 combines COM-002-3 and COM-003-1 into a single standard.</p> <p>Should NOT require RC approval of an entity's communication protocol. By requiring RC approval of each responsible entity's communication protocol document, it sets up the possibility of disagreements. Entities should be responsible to develop protocols that are compatible with RC protocols, but that may differ on the "downstream" side (i.e. with entity's field personnel). This may be required if RC demands use of Standard Time and BA must communicate with field personnel in Daylight Time. RC should not be able to dictate these types of issues. No defined resolution process in cases of disagreement. If RC is final word, then standard should require RC to develop protocol with input from other entities and all entities should use</p>
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	<p>RC protocol (no requirement for individual protocols). Who would “approve” RC to RC communication protocols?</p> <p><b>Response:</b> The RC approval has been removed from the draft 7.</p> <p>R2 and R3 documentation is onerous. It really requires a coordinated investigation into every Reliability Directive that is issued to verify it was NOT caused by a communication protocol violation somewhere in the chain (as it may not be between just two responsible entities/protocol documents). How wide a net needs to be cast in gathering attestations of “No Reliability Directives issued?” How deep in connected systems or entities? An entity may issue a Reliability Directive to a different entity than violated the communication protocol if that problem surfaces in their system.</p> <p><b>Response:</b> The language of R2 and R3 has been changed to reflect the new approach.</p> <p><b>Comments - Stefaniak:</b> R1.1, R 1.2, R1.3: It is not clear what is intended to be in scope for “written” Operating Instruction. The standard should not introduce vague terminology subject to different interpretations.  R2, R3: Failing to use communication protocols would not directly lead to an operating condition that requires the issuance of a Reliability Directive. It is more likely that failing to use communication protocols could cause an Operating Instruction to be incorrectly executed. Such an error could lead to an operating condition that requires the issuance of a Reliability Directive. Consider changing R2 and R3 as follows:  R2. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement its communication protocols developed in Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an Operating Instruction to be incorrectly executed thus leading to an</p>
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		<p>operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. [Violation Risk Factor: Medium][Time Horizon: Real Time Operations ]</p> <p>R3. Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider shall repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1 so that the failure to repeat, restate, rephrase, or recapitulate the Operating Instruction does not result in an Operating Instruction to be incorrectly executed thus leading to an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator. [Violation Risk Factor: Medium][Time Horizon: Real Time Operations ]</p>
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**2. Do you agree with the VRFs and VSLs for Requirements R1, R2, and R3?**

In light of the recommendation to combine the COM-002 and COM-003 standard and because the OPCPSDT has not had the opportunity to ballot a combined standard, the OPCP SDT has created draft 7 as COM-002-4, which creates a single combined standard. The OPCP SDT also considered the essential elements and evaluated whether they should be included within the combined standard. This change in the proposed standard led to changes in VRFs and VSLs. Given that, the comments below are not responded to individually because they are no longer relevant to the current version of the standard.

Organization	Yes/No	Comment
Oncor Electric Delivery	No	R2 – it is unclear how a “failure” of using an operating

		<p>protocol results in a reliability directive therefore the VSL indicates a zero tolerance level of performance which does not align to reliability based performance. R3 – not all failures of using three-part communication will automatically led to a Reliability Directive so the VSL should be designed to support more than a failure to use the protocols by the issuer of an Operating Instruction does not result</p>
GSOC	NO	<p>No, regarding R2 and R3, GSOC recommends to revise the wording as follows. In particular, we believe it advantageous to use NERC's definition of Emergency (BES Emergency) to provide entities escalating levels of severity as opposed to the single VSL - severe that appears in the current Draft 6. R2 - Each Balancing Authority, Reliability Coordinator, and Transmission Operator (R3 - Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider) shall implement its communication protocols developed in Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction does not result in any of the following: • Any abnormal system condition that requires automatic or immediate manual action to prevent the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System. • The failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System and automatic or immediate manual action to limit the failure was required. • An Adverse Reliability Impact</p>
NPCC	No	<p>We agree with the VRFs, but not the VSLs because of the concerns with Requirements R2 and R3. We do not agree with the Long-term Planning Time Horizon for R1. Developing and documenting communication protocols for use during real-time operations is an operational planning process (or mid-term planning, at most), not a long-term planning process. We suggest to change the Time Horizon to Operations Planning. Regarding the Implementation Plan, it conflicts with Ontario regulatory practice with regards to the effective date of the standard. It is suggested that this conflict be removed by</p>



		<p>appending to the effective date wording, after “applicable regulatory approval” in the Effective Dates Section of the Implementation Plan: “, or, in those jurisdictions as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.”</p>
Manitoba Hydro	Yes	
NERC Compliance Group	Yes	
PacifiCorp	No	<p>PacifiCorp does not agree with the VRFs and VSLs associated with R2 because it is not clear how R2 is measured. M2 would require an entity to provide evidence that it did not issue an Operating Instruction that resulted in an operating condition that required the issuance of a Reliability Directive by the issuer or another Balancing Authority, Reliability Coordinator, or Transmission Operator due to the failure to use documented communications protocols developed for Requirement R1. In essence, an entity is required to prove that it did not do something that resulted in a condition which caused another entity to be issued a directive (that it may or may not be privy to, depending upon whether or not it was the original issuer of said directive). A requirement that is measured by the absence of evidence creates a challenging auditing environment for the industry. PacifiCorp strongly recommends that the drafting team reconsider the measures required for proving compliance with R2.</p>
Arizona Public Service Company	Yes	
Consolidated Edison Co. of NY, Inc.	No	<p>FERC requires that VSL’s be graded. The Requirement R3 VSL should be modified to reflect the following graded proposal: “The first failure following the effective date of this standard is a “Low VSL.” However, should failures be more frequent, then the severity level for such failures should be increased. “For the second and subsequent failures following the effective date of the standard a single failure within a given 12-month rolling period is a Moderate VSL. “For the second and subsequent failures following the effective date of the standard and when there is more than one failure within</p>

		a given 12-month rolling period the failure is a Severe VSL.”
Flathead Electric Cooperative, Inc.	No	
Occidental Energy Ventures Corp.	Yes	
ReliabilityFirst	No	ReliabilityFirst has a concern with the VSLs for Requirement R1. In the previous draft, the VSLs for Requirement R1 were gradated based on missing “x” out of nine sub-parts. For example, missing 44% (four out of nine) of the sub-parts was a Severe VSL). With the current draft only including five sub-parts under Requirement R1, the gradation should be adjusted accordingly. ReliabilityFirst believes that an entity not addressing more than half of the sub-parts within the documented communication protocols is missing the intent of the requirement and should be a Severe VSL. Furthermore, if the “...subject to the Reliability Coordinator’s approval...” language continues to remain in Requirement R1 (against our recommendations in previous comments), this “Reliability Coordinator approval” needs to be included in the VSLs as well. ReliabilityFirst offers the following as an example for consideration: i. Lower VSL – none ii. Moderate VSL – “...did not develop one (1) of the five (5) parts...” iii. High VSL – “...did not develop one (2) of the five (5) parts...” iv. Severe VSL - “...did not develop one (3) of the five (5) parts...” v. Severe VSL - “The Responsible Entity did not receive Reliability Coordinator approval of its documented communication protocols as required in Requirement R1.”
City of Garland	No	R2 & R3 only have a “Severe VSL” listing - As I understand it, NERC has recognized that “perfect” historical compliance is not practical and is one of the reasons NERC is moving to implement the RAI program. R2 & R3 Severe VSL only listings require 100% perfection - Real life operations is not perfect (as recongnized by the RAI) – VSLs should be a gradient from “lower” to “severe”
Dominion	Yes	

North American Generator Forum Standards Review Team	No	The VRF and VSL language for R3 should be changed to that of the draft version of Draft 6 that was commented-on by the NAGF several weeks ago.
Independent Electricity System Operator	Yes	We agree with the VRFs, but not the VSL since we do not agree with Requirements R2 and R3. We offer the following two additional comments: 1. We do not agree with the Long-term Planning Time Horizon for R1. Developing and documenting communication protocols for use during real-time operations is an operational planning process (or mid-term planning, at most), not a long-term planning process. We suggest to change the Time Horizon to Operations Planning. 2. The proposed Implementation Plan conflicts with Ontario regulatory practice with respect to the effective date of the standard. It is suggested that this conflict be removed by appending to the effective date wording, after “applicable regulatory approval” in the Effective Dates Section of the Implementation Plan, to the following effect: “, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.” Prior to the wording “; or, In those jurisdiction....”. Alternatively, the same language in the Effective Dates Section of the Implementation Plan could be used.
Bonneville Power Administration	Yes	
Clark Public Utilities	Yes	
Southern Company: Southern Company Services, Inc; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation and Energy Marketing		R1 • The phrase “subject to the Reliability Coordinator’s approval” is included in the requirement, but there is no reference to RC approval in the measure. It is unclear exactly what the expectations are for TOPs and BAs in this requirement. Are they to develop protocols and submit to the RC for approval, and have a record of this approval for compliance evidence? If so, the SDT needs to modify this requirement to make the required actions very clear. EOP-005-2 is an example of the TOP getting approval from the RC on its restoration plan. This may be a better model to use as it is more clear. • In addition, the RC is required to approve its TOPs / BAs protocols; however there is no guidance on what criteria to base this approval on. There needs to be very clear

		<p>guidance that RCs are to ensure that the protocols are compatible with its protocol and that RCs are not “auditing” the TOPs / BAs protocols to confirm they include all the subparts of requirement R1. R3 • R3 can present an excessive or even impossible compliance burden, in that all parties receiving Operating Instructions must prove that no BA, RC or TOP issued a Reliability Directive as a result of their lack of three-part communication. This is not a matter of simply obtaining annually a “No known errors” letter from the BA, RC and TOP with which a receiving-end entity is directly involved, since all the neighboring BAs, RCs and TOPs are drawn-in by R3 as well. There is meanwhile no requirement that BAs, RCs or TOPs issue such letters when requested to do so, or that they must share any information at all regarding Reliability Directives issued. This leaves GOPs and other entities that receive Operating Instructions in danger of self-certifying compliance to R3, then being later confronted with evidence of non-compliance from a source from whom they had previously heard nothing.</p>
Oklahoma Gas & Electric	Yes	<p>There were a couple of typos in the VSLs: R1 – Insert a space between ‘R1’ and ‘in’ in the Lower VSL. R3 – Insert ‘to’ between ‘failed’ and ‘repeat’ in the Severe VSL.</p>
Seminole Electric Cooperative, Inc.	No	<p>The VSL’s are far too high given the ambiguity inherent to the R2 and R3 requirements as written.</p>
Wisconsin Public Service Corp	Yes	
Minnesota Power	No	<p>Minnesota Power supports comments submitted by the MRO NERC Standards Review Forum (NSRF).</p>
ACES Standards Collaborators	No	<p>(1) We disagree with the VSL for R1. The compliance violation should fall on the RC for failing to approve the communication protocol and it should be up to the RC to ensure the sub-parts 1.1 through 1.5 are included in the protocol. Under the current draft, the RC has approval authority without any accountability. The VSL would find the entity in violation of R1, even though it would be at the mercy of the RC to approve its protocol.                  (2) The VSLs for R2 and R3 imply that a violation of COM-002 also occurred. We cannot support a standard that</p>

		has the potential for multiple violations.
Southwest Power Pool Regional Entity	Yes	
Associated Electric Cooperative, Inc. - JRO00088	No	See AECl comment to Q1 above, with respect to DPs. While the SDT did follow Guideline 5, the resulting VSLs with respect to communication with these functional entities under normal operating conditions, hardly merits a medium risk assessment, whereas COM-002 might. Further, the SDT's VRF and VSL justification for COM 003-1, R2 "FERC VRF G1 Discussion" assertion that R2 is consistent with Recommendation of 26...", ignores the same report's "particularly during..." qualifier. See AECl response to Q1 above.
seattle city light	Yes	
MRO NERC Standards Review Forum (NSRF)	No	
Tri-State Generation and Transmission Association, Inc.	No	No, we believe that the minimal changes to address the FERC directives and Blackout Recommendations should be included as a revision to COM-002, not in a new Standard. Additionally, the requirements to develop and document protocols were not contemplated or warranted in either the FERC Directives or the Blackout Recommendations. We recommend that the drafting team reconsider their decision to develop a new COM-003 and investigate incorporating the requirements into the existing COM-002.
CenterPoint Energy Houston Electric LLC.		As stated in its Draft 5 comments, CenterPoint Energy firmly believes there should be no High or Severe VSL for simply failing to document a process, protocol, or procedure. It is counterintuitive to allow for a scenario where an entity's System Operators are communicating effectively and correctly and yet that has the entity penalized with the highest severity level for not having the appropriate documentation. Additionally, CenterPoint Energy disagrees with the assignment of Severe VSL for R3, when a comparable violation in COM-002-3 R2 is also a Severe VSL. The VSL for failing to repeat an O.I. and for failing to repeat an R.D. should not be the same. CenterPoint Energy also has concerns with the following two aspects of Draft 6: 1. CenterPoint

		<p>Energy disagrees with R1’s stipulation that the RC must approve the BA’s and the TOP’s communication protocols, especially given the SDT’s assertion that a possible outcome is for the RC to unilaterally develop the protocols and impose them on the BA and the TOP. Instead, CenterPoint Energy recommends that R1 be modified to state “Each Reliability Coordinator shall develop, and each Balancing Authority and Transmission Operator shall develop collaboratively with the Reliability Coordinator, documented communication protocols...” 2. CenterPoint Energy appreciates the efforts of the SDT to revamp COM-003-1 so that its Operating Instruction is compartmentalized from COM-002-3’s Reliability Directive, effectively reducing the industry’s compliance burden. However, the revision does not ease a System Operator’s practical operational burden of having to distinguish in real-time whether a command that is about to be issued is an O.I. or an R.D. Rather than focusing solely on maintaining the integrity of the BES, an Operator may now be distracted by what to label that command and the consequences of assigning the incorrect label. The industry and NERC have been working on the proposed COM-003 standard for nearly four years, ever since the posting of draft 1 in 2009. The proposed standard is now at draft 6, and it is becoming apparent that the industry is struggling to achieve consensus on the specifications for COM-003. Furthermore, it’s been more than nine years since the release of the Blackout Report and six years since Order 693. In that interim, the industry has improved and evolved in numerous areas, including operator communication effectiveness. Most of all, the industry and NERC have already approved COM-002-3 and its associated definition of Reliability Directive, which, once enforceable, will undoubtedly further tighten communication. Perhaps it is time then for NERC and the industry to start a dialogue with FERC to reevaluate the purpose and the need for COM-003 and to request from FERC refreshed, clear guidance on this subject.</p>
Bureau of Reclamation	No	Reclamation does not believe that R3 should only be

		<p>accompanied by a Severe Violation Severity Level (VSL), especially because BA and TOP "Operating Instruction" protocols could vary significantly among BAs and TOPS. Reclamation reiterates that if the intent of the standard is to avoid Operating Instructions escalating to Reliability Directives, GOPs should be able to inform the TOP, BA or RC of their "inability to perform" an Operating Instruction because it "would violate safety, equipment, regulatory, or statutory requirements" so that the Operating Instruction does not become a Reliability Directive. Reclamation suggests that the drafting team develop thresholds for failure to repeat that would amount to low, medium, high or severe violations.</p>
Hydro One Networks Inc	Yes	
FirstEnergy	Yes	
Deseret Power Electric Cooperative	No	<p>R3 should only be accompanied by a Severe Violation Severity Level (VSL), especially because BA and TOP "Operating Instruction" protocols could vary significantly among BAs and TOPS. If the intent of the standard is to avoid Operating Instructions escalating to Reliability Directives, GOPs should be able to inform the TOP, BA or RC of their "inability to perform" an Operating Instruction because it "would violate safety, equipment, regulatory, or statutory requirements" so that the Operating Instruction does not become a Reliability Directive. The drafting team should develop thresholds for failure to repeat that would amount to low, medium, high or severe violations.</p>
Duke Energy	no	<p>Duke Energy believes that the VSL(s) need to use the same language as in the standard requirements. In order to stay consistent with the VSL(s), we believe that "Functional Entities" should be replaced with "Responsible Entities" in the Applicability Section of this standard.</p>
Northeast Utilities	No	<p>Requirements R2 and R3 need to be written to clarify requirements. The current draft could result in differing interpretations</p>

Pacific Gas and Electric Company	No	PG&E does not believe that R3 should only be accompanied by a Severe Violation Severity Level (VSL), especially because BA and TOP "Operating Instruction" protocols could vary significantly among BAs and TOPS. Reclamation reiterates that if the intent of the standard is to avoid Operating Instructions escalating to Reliability Directives, GOPs should be able to inform the TOP, BA or RC of their "inability to perform" an Operating Instruction because it "would violate safety, equipment, regulatory, or statutory requirements" so that the Operating Instruction does not become a Reliability Directive.
Santee Cooper	Yes	
Cooper Compliance Corp	Yes	
Luminant Energy Company LLC	Yes	
Kansas City Power & Light	No	
SPP Standards Review Group	Yes	There were a couple of typos in the VSLs. R1 – Insert a space between ‘R1’ and ‘in’ in the Lower VSL. R3 – Insert ‘to’ between ‘failed’ and ‘repeat’ in the Severe VSL.
Colorado Springs Utilities	Yes	



**Standard Development Roadmap**

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

**Development Steps Completed:**

1. The Standards Committee (SC) approved the Standard Authorization Request (SAR) for posting on March 1, 2007.
2. The SAR was posted for comment from March 19 through April 17, 2007.
3. The SC sought SAR drafting team nominations April 18 through May 2, 2007.
4. The SAR drafting team posted reply comments to industry comments received on the first posting of the SAR on June 8, 2007.
5. Standard drafting team appointed by SC Executive Committee on June 28, 2007.
6. Version 1 draft of COM-003-1 Standard posted November 2009 for Informal Comments closed January 15, 2010.
7. Version 2 draft of COM-003-1 Standard posted May 2012 for Formal Comments, Initial Ballot closed June 20, 2012.
8. Version 3 draft of COM-003-1 Standard posted August 2012 for Formal Comments, Ballot closed September 22, 2012.
9. Version 4 draft of COM-003-1 Standard posted November 2012 for Formal Comments, Ballot closed December 13, 2012.
10. Version 5 draft of COM-003-1 Standard posted March 2013 for Formal Comments, Ballot closed April 5, 2013.
11. Version 6 draft of COM-003-1 Standard posted June 2013 for Formal Comments, Ballot closed July 19, 2013.

**Description of Current Draft:**

This is the first draft of a revised standard (seventh posting of a communications standard) requiring the use of standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The drafting team is posting this standard for a 15-day concurrent Formal Comment period and Ballot.

**Future Development Plan:**

<b>Anticipated Actions</b>	<b>Anticipated Date</b>
1. Additional ballot of Standard	October 2013
2. Final ballot of Standard.	November 2013
3. Board adopts standard.	November 2013

### **Definitions of Terms Used in Standard**

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

Operating Instruction — A command by operating personnel responsible for the Real-time generation control and operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction. A Reliability Directive is one type of an Operating Instruction.

## A. Introduction

1. **Title:** Operating Personnel Communications Protocols
2. **Number:** COM-002-4
3. **Purpose:** To tighten communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES).
4. **Applicability:**
  - 4.1. **Functional Entities**
    - 4.1.1 Balancing Authority
    - 4.1.2 Distribution Provider
    - 4.1.3 Reliability Coordinator
    - 4.1.4 Transmission Operator
    - 4.1.5 Generator Operator
5. **(Proposed) Effective Date:** The standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date the standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

## B. Requirements

- R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented communications protocols. The protocols shall, at a minimum:  
*[Violation Risk Factor: Low][Time Horizon: Long-term Planning]*
  - 1.1. Require the issuer of a Reliability Directive to identify the action as a Reliability Directive to the receiver.
  - 1.2. Require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
  - 1.3. Require the issuer of an oral two-party, person-to-person Operating Instruction to wait for a response from the receiver. Once a response is received, or if no response is received, require the issuer to take one of the following actions:
    - Confirm the receiver's response if the repeated information is correct.

- Reissue the Operating Instruction if the repeated information is incorrect, if the receiver does not issue a response, or if requested by the receiver.
- 1.4. Require the receiver of an oral two-party, person-to-person Operating Instruction to take one of the following actions:
    - Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct.
    - Request that the issuer reissue the Operating Instruction.
  - 1.5. Require the issuer of an oral Operating Instruction to verbally or electronically confirm receipt by at least one receiver when issuing the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (*e.g.*, an all call system).
  - 1.6. Require the receiver of an oral Operating Instruction to request clarification from the issuer if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (*e.g.*, an all call system).
  - 1.7. Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.
  - 1.8. Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.
  - 1.9. Specify the instances where alpha-numeric clarifiers are required when issuing an oral Operating Instruction and the format for those clarifiers.
- R2.** Each Distribution Provider and Generator Operator shall have documented communications protocols. The protocols shall, at a minimum: [*Violation Risk Factor: Low*][*Time Horizon: Long-term Planning*]
- 2.1. Require the receiver of an oral or written Operating Instruction to respond using the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
  - 2.2. Require the receiver of an oral two-party, person-to-person Operating Instruction to take one of the following actions:
    - Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct.
    - Request that the issuer reissue the Operating Instruction.
  - 2.3. Require the receiver of an oral Operating Instruction to request clarification from the issuer if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (*e.g.*, an all call system).

- R3.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement the documented communications protocols developed in Requirement R1. [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]
- R4.** Each Distribution Provider and Generator Operator shall implement the documented communications protocols developed in Requirement R2. [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]
- R5.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement a method to evaluate the communications protocols developed in Requirement R1 that: [*Violation Risk Factor: Low*][*Time Horizon: Operations Planning*]
  - 5.1.** Assesses adherence to the communications protocols to provide feedback to issuers and receivers of Operating Instructions.
  - 5.2.** Assesses the effectiveness of the communications protocols and modifies those protocols, as necessary.

**C. Measures**

- M1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1.
- M2.** Each Distribution Provider and Generator Operator shall provide its documented communications protocols developed for Requirement R2.
- M3.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence that it implemented the documented communication protocols which may include, but is not limited to, descriptions of the management practices in place that provide the entity reasonable assurance that protocols established in Requirement R1 are being followed by personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System, spreadsheets, memos, or logs, evidencing periodic, independent review of operating personnel's adherence to the protocols established in Requirement R1 and the remediation of noted exceptions in fulfillment of Requirement R5.
- M4.** Each Distribution Provider and Generator Operator shall provide evidence that it implemented the documented communication protocols which may include, but is not limited to, descriptions of the management practices in place that provide the entity reasonable assurance that protocols established in Requirement R2 are being followed by personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System, spreadsheets, memos, or logs, evidencing periodic, independent review of operating personnel's adherence to the protocols established in Requirement R2.
- M5.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide descriptions and associated evidence of the management practices in place that demonstrate a review of communications with operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System

and evidence that the entity evaluates the effectiveness of its documented communications protocols in fulfillment of Requirement R5.

## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance Enforcement Authority**

As defined in the NERC Rules of Procedure, “Compliance Enforcement Authority” means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

#### **1.2. Data Retention**

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, and Transmission Operator shall each keep data or evidence for each applicable Requirement for the current calendar year and one previous calendar year, with the exception of voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.

If a Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, or Transmission Operator is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

#### **Compliance Monitoring and Assessment Processes**

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

#### **1.3. Additional Compliance Information**

None

DRAFT

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	Low	<p>The responsible entity did not specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification, as required in Requirement R1, Part 1.7</p> <p>OR</p> <p>The responsible entity did not specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction, as required in Requirement R1, Part 1.8</p> <p>OR</p> <p>The responsible entity did not specify the instances where alpha-numeric clarifiers are required when issuing an oral Operating Instruction and the format for those clarifiers, as required in Requirement R1, Part 1.9.</p>	<p>The responsible entity did not require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise, as required in Requirement R1, Part 1.2. An alternate language may be used for internal operations.</p>	<p>The responsible entity did not include Requirement R1, Part 1.5 in its documented communication protocols</p> <p>OR</p> <p>The responsible entity did not include Requirement R1, Part 1.6 in its documented communications protocols.</p>	<p>The responsible entity did not include Requirement R1, Part 1.1 in its documented communications protocols</p> <p>OR</p> <p>The responsible entity did not include Requirement R1, Part 1.3 in its documented communications protocols</p> <p>OR</p> <p>The responsible entity did not include Requirement R1, Part 1.4 in its documented communications protocols</p> <p>OR</p> <p>The responsible entity did not develop any documented communications protocols as required in Requirement R1.</p>



COM-002-4 Operating Personnel Communications Protocols

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R2	Long-term Planning	Low	N/A	The responsible entity did not require the receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise, as required in Requirement R2, Part 2.1. An alternate language may be used for internal operations.	The responsible entity did not include Requirement R2, Part 2.3 in its documented communication protocols.	The responsible entity did not include Requirement R2, Part 2.2 in its documented communications protocols OR The responsible entity did not develop any documented communications protocols as required in Requirement R2.
R3	Real-time Operations	High	N/A	N/A	The responsible entity demonstrates a consistent pattern of not using the documented communications protocols developed in Requirement R1 for Operating Instructions that are not Reliability Directives.	The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving a Reliability Directive.

**COM-002-4 Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R4</b>	Real-time Operations	High	N/A	N/A	The responsible entity demonstrates a consistent pattern of not using the documented communications protocols developed in Requirement R2 for Operating Instructions that are not Reliability Directives.	The responsible entity did not use the documented communications protocols developed in Requirement R2 when receiving a Reliability Directive.
<b>R5</b>	Operations Planning	Low	N/A	N/A	N/A	The responsible entity did not implement a method for evaluating its communications protocols as specified in Requirement R5.

**E. Regional Variances**

None.

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	February 7, 2006	Adopted by Board of Trustees	Added measures and compliance elements
2	November 1, 2006	Adopted by Board of Trustees	Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Retired R1, R1.1, M1, M2 and updated the compliance monitoring information. Replaced R2 with new R1, R2 and R3.
2a	February 9, 2012	Interpretation of R2 adopted by Board of Trustees	Project 2009-22
3	November 7, 2012	Adopted by Board of Trustees	

## Implementation Plan

### Operating Personnel Communications Protocols

#### COM-002-4

##### Standards Involved

Approval:

- COM-002-4 – Operating Personnel Communications Protocols

Retirements:

- COM-001-1.1 Requirement R4 – Telecommunications
- COM-002-2 – Communication and Coordination
- COM-002-3 – Communication and Coordination

##### Prerequisite Approvals

Approval of the definition of “Reliability Directive”

##### Revisions to Glossary

The following term is proposed for addition to the NERC Glossary of Terms:

##### **Operating Instruction** —

A command by operating personnel responsible for the Real-time generation control and operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction. A Reliability Directive is one type of an Operating Instruction.

##### Applicable Entities

Balancing Authority  
Distribution Provider  
Generator Operator  
Reliability Coordinator  
Transmission Operator

##### Conforming Changes to Other Standards

None

**Effective Date**

COM-002-4 and the definition of “Operating Instruction” shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date the standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

**Retirement of Existing Standards:**

COM-001-1.1 Requirement R4, COM-002-2, and COM-002-3, as applicable, shall be retired at midnight of the day immediately prior to the effective date of COM-002-4 in the particular jurisdiction in which the new standard is becoming effective.

## Unofficial Comment Form

### Project 2007-02 Operating Personnel Communications Protocols COM-002-4 Operating Personnel Communications Protocols

Please **DO NOT** use this form. Please use the [electronic comment form](#) to submit comments on the proposed draft COM-002-4 Operating Personnel Communications Protocols standard. Comments must be submitted by **November 4, 2013**. If you have questions please contact [Stephen Eldridge](#) or by telephone at 404-446-9686.

[http://www.nerc.com/pa/Stand/Pages/Op\\_Comm\\_Protocol\\_Project\\_2007-02.aspx](http://www.nerc.com/pa/Stand/Pages/Op_Comm_Protocol_Project_2007-02.aspx)

#### Background Information:

Effective communication is critical for Bulk Electric System (BES) operations. Failure to successfully communicate clearly can create misunderstandings resulting in improper operations increasing the potential for failure of the BES. The seventh posting of Project 2007-02 combines COM-002-3 and COM-003-1 into one standard titled COM-002-4 that addresses communications protocols for operating personnel in Emergency, alert, and non-emergency situations.

The Standard Authorization Request (SAR) for this project was initiated on March 1, 2007 and approved by the Standards Committee on June 8, 2007. It established the scope of work for Project 2007-02 Operating Personnel Communications Protocols (OPCP). The scope described in the SAR is to establish essential elements of communications protocols and communications paths such that operators and users of the North American BES will efficiently convey information and ensure mutual understanding. The August 2003 Blackout Report, Recommendation Number 26, calls for a tightening of communications protocols. Federal Energy Regulatory Commission (FERC) Order 693 paragraph 532 reiterates this need. This proposed standard's goal is to ensure that effective communication is practiced and delivered in clear and consistent language.

The standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators, and Distribution Providers. These requirements ensure that communications include essential elements such that information is efficiently conveyed and mutually understood for communicating Operating Instructions.

The Purpose statement of COM-002-4 states: "To tighten communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System."

- 1) **New NERC Glossary term:** The OPCP Standards Drafting Team (SDT) revised the definition of Operating Instructions from its previous drafts. The definition states that a Reliability Directive

is a type of Operating Instruction. The proposed term differentiates the class of communications that deal with changing or altering the state of the BES from general discussions of options or alternatives. Changes to the BES operating state with unclear communications create increased opportunities for events that could place the BES at an unacceptable risk of instability, separation, or cascading failures. This term is proposed for addition to the North American Electric Reliability Corporation (NERC) Glossary to establish meaning and usage within the electricity industry.

- 2) **Project 2007-02, Posting 7 combines COM-002-3 and COM-003-1 into COM-002-4.** The OPCP SDT combined COM-002-3 and COM-003-1 into one standard in order to simplify communications protocols for operating personnel. The OPCP SDT determined that one communications protocols standard that addresses Emergency, alert, and non-emergency situations will improve communications because system operators will not need to refer to a different set of protocols during an emergency situation. The OPCP SDT believed this will improve consistency of communications and mitigate confusion during stressful emergency situations. Similarly, the Independent Experts Review Panel and NERC management recommended a single standard that addresses emergency and non-emergency communications protocols. The OPCP SDT decided to combine the standards under the title COM-002-4 to further reduce confusion. The COM-002-4 title keeps the numbering of COM standards consecutive (*e.g.*, COM-001, COM-002).
- 3) **Project 2007-02, Posting 7 features 5 requirements.** The The OPCP SDT developed the requirement structure and language in posting 7 to incorporate Emergency, alert, and non-emergency communications protocols. The language in COM-002-4, Requirement R1 permits applicable entities flexibility to develop their communication protocols but requires a set of minimum elements in the communications protocols. Requirement R1 requires communications protocols to include the following elements:
  - a. **Reliability Directive Identification:** Requirement R1, Part 1.1 – Require the issuer of a Reliability Directive to identify the action as a Reliability Directive to the receiver.
  - b. **English Language:** Requirement R1, Part 1.2 – Require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
  - c. **Three-part Communication for Oral Operating Instructions:** Requirement R1, Parts 1.3 and 1.4 – Require three-part communication for issuers and receivers of oral two-party, person-to-person Operating Instructions.
  - d. **One-way Burst Message Receipt Confirmation and Clarification:** Requirement R1, Parts 1.5 and 1.6 – Require the issuer of an oral Operating Instruction to verbally or electronically confirm receipt by at least one receiver when issuing the Operating Instruction through a one-way burst messaging system used to communicate a common

- message to multiple parties in a short time period (*e.g.*, an all call system). Require receiver to request clarification if not understood.
- e. **Time Identification:** Requirement R1, Part 1.7 – Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.
  - f. **Transmission Interface Elements and Facilities Nomenclature:** Requirement R1, Part 1.8 – Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.
  - g. **Alpha-numeric Clarifiers:** Requirement R1, Part 1.9 – Specify the instances where alpha-numeric clarifiers are required when issuing an oral Operating Instruction and the format for those clarifiers.

Requirement R2 establishes minimum requirements in communications protocols for entities that typically only receive Operating Instructions. Requirement R2 requires Generator Operators and Distribution Providers to include the following elements in their communications protocols:

- a. **English Language:** Requirement R2, Part 2.1 – Require the receiver of an oral or written Operating Instruction to respond using the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
- b. **Three-part Communication for Oral Operating Instructions:** Requirement R2, Part 2.2 – Require the receiver of an oral two-party, person-to-person Operating Instruction to either repeat the Operating Instruction and receive confirmation from the issuer or request the issuer to reissue the Operating Instruction.
- c. **One-way Burst Message Receipt Clarification:** Requirement R2, Part 2.3 – Require the receiver of an oral Operating Instruction to request clarification from the issuer if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (*e.g.*, an all call system).

Requirements R3 and R4 require entities to implement the communications protocols in Requirements R1 and R2. The OPCP SDT included these requirements to ensure that entities would include COM-002-4 in their training programs under PER-005-1. Finally, Requirement R5 requires each Balancing Authority, Reliability Coordinator, and Transmission Operator to assess personnel's adherence to communications protocols to provide feedback to issuers and receivers of Operating Instructions and to assess the effectiveness of the communications protocols.



The OPCP SDT is posting the standard for industry comment for a **15-day** comment period. The OPCP SDT received a waiver of the 45-day comment period required in the NERC Standards Processes Manual from the NERC Standards Committee. Accordingly, we request that you include your comments on the electronic form by **November 4, 2013**.

## Questions

1. The OPCP SDT combined COM-002-3 and COM-003-1 into the COM-002-4 standard. Do you agree that COM-002-4 addresses the August 2003 Blackout Report Recommendation number 26, FERC Order 693, and the COM-003-1 SAR? If not, please explain in the comment area of the last question.

- Yes  
 No

Comments:

2. Do you agree with the VRFs and VSLs for Requirements R1, R2, R3, R4, and R5? If not, please explain.

- Yes  
 No

Comments:

3. Do you have any additional comments? Please provide them here.

- Yes  
 No

Comments:

# Project 2007-02, COM-002-4 Operating Personnel Communications Protocols Rationale and Technical Justification

Justification for Requirements in Posting 7

## Background

Posting 7 of Project 2007-02 – Operating Personnel Communications Protocols combines COM-002-3 and former draft COM-003-1 into one standard that addresses communications protocols for operating personnel in Emergency, alert and non-emergency conditions. The Operating Personnel Communications Protocols Standard Drafting Draft (OPCP SDT) determined that one communications protocols standard that addresses emergency and non-emergency situations will improve communications because system operators will not need to refer to a different set of protocols during the issuance of a Reliability Directive. The OPCP SDT believe this will improve consistency of communications and mitigate confusion during stressful emergency situations. As a result of the combination, the standard has been renumbered as COM-002-4 to maintain the consecutive numbering of the standards (e.g., COM-001, COM-002) since the combined standard will replace COM-002-2 and COM-002-3, where necessary.

In preparing COM-002-4, the Operating Personnel Communications Protocols Standard Drafting Team (OPCP SDT) considered the comments provided on draft 6 of COM-003-1 and also reviewed the recommendation of the NERC Board of Trustees (Board) Standards Oversight and Technology Committee (SOTC). In this posting, the OPCP SDT seeks industry comment on a combined communications standard. This provides an opportunity for industry to comment and ballot a combined standard prior to the Board's consideration of a communications standard at the November 2013 meeting of the Board.

The latest draft reflects a results-based approach to strengthening communications during non-emergency, alert, and emergency operating conditions. The following sections outline the OPCP SDT's revisions to the communications standards and rationale.

## Definition of Operating Instruction

The proposed definition of "Operating Instruction" has been revised to read as follows:

A command by operating personnel responsible for the Real-time generation control and operation of the interconnected Bulk Electric

System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction. A Reliability Directive is one type of an Operating Instruction.

As opposed to the definition used in draft 6 of COM-003-1, this revised definition characterizes a Reliability Directive as a type of Operating Instruction. Retaining the definition of Reliability Directive and including it within the scope of the definition of Operating Instruction is necessary since it is currently used in other Reliability Standards (e.g., TOP-001-2 and IRO-001-3).

A “command” as used in the definition refers to both oral and written commands by operating personnel. In the requirements of COM-002-4, the OPCP SDT has specified “oral” or “written” as needed to define which Operating Instructions are covered by the requirement. The definition continues to clarify that general discussions are not considered Operating Instructions.

## Applicability

In addition to Balancing Authorities, Reliability Coordinators, and Transmission Operators, the proposed standard applies to Distribution Providers and Generator Operators. The OPCP SDT added these Functional Entities in the Applicability section because they are often on the receiving end of Operating Instructions. The OPCP SDT determined that it would leave a gap to not cover them in a communications standard that addresses operating personnel. Recognizing that Generator Operators and Distribution Providers typically only receive Operating Instructions, the OPCP SDT proposed that only Requirements R2 and R4 apply to these Functional Entities. As a result, Generator Operators and Distribution Providers need only develop communications protocols governing receipt of Operating Instructions.

## Requirements in COM-002-4

### Requirement R1

Requirement R1 requires entities that can both issue and receive Operating Instructions to have documented communications protocols that include a minimum set of elements, outlined in Parts 1.1 through 1.9 of the requirement. Because Operating Instructions affect Facilities and Elements of the Bulk Electric System, the communication of those Operating Instructions must be understood by all involved parties, especially when those communications occur between Functional Entities. An EPRI study reviewed nearly 400 switching mishaps by electric utilities and found that roughly 19% of errors (generally classified as loss of load, breach of safety, or equipment damage) were due to communication

failures.<sup>1</sup> This was nearly identical to another study of dispatchers from 18 utilities representing nearly 2000 years of operating experience that found that 18% of the operators' errors were due to communication problems.<sup>2</sup> The necessary protocols include the use of the English language unless agreed to otherwise (except for internal operations), time formatting, specified nomenclature for Transmission interface Elements, alpha-numeric clarifiers, and three-part communications.

The OPCP SDT drafted Requirement R1 to ensure consistency among communications protocols while also allowing flexibility for entities to develop additional communications protocols. The OPCP SDT determined that the inclusion of the elements in Parts 1.1 through 1.9 are necessary to tighten communications protocols but are not overly prescriptive. The OPCP SDT determined that this approach is the best way to promote effective communications while maintaining flexibility for entities to include additional communications protocols based on its own operating environment.

On September 19, 2012, the NERC Operating Committee issued a Reliability Guideline entitled: "System Operator Verbal Communications – Current Industry Practices." As stated on page one, the purpose of the Reliability Guideline ". . . is to document and share current verbal BES communications practices and procedures from across the industry that have been found to enhance the effectiveness of system operator communications programs." This guideline serves as an additional source of information on best practices that entities can draw on in creating the documented communications protocols.

The term *documented communication protocols* in R1 refers to a set of required protocols specific to the Functional Entity and the Functional Entities they must communicate with. An entity should include as much detail as it believes necessary in their documented protocols, but they must address all of the applicable parts of Requirement R1. Where an entity does not already have a set of documented protocols that meet the parts of Requirement R1, the entity must develop the necessary communications protocols. Entities may also adopt the documented protocols of another entity as its own communications protocols, but the entity must maintain its own set of documented communications protocols to meet Requirement R1.

Each part of Requirement R1 is discussed below:

*1.1. Require the issuer of a Reliability Directive to identify the action as a Reliability Directive to the receiver.*

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<sup>1</sup> Beare, A., Taylor, J. *Field Operation Power Switching Safety*, WO2944-10, Electric Power Research Institute.

<sup>2</sup> Bilke, T., *Cause and prevention of human error in electric utility operations*, Colorado State University, 1998.

The OPCP SDT has included this part to ensure consistency with TOP-001-2, which requires compliance with the identified Reliability Directive by the Transmission Operator. This identification must be required in order to meet the performance expected in TOP-001-2. TOP-001-2 requires each Balancing Authority, Generator Operator, Distribution Provider, and Load-Serving Entity to comply with each Reliability Directive *issued and identified* as such by its Transmission Operator(s), unless such action would violate safety, equipment, regulatory, or statutory requirements.

*1.2. Require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.*

The OPCP SDT has included this part to carry forward the same use of English language included in COM-001-1, Requirement R4. Retirement of this Requirement in COM-001-1 was specifically referred to Project 2007-02. The requirement continues to permit the issuer and receiver to use an agreed to alternate language. This has been retained since use of an alternate language on a case-by-case basis may serve to better facilitate effective communications where the use of English language may create additional opportunities for miscommunications. Part 1.2 requires the use of English language when issuing oral or written (e.g. switching orders) Operating Instructions. This creates a standard language (unless agreed to otherwise) for use when issuing commands that could change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. It also clarifies that an alternate language can be used internally within the organization.

*1.3. Require the issuer of an oral two-party, person-to-person Operating Instruction to wait for a response from the receiver. Once a response is received, or if no response is received, require the issuer to take one of the following actions:*

- *Confirm the receiver's response if the repeated information is correct.*
- *Reissue the Operating Instruction if the repeated information is incorrect, if the receiver does not issue a response, or if requested by the receiver.*

The OPCP SDT has included this part to require communications protocols for the use of three-part communications for oral two-party, person-to-person Operating Instructions by the issuer. This carries forward the requirement to use three-part communications in COM-002-2 and COM-002-3.

The reliability benefits of using three-part communication (R1, parts 1.3 and 1.4) are threefold:

1. The removal of any doubt that communication protocols will be used and when they will be used. This will reduce the opportunity for confusion and misunderstanding among entities that may have different doctrine. An example is: One entity uses three-part for emergencies, and the other uses it for all operating conditions.

2. There will be no mental “transition” when operating conditions shift from normal to Emergency. The communication protocols for the operators will remain standard during transitions through all conditions.
  3. The formal requirement for three-part communication will create a heightened sense of awareness in operators that the task they are about to execute is critical, and recognize the risk to the reliable operation of the BES is increased if the communication is misunderstood.
- 1.4. *Require the receiver of an oral two-party, person-to-person Operating Instruction to take one of the following actions:*
- *Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct.*
  - *Request that the issuer reissue the Operating Instruction.*

The OPCP SDT has included this part to require communications protocols for the use of three-part communications for oral two-party, person-to-person Operating Instructions by the receiver. This is consistent with the approach to using three-part communications in COM-002-2 and COM-002-3.

- 1.5. *Require the issuer of an oral Operating Instruction to verbally or electronically confirm receipt by at least one receiver when issuing the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g., an all call system).*

The OPCP SDT has included this part to require communications protocols for an issuer for the use of a one-way burst messaging system. The drafting team has included this because the use of three-part communications is not practically possible when utilizing this type of communication. Therefore, it is necessary to include a different set of protocols for these situations.

- 1.6. *Require the receiver of an oral Operating Instruction to request clarification from the issuer if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g., an all call system).*

The OPCP SDT has included this part to require communications protocols for a receiver for the use of a one-way burst messaging system. The drafting team has included this because the use of three-part communications is not practically possible when utilizing this type of communication. Therefore, it is necessary to include a different set of protocols for these situations.

- 1.7. *Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.*

The OPCP SDT has included this part to add necessary clarity to Operating Instructions to reduce the risk of mistakes. Clarifying time and time zone (where necessary) contributes to reducing misunderstandings and reduce the risk of a grave error during BES operations.

*1.8. Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.*

Project 2007-03 chose to eliminate TOP-002-2a Requirement R18 when it developed TOP-002-3. This Requirement states “Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network.” COM-002-4, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are readily familiar with each other’s interface Elements and Facilities, eliminating hesitation and confusion when referring to equipment for the Operating Instruction. This shortens response time and improves situational awareness.

*1.9. Specify the instances where alpha-numeric clarifiers are required when issuing an oral Operating Instruction and the format for those clarifiers.*

The OPCP SDT has included this part to avoid miscommunications due to the fact that several letters in the English language sound alike and can be confused in stressful or noisy situations. For example, some letters sound alike when spoken, and can easily be confused; such as “D” and “B.” The phonetic alphabet specifies a common word for each letter of the English alphabet. By using a word for each letter, there is less chance that the person listening will confuse the letters. Using the phonetic alphabet, “Delta” and “Bravo” are more easily differentiated. The effects of noise, weak telephone or radio signals, and an individual's accent are reduced through the use of the phonetic alphabet.

## **Requirement R2**

Requirement R2 requires the development of documented communications protocols for Generator Operators and Distribution Providers receiving Operating Instructions. As Generator Operators and Distribution Providers typically only receive Operating Instructions, the OPCP SDT determined that a separate requirement for these Functional Entities covers their communications protocols but does not subject them to the additional requirements imposed upon entities who issue Operating Instructions. The requirement includes similar parts requiring the inclusion in communications protocols of the use of English language, three-part communications, and protocols for the use of a one-way burst messaging system.

## **Requirements R3 and R4**

Requirement R3 requires entities that issue and receive Operating Instructions to implement the documented communications protocols in Requirement R1. Requirement R4 requires Generator Operators and Distribution Providers who receive Operating Instructions to implement the documented communications protocols in Requirement R2.

The associated Measures for R3 and R4 explain that evidence demonstrating compliance may include, but is not limited to, descriptions of the management practices in place that provide the entity reasonable assurance that protocols established in Requirement R1 are being followed by personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System, spreadsheets, memos, or logs, evidencing periodic, independent review of operating personnel's adherence to the protocols established in Requirement R1 and the remediation of noted exceptions in fulfillment of Requirement R5. The VSLs for Requirement R3 and R4 have also been designed to reflect the identification of a pattern of not using the documented communications protocols developed in Requirement R1 and R2 as the VSL for Operating Instructions that are not Reliability Directives, also in addition to the severe VSL for not using the documented communications protocols developed in Requirement R1 and R2 when issuing or receiving a Reliability Directive.

### **Requirement R5**

Requirement R5 requires entities that are subject to Requirement R1 to continually assess the communications protocols and determine whether personnel adhere to them. The OPCP SDT determined that communications protocols need to be evaluated but allowed flexibility for entities to determine when to evaluate and how to assess or modify those communications protocols. The OPCP SDT believed this creates a learning environment through the use of feedback and most effectively promotes reliable communications.



## Project 2007-02: Operating Personnel Communication Protocols

Mapping Document

### COM-001-1.1 to COM-002-4

Board Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1.1</b></p> <p>R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.</p>	<p><b>COM-002-4</b></p> <p>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented communications protocols. The protocols shall, at a minimum: <i>[Violation Risk Factor: Low][Time Horizon: Long-term Planning]</i></p> <p>1.2. Require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations</p> <p>R2. Each Distribution Provider and Generator Operator shall have documented communications protocols. The protocols shall, at a minimum: <i>[Violation Risk Factor: Low][Time Horizon: Long-term Planning]</i></p> <p>2.1. Require the receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for</p>

Board Approved Standard	Proposed Replacement Requirement(s)
	internal operations
<b>Notes:</b> Moved COM-001-1 R4 into COM 002-4 Requirement R1 Part 1.2 and Requirement R2 Part 2.1	

## COM-002-2 to COM-002-3

Board Approved Standard	Proposed Replacement Requirement(s)
<p>COM-002-2</p> <p>R1. Each Transmission Operator, Balancing Authority, and Generator Operator shall have communications (voice and data links) with appropriate Reliability Coordinators, Balancing Authorities, and Transmission Operators. Such communications shall be staffed and available for addressing a real-time emergency condition. <i>[Violation Risk Factor: High]</i></p> <p>R1.1 Each Balancing Authority and Transmission Operator shall notify its Reliability Coordinator, and all other potentially affected Balancing Authorities and Transmission Operators through predetermined communication paths of any condition that could threaten the reliability of its area or when firm load shedding is anticipated. <i>[Violation Risk Factor: High]</i></p>	<p>The RC SDT retired COM-002-2, R1 and R1.1. The following rational was provided by that drafting team:</p> <p>The communications requirements of R1 are addressed in existing COM-001-1.1 as well as the proposed COM-001-2 requirements. Additionally, IRO-010-1a addresses data provisions.</p> <p>The RC SDT contends that COM-002-2, R1.1 is a low level facilitating requirement that is more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards. Examples include:</p> <ul style="list-style-type: none"> <li>• EOP-002-1, R3 – outlines BA to RC communications. IRO-001-1, R3 requires adequate telecommunication for the Reliability Coordinator to direct actions of multiple entities, including TOPs and BAs.</li> <li>• TOP-001-1, R3 requires adequate telecommunications facilities for the TOP, BA, and GOP to be able to receive directives from the RC.</li> </ul>

Board Approved Standard	Proposed Replacement Requirement(s)
	<ul style="list-style-type: none"> <li>• TOP-001-1, R5 requires communications between TOPs and RCs for emergency situations.</li> <li>• TOP-005-1, R1 and R3 require adequate telecommunications for BAs and TOPs to provide each other with operating data as well as providing data to the RC.</li> <li>• TOP-006-1, R1 requires adequate telecommunications for the GOP to inform the BA and TOP of resources. The BA and TOP will then inform the RC, other TOP and BAs of all transmission and generation available for use.</li> <li>• PER-001-1, R1 and PER-004-1, R1 set forth the staffing requirements.</li> </ul>
<p><b>Notes:</b> The RC SDT contends that COM-002-2, R1 and its sub-requirements are low level facilitating requirements that are more appropriately and inherently monitored under various higher-level performance-based reliability requirements for each entity throughout the body of standards. These include standards within the COM, IRO, and TOP body of standards and are specifically identified in the mapping table below.</p>	
<p><b>COM-002-2</b></p> <p>R2. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall issue directives in a clear, concise, and definitive manner; shall ensure the recipient of the directive repeats the information back correctly; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. <i>[Violation Risk Factor: Medium]</i></p>	<p><b>COM-002-3</b></p> <p>The RC SDT expanded COM-002-2 R2 into three requirements in COM-002-3:</p> <p><b>R1.</b> When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p>

Board Approved Standard	Proposed Replacement Requirement(s)
	<p><b>R2.</b> Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive, shall repeat, restate, rephrase or recapitulate the Reliability Directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p><b>R3.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall either: <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <ul style="list-style-type: none"> <li>• Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or</li> <li>• Reissue the Reliability Directive to resolve any misunderstandings.</li> </ul>
<p><b>Notes:</b> The RC SDT expanded the list of responsible entities to include the DP and GOP and subdivided the requirement to improve clarity.</p>	

## COM-002-3 to COM-002-4

Board Approved Standard	Proposed Replacement Requirement(s)
<p>COM-002-3</p> <p>R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time</i></p>	<p>COM-002-4</p> <p>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented communications protocols. The protocols shall, at a minimum: <i>[Violation Risk Factor: Low][Time Horizon: Long-term Planning]</i></p>

Board Approved Standard	Proposed Replacement Requirement(s)
<i>Horizon: Real-Time]</i>	1.1. Require the issuer of a Reliability Directive to identify the action as a Reliability Directive to the receiver.
<b>Notes:</b> Moved COM-002-3 R1 into COM 002-4 Requirement 1 Part 1.1	
<p>R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive, shall repeat, restate, rephrase or recapitulate the Reliability Directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p>	<p>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented communications protocols. The protocols shall, at a minimum: <i>[Violation Risk Factor: Low][Time Horizon: Long-term Planning]</i></p> <p>1.4. Require the receiver of an oral two-party, person-to-person Operating Instruction to take one of the following actions:</p> <ul style="list-style-type: none"> <li>• Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct.</li> <li>• Request that the issuer reissue the Operating Instruction.</li> </ul> <p>R2. Each Distribution Provider and Generator Operator shall have documented communications protocols. The protocols shall, at a minimum: <i>[Violation Risk Factor: Low][Time Horizon: Long-term Planning]</i></p> <p>2.2. Require the receiver of an oral two-party, person-to-person Operating Instruction to take one of the following actions:</p> <ul style="list-style-type: none"> <li>• Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was</li> </ul>

Board Approved Standard	Proposed Replacement Requirement(s)
	<p>correct.</p> <ul style="list-style-type: none"> <li>Request that the issuer reissue the Operating Instruction.</li> </ul>
<p><b>Notes:</b> Moved COM-002-3 R2 into COM 002-4 Requirement R1 Part 1.4 and Requirement R2 Part 2.2. Additional language was added to provide clarity for the responsibility of the receiver of three-part communication.</p>	
<p>R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall either: <i>[Violation Risk Factor: High] [Time Horizon: Real-Time]</i></p> <ul style="list-style-type: none"> <li>Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or</li> <li>Reissue the Reliability Directive to resolve any misunderstandings.</li> </ul>	<p>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented communications protocols. The protocols shall, at a minimum: <i>[Violation Risk Factor: Low][Time Horizon: Long-term Planning]</i></p> <p>1.3. Require the issuer of an oral two-party, person-to-person Operating Instruction to wait for a response from the receiver. Once a response is received, or if no response is received, require the issuer to take one of the following actions:</p> <ul style="list-style-type: none"> <li>Confirm the receiver’s response if the repeated information is correct.</li> <li>Reissue the Operating Instruction if the repeated information is incorrect, if the receiver does not issue a response, or if requested by the receiver.</li> </ul>
<p><b>Notes:</b> Moved COM-002-3 R3 into COM 002-4 Requirement R1 Part 1.3. Additional language was added to provide clarity for the responsibility of the issuer of three-part communication.</p>	

## **Project 2007-02 – Operating Personnel Communications Protocol**

### **VRF and VSL Justifications**

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in COM-002-4 Operating Personnel Communications Protocols.

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Operations Personnel Communications Protocol Standard Drafting Team applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSLs for the requirements under this project:

### **NERC Criteria - Violation Risk Factors**

#### **High Risk Requirement**

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a

cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

### **Medium Risk Requirement**

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

### **Lower Risk Requirement**

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

## **FERC Violation Risk Factor Guidelines**

### **Guideline (1) — Consistency with the Conclusions of the Final Blackout Report**

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.



In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief

#### **Guideline (2) — Consistency within a Reliability Standard**

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

#### **Guideline (3) — Consistency among Reliability Standards**

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

#### **Guideline (4) — Consistency with NERC's Definition of the Violation Risk Factor Level**

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC's definition of that risk level.

**Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation**

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC's VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC's Reliability Standards and implies that these requirements should be assigned a "High" VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

VRF for COM-002-4:

There are five requirements in COM-002-4, draft 1. Requirements R1 and R2 are assigned a "Low" VRF. R1 now reads: *"Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented communications protocols. The protocols shall, at a minimum:."* R2 now reads: *"Each Distribution Provider and Generator Operator shall have documented communications protocols. The protocols shall, at a minimum:."* Requirements R3 and R4 are assigned a "High" VRF. R3 now reads: *" Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement the documented communications protocols developed in Requirement R1."* R4 now reads: *" Each Distribution Provider and Generator Operator shall implement the documented communications protocols developed in Requirement R2."* These Requirements warrant VRFs of "High" because failure to use the communications protocols during an emergency could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures. Requirement R5 is assigned a "Low" VRF. R5 now reads: *" R5. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement a method to evaluate the communications protocols developed in Requirement R1 that:."*

## **NERC Criteria - Violation Severity Levels**

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple "degrees" of noncompliant performance and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
Missing a minor element (or a small percentage) of the required performance The performance or product	Missing at least one significant element (or a moderate percentage) of the required performance.	Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital	Missing most or all of the significant elements (or a significant percentage) of the required performance. The performance measured does not meet

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measured has significant value as it almost meets the full intent of the requirement.	The performance or product measured still has significant value in meeting the intent of the requirement.	component. The performance or product has limited value in meeting the intent of the requirement.	the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.
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## **FERC Order on Violation Severity Levels**

In its June 19, 2008 Order on Violation Severity Levels, FERC indicated it would use the following four guidelines for determining whether to approve VSLs:

### **Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance**

Compare the VSLs to any prior Levels of Non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when Levels of Non-compliance were used.

### **Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties**

Guideline 2a: A violation of a “binary” type requirement must be a “Severe” VSL.

Guideline 2b: Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

### **Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement**

VSLs should not expand on what is required in the requirement.

**Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations**

. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

The drafting team will complete the following table, providing of analysis and justification for each VRF and VSL, for each requirement.

VRF and VSL Justifications – COM-002-4, R1	
Proposed VRF	Low
NERC VRF Discussion	R1 is a requirement in a Long-term Planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system The VRF for this requirement is “Low,” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R1 establishes communications protocols, which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for the development of documented communications protocols by entities that will both issue and receive “Operating Instructions” that reduce the possibility of miscommunication which

VRF and VSL Justifications – COM-002-4, R1			
	could eventually lead to action or inaction harmful to the reliability of the bulk electric system.		
FERC VRF G4 Discussion	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b>                      Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “ Low,” which is consistent with NERC guidelines for similar requirements.</p>		
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>                      COM-002-4 Requirement R1 contains only one objective which is to document clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of the bulk electric system. Since the requirement has only one objective, only one VRF was assigned.</p>		
Proposed VSL			
Lower	Moderate	High	Severe
The responsible entity did not specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification, as required in Requirement R1, Part 1.7	The responsible entity did not require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise, as required in Requirement R1, Part 1.2. An alternate language may be used for internal operations.	The responsible entity did not include Requirement R1, Part 1.5 in its documented communication protocols  OR  The responsible entity did not include Requirement R1, Part 1.6 in its documented communications	The responsible entity did not include Requirement R1, Part 1.1 in its documented communications protocols  OR  The responsible entity did not include Requirement R1, Part 1.3 in its documented

**VRF and VSL Justifications – COM-002-4, R1**

<p>OR</p> <p>The responsible entity did not specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction, as required in Requirement R1, Part 1.8</p> <p>OR</p> <p>The responsible entity did not specify the instances where alpha-numeric clarifiers are required when issuing an oral Operating Instruction and the format for those clarifiers, as required in Requirement R1, Part 1.9.</p>		<p>protocols.</p>	<p>communications protocols</p> <p>OR</p> <p>The responsible entity did not include Requirement R1, Part 1.4 in its documented communications protocols</p> <p>OR</p> <p>The responsible entity did not develop any documented communications protocols as required in Requirement R1</p>
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**VRF and VSL Justifications – COM-002-4, R1**

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of common communication protocols, with varied VSLs based on the severity of the potential risk to the bulk electric system if the protocols were not used. If no communication protocols were addressed at all then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R1 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement. In addition, the VSLs are consistent with Requirement R1.</p>



## VRF and VSL Justifications – COM-002-4, R1

VRF and VSL Justifications – COM-002-4, R1	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM-002-4, R2	
<b>Proposed VRF</b>	Low
NERC VRF Discussion	R2 is a requirement in a Long-term Planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system The VRF for this requirement is “Low,” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R2 establishes communication protocols, which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for the development of documented communication protocols by entities that will only receive “Operating Instructions” that reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of the bulk electric system.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> Failure to utilize communication protocols properly could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Low,” which is consistent with NERC guidelines for similar requirements.
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-002-4 Requirement R2 contains only one objective which is to document clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of the bulk electric system. Since the requirement has

VRF and VSL Justifications – COM-002-4, R2			
		only one objective, only one VRF was assigned.	
Proposed VSL			
Lower	Moderate	High	Severe
N/A	The responsible entity did not require the receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise, as required in Requirement R2, Part 2.1. An alternate language may be used for internal operations.	The responsible entity did not include Requirement R2, Part 2.3 in its documented communication protocols.	The responsible entity did not include Requirement R2, Part 2.2 in its documented communications protocols  OR The responsible entity did not develop any documented communications protocols as required in Requirement R2

**VRF and VSL Justifications – COM-002-4, R2**

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed three VSLs based on misapplication or absence of common communication protocols, with varied VSLs based on the severity of the potential risk to the bulk electric system if the protocols were not used. If no communication protocols were addressed at all then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R2 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement. In addition, the VSLs are consistent with Requirement R1.</p>

VRF and VSL Justifications – COM-002-4, R2	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 002-4, R3	
Proposed VRF	High
NERC VRF Discussion	R3 is a requirement in a Real-time Operations time frame that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures due to failure to use the communications protocols during an emergency. The VRF for this requirement is “High,” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R2 falls under Recommendation 26 of the Blackout Report. The VRF for this requirement is “High,” which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for implementation of communication protocols developed in Requirement R1 to reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of the bulk electric system.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> R3 is a requirement in a Real Time- time frame that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures due to failure to use the communications protocols during an emergency. The VRF for this requirement is “High,” which is consistent with NERC guidelines.
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-002-4 Requirement R3 contains only one objective which is to implement clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of the bulk electric system. Since the requirement has

VRF and VSL Justifications – COM 002-4, R3			
		only one objective, only one VRF was assigned.	
Proposed VSL			
Lower	Moderate	High	Severe
N/A	N/A	The responsible entity demonstrates a consistent pattern of not using the documented communications protocols developed in Requirement R1 for Operating Instructions that are not Reliability Directives.	The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving a Reliability Directive.

**VRF and VSL Justifications – COM 002-4, R3**

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed two VSLs to establish the severity of an entity not implementing their communications protocols. If an entity demonstrates a consistent pattern of not using their protocols over time for Operating Instructions that are not Reliability Directives, then they are deemed to not have implemented their communications protocols at a “high” level. If an entity does not use their protocols when issuing or receiving a Reliability Directive, then they are deemed to not have implemented their communications protocols at a “severe” level.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R3 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>



## VRF and VSL Justifications – COM 002-4, R3

VRF and VSL Justifications – COM 002-4, R3	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 002-4, R4	
Proposed VRF	High
NERC VRF Discussion	R4 is a requirement in a Real-time Operations time frame that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures due to failure to use the communications protocols during an emergency. The VRF for this requirement is “High,” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R4 falls under Recommendation 26 of the Blackout Report. The VRF for this requirement is “High,” which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement calls for implementation of communication protocols developed in Requirement R2 to reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of the bulk electric system.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> R4 is a requirement in a Real-time Operations time frame that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures due to failure to use the communications protocols during an emergency. The VRF for this requirement is “High” which is consistent with NERC guidelines.
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-002-4 Requirement R4 contains only one objective which is to implement clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of the bulk electric system. Since the requirement has

VRF and VSL Justifications – COM 002-4, R4			
only one objective, only one VRF was assigned.			
Proposed VSL			
Lower	Moderate	High	Severe
N/A	N/A	The responsible entity demonstrates a consistent pattern of not using the documented communications protocols developed in Requirement R2 for Operating Instructions that are not Reliability Directives.	The responsible entity did not use the documented communications protocols developed in Requirement R2 when receiving a Reliability Directive.

**VRF and VSL Justifications – COM 002-4, R4**

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed two VSLs to establish the severity of an entity not implementing their communications protocols. If an entity demonstrates a consistent pattern of not using their protocols over time for Operating Instructions that are not Reliability Directives, then they are deemed to not have implemented their communications protocols at a “high” level. If an entity does not use their protocols when receiving a Reliability Directive, then they are deemed to not have implemented their communications protocols at a “severe” level.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R4 is not binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>

VRF and VSL Justifications – COM 002-4, R4	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

VRF and VSL Justifications – COM 002-4, R5	
Proposed VRF	Low
NERC VRF Discussion	R5 is a requirement in an Operations Planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system The VRF for this requirement is “Low,” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R5 establishes a method to evaluate communication protocols, which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has sub-requirements that are of equal importance and similarly address communication protocols; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> This requirement establishes a method to evaluate communication protocols developed in Requirement R1 to reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of the bulk electric system, which is not inconsistent with any other Reliability Standards.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> R5 is a requirement in an Operations Planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system The VRF for this requirement is “Low,” which is consistent with NERC guidelines.
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-002-4 Requirement R5 contains only one objective which is to establish a method to evaluate communication protocols developed in Requirement R1 to reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of the bulk electric system. Since the

VRF and VSL Justifications – COM 002-4, R5			
		requirement has only one objective, only one VRF was assigned.	
Proposed VSL			
Lower	Moderate	High	Severe
N/A	N/A	N/A	The responsible entity did not implement a method for evaluating its communications protocols as specified in Requirement R5.

**VRF and VSL Justifications – COM 002-4, R5**

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed one VSL based on the failure to establish a method to evaluate the communication protocols developed in Requirement R1. Therefore the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R5 is binary.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>



VRF and VSL Justifications – COM 002-4, R5	
Corresponding Requirement	
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	The VSL is based on a single violation and not cumulative violations
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	Non CIP
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	Non CIP

## Table of Issues and Directives

Project 2007-02

Operating Personnel Communications Protocols

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
FERC Order No. 693, P 512, 513, 540 (Part1)	512. The Commission finds that, during both normal and emergency operations, it is essential that the transmission operator, balancing authority and reliability coordinator have communications with distribution providers. In response to APPA, as discussed above, any distribution provider that is not a user, owner or operator of the Bulk-Power System would not be required to comply with COM-002-2, even though the Commission is requiring the ERO to modify the Reliability Standard to include distribution providers as applicable entities. APPA's concern that 2,000 public power systems would have to be added to the compliance registry is misplaced, since, as we explain in our Applicability discussion above, we are approving NERC's registry process, including the registry criteria. Therefore, we adopt our proposal to require	Distribution Providers have been included as applicable entities in COM-002-4	Applicability 4.1.2 Requirements R2, R4, R5.

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
	<p>the ERO to modify COM-002-2 to apply to distribution providers through its Reliability Standards development process.</p> <p>513. The Commission believes that this Reliability Standard does not alter who would operate a distribution provider’s system. It only concerns communications, not the operation of the distribution system.</p> <p>540. ... In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to COM-002-2 through the Reliability Standards development process that: (1) expands the applicability to include distribution providers as applicable entities; (2) includes a new Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area view of a transmission operator or balancing authority and (3) requires tightened communications protocols, especially for communications during alerts and emergencies. Alternatively, with respect to this final issue, the ERO may</p>		

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
	<p>develop a new Reliability Standard that responds to Blackout Report Recommendation No. 26 in the manner described above. Finally, we direct the ERO to include APPA's suggestions to complete the Measures and Levels of Non-Compliance in its modification of COM-002-2 through the Reliability Standards development process.</p>		
<p>FERC Order No. 693, P 531, 534, 535, 540 (Part 3)</p>	<p>531. We adopt our proposal to require the ERO to establish tightened communication protocols, especially for communications during alerts and emergencies, either as part of COM-002-2 or as a new Reliability Standard. We note that the ERO's response to the Staff Preliminary Assessment supports the need to develop additional Reliability Standards addressing consistent communications protocols among personnel responsible for the reliability of the Bulk-Power System.</p> <p>534. In response to MISO's contention that Blackout Report Recommendation No. 26 has been fully implemented, we note that</p>	<p>COM-002-4 tightens protocols for Operating Instructions, which cover necessary non-emergency communications and communications that are Reliability Directives. Reliability Directives include both alert and emergency communications.</p>	<p>Definition of Operating Instruction Requirements R1, R2, R3, R4, R5</p>

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
	<p>Recommendation No. 26 addressed two matters. We believe MISO is referring to the second part of the recommendation requiring NERC to “[u]pgrade communication system hardware where appropriate” instead of tightening communications protocols. While we commend the ERO for taking appropriate action in upgrading its NERCNet, we remind the industry to continue their efforts in addressing the first part of Blackout Recommendation No. 26. (Emphasis added)</p> <p>535. Accordingly, we direct the ERO to either modify COM-002-2 or develop a new Reliability Standard that requires tightened communications protocols, especially for communications during alerts and emergencies.</p>		
<p>FERC Order No. 693, P 532</p>	<p>532. While we agree with EEI that EOP-001-0, Requirement R4.1 requires communications protocols to be used during emergencies, we believe, and the ERO agrees, that the communications protocols need to be</p>	<p>Reliability Standard EOP-001-2.1b — Emergency Operations Planning (successor standard to EOP-001-0) requires that the emergency plans for each Transmission Operator and Balancing Authority include:</p>	<p>Requirements R1, R3, R5</p>

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
	<p>tightened to ensure Reliable Operation of the Bulk-Power System. We also believe an integral component in tightening the protocols is to establish communication uniformity as much as practical on a continent-wide basis. This will eliminate possible ambiguities in communications during normal, alert and emergency conditions. This is important because the Bulk- Power System is so tightly interconnected that system impacts often cross several operating entities' areas.</p> <p>533. Regarding APPA's suggestion that it may be beneficial to include communication protocols in the relevant Reliability Standard that governs those types of emergencies, we direct that it be addressed in the Reliability Standards development process.</p>	<p>communications protocols to be used during emergencies (Requirement R3.1). This requirement is compatible with COM-002-4, which establishes the communications protocols and requires their use.</p> <p>COM-002-4 requires a set of protocols be used by all applicable entities, establishing communication uniformity as much as practical on a continent-wide basis</p>	

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
<p>FERC Order No. 693, P 514, 515</p>	<p>514. APPA notes that the Levels of Non-Compliance for COM-002-2 are inadequate in two respects: (1) reliability coordinators are not included in any Level of Non-Compliance and (2) the Levels of Non-Compliance for transmission operators and balancing authorities in Compliance D.2 do not reference Requirements R1 and R2. Therefore, APPA would support approval of COM-002-2 as a mandatory Reliability Standard, but would not support levying penalties for violating incomplete portions of the Reliability Standard.</p> <p>515. As stated in the Common Issues section, a Reliability Standard is enforceable even if it does not contain Levels of Non-Compliance. However, the Commission agrees with APPA that this Reliability Standard could be improved by incorporating the changes proposed by APPA. Therefore, when reviewing the Reliability Standard through the Reliability Standards development process, the ERO should consider</p>	<p>COM-002-4 includes Measures, VRFs and VSLs for each requirement.</p>	<p>Section C, Measures Section D, Compliance</p>

**Table of Issues and Directives Associated with COM-002-4**

Source	Directive Language	Disposition	Section and/or Requirement(s)
	APPA’s concerns.		
2003 Blackout Report Recommendation No. 26	NERC should work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations, and ensure that all key parties, including state and local officials, receive timely and accurate information. NERC should task the regional councils to work together to develop communications protocols by December 31, 2004, and to assess and report on the adequacy of emergency communications systems within their regions against the protocols by that date.	The requirements in COM-002-4 will improve the effectiveness of internal and external communications during alerts, emergencies, and other critical situations.	Requirements R1, R2, R3, R4, R5



# Reliability Standard Audit Worksheet<sup>1</sup>

## COM-002-4 – Operating Personnel Communications Protocols

*This section to be completed by the Compliance Enforcement Authority.*

**Audit ID:** Audit ID if available; or REG-NCRnnnnn-YYYYMMDD  
**Registered Entity:** Registered name of entity being audited  
**NCR Number:** NCRnnnnn  
**Compliance Enforcement Authority:** Region or NERC performing audit  
**Compliance Assessment Date(s)<sup>2</sup>:** Month DD, YYYY, to Month DD, YYYY  
**Compliance Monitoring Method:** Audit  
**Names of Auditors:** Supplied by CEA

### Applicability of Requirements *[RSAW developer to insert correct applicability]*

	BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	RSG	TO	TOP	TP	TSP
R1	X								X				X		
R2		X		X											
R3	X								X				X		
R4		X		X											
R5	X								X				X		

<sup>1</sup> NERC developed this Reliability Standard Audit Worksheet (RSAW) language in order to facilitate NERC’s and the Regional Entities’ assessment of a registered entity’s compliance with this Reliability Standard. The NERC RSAW language is written to specific versions of each NERC Reliability Standard. Entities using this RSAW should choose the version of the RSAW applicable to the Reliability Standard being assessed. While the information included in this RSAW provides some of the methodology that NERC has elected to use to assess compliance with the requirements of the Reliability Standard, this document should not be treated as a substitute for the Reliability Standard or viewed as additional Reliability Standard requirements. In all cases, the Regional Entity should rely on the language contained in the Reliability Standard itself, and not on the language contained in this RSAW, to determine compliance with the Reliability Standard. NERC’s Reliability Standards can be found on NERC’s website. Additionally, NERC Reliability Standards are updated frequently, and this RSAW may not necessarily be updated with the same frequency. Therefore, it is imperative that entities treat this RSAW as a reference document only, and not as a substitute or replacement for the Reliability Standard. It is the responsibility of the registered entity to verify its compliance with the latest approved version of the Reliability Standards, by the applicable governmental authority, relevant to its registration status.

The NERC RSAW language contained within this document provides a non-exclusive list, for informational purposes only, of examples of the types of evidence a registered entity may produce or may be asked to produce to demonstrate compliance with the Reliability Standard. A registered entity’s adherence to the examples contained within this RSAW does not necessarily constitute compliance with the applicable Reliability Standard, and NERC and the Regional Entity using this RSAW reserves the right to request additional evidence from the registered entity that is not included in this RSAW. Additionally, this RSAW includes excerpts from FERC Orders and other regulatory references. The FERC Order cites are provided for ease of reference only, and this document does not necessarily include all applicable Order provisions. In the event of a discrepancy between FERC Orders, and the language included in this document, FERC Orders shall prevail.

<sup>2</sup> Compliance Assessment Date(s): The date(s) the actual compliance assessment (on-site audit, off-site spot check, etc.) occurs.

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### Subject Matter Experts

Identify Subject Matter Expert(s) responsible for this Reliability Standard. (Insert additional rows if necessary)

### Registered Entity Response **(Required)**:

SME Name	Title	Organization	Requirement(s)

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DRAFT

**R1 Supporting Evidence and Documentation**

- R1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented communications protocols. The protocols shall, at a minimum:
- 1.1.** Require the issuer of a Reliability Directive to identify the action as a Reliability Directive to the recipient.
  - 1.2.** Require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
  - 1.3.** Require the issuer of an oral two-party, person-to-person Operating Instruction to wait for a response from the receiver. Once a response is received, or if no response is received, require the issuer to take one of the following actions:
    - Confirm the receiver’s response if the repeated information is correct.
    - Reissue the Operating Instruction if the repeated information is incorrect, if the receiver does not issue a response, or if requested by the receiver..
  - 1.4.** Require the receiver of an oral two-party, person-to-person Operating Instruction to take one of the following actions:
    - Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct.
    - Request that the issuer reissue the Operating Instruction.
  - 1.5.** Require the issuer of an oral Operating Instruction to verbally or electronically confirm receipt by at least one receiver when issuing the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (*e.g.*, an all call system).
  - 1.6.** Require the receiver of an oral Operating Instruction to request clarification from the issuer if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (*e.g.*, an all call system).
  - 1.7.** Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.
  - 1.8.** Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.
  - 1.9.** Specify the instances where alpha-numeric clarifiers are required when issuing an oral Operating Instruction and the format for those clarifiers.

**Definition of Operating Instruction**

A command by operating personnel responsible for the Real-time generation control and operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. A discussion of general information and of potential

## DRAFT NERC Reliability Standard Audit Worksheet

options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction. A Reliability Directive is one type of an Operating Instruction.

**M1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1.

### Registered Entity Response to General Compliance with this Requirement (Required):

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

### Evidence Requested<sup>3</sup>:

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.

A copy of the documented communication protocols that cover the Requirements outlined in Requirement R1 Parts 1.1 to 1.9.

### Registered Entity Evidence (Required):

The following information is recommended for all evidence submitted:  
File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description.  
Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

### Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

### Compliance Assessment Approach Specific to COM-002-4, R1

#### *This section to be completed by the Compliance Enforcement Authority*

	Review the documented communications protocols provided by entity and ensure they address the sub-requirements of R1 as follows:
	(1.1) Requires the issuer of a Reliability Directive to identify the action as a Reliability Directive to the

<sup>3</sup> Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity's discretion.

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	recipient
(1.2)	Requires the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
(1.3)	Requires the issuer of an oral two party, person-to-person Operating Instruction to wait for a repetition from the receiver and if the repetition is correct confirm the repetition. If the repetition is incorrect, or if no repetition is received, or if the receiver requests, requires the issuer to reissue the Operating Instruction.
(1.4)	Requires the receiver of an oral two party, person-to-person Operating Instruction to take one of the following actions: <ul style="list-style-type: none"><li>• Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct</li><li>• Request that the issuer reissue the Operating Instruction.</li></ul>
(1.5)	Requires the issuer of an oral Operating Instruction to verbally or electronically confirm receipt by at least one receiving party when issuing the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g., an all call system)
(1.6)	Requires the receiver of an oral Operating Instruction to request clarification from the initiator if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system).
(1.7)	Specifies the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.
(1.8)	Specifies the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.
(1.9)	Specifies the instances where alpha-numeric clarifiers are required when issuing an oral Operating Instruction and the format for those clarifiers

**Note to Auditor:**

**Auditor Notes:**

**R2 Supporting Evidence and Documentation**

- R2.** Each Distribution Operator and Distribution Operator shall have documented communications protocols. The protocols shall, at a minimum:
- 2.1.** Require the receiver of an oral or written Operating Instruction to respond using the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
  - 2.2.** Require the receiver of an oral two-party, person-to-person Operating Instruction to take one of the following actions:
    - Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct.
    - Request that the issuer reissue the Operating Instruction.
  - 2.3.** Require the receiver of an oral Operating Instruction to request clarification from the issuer if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g., an all call system).
- M2.** Each Distribution Provider and Generator Operator shall provide its documented communications protocols developed for Requirement R2.

**Registered Entity Response to General Compliance with this Requirement (Required):**

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

**Evidence Requested<sup>4</sup>:**

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.

A copy of the documented communication protocols that cover the Requirements outlined in Requirement R2 Parts 2.1 to 2.3.

**Registered Entity Evidence (Required):**

The following information is recommended for all evidence submitted:  
File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description.  
Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

<sup>4</sup> Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity's discretion.

**DRAFT NERC Reliability Standard Audit Worksheet**

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**Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):**


**Compliance Assessment Approach Specific to COM-002-4, R2**

***This section to be completed by the Compliance Enforcement Authority***

	Review the documented communications protocols provided by entity and ensure they address the sub-requirements of R2 as follows:
(2.1)	Requires the receiver of an oral or written Operating Instruction to respond using the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
(2.2)	Requires the receiver of an oral two party, person-to-person Operating Instruction to take one of the following actions: <ul style="list-style-type: none"><li>• Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct</li><li>• Request that the issuer reissue the Operating Instruction.</li></ul>
(2.3)	Requires the receiver of an oral Operating Instruction to request clarification from the initiator if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system).

**Note to Auditor:**

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**Auditor Notes:**

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**R3 Supporting Evidence and Documentation**

- R3.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement the documented communications protocols developed in Requirement R1.
  
- M3.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence that it implemented the documented communication protocols which may include, but is not limited to, descriptions of the management practices in place that provide the entity reasonable assurance that protocols established in Requirement R1 are being followed by personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System, spreadsheets, memos, or logs, evidencing periodic, independent review of operating personnel’s adherence to the protocols established in Requirement R1 and the remediation of noted exceptions in fulfillment of Requirement R5.

**Registered Entity Response to General Compliance with this Requirement (Required):**

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

**Evidence Requested<sup>5</sup>:**

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.

Descriptions of the management practices in place that provide the entity reasonable assurance that protocols established in Requirement R1 are being followed by personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System.

Spreadsheets, memos, or logs, evidencing periodic, independent review of operating personnel’s adherence to the protocols established in Requirement R1 and the remediation of noted exceptions.

**Registered Entity Evidence (Required):**

The following information is recommended for all evidence submitted:  
File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description.  
Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

<sup>5</sup> Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity’s discretion.



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**Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):**


**Compliance Assessment Approach Specific to COM-002-4, R3**

*This section to be completed by the Compliance Enforcement Authority*

	Review the design of the entity’s management practices related to communication protocols to gain reasonable assurance that they are effective. Design considerations include frequency, volume of communications reviewed, and independence of the reviewing party. Identify if management practices proactively identify and correct issues with communications protocols.
	Review the evidence provided to gain reasonable assurance that the management practices asserted above are actually occurring, and are reasonably effective.
	If above management practices are deemed insufficient to provide reasonable assurance that communication protocols are being followed, apply other audit procedures as necessary to gain confidence regarding the implementation of the communication protocols. See ‘Note to Auditor’ section for additional details.

**Note to Auditor:**

The nature and extent of audit procedures applied related to this requirement will vary depending on certain risk factors to the Bulk Electric System and the auditor’s assessment of management practices specific to this requirement. In general, more extensive audit procedures will be applied where risks to the Bulk Electric System are higher and management practices are determined to be less effective.

Based on the assessment of risk and internal controls, as described above, specific audit procedures applied for this requirement may range from exclusion of this requirement from audit scope to the auditor reviewing a sample of voice recordings to ensure the protocols related to Operating Instructions were followed. Auditors may also interview entity operating personnel to understand how they comply with the protocols and observe them performing their duties. In circumstances where voice recordings are reviewed, auditors should consider requesting recordings commensurate with known events in the entity’s footprint during the audit period, as Operating Instructions may be more likely to occur during, and related to, such events, although other sampling methods for selecting voice recordings may also be employed.

An auditor should first examine the internal controls for this Requirement, not the actual communications. The focus is on understanding the entity’s internal control processes, verifying they are actually performing the control, and that the control is reasonably designed. Sampling is not a part of the audit process unless the auditor determines that the internal control is not properly designed or is ineffective. If the auditor cannot

**DRAFT NERC Reliability Standard Audit Worksheet**

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rely on the entity's controls to gain reasonable assurance of compliance, then the auditor can pull a sample of the entity's communications from their available voice recordings (limited to the prior 90 calendar days) and if instances of noncompliance with the protocols are found, they will be turned over to Enforcement, which will make the determination whether the entity demonstrates a consistent pattern of not using their documented communications protocols and, if applicable, the severity of the violation.

**Auditor Notes:**

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DRAFT

**R4 Supporting Evidence and Documentation**

- R4.** Each Distribution Provider and Generator Operator shall implement the documented communications protocols developed in Requirement R2.
  
- M4.** Each Distribution Provider and Generator Operator shall provide evidence that it implemented the documented communication protocols which may include, but is not limited to, descriptions of the management practices in place that provide the entity reasonable assurance that protocols established in Requirement R2 are being followed by personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System, spreadsheets, memos, or logs, evidencing periodic, independent review of operating personnel’s adherence to the protocols established in Requirement R2.

**Registered Entity Response to General Compliance with this Requirement (Required):**

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

**Evidence Requested<sup>6</sup>:**

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.

Descriptions of the management practices in place that provide the entity reasonable assurance that protocols established in Requirement R2 are being followed by personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System.

Spreadsheets, memos, or logs, evidencing periodic, independent review of operating personnel’s adherence to the protocols established in Requirement R2 and the remediation of noted exceptions.

**Registered Entity Evidence (Required):**

The following information is recommended for all evidence submitted:  
File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description.  
Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

<sup>6</sup> Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity’s discretion.

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**Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):**


**Compliance Assessment Approach Specific to COM-002-4, R4**

***This section to be completed by the Compliance Enforcement Authority***

	Review the design of the entity’s management practices related to communication protocols to gain reasonable assurance that they are effective. Design considerations include frequency, volume of communications reviewed, and independence of the reviewing party. Identify if management practices proactively identify and correct issues that could lead to failure of communications protocols.
	Review the evidence provided to gain reasonable assurance that the management practices asserted above are actually occurring, and are reasonably effective.
	If above management practices are deemed insufficient to provide reasonable assurance that communication protocols are being followed, apply other audit procedures as necessary to gain confidence regarding the implementation of the communication protocols. See ‘Note to Auditor’ section for additional details.

**Note to Auditor:** The nature and extent of audit procedures applied related to this requirement will vary depending on certain risk factors to the Bulk Electric System and the auditor’s assessment of management practices specific to this requirement. In general, more extensive audit procedures will be applied where risks to the Bulk Electric System are higher and management practices are determined to be less effective.

Based on the assessment of risk and internal controls, as described above, specific audit procedures applied for this requirement may range from exclusion of this requirement from audit scope to the auditor reviewing a sample of voice recordings to ensure the protocols related to Operating Instructions were followed. Auditors may also interview entity operating personnel to understand how they comply with the protocols and observe them performing their duties. In circumstances where voice recordings are reviewed, auditors should consider requesting recordings commensurate with known events in the entity’s footprint during the audit period, as Operating Instructions may be more likely to occur during, and related to, such events, although other sampling methods for selecting voice recordings may also be employed.

An auditor should first examine the internal controls for this Requirement, not the actual communications. The focus is on understanding the entity’s internal control processes, verifying they are actually performing the control, and that the control is reasonably designed. Sampling is not a part of the audit process unless the auditor determines that the internal control is not properly designed or is ineffective. If the auditor cannot rely on the entity’s controls to gain reasonable assurance of compliance, then the auditor can pull a sample of the entity’s communications from their available voice recordings (limited to the prior 90 calendar days) and if instances of noncompliance with the protocols are found, they will be turned over to Enforcement, which will make the determination whether the entity demonstrates a consistent pattern of not using their documented communications protocols and, if applicable, the severity of the violation.

**Auditor Notes:**

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**R5 Supporting Evidence and Documentation**

- R5.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement a method to evaluate the communications protocols developed in Requirement R1 that:
  - 5.1.** Assesses adherence to the communication protocols to provide feedback to issuers and receivers of Operating Instructions.
  - 5.2.** Assesses the effectiveness of the communication protocols and modifies those protocols, as necessary.
  
- M5.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide descriptions and associated evidence of the management practices in place that demonstrate a review of communications with operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System and evidence that the entity evaluates the effectiveness of its documented communications protocols in fulfillment of Requirement R5.

**Registered Entity Response to General Compliance with this Requirement (Required):**

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

**Evidence Requested<sup>7</sup>:**

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.

Provide evidence that entity evaluates the effectiveness of the documented protocols.

Provide evidence that entity provides feedback to improve the effectiveness of operator communication.

**Registered Entity Evidence (Required):**

The following information is recommended for all evidence submitted:  
File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description.  
Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

<sup>7</sup> Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity's discretion.

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**Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):**


**Compliance Assessment Approach Specific to COM-003-1, R5**

***This section to be completed by the Compliance Enforcement Authority***

	Understand the method and review the evidence provided by the entity to gain confidence that the entity is evaluating its documented communications protocols developed in Requirement R1. Gain confidence that evaluation addresses sub-requirements R5.1-R5.2.
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**Note to Auditor:** Auditor should assess whether evidence related to the management practices providing reasonable assurance of implementation of communication protocols provided by entity for Requirement R3 also satisfies Requirement R5, in part or in whole.

**Auditor Notes:**

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**Additional Information:**

**Reliability Standard**

*The RSAW developer should provide the following information without hyperlinks. Update the information below as appropriate.*

The full text of STD-OXX-N may be found on the NERC Web Site ([www.nerc.com](http://www.nerc.com)) under “Program Areas & Departments”, “Reliability Standards.”

In addition to the Reliability Standard, there is an applicable Implementation Plan available on the NERC Web Site.

In addition to the Reliability Standard, there is background information available on the NERC Web Site.

Capitalized terms in the Reliability Standard refer to terms in the NERC Glossary, which may be found on the NERC Web Site.

**Sampling Methodology [If developer deems reference applicable]**

Sampling is essential for auditing compliance with NERC Reliability Standards since it is not always possible or practical to test 100% of either the equipment, documentation, or both, associated with the full suite of enforceable standards. The [Sampling Methodology Guidelines and Criteria](#), or sample guidelines, provided by the Electric Reliability Organization help to establish a minimum sample set for monitoring and enforcement uses in audits of NERC Reliability Standards.

**Regulatory Language [Developer to ensure RSAW has been provided to NERC Legal for links to appropriate Regulatory Language – See example below]**

E.g. FERC Order No. 742 paragraph 34: “Based on NERC’s.....”

E.g. FERC Order No. 742 Paragraph 55, Commission Determination: “We affirm NERC’s.....”

**Selected Glossary Terms [If developer deems applicable]**

The following Glossary terms are provided for convenience only. Please refer to the NERC web site for the current enforceable terms.

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**DRAFT** NERC Reliability Standard Audit Worksheet

**Revision History**

Version	Date	Reviewers	Revision Description
1	10/18/2013	NERC Compliance, NERC Standards	New Document

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## **Proposed Waiver on COM-002 and COM-003 Reliability Standards**

### **Action**

Approve a waiver to shorten ballot and comment periods during development of a combined COM-002 and COM-003 standard.

### **Background**

To prepare for potential direction from the Board of Trustees (“Board”) regarding COM-003-1, the SC took two actions at its meeting on September 19, 2013 enabling the development of a revised COM-003-1 standard on an expedited timeline. On September 30, 2013, the Board’s Standards Oversight and Technology Committee (“SOTC”) held a closed conference call to deliberate on the inputs to the Board’s questions received on the draft COM-003-1 Reliability Standard from the Independent Expert Review Panel, Reliability Issues Steering Committee, NERC Management and the Operating Committee. The SOTC approved a recommendation to the Board directing the SC to work with the relevant standard drafting team (SDT) (i.e. the Operating Personnel Communications Protocols (OPCP) SDT) to develop a combined COM-002 and COM-003 standard (the “combined standard”) that includes essential elements included in the SOTC’s resolution.

Prior to Board action, the SOTC further agreed to direct the SC and NERC management to provide an update to the SOTC at the November 6, 2013 SOTC meeting on the status of the development of the draft combined standard and the RSAW. The November 2013 Policy Input to NERC Board of Trustees is attached. Based on the action of the SOTC, the SC is requested to approve a new waiver that will supersede the SC’s September 19, 2013 waiver on COM-003 that will allow the OPCS SDT to approve development of a revised standard on a shortened timeline and will enable the SDT to develop a draft combined standard with the input and direction from the SOTC. The SC is also requested to approve a shorter time period for the initial posting to develop, post, and ballot the draft combined standard before the November 7, 2013 Board meeting. The proposed waiver on a combined COM-002/COM-003 standard is included below:

If, prior to or at its November 7, 2013 meeting, the Board or the Standards Oversight and Technology Committee requests or directs the COM-003-1 standard drafting team to post for comment and ballot a proposed COM-002 and COM-003 standard (the “combined standard”), the Standards Committee approves the following waiver:

- a. Direct the COM-003-1 standard drafting team to develop a combined standard and post the revised combined standard for a 15-calendar day comment and concurrent 10-calendar day ballot period.
- b. If the revised combined standard passes, the COM-003-1 standard drafting team is directed to post the revised combined standard for a 5-calendar day final ballot period.

- c. If the revised combined standard does not pass, the standard drafting team is directed not to post the revised combined standard for final ballot.

As required in Section 16.0 of the Standard Processes Manual, NERC provided stakeholders with notice of this waiver request on October 1, 2013. If the waiver is authorized, NERC staff will post notice of the waiver on the project page and notify the NERC Board of Trustees Standards Oversight and Technology Committee.

## Standards Announcement **Reminder**

Project 2007-02 Operating Personnel Communications Protocols  
COM-002-4

**An Additional Ballot and Non-binding Poll is now open through November 4, 2013**

[Now Available](#)

An additional ballot for **COM-002-4** Operating Personnel Communications Protocols and a non-binding poll of the associated Violation Risk Factors and Violation Severity Levels is now open through **8 p.m. Eastern on Monday, November 4, 2013**.

Background information for this project can be found on the [project page](#).

### **Instructions for Balloting**

Members of the ballot pools associated with this project may log in and submit their vote for the definition by clicking [here](#).

**As a reminder, this ballot is being conducted under the revised Standard Processes Manual, which requires all negative votes to have an associated comment submitted (or an indication of support of another entity's comments). Please see NERC's [announcement](#) regarding the balloting software updates and the [guidance document](#), which explains how to cast your ballot and note if you've made a comment in the online comment form or support another entity's comment**

### **Next Steps**

The ballot results will be announced and posted on the project page. The drafting team will consider all comments received during the formal comment period and, if needed, make revisions to the definition. If the comments do not show the need for significant revisions, the definition will proceed to a final ballot.

### **Standards Process**

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact Wendy Muller,  
Standards Development Administrator, at [wendy.muller@nerc.net](mailto:wendy.muller@nerc.net) or at 404-446-2560.*

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# Standards Announcement

## Project 2007-02 Operating Personnel Communications Protocols COM-002-4

**Comment Period: October 21 – November 4, 2013**

Upcoming

Additional Ballot and Non-binding Poll: October 25 – November 4, 2013

### [Now Available](#)

A **15-day** comment period for **COM-002-4** Operating Personnel Communications Protocols is open through **8 p.m. Eastern on Monday, November 4, 2013.**

**On October 17, 2013, the NERC Standards Committee authorized a waiver of the standard process, in accordance with Section 16 of the Standard Processes Manual, to shorten this comment period of the combined communication standard from 45 days to 15 days with a ballot during the last 10 days of the comment period.**

**Effective communication is critical for Bulk Electric System (BES) operations. Failure to successfully communicate clearly can create misunderstandings resulting in improper operations increasing the potential for failure of the BES. The seventh posting of Project 2007-02 combines COM-002-3 and COM-003-1 into one standard titled COM-002-4 that addresses communications protocols for operating personnel in emergency, alert, and non-emergency situations.**

**The standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators, and Distribution Providers. These requirements ensure that communications include essential elements such that information is efficiently conveyed and mutually understood for communicating Operating Instructions.**

Background information for this project can be found on the [project page](#).

### Instructions for Commenting

Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact [Wendy Muller](#). An off-line, unofficial copy of the comment form is posted on the [project page](#).

### Next Steps

An additional ballot of **COM-002-4** and non-binding poll of the associated Violation Risk Factors and Violation Severity Levels will be conducted from October 25, 2013 through November 4, 2013.

**Standards Process**

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# Standards Announcement

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Upcoming

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## Standards Announcement

### Project 2007-02 Operating Personnel Communications Protocols COM-002-4

#### Additional Ballot and Non-Binding Poll Results

##### [Now Available](#)

An additional ballot of **COM-002-4** Operating Personnel Communications Protocols and non-binding poll of the associated Violation Risk Factors and Violation Severity Levels concluded at **8 p.m. Eastern on Thursday, November 7, 2013.**

This standard achieved a quorum but did not receive sufficient affirmative votes for approval. Voting statistics are listed below, and the [Ballot Results](#) page provides a link to the detailed results for the additional ballot.

Approval	Non-Binding Poll Results
Quorum: 76.67%	Quorum: 75.52%
Approval: 58.24%	Supportive Opinions: 55.46%

Background information for this project can be found on the [project page](#).

#### Next Steps

On November 7, 2013 the NERC Board of Trustees (Board) approved a resolution on Operating Personnel Communications Protocols, which may be found [here](#). In response to this resolution, the drafting team will meet in Atlanta, GA on November 19, 2013 to consider comments and prepare a new draft of COM-002-4. Meeting details may be found [here](#), as well as [registration information](#). The drafting team expects to post this new draft the week of December 2, 2013 so that the standard can be delivered to the Board at the February 2014 meeting, as directed in the resolution.

#### Standards Development Process

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact [Wendy Muller](#) (via email),  
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User Name

Password

Log in

Register

- Ballot Pools
- Current Ballots
- Ballot Results
- Registered Ballot Body
- Proxy Voters

[Home Page](#)

Ballot Results	
<b>Ballot Name:</b>	Project 2007-02 COM-002-4 Additional Ballot October 2013
<b>Ballot Period:</b>	10/25/2013 - 11/7/2013
<b>Ballot Type:</b>	Additional Ballot
<b>Total # Votes:</b>	322
<b>Total Ballot Pool:</b>	420
<b>Quorum:</b>	<b>76.67 % The Quorum has been reached</b>
<b>Weighted Segment Vote:</b>	58.24 %
<b>Ballot Results:</b>	<b>The Ballot has Closed</b>

Summary of Ballot Results										
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Negative Vote without a Comment	Abstain	No Vote	
			# Votes	Fraction	# Votes	Fraction				
1 - Segment 1	108	1	46	0.575	34	0.425	0	7	21	
2 - Segment 2	11	0.9	3	0.3	6	0.6	0	1	1	
3 - Segment 3	101	1	37	0.578	27	0.422	0	7	30	
4 - Segment 4	38	1	13	0.542	11	0.458	0	0	14	
5 - Segment 5	89	1	42	0.618	26	0.382	0	9	12	
6 - Segment 6	51	1	23	0.622	14	0.378	0	2	12	
7 - Segment 7	0	0	0	0	0	0	0	0	0	
8 - Segment 8	8	0.4	2	0.2	2	0.2	0	0	4	
9 - Segment 9	5	0	0	0	0	0	0	1	4	
10 - Segment 10	9	0.8	7	0.7	1	0.1	0	1	0	
<b>Totals</b>	<b>420</b>	<b>7.1</b>	<b>173</b>	<b>4.135</b>	<b>121</b>	<b>2.965</b>	<b>0</b>	<b>28</b>	<b>98</b>	

Individual Ballot Pool Results										

Segment	Organization	Member	Ballot	NERC Notes
1	Ameren Services	Kirit Shah	Negative	SUPPORTS THIRD PARTY COMMENTS - SERC OC
1	American Electric Power	Paul B Johnson	Affirmative	
1	American Transmission Company, LLC	Andrew Z Puszta	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECT)
1	ATCO Electric	Glen Sutton	Affirmative	
1	Austin Energy	James Armke	Negative	SUPPORTS THIRD PARTY COMMENTS - (Andrew Gallo)
1	Avista Corp.	Scott J Kinney		
1	Balancing Authority of Northern California	Kevin Smith	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Negative	COMMENT RECEIVED - Chris Scanlon
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	
1	Beaches Energy Services	Joseph S Stonecipher		
1	Black Hills Corp	Eric Egge	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES Power Marketing)
1	Bryan Texas Utilities	John C Fontenot	Affirmative	
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Negative	COMMENT RECEIVED
1	Central Electric Power Cooperative	Michael B Bax	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECT)
1	City of Pasadena	Marco A Sustaita		
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Negative	SUPPORTS THIRD PARTY COMMENTS - (Keith Morissette)
1	City Utilities of Springfield, Missouri	Jeff Knottek		
1	City Water, Light & Power of Springfield	Shaun Anders		
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel		
1	Colorado Springs Utilities	Paul Morland	Negative	SUPPORTS THIRD PARTY COMMENTS - (Colorado Springs Utilities)
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	Consumers Power Inc.	Stuart Sloan		
1	CPS Energy	Richard Castrejana		
1	Dairyland Power Coop.	Robert W. Roddy	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash	Affirmative	
1	Deseret Power	James Tucker		
1	Dominion Virginia Power	Michael S Crowley	Affirmative	
1	Duke Energy Carolina	Douglas E. Hils	Affirmative	
1	Empire District Electric Co.	Ralph F Meyer		
1	Entergy Services, Inc.	Edward J Davis	Affirmative	
1	FirstEnergy Corp.	William J Smith	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Abstain	
1	Florida Power & Light Co.	Mike O'Neil	Affirmative	
				SUPPORTS

1	Gainesville Regional Utilities	Richard Bachmeier	Negative	THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
1	Georgia Transmission Corporation	Jason Snodgrass	Affirmative	
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon		
1	Hydro One Networks, Inc.	Ajay Garg	Negative	COMMENT RECEIVED
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Negative	COMMENT RECEIVED
1	Idaho Power Company	Molly Devine	Negative	COMMENT RECEIVED
1	International Transmission Company Holdings Corp	Michael Moltane	Affirmative	
1	JEA	Ted Hobson	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	Kansas City Power & Light Co.	Michael Gammon		
1	Keys Energy Services	Stanley T Rzad		
1	Lakeland Electric	Larry E Watt	Negative	SUPPORTS THIRD PARTY COMMENTS - ((FMPA) Florida Municipal Power Agency)
1	Lee County Electric Cooperative	John W Delucca		
1	LG&E Energy Transmission Services	Bradley C. Young		
1	Long Island Power Authority	Robert Ganley	Affirmative	
1	Los Angeles Department of Water & Power	John Burnett		
1	Lower Colorado River Authority	Martyn Turner	Abstain	
1	M & A Electric Power Cooperative	William Price	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	Manitoba Hydro	Joe D Petaski	Affirmative	
1	MEAG Power	Danny Dees	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	
1	Minnesota Power, Inc.	Randi K. Nyholm	Affirmative	
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	National Grid USA	Michael Jones	Negative	COMMENT RECEIVED - National Grid
1	Nebraska Public Power District	Cole C Brodine	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPPD)
1	New York Power Authority	Bruce Metruck	Negative	SUPPORTS THIRD PARTY COMMENTS - (Refer to NPCC submitted comments)
1	New York State Electric & Gas Corp.	Raymond P Kinney		
1	Northeast Missouri Electric Power Cooperative	Kevin White	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	Northeast Utilities	David Boguslawski	Negative	COMMENT RECEIVED
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Abstain	
1	Ohio Valley Electric Corp.	Robert Matthey	Affirmative	
				COMMENT

1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Negative	RECEIVED
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Jen Fiegel	Negative	COMMENT RECEIVED
1	Orlando Utilities Commission	Brad Chase	Abstain	
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan	Affirmative	
1	PacifiCorp	Ryan Millard	Abstain	
1	PECO Energy	Ronald Schloendorn	Abstain	
1	Platte River Power Authority	John C. Collins	Negative	COMMENT RECEIVED
1	Portland General Electric Co.	John T Walker	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Abstain	
1	Public Service Company of New Mexico	Laurie Williams	Affirmative	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative	
1	Public Utility District No. 2 of Grant County, Washington	Rod Noteboom		
1	Puget Sound Energy, Inc.	Denise M Lietz	Affirmative	
1	Rochester Gas and Electric Corp.	John C. Allen	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell		
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Sho-Me Power Electric Cooperative	Denise Stevens	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	Sierra Pacific Power Co.	Rich Salgo	Affirmative	
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	
1	South California Edison Company	Steven Mavis	Affirmative	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison		
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Tampa Electric Co.	Beth Young	Negative	SUPPORTS THIRD PARTY COMMENTS - (Ronald L. Donahey)
1	Tennessee Valley Authority	Larry G Akens	Affirmative	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Negative	COMMENT RECEIVED
1	Tucson Electric Power Co.	John Tolo	Negative	COMMENT RECEIVED
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Negative	SUPPORTS THIRD PARTY COMMENTS - (SPP Standards Group comments)
1	Western Area Power Administration	Brandy A Dunn		
1	Xcel Energy, Inc.	Gregory L Pieper	Negative	SUPPORTS THIRD PARTY COMMENTS - (Alice Ireland, Xcel Energy)
2	Alberta Electric System Operator	Mark B Thompson	Abstain	
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
				SUPPORTS THIRD PARTY

2	California ISO	Rich Vine	Negative	COMMENTS - (ISO/RTO Standards Review Committee)
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Negative	COMMENT RECEIVED
2	Independent Electricity System Operator	Barbara Constantinescu	Negative	COMMENT RECEIVED
2	ISO New England, Inc.	Kathleen Goodman	Negative	SUPPORTS THIRD PARTY COMMENTS - (IRC SRC)
2	Midwest ISO, Inc.	Marie Knox	Negative	SUPPORTS THIRD PARTY COMMENTS - (IRC/SRC)
2	New Brunswick System Operator	Alden Briggs		
2	New York Independent System Operator	Gregory Campoli	Affirmative	
2	PJM Interconnection, L.L.C.	stephanie monzon	Affirmative	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Negative	COMMENT RECEIVED
3	Alabama Power Company	Richard J. Mandes		
3	Alameda Municipal Power	Douglas Draeger		
3	Ameren Services	Mark Peters	Negative	SUPPORTS THIRD PARTY COMMENTS - SERC OC
3	APS	Steven Norris		
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI's)
3	Atlantic City Electric Company	NICOLE BUCKMAN	Affirmative	
3	Avista Corp.	Robert Lafferty		
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blachly-Lane Electric Co-op	Bud Tracy		
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham		
3	Central Electric Power Cooperative	Adam M Weber	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
3	Central Lincoln PUD	Steve Alexanderson	Negative	COMMENT RECEIVED
3	City of Austin dba Austin Energy	Andrew Gallo	Negative	COMMENT RECEIVED
3	City of Bartow, Florida	Matt Culverhouse	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
3	City of Clewiston	Lynne Mila		
3	City of Farmington	Linda R Jacobson	Abstain	
3	City of Garland	Ronnie C Hoeinghaus	Abstain	
3	City of Green Cove Springs	Gregg R Griffin		
3	City of Lodi, California	Elizabeth Kirkley		
3	City of Palo Alto	Eric R Scott	Negative	SUPPORTS THIRD PARTY COMMENTS - (Small Entity Comment Group (to be submitted))
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey		
3	City Water, Light & Power of Springfield	Roger Powers	Abstain	
3	Clearwater Power Co.	Dave Hagen		
3	Cleco Corporation	Michelle A Corley		
				SUPPORTS THIRD PARTY



3	Colorado Springs Utilities	Charles Morgan	Negative	COMMENTS - (Colorado Springs Utilities)
3	ComEd	Bruce Krawczyk	Negative	SUPPORTS THIRD PARTY COMMENTS - Chris Scanlon
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy	Richard Blumenstock	Negative	COMMENT RECEIVED
3	Consumers Power Inc.	Roman Gillen		
3	Coos-Curry Electric Cooperative, Inc	Roger Meader		
3	Cowlitz County PUD	Russell A Noble	Affirmative	
3	CPS Energy	Jose Escamilla		
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Dominion Resources, Inc.	Connie B Lowe	Affirmative	
3	Entergy	Joel T Plessinger	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case		
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Negative	COMMENT RECEIVED
3	Florida Power Corporation	Lee Schuster	Affirmative	
3	Georgia Power Company	Danny Lindsey	Abstain	
3	Georgia System Operations Corporation	Scott McGough	Affirmative	
3	Great River Energy	Brian Glover	Affirmative	
3	Gulf Power Company	Paul C Caldwell	Abstain	
3	Hydro One Networks, Inc.	David Kiguel		
3	KAMO Electric Cooperative	Theodore J Hilmes	Negative	SUPPORTS THIRD PARTY COMMENTS - (Associated Electric Cooperative)
3	Kansas City Power & Light Co.	Charles Locke	Negative	COMMENT RECEIVED
3	Kissimmee Utility Authority	Gregory D Woessner	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
3	Lakeland Electric	Mace D Hunter	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
3	Lane Electric Cooperative, Inc.	Rick Crinklaw		
3	Lincoln Electric System	Jason Fortik	Affirmative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski		
3	Louisville Gas and Electric Co.	Charles A. Freibert	Negative	SUPPORTS THIRD PARTY COMMENTS - (comments filed under PPL NERC Registered Affiliates)
3	M & A Electric Power Cooperative	Stephen D Pogue	Negative	SUPPORTS THIRD PARTY COMMENTS - (Associated Electric Cooperative)
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Mississippi Power	Jeff Franklin	Affirmative	
3	Modesto Irrigation District	Jack W Savage		
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Affirmative	

3	Nebraska Public Power District	Tony Eddleman	Negative	SUPPORTS THIRD PARTY COMMENTS - (Don Schmit submitted comments for Nebraska Public Power District)
3	New York Power Authority	David R Rivera	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC Comments)
3	Niagara Mohawk (National Grid Company)	Michael Schiavone		
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann		
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby		
3	NW Electric Power Cooperative, Inc.	David McDowell	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
3	Omaha Public Power District	Blaine R. Dinwiddie		
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative	
3	Owensboro Municipal Utilities	Thomas T Lyons	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC OC Comments)
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	Pacific Northwest Generating Cooperative	Rick Paschall		
3	PacifiCorp	Dan Zollner	Abstain	
3	Platte River Power Authority	Terry L Baker	Negative	COMMENT RECEIVED
3	PNM Resources	Michael Mertz	Affirmative	
3	Portland General Electric Co.	Thomas G Ward	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter		
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Affirmative	
3	Puget Sound Energy, Inc.	Erin Apperson	Affirmative	
3	Raft River Rural Electric Cooperative	Heber Carpenter		
3	Rutherford EMC	Thomas M Haire	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salmon River Electric Cooperative	Ken Dizes		
3	Salt River Project	John T. Underhill	Affirmative	
3	Santee Cooper	James M Poston	Abstain	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
3	South Carolina Electric & Gas Co.	Hubert C Young	Affirmative	
3	Tacoma Public Utilities	Travis Metcalfe	Negative	SUPPORTS THIRD PARTY COMMENTS - (Keith Morisette)
3	Tampa Electric Co.	Ronald L. Donahey	Negative	COMMENT RECEIVED
3	Tennessee Valley Authority	Ian S Grant	Affirmative	
3	Tri-County Electric Cooperative, Inc.	Mike Swearingen	Affirmative	
3	Tri-State G & T Association, Inc.	Janelle Marriott	Negative	COMMENT RECEIVED
3	Umatilla Electric Cooperative	Steve Eldrige		
3	Westar Energy	Bo Jones	Negative	SUPPORTS THIRD PARTY COMMENTS - (SPP Standards Group)
3	Wisconsin Electric Power Marketing	James R Keller	Affirmative	
3	Xcel Energy, Inc.	Michael Ibold		

4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini		
4	Blue Ridge Power Agency	Duane S Dahlquist	Negative	SUPPORTS THIRD PARTY COMMENTS - (Support comments of IMPA, FMPA and Utilities Services)
4	Central Lincoln PUD	Shamus J Gamache	Negative	SUPPORTS THIRD PARTY COMMENTS - (Western Small Entity Comment Group)
4	City of Austin dba Austin Energy	Reza Ebrahimian	Negative	SUPPORTS THIRD PARTY COMMENTS - (Andrew Gallo)
4	City of Clewiston	Kevin McCarthy		
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle		
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Negative	SUPPORTS THIRD PARTY COMMENTS - (SPP)
4	Consumers Energy	David Frank Ronk		
4	Cowlitz County PUD	Rick Syring	Affirmative	
4	Detroit Edison Company	Daniel Herring	Affirmative	
4	Flathead Electric Cooperative	Russ Schneider	Negative	COMMENT RECEIVED
4	Florida Municipal Power Agency	Frank Gaffney	Negative	COMMENT RECEIVED
4	Fort Pierce Utilities Authority	Cairo Vanegas	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency, Utility Services, Indiana Municipal Power Agency, SERC Review Group)
4	Imperial Irrigation District	Diana U Torres		
4	Indiana Municipal Power Agency	Jack Alvey	Negative	COMMENT RECEIVED
4	LaGen	Richard Comeaux		
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	
4	Modesto Irrigation District	Spencer Tacke		
4	Northern California Power Agency	Tracy R Bibb		
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Oklahoma Municipal Power Authority	Ashley Stringer	Negative	SUPPORTS THIRD PARTY COMMENTS - (Utility Services)
4	Old Dominion Electric Coop.	Mark Ringhausen		
4	Pacific Northwest Generating Cooperative	Aleka K Scott		
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean		
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	

4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	South Mississippi Electric Power Association	Steven McElhaney		
4	Southern Minnesota Municipal Power Agency	Richard L Koch		
4	Tacoma Public Utilities	Keith Morissette	Negative	COMMENT RECEIVED
4	West Oregon Electric Cooperative, Inc.	Marc M Farmer		
4	Wisconsin Energy Corp.	Anthony Jankowski	Affirmative	
4	WPPI Energy	Todd Komplin	Affirmative	
5	AEP Service Corp.	Brock Ondayko	Affirmative	
5	AES Corporation	Leo Bernier	Affirmative	
5	Amerenue	Sam Dwyer	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC OC comments)
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
5	Avista Corp.	Edward F. Groce		
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla		
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
5	Calpine Corporation	Phillip Porter		
5	City and County of San Francisco	Daniel Mason	Negative	COMMENT RECEIVED
5	City of Austin dba Austin Energy	Jeanie Doty	Negative	SUPPORTS THIRD PARTY COMMENTS - (Andrew Gallo)
5	City of Redding	Paul A. Cummings	Affirmative	
5	City of Tallahassee	Karen Webb	Abstain	
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative	
5	Cleco Power	Stephanie Huffman		
5	Cogentrix Energy, Inc.	Mike D Hirst	Affirmative	
5	Colorado Springs Utilities	Jennifer Eckels	Negative	COMMENT RECEIVED
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Affirmative	
5	Consumers Energy Company	David C Greyerbiehl	Negative	SUPPORTS THIRD PARTY COMMENTS - (Jerry Farringer)
5	Cowlitz County PUD	Bob Essex	Affirmative	
5	Dairyland Power Coop.	Tommy Drea	Affirmative	
5	Deseret Power	Philip B Tice Jr	Abstain	
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Affirmative	
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC OC Committee)
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain	
5	Electric Power Supply Association	John R Cashin	Abstain	
5	Essential Power, LLC	Patrick Brown		
5	Exelon Nuclear	Michael Korchynsky	Negative	SUPPORTS THIRD PARTY COMMENTS - Chris Scanlon
5	ExxonMobil Research and Engineering	Martin Kaufman		
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	

5	Florida Municipal Power Agency	David Schumann	Negative	COMMENT RECEIVED
5	Great River Energy	Preston L Walsh	Affirmative	
5	Hydro-Québec Production	Roger Dufresne	Negative	COMMENT RECEIVED
5	Imperial Irrigation District	Marcela Y Caballero		
5	JEA	John J Babik	Affirmative	
5	Kansas City Power & Light Co.	Brett Holland	Negative	COMMENT RECEIVED
5	Kissimmee Utility Authority	Mike Blough	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
5	Lakeland Electric	James M Howard	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Pool)
5	Liberty Electric Power LLC	Daniel Duff	Negative	COMMENT RECEIVED
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver		
5	Luminant Generation Company LLC	Mike Laney		
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider	Abstain	
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Negative	COMMENT RECEIVED
5	New York Power Authority	Wayne Sipperly	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
5	NextEra Energy	Allen D Schriver	Affirmative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
5	Northern Indiana Public Service Co.	William O. Thompson	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Negative	COMMENT RECEIVED
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard K Kinas	Affirmative	
5	Pacific Gas and Electric Company	Richard J. Padilla	Affirmative	
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Roland Thiel		
5	Portland General Electric Co.	Matt E. Jastram	Affirmative	
5	PowerSouth Energy Cooperative	Tim Hattaway		
5	PPL Generation LLC	Annette M Bannon	Negative	SUPPORTS THIRD PARTY COMMENTS - (PPL NERC Registered Affiliates)
5	PSEG Fossil LLC	Tim Kucey	Affirmative	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative	SUPPORTS THIRD PARTY COMMENTS - (NW small entity group)
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Affirmative	
5	Puget Sound Energy, Inc.	Tom Flynn	Affirmative	
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative	
5	Salt River Project	William Alkema	Affirmative	
5	Santee Cooper	Lewis P Pierce	Abstain	
5	Seattle City Light	Michael J. Haynes	Affirmative	

5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	South Carolina Electric & Gas Co.	Edward Magic	Affirmative	
5	Southeastern Power Administration	Douglas Spencer		
5	Southern California Edison Co.	Denise Yaffe	Affirmative	
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tacoma Power	Chris Mattson	Negative	SUPPORTS THIRD PARTY COMMENTS - (Keith Morissette)
5	Tampa Electric Co.	RJames Rocha	Negative	SUPPORTS THIRD PARTY COMMENTS - (TEC Ron Donahey)
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	U.S. Bureau of Reclamation	Martin Bauer	Negative	COMMENT RECEIVED
5	Westar Energy	Bryan Taggart	Negative	SUPPORTS THIRD PARTY COMMENTS - (SPP Standards Group comments)
5	Wisconsin Electric Power Co.	Linda Horn	Affirmative	
5	WPPI Energy	Steven Leovy	Affirmative	
5	Xcel Energy, Inc.	Liam Noailles	Negative	SUPPORTS THIRD PARTY COMMENTS - (Alice Ireland)
6	AEP Marketing	Edward P. Cox	Affirmative	
6	Ameren Energy Marketing Co.	Jennifer Richardson	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC OC Comments)
6	APS	Randy A. Young	Affirmative	
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa Martin	Negative	SUPPORTS THIRD PARTY COMMENTS - (Andrew Gallo)
6	City of Redding	Marvin Briggs	Affirmative	
6	Cleco Power LLC	Robert Hirchak		
6	Colorado Springs Utilities	Lisa C Rosintoski		
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative	
6	Constellation Energy Commodities Group	Donald Schopp	Negative	SUPPORTS THIRD PARTY COMMENTS - Chris Scanlon
6	Discount Power, Inc.	David Feldman		
6	Dominion Resources, Inc.	Louis S. Slade	Affirmative	
6	Duke Energy	Greg Cecil	Affirmative	
6	Entergy Services, Inc.	Terri F Benoit		
6	FirstEnergy Solutions	Kevin Query	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Negative	COMMENT RECEIVED
6	Florida Municipal Power Pool	Thomas Washburn		
6	Florida Power & Light Co.	Silvia P Mitchell	Affirmative	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	COMMENT RECEIVED
6	Lakeland Electric	Paul Shipps	Negative	SUPPORTS THIRD PARTY COMMENTS -

				(FMPA)
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Los Angeles Department of Water & Power	Brad Packer		
6	Luminant Energy	Brad Jones	Negative	COMMENT RECEIVED
6	Manitoba Hydro	Daniel Prowse	Affirmative	
6	MidAmerican Energy Co.	Dennis Kimm	Abstain	
6	Modesto Irrigation District	James McFall		
6	Muscatine Power & Water	John Stolley	Affirmative	
6	New York Power Authority	Saul Rojas	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	NRG Energy, Inc.	Alan Johnson		
6	Omaha Public Power District	David Ried		
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Negative	COMMENT RECEIVED
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative	
6	Public Utility District No. 1 of Chelan County	Hugh A. Owen		
6	Sacramento Municipal Utility District	Diane Enderby	Affirmative	
6	Salt River Project	Steven J Hulet	Affirmative	
6	Santee Cooper	Michael Brown	Abstain	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Snohomish County PUD No. 1	William T Moojen	Affirmative	
6	South California Edison Company	Lujuanna Medina		
6	Southern Company Generation and Energy Marketing	John J. Ciza	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Negative	SUPPORTS THIRD PARTY COMMENTS - (Kieth Morisette)
6	Tampa Electric Co.	Benjamin F Smith II	Negative	SUPPORTS THIRD PARTY COMMENTS - (support comments made by Ron Donahey)
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative	
6	Westar Energy	Grant L Wilkerson	Negative	SUPPORTS THIRD PARTY COMMENTS - (SPP Standards Group)
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F Lemmons	Negative	SUPPORTS THIRD PARTY COMMENTS - Alice Ireland
8		Roger C Zaklukiewicz	Negative	SUPPORTS THIRD PARTY COMMENTS - (ISO-NE)
8		James A Maenner		
8		Edward C Stein		
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Pacific Northwest Generating Cooperative	Margaret Ryan		
8	Utility Services, Inc.	Brian Evans-Mongeon	Negative	COMMENT RECEIVED
8	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman		
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative	
9	California Energy Commission	William M Chamberlain		
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Abstain	
9	National Association of Regulatory Utility Commissioners	Diane J. Barney		
9	Oregon Public Utility Commission	Jerome Murray		



9	Public Utilities Commission of Ohio	Klaus Lambeck		
10	Florida Reliability Coordinating Council	Linda Campbell	Affirmative	
10	Midwest Reliability Organization	William S Smith	Affirmative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council	Guy V. Zito	Abstain	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	
10	SERC Reliability Corporation	Carter B Edge	Affirmative	
10	Southwest Power Pool RE	Emily Pennel	Affirmative	
10	Texas Reliability Entity, Inc.	Donald G Jones	Negative	COMMENT RECEIVED
10	Western Electricity Coordinating Council	Steven L. Rueckert	Affirmative	

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A New Jersey Nonprofit Corporation



# Non-Binding Poll Results

## Project 2007-02 COM-002-4

Non-Binding Poll Results	
<b>Non-Binding Poll Name:</b>	Project 2007-02 COM-002-4 Non-Binding Poll October 2013_sc_2
<b>Poll Period:</b>	10/25/2013 - 11/7/2013
<b>Total # Opinions:</b>	290
<b>Total Ballot Pool:</b>	384
<b>Summary Results:</b>	75.52% of those who registered to participate provided an opinion or an abstention; 55.46% of those who provided an opinion indicated support for the VRFs and VSLs.

Individual Ballot Pool Results				
Segment	Organization	Member	Opinions	Comments
1	Ameren Services	Kirit Shah	Negative	COMMENT RECEIVED - SERC OC
1	American Electric Power	Paul B Johnson	Negative	SUPPORTS THIRD PARTY COMMENTS - (Thomas Foltz - AEP)
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	ATCO Electric	Glen Sutton	Affirmative	
1	Austin Energy	James Armke	Negative	SUPPORTS THIRD PARTY COMMENTS - (Andrew Gallo)
1	Avista Corp.	Scott J Kinney		
1	Balancing Authority of Northern California	Kevin Smith	Abstain	
1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher		
1	Black Hills Corp	Eric Egge	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES Power Marketing)
1	Bryan Texas Utilities	John C Fontenot	Affirmative	
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Negative	COMMENT RECEIVED

1	Central Electric Power Cooperative	Michael B Bax	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	City of Pasadena	Marco A Sustaita		
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Negative	SUPPORTS THIRD PARTY COMMENTS - (Keith Morissette)
1	City Utilities of Springfield, Missouri	Jeff Knottek		
1	City Water, Light & Power of Springfield	Shaun Anders		
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel		
1	Colorado Springs Utilities	Paul Morland	Negative	SUPPORTS THIRD PARTY COMMENTS - (Colorado Springs Utilities)
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	CPS Energy	Richard Castrejano		
1	Dairyland Power Coop.	Robert W. Roddy	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash	Affirmative	
1	Deseret Power	James Tucker		
1	Dominion Virginia Power	Michael S Crowley	Abstain	
1	Duke Energy Carolina	Douglas E. Hils	Affirmative	
1	Empire District Electric Co.	Ralph F Meyer		
1	Entergy Services, Inc.	Edward J Davis	Affirmative	
1	FirstEnergy Corp.	William J Smith	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Abstain	
1	Florida Power & Light Co.	Mike O'Neil	Affirmative	
1	Gainesville Regional Utilities	Richard Bachmeier	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
1	Georgia Transmission Corporation	Jason Snodgrass	Affirmative	
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon		
1	Hydro One Networks, Inc.	Ajay Garg	Negative	COMMENT RECEIVED
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Negative	COMMENT RECEIVED
1	Idaho Power Company	Molly Devine	Negative	COMMENT RECEIVED
1	International Transmission Company Holdings Corp	Michael Moltane	Abstain	

1	JEA	Ted Hobson	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	Kansas City Power & Light Co.	Michael Gammon		
1	Keys Energy Services	Stanley T Rzad		
1	Lakeland Electric	Larry E Watt	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
1	Lee County Electric Cooperative	John W Delucca		
1	LG&E Energy Transmission Services	Bradley C. Young		
1	Long Island Power Authority	Robert Ganley	Affirmative	
1	Los Angeles Department of Water & Power	John Burnett		
1	Lower Colorado River Authority	Martyn Turner	Abstain	
1	M & A Electric Power Cooperative	William Price	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	Manitoba Hydro	Joe D Petaski	Affirmative	
1	MEAG Power	Danny Dees	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	National Grid USA	Michael Jones	Negative	COMMENT RECEIVED
1	Nebraska Public Power District	Cole C Brodine	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPPD)
1	New York Power Authority	Bruce Metruck	Negative	SUPPORTS THIRD PARTY COMMENTS - (Refer to NPCC)
1	New York State Electric & Gas Corp.	Raymond P Kinney		
1	Northeast Missouri Electric Power Cooperative	Kevin White	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	Northeast Utilities	David Boguslawski	Negative	COMMENT RECEIVED
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan		
1	Ohio Valley Electric Corp.	Robert Matthey	Negative	SUPPORTS THIRD PARTY COMMENTS -

				(Thomas Foltz - American Electric Power)
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Negative	COMMENT RECEIVED
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Jen Fiegel	Negative	COMMENT RECEIVED
1	Orlando Utilities Commission	Brad Chase	Abstain	
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan	Affirmative	
1	PacifiCorp	Ryan Millard	Abstain	
1	PECO Energy	Ronald Schloendorn	Abstain	
1	Platte River Power Authority	John C. Collins	Abstain	
1	Portland General Electric Co.	John T Walker	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Abstain	
1	Public Service Company of New Mexico	Laurie Williams	Affirmative	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Abstain	
1	Public Utility District No. 2 of Grant County, Washington	Rod Noteboom		
1	Puget Sound Energy, Inc.	Denise M Lietz	Affirmative	
1	Rochester Gas and Electric Corp.	John C. Allen	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
1	Sacramento Municipal Utility District	Tim Kelley	Abstain	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell		
1	Seattle City Light	Pawel Krupa		
1	Sho-Me Power Electric Cooperative	Denise Stevens	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	
1	South California Edison Company	Steven Mavis	Affirmative	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison		
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Tampa Electric Co.	Beth Young	Negative	SUPPORTS THIRD PARTY COMMENTS - (Ronald L. Donahey)
1	Tennessee Valley Authority	Larry G Akens	Affirmative	

1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Negative	COMMENT RECEIVED
1	Tucson Electric Power Co.	John Tolo	Abstain	
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Negative	SUPPORTS THIRD PARTY COMMENTS - (SPP Standards Group comments)
1	Western Area Power Administration	Brandy A Dunn		
1	Xcel Energy, Inc.	Gregory L Pieper		
2	Alberta Electric System Operator	Mark B Thompson		
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Rich Vine	Negative	SUPPORTS THIRD PARTY COMMENTS - (ISO/RTO Standards Review Committee)
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Negative	COMMENT RECEIVED
2	Independent Electricity System Operator	Barbara Constantinescu	Negative	COMMENT RECEIVED
2	ISO New England, Inc.	Kathleen Goodman		
2	Midwest ISO, Inc.	Marie Knox	Negative	SUPPORTS THIRD PARTY COMMENTS - (IRC/SRC)
2	New Brunswick System Operator	Alden Briggs		
2	New York Independent System Operator	Gregory Campoli	Negative	COMMENT RECEIVED
2	PJM Interconnection, L.L.C.	stephanie monzon	Affirmative	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Abstain	
3	Alabama Power Company	Richard J. Mandes		
3	Alameda Municipal Power	Douglas Draeger		
3	Ameren Services	Mark Peters	Negative	SUPPORTS THIRD PARTY COMMENTS - SERC OC
3	APS	Steven Norris		
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI's)
3	Avista Corp.	Robert Lafferty		
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	

3	Central Electric Power Cooperative	Adam M Weber	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
3	Central Lincoln PUD	Steve Alexanderson	Abstain	
3	City of Austin dba Austin Energy	Andrew Gallo	Negative	COMMENT RECEIVED
3	City of Bartow, Florida	Matt Culverhouse	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
3	City of Clewiston	Lynne Mila		
3	City of Farmington	Linda R Jacobson	Abstain	
3	City of Garland	Ronnie C Hoeinghaus	Abstain	
3	City of Green Cove Springs	Gregg R Griffin		
3	City of Lodi, California	Elizabeth Kirkley		
3	City of Palo Alto	Eric R Scott	Abstain	
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey		
3	Cleco Corporation	Michelle A Corley		
3	Colorado Springs Utilities	Charles Morgan	Negative	SUPPORTS THIRD PARTY COMMENTS - (Colorado Springs Utilities)
3	ComEd	Bruce Krawczyk	Negative	COMMENT RECEIVED
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy	Richard Blumenstock	Negative	COMMENT RECEIVED
3	Cowlitz County PUD	Russell A Noble	Affirmative	
3	CPS Energy	Jose Escamilla		
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Entergy	Joel T Plessinger	Affirmative	
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Negative	COMMENT RECEIVED
3	Florida Power Corporation	Lee Schuster	Affirmative	
3	Georgia Power Company	Danny Lindsey	Abstain	
3	Georgia System Operations Corporation	Scott McGough	Affirmative	
3	Great River Energy	Brian Glover	Affirmative	
3	Gulf Power Company	Paul C Caldwell	Abstain	
3	Hydro One Networks, Inc.	David Kiguel		
3	KAMO Electric Cooperative	Theodore J Hilmes	Negative	SUPPORTS THIRD PARTY COMMENTS - (associated electric

				cooperative)
3	Kansas City Power & Light Co.	Charles Locke	Negative	COMMENT RECEIVED
3	Kissimmee Utility Authority	Gregory D Woessner	Negative	SUPPORTS THIRD PARTY COMMENTS - (FMPA)
3	Lakeland Electric	Mace D Hunter		
3	Lincoln Electric System	Jason Fortik	Affirmative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski		
3	Louisville Gas and Electric Co.	Charles A. Freibert		
3	M & A Electric Power Cooperative	Stephen D Pogue	Negative	SUPPORTS THIRD PARTY COMMENTS - (Associated Electric Cooperative)
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Mississippi Power	Jeff Franklin	Affirmative	
3	Modesto Irrigation District	Jack W Savage		
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Affirmative	
3	Nebraska Public Power District	Tony Eddleman	Negative	SUPPORTS THIRD PARTY COMMENTS - (Don Schmit submitted comments for Nebraska Public Power District)
3	New York Power Authority	David R Rivera	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC Comments)
3	Niagara Mohawk (National Grid Company)	Michael Schiavone		
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann		
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	NW Electric Power Cooperative, Inc.	David McDowell	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Owensboro Municipal Utilities	Thomas T Lyons	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC OC Comments)
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	PacifiCorp	Dan Zollner		

3	Platte River Power Authority	Terry L Baker	Negative	COMMENT RECEIVED
3	PNM Resources	Michael Mertz	Affirmative	
3	Portland General Electric Co.	Thomas G Ward	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter		
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Abstain	
3	Puget Sound Energy, Inc.	Erin Apperson	Affirmative	
3	Rutherford EMC	Thomas M Haire	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Abstain	
3	Salmon River Electric Cooperative	Ken Dizes		
3	Salt River Project	John T. Underhill	Affirmative	
3	Santee Cooper	James M Poston	Abstain	
3	Seattle City Light	Dana Wheelock		
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
3	South Carolina Electric & Gas Co.	Hubert C Young	Affirmative	
3	Tacoma Public Utilities	Travis Metcalfe	Negative	SUPPORTS THIRD PARTY COMMENTS - (Keith Morisette)
3	Tampa Electric Co.	Ronald L. Donahey	Negative	COMMENT RECEIVED
3	Tennessee Valley Authority	Ian S Grant	Abstain	
3	Tri-County Electric Cooperative, Inc.	Mike Swearingen	Affirmative	
3	Tri-State G & T Association, Inc.	Janelle Marriott	Negative	COMMENT RECEIVED
3	Westar Energy	Bo Jones	Negative	SUPPORTS THIRD PARTY COMMENTS - (SPP Standards Group)
3	Wisconsin Electric Power Marketing	James R Keller		
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini		
4	Blue Ridge Power Agency	Duane S Dahlquist	Negative	SUPPORTS THIRD PARTY COMMENTS - (Support comments of IMPA, FMPA and Utilities Services)
4	Central Lincoln PUD	Shamus J Gamache	Abstain	
4	City of Austin dba Austin Energy	Reza Ebrahimian	Negative	SUPPORTS THIRD PARTY COMMENTS -



				(Andrew Gallo)
4	City of Clewiston	Kevin McCarthy		
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle		
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Negative	SUPPORTS THIRD PARTY COMMENTS - (SPP)
4	Consumers Energy	David Frank Ronk		
4	Cowlitz County PUD	Rick Syring	Affirmative	
4	Detroit Edison Company	Daniel Herring	Affirmative	
4	Flathead Electric Cooperative	Russ Schneider	Negative	COMMENT RECEIVED
4	Florida Municipal Power Agency	Frank Gaffney	Negative	COMMENT RECEIVED
4	Fort Pierce Utilities Authority	Cairo Vanegas	Abstain	
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency, Utility Services, Indiana Municipal Power Agency, SERC Review Group)
4	Imperial Irrigation District	Diana U Torres		
4	Indiana Municipal Power Agency	Jack Alvey	Negative	COMMENT RECEIVED
4	LaGen	Richard Comeaux		
4	Madison Gas and Electric Co.	Joseph DePoorter	Abstain	
4	Modesto Irrigation District	Spencer Tacke		
4	Northern California Power Agency	Tracy R Bibb		
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Oklahoma Municipal Power Authority	Ashley Stringer	Abstain	
4	Old Dominion Electric Coop.	Mark Ringhausen		
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean		
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	
4	Sacramento Municipal Utility District	Mike Ramirez	Abstain	
4	Seattle City Light	Hao Li		
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	South Mississippi Electric Power	Steven McElhanev		

	Association			
4	Tacoma Public Utilities	Keith Morisette	Negative	COMMENT RECEIVED
4	Wisconsin Energy Corp.	Anthony Jankowski	Affirmative	
4	WPPI Energy	Todd Komplin	Affirmative	
5	AEP Service Corp.	Brock Ondayko	Negative	SUPPORTS THIRD PARTY COMMENTS - (Thomas Foltz - American Electric Power)
5	AES Corporation	Leo Bernier	Negative	SUPPORTS THIRD PARTY COMMENTS - (reliability First)
5	Amerenue	Sam Dwyer	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC OC comments)
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
5	Avista Corp.	Edward F. Groce		
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla		
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
5	Calpine Corporation	Phillip Porter		
5	City and County of San Francisco	Daniel Mason		
5	City of Austin dba Austin Energy	Jeanie Doty	Negative	SUPPORTS THIRD PARTY COMMENTS - (Andrew Gallo)
5	City of Redding	Paul A. Cummings	Affirmative	
5	City of Tallahassee	Karen Webb	Abstain	
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative	
5	Cleco Power	Stephanie Huffman		
5	Cogentrix Energy, Inc.	Mike D Hirst	Affirmative	
5	Colorado Springs Utilities	Jennifer Eckels	Negative	COMMENT RECEIVED
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Affirmative	
5	Consumers Energy Company	David C Greverbiehl	Negative	SUPPORTS

				THIRD PARTY COMMENTS - (Jerry Farringer)
5	Cowlitz County PUD	Bob Essex	Affirmative	
5	Dairyland Power Coop.	Tommy Drea	Affirmative	
5	Deseret Power	Philip B Tice Jr	Abstain	
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Abstain	
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC OC Committee)
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain	
5	Electric Power Supply Association	John R Cashin	Abstain	
5	Essential Power, LLC	Patrick Brown		
5	Exelon Nuclear	Michael Korchynsky	Negative	COMMENT RECEIVED
5	ExxonMobil Research and Engineering	Martin Kaufman		
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Negative	COMMENT RECEIVED
5	Great River Energy	Preston L Walsh	Affirmative	
5	Hydro-Québec Production	Roger Dufresne	Negative	COMMENT RECEIVED
5	Imperial Irrigation District	Marcela Y Caballero		
5	JEA	John J Babik	Affirmative	
5	Kansas City Power & Light Co.	Brett Holland	Negative	COMMENT RECEIVED
5	Kissimmee Utility Authority	Mike Blough	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
5	Lakeland Electric	James M Howard	Abstain	
5	Liberty Electric Power LLC	Daniel Duff		
5	Lincoln Electric System	Dennis Florom		
5	Los Angeles Department of Water & Power	Kenneth Silver		
5	Luminant Generation Company LLC	Mike Laney		
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider		
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Negative	COMMENT

				RECEIVED
5	New York Power Authority	Wayne Sipperly	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
5	NextEra Energy	Allen D Schriver	Affirmative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
5	Northern Indiana Public Service Co.	William O. Thompson	Affirmative	
5	Occidental Chemical	Michelle R DAntuono		
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard K Kinas	Affirmative	
5	Pacific Gas and Electric Company	Richard J. Padilla	Affirmative	
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Roland Thiel		
5	Portland General Electric Co.	Matt E. Jastram	Affirmative	
5	PowerSouth Energy Cooperative	Tim Hattaway		
5	PPL Generation LLC	Annette M Bannon	Negative	SUPPORTS THIRD PARTY COMMENTS - (PPL NERC Registered Affiliates)
5	PSEG Fossil LLC	Tim Kucey	Abstain	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative	SUPPORTS THIRD PARTY COMMENTS - (NW small entity group)
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Affirmative	
5	Puget Sound Energy, Inc.	Tom Flynn	Affirmative	
5	Sacramento Municipal Utility District	Bethany Hunter	Abstain	
5	Salt River Project	William Alkema	Affirmative	
5	Santee Cooper	Lewis P Pierce	Abstain	
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	South Carolina Electric & Gas Co.	Edward Magic	Affirmative	
5	Southeastern Power Administration	Douglas Spencer		
5	Southern California Edison Co.	Denise Yaffe	Affirmative	
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tacoma Power	Chris Mattson	Negative	SUPPORTS THIRD PARTY COMMENTS - (Keith Morissette)
5	Tampa Electric Co.	RJames Rocha	Negative	SUPPORTS THIRD PARTY COMMENTS -

				(TEC Ron Donahey)
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	U.S. Bureau of Reclamation	Martin Bauer	Negative	COMMENT RECEIVED
5	Wisconsin Electric Power Co.	Linda Horn		
5	WPPI Energy	Steven Leovy	Affirmative	
5	Xcel Energy, Inc.	Liam Noailles		
6	AEP Marketing	Edward P. Cox	Negative	SUPPORTS THIRD PARTY COMMENTS - (Tom Foltz AEP)
6	Ameren Energy Marketing Co.	Jennifer Richardson	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC OC Comments)
6	APS	Randy A. Young	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa Martin	Negative	SUPPORTS THIRD PARTY COMMENTS - (Andrew Gallo)
6	City of Redding	Marvin Briggs	Affirmative	
6	Cleco Power LLC	Robert Hirschak		
6	Colorado Springs Utilities	Lisa C Rosintoski		
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative	
6	Duke Energy	Greg Cecil	Affirmative	
6	Entergy Services, Inc.	Terri F Benoit		
6	FirstEnergy Solutions	Kevin Querry	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Negative	COMMENT RECEIVED
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	
6	Florida Power & Light Co.	Silvia P Mitchell	Abstain	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	COMMENT RECEIVED
6	Lakeland Electric	Paul Shipps	Negative	SUPPORTS THIRD PARTY COMMENTS - (FMAP)
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Los Angeles Department of Water & Power	Brad Packer		
6	Luminant Energy	Brad Jones	Negative	COMMENT RECEIVED
6	Manitoba Hydro	Daniel Prowse	Affirmative	
6	MidAmerican Energy Co.	Dennis Kimm		

6	Modesto Irrigation District	James McFall		
6	Muscatine Power & Water	John Stolley	Affirmative	
6	New York Power Authority	Saul Rojas	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	NRG Energy, Inc.	Alan Johnson		
6	Omaha Public Power District	David Ried		
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Negative	COMMENT RECEIVED
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Abstain	
6	Sacramento Municipal Utility District	Diane Enderby	Abstain	
6	Salt River Project	Steven J Hulet	Affirmative	
6	Santee Cooper	Michael Brown	Abstain	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Snohomish County PUD No. 1	William T Moojen	Affirmative	
6	South California Edison Company	Lujuanna Medina		
6	Southern Company Generation and Energy Marketing	John J. Ciza	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Negative	SUPPORTS THIRD PARTY COMMENTS - (Keith Morisette)
6	Tampa Electric Co.	Benjamin F Smith II	Negative	SUPPORTS THIRD PARTY COMMENTS - (support comments made by Ron Donahey)
6	Tennessee Valley Authority	Marjorie S. Parsons	Abstain	
6	Westar Energy	Grant L Wilkerson	Negative	SUPPORTS THIRD PARTY COMMENTS - (SPP Standard Group)
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
8		Edward C Stein		
8		James A Maenner		
8		Roger C Zaklukiewicz	Negative	SUPPORTS THIRD PARTY COMMENTS - (ISO-NE)
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Utility Services, Inc.	Brian Evans-Mongeon	Negative	COMMENT RECEIVED

8	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman		
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative	
9	California Energy Commission	William M Chamberlain		
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Abstain	
9	Public Utilities Commission of Ohio	Klaus Lambeck		
10	Florida Reliability Coordinating Council	Linda Campbell	Affirmative	
10	Midwest Reliability Organization	William S Smith	Affirmative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council	Guy V. Zito	Negative	COMMENT RECEIVED
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	
10	SERC Reliability Corporation	Carter B Edge	Affirmative	
10	Southwest Power Pool RE	Emily Pannel	Affirmative	
10	Texas Reliability Entity, Inc.	Donald G Jones	Negative	COMMENT RECEIVED
10	Western Electricity Coordinating Council	Steven L. Rueckert	Abstain	

**Individual or group. (77 Responses)**

**Name (51 Responses)**

**Organization (51 Responses)**

**Group Name (26 Responses)**

**Lead Contact (26 Responses)**

**IF YOU WISH TO EXPRESS SUPPORT FOR ANOTHER ENTITY'S COMMENTS WITHOUT ENTERING ANY ADDITIONAL COMMENTS, YOU MAY DO SO HERE. (11 Responses)**

**Comments (77 Responses)**

**Question 1 (50 Responses)**

**Question 1 Comments (66 Responses)**

**Question 2 (50 Responses)**

**Question 2 Comments (66 Responses)**

**Question 3 (64 Responses)**

**Question 3 Comments (66 Responses)**

Individual
William H. Chambliss, Operating Committee
Virginia State Corporation Commission
Yes
Requirement R.1.5 obligates issuers of burst messages using "a one-way burst messaging system" to confirm receipt of that message "by at least one receiver." However, nothing in the requirements that I can find explains how such confirmation is to occur. Requirement R.1.6 obligates a receiver of a burst message to respond only "to request clarification from this issuer if the communication is not understood." There is no Requirement on any receiver to confirm receipt of an understood communication.
Group
Northeast Power Coordinating Council
Guy Zito
No
Neither Recommendation 26 in the Final Report on the August 14, 2003 Blackout In The United States and Canada or FERC Order 693 require 3-part communications protocol, or any established communication protocol for day to day operations. Both the Blackout Report Recommendation 26 and the Order 693 sections related to inter-Area communications identified one of the key factors in the Blackout being related to communications between and to RC entities as not being effective. It is not apparent if 3-part communications or the content of the other requirements in the proposed standard were in effect August 13, 2003 the problems would not have occurred. From the North American Electric Reliability Council Status of August 2003 Blackout Recommendations July 14, 2005: Recommendation 26. Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate. Status: Ongoing initiative. In response to this recommendation, NERC installed a new conference bridge and approved a new set of hotline procedures and protocols for reliability coordinator hotline calls. NERC is



working on an upgrade of the Reliability Coordinator Information System (RCIS) — an on-line, real-time, messaging system that connects all Reliability Coordinators and many control areas, which permits Reliability Coordinators to share emergency alerts. RCIS also displays information related to Area Control Error (ACE), frequency, and selected outages. Work in this area will be an ongoing activity as technologies and techniques improve. Note that NERC's own report does not mention any operator-to-operator communications. Also, from the Report to the U.S.-Canada Power System Outage Task Force The August 14, 2003 Blackout One Year Later: Actions Taken in the United States and Canada To Reduce Blackout Risk from the Natural Resources Canada, and the U.S. Department of Energy, the section Key Accomplishments—and Major Challenges Still Ahead section, there is no mention of communications issues. In light of the above, some of NPCC's participating members do not believe that the Standard is necessary and any perceived gap in communications has already been addressed through other means. We are not aware of any evidence that exists of a reliability issue existing for normal communications that needs to be addressed.

No

Not following a communications protocol when the Operating Instruction is identified as a Reliability Directive is an instance of zero tolerance. So even if a Reliability Directive is addressed and action is taken but the protocol was "missed" and a BES situation is mitigated, it is still a Severe Violation. This is extreme, and the VSLs for R4 should be reduced to address this. Regarding Requirement R4, more clarity needs to be provided on how a "consistent pattern" will be established and a set of uniform criteria needs to exist, without it there will be disparity in assessing compliance. Some of the applicable entities do not record phone conversations. The RSAW states that any instances of non-compliance will be turned over to Enforcement to determine a "consistent pattern." Again this is zero-tolerance language as each instance will be considered a potential violation. The standard implies that a zero defect assessment for Reliability Directives will be assessed in reviewing the VSL's. This does not meet the tenets of a results based standards development or any intention of the RAI process. The requirement needs to stand on its own. Only requirements that are approved by FERC are therefore enforceable. Requirement language should be provided that clearly states the intent to have a zero defect requirement for completing three part communication when Reliability Directives are issued. This is not an endorsement of this approach, simply a correct application of the SDT intent. The VSL wording is incorrect. For example, in R1, the Low VSL states the following: "The responsible entity did not specify the instances that require time identification..." when it should read "The responsible entity's protocol did not specify the instances that require time identification..." The Requirement is about specification in the protocol document explicitly. There are other places in the VSLs that similar errors occur. Suggest adding for R4 VSL Lower - The Reliability Directive was performed correctly by the receiver, but the responsible entity did not use the documented communications protocols developed in Requirement R2 when receiving a Reliability Directive. Suggest revising R4 VSL Severe - The Reliability Directive was performed incorrectly by the receiver, because the responsible entity did not use the documented communications protocols developed in Requirement R2 when receiving a Reliability Directive. The VSL should not add an additional layer of compliance to the proposed requirement. The requirements are structured to include:

1) document, 2) implement and 3) evaluate. The VSL should be developed from these three components of the standard and not introduce a 'zero defect' enforcement approach. NERC's recent direction was to move away from 'zero defect' standards and approach compliance from an 'identify, assess and correct' approach for controls type standards that have high frequency activity that do not immediately pose a reliability risk. The proposed requirements follow that approach. The proposed VRFs incorrectly introduce a 'zero defect' approach through a 'back door'. An entity may 'implement' a protocol, but one occurrence of not following that protocol does not warrant an entity to be non-compliant, as proposed in the standard. If the drafting team is looking for a 'zero defect' standard then the appropriate wording needs to be in the requirement. It is unnecessary as the 'zero defect' requirements for poor communication already exist in current IRO/TOP Standards.

Yes

The Requirements of COM-002-4 as written make it a zero tolerance standard. Non-emergency communications should not be zero tolerance. It can be argued that Reliability Directives be subject to zero tolerance, but even then there are realistic operational situations where having to identify a communication as a Reliability Directive, and having to repeat it back can further exacerbate a tenuous operating condition. Burst messaging should not be considered in the standard. Part 1.5 requires confirmation by at least one receiver for burst messaging. A burst message can include the issuance of multiple Reliability Directives. Getting one receipt does not guarantee that all Reliability Directives were received. There is no value in getting one back. In an emergency situation waiting for all recipients of a burst message to respond can have catastrophic reliability consequences. When a burst message is sent, the initiator can see from the system response if the message was received. FERC approved Standard TOP-001-1a Requirement R3 states that "Each Transmission Operator, Balancing Authority, and Generator Operator shall comply with reliability directives issued by the Reliability Coordinator, and each Balancing Authority and Generator Operator shall comply with reliability directives issued by the Transmission Operator, unless such actions would violate safety, equipment, regulatory or statutory requirements..." (This TOP-001 is deficient in itself as it doesn't address Transmission Operator to Transmission Operator directives). The Requirement goes on to further state that a response is only required if there is an inability to perform the directive. This introduces a double jeopardy situation with COM-002-4. If an entity does not comply with a directive and has not repeated it back to the issuer there is a violation of TOP-001-1a, and COM-002-4. TOP-001-1a Requirement R4, IRO-001-1.1 Requirement R8, and IRO-004-2 Requirement R1 also address communications. There is questionable value in having a documented communications protocol if the entity does not intend to implement it, make sure it is followed, maintained and personnel are trained in it. Suggest that requirements R3 and R4 either be added into the body of R1 and R2 respectively, or as Parts of R1 and R2 respectively. The VSLs should be modified accordingly. There was concern in the expressed in the Northeast that if no proper documented protocol is available, it also can't be implemented thus resulting in double jeopardy concerns. Combining these and requiring the protocol and also implementing it in the same requirement is preferable. In addition a problem was expressed with the term "implement". NPCC's participating members believe that implement, in the context written, could result in an auditor taking a "zero" defect approach. In this context, implement means to

have a current in effect document that is part of the mandatory policy of the entity that employees must follow if applicable to their job function. Part 1.4 reads: "Require the issuer of an oral Operating Instruction to verbally or electronically confirm receipt by at least one receiver when issuing the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g., an all call system)." This removes the efficiency gains obtained through such communication. It is unrealistic and an impediment to reliability if, during an emergency situation for example, the issuer of an oral Operating Instruction has to take the time to confirm receipt, and have the receiver of the Operating Instruction interrupt the implementation of actions to mitigate the emergency to confirm receipt. In all cases the issuer of the instruction would observe changes to the system thus providing "confirmation" of receipt. Furthermore, there is no requirement for the receiver to confirm receipt. Suggest adding a bullet stating that the receiver has to acknowledge receipt of the initial message. NPCC's participating members maintain that a Reliability Directive is a communication requiring immediate or emergency action, it should not be included in the definition of Operating Instruction, and the definition of Operating Instruction revised accordingly. R5 reads: "Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement a method to evaluate the communications protocols developed in Requirement R1 that:..." This does not require any evaluation by the DP or GOP. We would like the Standard Drafting Team to explain why a similar requirement was not considered for the DP or GOP? There is a disparity between the RSAW and VSLs as to what is considered noncompliant. The VSL states you are non-compliant for not using 3-way communications for Operating Instructions only if you show a "consistent pattern" of not following your protocols. The RSAW states that events should be sampled, and if instances of noncompliance with the protocols are found, the issue should be turned over to the Compliance Enforcement Authority who will then make a determination whether there was a pattern. First, the focus should not be on just sampling events. The entity should provide the samples that they tested internally to do their periodic reviews of the effectiveness and adherence to the protocols in place. Is Requirement R1.1 necessary? As per NERC Management's response in the document "NERC Management Response to the Questions of the NERC BOT on Reliability Standard COM-003-1" (page 4/5), it was suggested that distinguishing between "operating instructions" and "reliability directives" would not be practical during real-time situations and that it was as important, if not more important that common protocols be used for emergency communications. Any instruction given should be treated as a reliability directive and therefore there is no need for R1.1. Furthermore, the proposed definition of Operating Instruction on page 2 of the draft standard states that a reliability directive is one type of operating instruction. This further demonstrates the redundancy of having R1.1 in the standard. The applicability of the standard should be written to exclude DPs that do not own or operate BES equipment. As per the definition of Operating Instruction "A command ... to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System..." Entities that do not have real-time control of Elements or Facilities of the BES should be removed from the applicability of the standard. Suggest adding the following to Section 4: 4.1.2 Distribution Provider with control of Elements or Facilities of the Bulk Electric System. M3 and M4 are

difficult to understand and suggest edits to clarify: Each Distribution Provider and Generator Operator shall provide evidence that it implemented the documented communication protocols such that the entity has reasonable assurance that protocols established in Requirement R2 are being followed by personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Evidence should show periodic, independent review of the operating personnel's adherence to protocols established in R2. Evidence may include, but is not limited to • Descriptions of the management practices in place, • spreadsheets, • memos, or • logs, R5.1 is redundant with R3 as both require assessment of adherence to protocols established in R1. If part of "Implementation" (covered in R3) includes an assessment of the communication protocols, R5 should be limited to only correcting deficiencies with the protocols and the implementation of those protocols. If not removed as redundant, Requirement 5.1 should specify that the assessment will be limited to the operating personnel of the individual entity for both issuing and receiving Operating Instructions. As it is written now it would be the responsibility of the BA, RC and TOP to assess compliance with communication protocols to all entities involved in every communication, including the receiving GOPs and DPs, and other BAs, RCs and TOPs based on the Operating Instruction as "issuer and receiver" are not defined. Suggested Rewording of R5.1: "Assesses adherence to the communications protocols to provide feedback to entity personnel". In several places, including the Implementation Plan, there is mention of retiring COM-002-3. This standard was never FERC approved, therefore suggest changing this from retiring COM-002-3 to withdrawing COM-002-3. Implementation plan period – it is in the best interest of reliability for operating and other control room personnel to be thoroughly trained on the new communications protocols proposed in COM-002-4 before the standard goes into effect for compliance. To thoroughly train the more than 6000 certified operators in North America will likely take more than a year and an implementation plan period of one year is therefore inadequate. It is recommended that the SDT consider a two year period to assure successful implementation. If the SDT decides to retain the proposed one year implementation plan, we recommend that the SDT consider adding an option for the Registered Entity to elect an additional one year implementation period, to be vetted and pre-approved on a case by case basis upon mutual agreement between the Regional Entity and the Registered Entity. Addressing preferred communication methods and procedures could be addressed in training programs that would be reviewed for universal consistency. The requirements contained within COM-002-4 and its previous versions have concepts that more appropriately belong in a procedure or guideline. One example is COM-002-4, R1.3: "Require the issuer of an oral two-party, person-to-person Operating Instruction to wait for a response from the receiver ...". If the NERC Board of Trustees decides that a standard is needed: 1) Industry must accept that there needs to be a NERC Standard that addresses both Normal and Emergency communications. 2) The standard needs to be simplified. 3) Regulators acknowledge and understand that the "zero-defect" regulatory approach is already (appropriately) applied to the result (e.g. was a Reliability Directive implemented properly), and therefore does not need to be applied to the supporting means (communications). 4) Related to 3), there are already "zero-defect" requirements associated with Reliability Directive compliance as contained in IRO-001, R8, IRO-004-2, R1, TOP-001-1a, R3 and R4. 5) Acknowledge that each entity is going to

have to ensure their communication protocols are appropriately coordinated w/ neighboring entities. 6. Burst messaging should not be included in this standard. The preceding will require compromise between the Industry and Regulatory bodies. RSAW Comments: The “Note to Auditor” related to R3 and R4 is outside of the scope of the standard. Placing the examination of Internal Control within the RSAW effectively requires entities to have Internal Controls, which expands the scope of the standard significantly.

Individual

Thomas Foltz

American Electric Power

Yes

No

R3 & R4: While there \*is\* the potential of risk if documented communications protocols are not followed, this should not somehow imply that incorrect operations were performed as a result. The severe category should be reserved only for those instances in which documented communications protocols were not followed \*and\* which resulted in an emergency operation or reliability issue. As a result, we suggest “demoting” each existing VSL to a lower level, and editing the Severe VSL and limit it to only those instances that resulted in an emergency operation or reliability issue (suggestions provided below). Low - The responsible entity demonstrates a consistent pattern of not using the documented communications protocols developed in Requirement R1 for Operating Instructions that are not Reliability Directives. Moderate – The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving a Reliability Directive. High – The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving an Operating Instruction \*and\* resulting in an emergency operation or reliability issue. Severe - The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving a Reliability Directive \*and\* resulting in an emergency operation or reliability issue.

Yes

R5.1: Read on its own, one might think an issuer of an operating instruction may be required to provide feedback to the receiver. We don’t believe this is the intent. We suggest removing R5.1 in its entirety, or at a minimum, change the wording to the following: “Assesses adherence to communications protocols.”

Individual

Gerald G Farringer

Consumers Energy

Yes

The addition of “Operating Instruction” is less clear than in previous versions. In the distinction of “Operating Instruction “is needed at all it needs to be distinct and separate from a “Reliability Directive”. There needs to be a distinction of requests and instruction. Typical generation dispatch could be a request and does not have the weight of a direct reliability risk

for example. Keeping a clear distinction of "Reliability Directive" lends an air of urgency to the direction. There needs to be this clear distinction to communicate the difference between routine economic dispatches and true reliability needs. Creating "Operating Instruction" will only cause this category to be used when a "Reliability Directive" would be appropriate.

Individual

Chantal Mazza

Hydro Québec TransÉnergie

Agree

NPCC

Group

Southwest Power Pool Regional Entity

Emily Pennel

Yes

R3, R4, and R5 as addressed in the draft RSAW focuses on compliance related to internal controls. Disagree that compliance assessment is primarily based on internal controls and limiting audit scope and review of evidence as reflected in the Notes to Auditor section. Also limiting review of voice recordings to last 90 days negates the value of sampling for 3 way communication during events during the entire audit period. I don't think notes to auditor section should include audit scoping and dedicated to internal controls review for which compliance assessment findings of violations cannot be determined. R1 and R2 are focused on documentation of communication protocols, R3 and R4 the implementation of said protocols. R5 a method to evaluate protocols for R1. Unclear as to why R3 implementation cannot include the components of R5 as for same entities and both involve implementation of protocols. R5 is review.

Group

Arizona Public Service Company

Janet Smith, Regulatory Affairs Supervisor

Yes

Yes

No

Individual

Christopher Wood

Platte River Power Authority

Yes

We believe that requirement 1.9 should be removed or rewritten. If each utility is allowed to define this differently it would make communication more difficult, especially in emergency conditions.

Individual

Andrew Gallo
City of Austin dba Austin Energy
No
Neither the August 2003 Blackout Report Recommendation number 26 nor Order 693 requires three-part communications or any established communication protocol for normal operations. Additionally, EOP-001-2, R3.1 and COM-002-2, R2 already address the requirements of the Blackout Report and FERC Order 693.
No
Regarding R3 and R4: These VSLs create a “zero tolerance” situation. If an entity fails to follow the communication protocol when issuing or receiving a Reliability Directive one time, even if there is no adverse impact to the BES, it is a violation. While there is the potential of risk if documented communications protocols are not followed, this should not somehow imply that incorrect operations occurred as a result. The severe category should be reserved for only those instances in which documented communications protocols were not followed and the failure resulted in an emergency operation or reliability issue. As a result, we suggest “demoting” each existing VSL to a lower level and limiting the Severe VSL to only those instances that resulted in an adverse impact on the BES (suggestions provided below). Low - The responsible entity demonstrates a consistent pattern of not using the documented communications protocols developed in Requirement R1 for Operating Instructions that are not Reliability Directives. Moderate – The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving a Reliability Directive. High – The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving an Operating Instruction and that failure resulted in an emergency operation or reliability issue. Severe - The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving a Reliability Directive and that failure resulted in an emergency operation or reliability issue. Regarding the VSL for R3 and R4: Use of the term “consistent pattern” is vague and will be difficult to determine and analyze.
Yes
R2.1 currently requires, “the receiver of an oral or written Operating Instruction to respond using the English language.” We recommend re-writing the requirement to require, “the receiver of an oral or written Operating Instruction to use the English language.” (similar to R1.2) “Written Operating Instructions” must be defined (e.g. in the ERCOT Region, would an electronic, computer-generated dispatch instruction constitute a “written Operating Instruction?”) Measure 3 requires “reasonable assurance” without defining that term. Additionally, M3 also requires an “independent review.” Does that require hiring a third-party? Can a company’s compliance office serve as the “independent” reviewer? Can an operator “independently review” another operator? In several places, including the implementation plan, there is mention of retiring COM-002-3. FERC never approved that standard. The standard should not apply to DPs who do not own or operate BES equipment. As per the definition of Operating Instruction “A command ... to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric

System...” The Standard should not apply to entities that do not have real-time control of BES Elements or Facilities. We suggest adding the following to Section 4: 4.1.2 Distribution Providers who control BES Elements or Facilities. In the definition of “Operating Instruction,” the word “and” in the second line and the fourth line should be “or.”

Individual

Steven Wallace

Seminole Electric Cooperative, Inc.

Yes

Yes

Yes

The RSAW for COM-002-4 seems dependent on the implementation of the Reliability Assurance Initiative (RAI) which is not expected to be implemented until 2016. It is not reasonable to utilize an internal controls approach to auditing until the criteria for such evaluation has been clearly explained to the stakeholders. Therefore, the Implementation Plan and the EFFECTIVE DATE for this standard needs to be delayed accordingly.

Individual

Chris de Graffenried

Consolidated Edison Co. of NY, Inc.

No

Modify Requirement 1 Part 1.1 to say: “Require the issuer of a Reliability Directive to identify the action as a Reliability Directive to the receiver where time permitting.” Time permitting would be defined as when taking proactive actions to mitigate or prevent an Adverse Reliability impact pre-contingency. Stating “This is a Reliability Directive” would not be required post-contingency, and at the discretion of the sender would only be used if time were permitting. Add a new sub-requirement requiring that senders (RC, BA, TOP) and receivers (GOP, DP) of Operating Instructions, including Reliability Directives, have direct communication facilities. This requirement would remove the inherent time delay and introduction of garbled messages caused by the use of communications intermediaries. The following wording is suggested: New Requirement 1.2 - Require the issuer and receiver of an oral or written Operating Instruction have direct communications facilities. The use of communications intermediaries is not acceptable. Append the following words to the end of Requirement 5.1: “to ensure there that there is a consistent pattern in the use of communications protocols.” The sub-requirement would then read as follows: 5.1. Assesses adherence to the communications protocols to provide feedback to issuers and receivers of Operating Instructions to ensure there that there is a consistent pattern in the use of communications protocols.

No

Background - The ultimate purpose of any communications standard should be to see that the correct actions affecting the BES are taken. Greater emphasis should be placed on Reliability Directives, than on non-RD Operating Instructions. Therefore, the ultimate measure of whether such communications were successful should be whether the required action was taken (and



the real-time risk to the BES reduced) or not. It should not be based on whether some documentation requirement was met or some communications protocol was followed to the letter. Recommendations - We recommend different VSL ratings for a failure to repeat-back, depending upon whether the Operating Instruction was a Reliability Directive or a non-RD Operating Instruction, and whether the action taken reduced or potentially increased the real-time risk to the BES. If the action taken by the receiver (who failed to repeat back) was still correct and in accordance with the Sender's instructions, then only an administrative requirement was violated. There was no actual risk to the BES. This fact should be recognized and the documentation failure rated lower. However, if following a failure to repeat-back a receiver takes an incorrect or inappropriate action, which potentially introduces increased risk to the reliable operation of the BES, then this failure and should receive a higher rating. As such, we recommend the following replacements for the Requirement R4 VSL's: Add R4 VSL Lower - The Reliability Directive was performed correctly by the receiver, but the responsible entity did not use the documented communications protocols developed in Requirement R2 when receiving a Reliability Directive. Revise R4 VSL Severe - The Reliability Directive was performed incorrectly by the receiver, because the responsible entity did not use the documented communications protocols developed in Requirement R2 when receiving a Reliability Directive.

No

Individual

RoLynda Shumpert

South Carolina Electric and Gas

Agree

SERC OC Review Group

Individual

David Burke

Orange and Rockland Utilities, Inc.

Agree

Consolidated Edison Co. of NY, Inc.

Individual

Shirley Mayadewi

Manitoba Hydro

Yes

No comment.

Yes

Although Manitoba Hydro is in general agreement with the standard, we have the following clarifying comments: (a) VSLs, R1 and R2, Moderate – the statement ‘an alternate language may be used for internal operations’ is not necessary. (b) VSLs, R1 and R2, High and Severe – these are not written in the same form as the lower and moderate VSLs. The latter paraphrase the requirement part that is being violated while the former only refer to the requirement part

number. (c) VSLs R3, R4 – the term ‘consistent pattern’ is subjective; unclear how this would be interpreted. (d) VSLs R5 – doesn’t address requirements in 5.1 and 5.2

Yes

Although Manitoba Hydro is in general agreement with the standard, we have the following clarifying comments: (a) M3, M4, M5 – replace Bulk Electric System with BES. (b) Purpose – consider using the word ‘improve’ or ‘strengthen’ instead of ‘tighten’ in this statement. (c) R1 – Reliability Directive is not yet a FERC approved definition. What is the protocol if the definition of Reliability Direction is not approved? (d) R1 – the bulleted statements in R1, 1.3 make more sense if they came after the statements in 1.4. 1.4 discusses the requirement on the receiver to repeat information, a reference in 1.3 to ‘repeated information’ is premature. (e) R5 – 5.2 buries an additional requirement with the last few words ‘to modify the protocols as necessary’. If such a requirement is to be in place, it should be a separate requirement not tagged on to the R5 requirement to evaluate and assess. (f) There seems to be missing a further requirement that would require the Distribution Provider and Generator Operator to evaluate their communication protocols similar to that in R5. (g) M3 and M4 – the language ‘that provide the entity reasonable assurance that protocols.....Bulk Electric System’ seems unnecessary here. This language does not appear anywhere else in the requirement or the standard. Wouldn’t it be sufficient to require evidence of management practices in place without going into further description? (h) M4 – the language ‘and the remediation of noted exceptions in fulfillment of Requirement R5’ doesn’t seem to belong here. R3 simply requires implementation, not remediation. (i) M5 – the language in M5 does not match the language in R5, and doesn’t address 5.1 or 5.2.

Individual

Michael Falvo

Independent Electricity System Operator

No

a. As indicated in all of our comments on the previous COM-003 postings, we believe that the COM-002-3 standard that is supported by the industry and approved by NERC Board of Trustees adequately addressed the Blackout Report recommendation. Furthermore, communication protocols are in place to require functional entities that receive Reliability Directives to perform the directive issues by the RC, BA and TOP. While we generally supports exercising tightened communication protocols for routine operating instructions, we continue to disagree with the need to develop a standard that mandate three-part communication for issuance of Operating Instructions for normal operating system conditions. Any and all instructions will either change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Unlike its COM-003-1 Draft 5 predecessor, this draft no longer allows the Responsible Entity to specify the instances where the issuer of an oral two party, person-to-person Operating Instruction is required to exercise 3-part communication. Without this provision, the standard now requires 3-part communication whenever a Responsible Entity issues an Operating Instruction. This is overly burdensome, and may in fact hurt reliability as System Operators will now place focus on implementing and completing the 3-part communication process rather than concentrating on

the actions needed to achieve a reliability outcome. Notwithstanding the above, we have the following comments on the proposed standard. b. Part 1.3 is unclear in two aspects: • To “wait” is not a 2-part action, and is not measurable. How is an entity assessed whether or not it waited or not waited? We suggest to make it more proactive by replacing it with “obtain” or “collect” a response. • In the second sentence, the phrase “or if no response is received” is open-ended. When should the issuing entity take one of the actions listed in the bullets below? We suggest the SDT to add a time frame in this sentence such as: “or if no response is received in X minutes”. Without the time frame, it will not be possible for the issuing entity to know when it is supposed to follow up, and for the Compliance Enforcement Authority to assess if Part 1.3 was complied with. • The above comment also applies to Part 2.2. c. Part 1.4 places the obligation on the receivers of the Operating Instruction; it is not appropriate for inclusion in the issuer’s communication protocol unless the protocol document is distributed to all potential recipients of the Operating Instructions. However, there does not exist a requirement for the BA, RC or TOP to distribute their communication protocol document hence the inclusion of Part 1.4 in their communication protocol document is inappropriate and serves no purpose. d. Part 1.5: The intent of this part is unclear or the requirement is incomplete, leading to an unnecessary or missing action mandated by the requirement, or the potential for non-compliance despite best effort. Part 1.5 requires the issuer (say, a BA) of an Operating Instruction that uses a one-way burst messaging system for communicating common messages to multiple parties to obtain confirmation from at least one recipient (say, a GOP). The intent of using the burst messaging system is to achieve efficiency by eliminating the need for one-on-one communication of the same message and the need for confirming receipt of the message. The requirement for the issuer to confirm receipt by at least one receiver of the message is not consistent with the intent of using the burst messaging system. Further, we believe that the combined standard should focus on oral two-party, person-to-person communication. The one-way burst messaging system requirement is thus not necessary (e.g., confirmation of receipt) and should be removed because this is more of an electronic verification that is a function of the operability of the one-way burst messaging system. If the SDT should insist that requirement be retained, then to confirm at least one recipient receives the message, there needs to be an obligation on the receiving entities to acknowledge receipt of the Operating Instruction. However, there is no requirement in the standard to require the receiving entities (say, a GOP or a DP) to provide that confirmation. The only requirement for responding to Operating Instruction transmitted through the burst messaging system is when the communication is not understood by the recipient as stipulated in Part 1.6 and Part 2.3. If all recipients understand (or think they understand) the Operating Instruction so transmitted, the issuing party (e.g. a BA) will not receive any confirmation at all. In this case, the issuing party (e.g. the BA) will not be able to comply with Part 1.5. We suggest the SDT to review the intent of Part 1.5, and to remove this part or strengthen the other parts in this and other requirements to close the loop for confirming receipt of Operating Instructions transmitted through the burst messaging system. e. Requirement R5 requires the BA, RC and TOP to implement a method to evaluate the communications protocols developed in Requirement R1, assess adherence to the protocol, provide feedback and make adjustments as necessary. There is no such requirement for the GOP and DP who are also required to develop their communication protocol per

Requirement R2. The reason for not having such a requirement is not presented in the posted Rationale and Technical Justification document. We suggest the SDT to provide the reason for not having this requirement, or to add this requirement to close the gap.

No

Requirements R3 and R4 were mapped from Requirements R1 and R2 of in Draft 5 of the COM-003-1 standard. In that draft, both of these requirements were assigned a LOW VRF, which we concurred. In the proposed COM-002-4, the SDT proposes that these two requirements (now R3 and R4) be assigned a HIGH VRF "... because failure to use the communications protocols during an emergency could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures." We do not agree with the HIGH VRF since miscommunication alone does not and cannot cause instability. It needs to have another action or inaction combined by an event on the BES to result in any disturbance that results in instability. Even if we agree to some extent that failure to use the communication protocol during an emergency could contribute to bulk electric system instability, these two requirements also cover non-emergency situations. Under the latter conditions, we are unable to support the argument that failure to use the communications protocols could cause or contribute to bulk electric system instability. At most, we can accept a MEDIUM VRF assigned to these two requirements, but not a HIGH. We suggest the SDT to revise these VRF accordingly.

Individual

David Thorne

Pepco Holdings Inc

Yes

Take the case of a TO communicating with a TOP regarding the TOs prescheduled request to perform a BES switching activity. When field personnel are ready to begin work, the TO would contact the TOP requesting that the switching activity begin. The TOP would then authorize the TO perform the prescheduled BES switching. Technically the TOP did not "command" that the TO change the state of the BES system as described in the definition of Operating Instruction. Is "three part" communication required in this instance? If so please explain/describe how the draft standard is applied in this instance, since TOs are not included as Applicable and that no Operating Instructions were issued. In R3 and R4 in the RSAW it states under Evidence Required: "Spreadsheets, memos, or logs, evidencing periodic, independent review of operating personnel's adherence to the protocols..." What is meant by "independent review"? Is that meant to only exclude the personnel involved directly in the communication from "self-certifying" their adherence or does that exclude the Operations supervisor in charge of the Operating personnel and other operations personnel from review? That would imply then that review would require someone from outside operations like internal audit or a consultant.

Group

Tennessee Valley Authority

Brandy Spraker

Yes
Yes
Yes
TVA supports the SERC OC Review Group comments. We would respectfully add the comment below: As currently written, Measurements M3 and M4 establish the additional requirement of “periodic, independent review . . . of adherence to the [documented communication] protocols.” This is essentially duplication of activity without additional reliability benefit over assessments performed by issuers required in R5. As such, this will create unnecessary administrative burden on applicable entities. The SDT is respectfully requested to remove this language from M3 and M4 and to add as an alternative, a requirement for documented response to feedback from the issuers’ assessments that would include evidence of corrective actions taken. Suggested wording would be, “. . . reasonable assurance that protocols established in Requirement R2 are being followed by personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System, and documented responses to feedback received from assessments performed as required in R5, consisting of dated reports, or copies of electronic messages, or other evidence of appropriate corrective actions taken or technically justified explanations as to why no action is required.
Individual
John Seelke
Public Service Enterprise Group
Yes
Yes
1. Make a common NERC-wide communications protocol a separate standard attachment. We believe a single protocol that would apply across all of NERC is desirable. That protocol could be incorporated in a separate attachment with these items defining the “protocol:” a. The issuer of a Reliability Directive shall identify the action as a Reliability Directive to the receiver. b. When an oral person-to-person Operating Instruction command is issued, the command shall be repeated by the recipient and either confirmed by the issuer or reissued to resolve misunderstandings. c. For an oral Operating Instruction that uses a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g., an all call system): i. The issuer shall electronically or verbally confirm the receipt by at least recipient. ii. The receiver shall request clarification from the issuer when the Operating Instruction is not understood. We have not included certain provisions in R1 in the COM-002-4 draft in the protocol items: • We would not require each RC, BA, and TOP to develop its own protocol to address such items as time identifiers and the use of alpha-numeric clarifiers. We believe that three-part communications will correct any misunderstandings. • We would not address written communications, which are included in subparts 1.2 and 1.8. Although addressed in COM-002-4 draft, written communications requirements are only placed the issuer and therefore should not be included. • While not impacted by 1.2 for oral Operating Instructions, we did not require the receiver of an oral Operating Instruction to reply in English, unless agreed to otherwise. We believe the language used for communicating does not need to

be addressed in a standard because it is automatically handled by the use of three-part communications. 2. Include a requirement that requires the protocol be implemented. With a protocol defined in an attachment, a requirement should simply require Operating Instruction issuers (RC, BA, and TOP) and receivers (BA, TOP, DP, and GOP) to implement the communications protocol as defined in the attachment. This requirement would replace R1 through R4 in the current COM-002-4 draft.

Individual

Roger Dufresne

Hydro-québec Production

Yes

No

VRF, VSL The violation severity level and the VRF level seems not to be at the proper level compare to the requirement.

Yes

R1 - The issuer of a reliability directive should not have to identify the action as a reliability directive to a receiver. There should be only one level of communication protocol. The operating instruction should be included in the Reliability Directive to create only one level of communication protocol. This communication protocol would then be considered the highest level in all communication situation. A single communication protocol would minimise the risk of unwanted communication delay in emergency situation. Requiring the issuer of an oral two-party, person-to-person Operating Instruction to wait for a response from the receiver and having the receiver to repeat the Operating instruction would induce unwanted communication delay in emergency situation.

Individual

Russ Schneider

Flathead Electric Cooperative, Inc.

No

FERC Order 693 P 512 may have intended Distribution Provider (DP) be made applicable, but also stipulates not all DP entities will be required to comply with the communication and coordination standard. For an entity registered as a DP to provide BES support as intended by the Standard, there must be means and trained personnel available 24/7 to control facilities in a timely fashion which will have a significant operational impact on the BES and staff available to receive Operational Instructions. Many small entities do not maintain a 24/7 distribution dispath operation, precisely because their TOP is the one with control of the BES and lower level communications are generally related to impacts of the TOP's operational decisions. If DPs are included in the applicability section, there needs to be some qualifier on DPs with BES control of assets deemed essential by the the RC or PA/PC or something similar.

No

Not with the current unqualified applicability for DPs.

No

Previous comments by other small entities on the impacts of this standard appear to remain unaddressed in the current draft. This may be an oversight by the drafting team, but it does remain a defect in the current draft. The standard as drafted will require small entities to have and implement protocols to deal with Operating Instructions that they currently don't get or may never get from their TOP or BA, because of their lower voltage and impact position on the outskirts of the BES. Additional staffing will be required to deal with one-way bursts that might occur after hours, even though none of the possible issuers of these have indicated any plans to implement such a system, or have suggested that these entities must be available around the clock for reliability. DPs not designated by the RC or PA/PC be excluded.

Individual

Keith Morisette

Tacoma Power

No

Tacoma Power does not agree with the result, COM-002-4 standard. Reason One: -R1 and R2 of the proposed standard both address the issuance and receipt of an "oral, two-party, person-to-person Operating Instruction." -R1 applies to BA, TC, and TO -R2 applies to DP and GO -The requirements in R1 are different from R2, in that R1 contains several sub-requirements that R2 does not. One of these additional requirements is confirming the accuracy of the repeat-back of the Operating Instruction. This is a cornerstone of three-part communication, and its omission from R2 is a move in the wrong direction. -This sets a "compliance trap" for the System Operator and could delay critical communications. Alternately, it would require utilities that perform TO, BA, GO, and DP functions out of the same control room, often from the same Operator, to over-apply R1 to ensure compliance. Reason Two: -R5 (R5.1) will require implementation of a method to evaluate the communication protocols developed in R1 that assesses the adherence to the communication protocols and provide feedback to the issuers and receivers of Operating Instructions. -R5.1 does not specify a periodicity for this evaluation: annually, semi-annually, monthly? The data retention period is 90 days, so arguably we would need to perform these evaluations every 90 days on all operators. -This has the potential to create a large burden to administer this program.

No

Tacoma Power does not agree to the standard as proposed, for the reasons stated above. Therefore applications of VRFs and VSLs cannot be determined and supported for the proposed standard.

No

Group

Western Small Entity Comment Group

Steve Alexanderson

No

FERC Order 693 P 512 mandates Distribution Providers (DP) be made applicable, but also stipulates that DP entities that do not use, own, or operate BES facilities need not be required to comply with the communication and coordination standard. This implies there is room for

exclusion language in the Standard to remove compliance obligations for DP entities that are unable to provide any BES reliability support the Standard is designed to cover. However, the current draft has no such language. This standard assumes each applicable entity has the means to control BES facilities in a timely fashion, and has staff continuously available to receive Operational Instructions (OIs). Many DP entities do not have continuously staffed dispatch, nor own supervisory control and data acquisition (SCADA) equipment enabling remote control from a central location and may own limited BES facilities, if any at all. Therefore, the applicability section should allow exclusion for such entities. We suggest the applicability for Distribution Providers be further focused: Distribution Providers having a continuously staffed (24-7) dispatch desk with the ability to remotely control BES facilities with an aggregate impact of 75 MW or greater; or as identified in written agreement by the RC, BA, or TOP as required for specific prearranged operational actions. We also urge consideration be given to small non-24/7 GOPs. Small generation projects often are only manned for a single 8-hour shift each day.

No

In light of the comments submitted for questions one and three, the VRFs and VSLs cannot be aligned until the Standard is modified to remove applicability on entities that cannot provide the Reliability support it is designed to cover. Further, the high VRF for Requirement R4 is obviously inappropriate for small DPs and GOPs.

Yes

The comment group emphasizes its past comments submitted during COM-003-1 development and believes that smaller entities and non-24/7 staffed-entities, including small GOPs, were not considered during the drafting of this standard. The standard as drafted will require these entities to have and implement protocols to deal with OIs that have never occurred in the memories of numerous 30 year employees. Additional staffing will be required to deal with one-way burst OIs that might occur after hours, even though none of the possible issuers of these OIs have indicated any plans to implement such a system, or have suggested that these entities must be available around the clock for reliability. We suggest that non-24/7 DPs/GOPs and/or those not designated by the RC or PA/PC be excluded from the Applicability section of COM-002-4. The comment group also believes that the abbreviated 15-day comment period is an unreasonably short period for stakeholders to analyze and reach consensus on modifications to the standard that would address our concerns.

Group

Associated Electric Cooperative, Inc. - JRO00088

David Dockery

No

AECI firmly believes COM-002-3 adequately addressed SWBO recommendation 26 and FERC Order 693, with a reasonable balance of BES benefit, risk, and scope of governance, and should have been submitted to FERC upon NERC BOT approval per standard development procedure.

No

The scope of Operating Instructions is too broad for the assessed Severity, due to capturing



within its scope communications that would not significantly affect BES reliability, based solely upon mild possibilities.

Yes

AECI does not approve of this draft for the following reasons: 1) Expectations that once a Directive or even Instruction is issued then the issuer is legally obligated to wait upon a response, although adverse conditions could make such response impossible. 2) Including Distribution Providers, where redundant communication lines are not and in most all cases should not be required, by failing to reduce their Applicability scope to only communications affecting load reduction or shedding to protect the BES. 3) This draft introduces a hidden compliance-risk to responsible entities who improperly categorize Directives. 4) COM-002-3 addressed the risks to the industry.

Individual

Tracy Goble

Consumer Energy Co

Agree

Jerry Farringer - Consumers Energy Company

Individual

Andrew Z. Pusztai

American Transmission Company

Yes

1. However, ATC does not believe that the following text taken from the SAR was adequately addressed: "Requirements will ensure that communications include essential elements such that information is efficiently conveyed and mutually understood for communicating changes to real-time operating conditions and responding to operating directives." NERC Glossary of Terms Definition of a "Reliability Directive": (Approved by FERC) A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact. The draft COM-002-4 Standard in R1.1 requires the "issuer" to identify a "Reliability Directive", however, does not specifically call out the requirement that the "receiver" repeat back that it is considered a "Reliability Directive". ATC recommends this be added to R1.1. The Standard should close the loop on this subject as it is considered an Emergency or Adverse Reliability Impact. 2. Draft COM-002-4 Standard R1.4 requires the receiver to wait for "confirmation" from the issuer that the repeat back was correct. ATC recommends that the SDT include language which states confirmation consists of stating "that is correct" or "that is incorrect" followed by a re-issuing of the instruction.

No

ATC believes there should be more than just a "Severe VSL" for R5. Implementing a method of evaluating communication protocols could be accomplished at various levels of adequacy. With that said, additional levels should be considered.

Yes

The following are recommendations to improve the quality of the draft Standard: 1. After

reviewing the Measures in this draft Standard , ATC has the following comments: • M3, as written, is awkward and not grammatically correct and should be revised to clearly state the intent of the Measure. • Also, M3 and M5 may be duplicative when referring to R5. Furthermore, ATC recommends that in the last sentence in M3 be shortened by deleting the phrase “..... and the remediation of noted exceptions in fulfillment of Requirement 5.” Finally, this phrase uses the term “remediation” that does not make sense after researching the definition of the term to meet the intent of R5. 2. After reviewing Section D 1.2 Data Retention of the draft Standard, ATC is concerned that the guidance provided to the CEA is confusing and contradictory. In the first paragraph, the Standard states “ where the evidence retention period (for the Standard) is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.” (What does this mean?) In the second paragraph, the Standard requires the entity to “keep data or evidence for each applicable Requirement for the current year and one previous calendar year, with the exception of voice recordings which shall be retained for 90 calendar days.....” Bottom line is the required retention period in the second paragraph is much shorter than the 3-year audit period that would apply to Transmission Operators and it is not reasonable to meet the expectations of both time periods and comply. 3. ATC suggests R5.2 be re-worded as follows: R5.2 Provides for a periodic review of the communication protocols and modifies them based on lessons-learned during the adherence of the communication protocols. Evidence would be documenting this periodic review, whether changes were warranted, and subsequently implemented.

Individual

Scott Berry

Indiana Municipal Power Agency

No

For requirement R3 (and other requirements) VSL, how many non-conforming communications or types of non-conforming communications demonstrate a consistent pattern of not using the documented communications protocols? Would it be two or three or does it just depend on the volume of communications the entity performs? This VSL is very open to interpretation and may lead to much inconsistency in the Enforcement area.

Yes

The definition of an Operating Instruction has changed since the last posting of COM-003-1. In COM-003-1, an Operating Instruction was “a command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where...” and now it has changed to “a command by operating personnel responsible for the Real-time generation control and operation of the interconnected Bulk Electric System to change...”. The current definition in COM-002-4 of Operating Instruction seems to now include communications between an entity’s Market Operations Center (not a control center) and its generation facility. Previously, this did not seem to be the intent of the SDT and IMPA would recommend that the SDT uses the words “a command by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where...” so as not to include communications between the entity’s Market Operations and its generation facilities. IMPA has

concerns with the RSAW. First, the GOP requirements do not say or require the GOP to have management practices in place. The RSAW should be written to audit an entity to what is in the requirements and nothing more. Second, the RSAW is written in a way that makes an entity's management practices fall under the audit, and it allows the auditor great latitude in determining if an entity's management practice designs are effective. IMPA does not believe that management practices should be reviewed by an auditor during an audit. Even the RAI is looking at reviewing management practices outside of an audit in an assessment style only before an audit is performed. If a management practice must be included in the audit, there must be consistency among the auditors and not so much discretion of the auditor allowed which may lead to inconsistent audits. Maybe benchmarking or a model of internal controls can be used by both the entities and auditors (one that also allows for different sizes of entities - scalability and tailor-able). Third, an entity may believe that its internal controls are effective but if the auditor deems they are not effective then the auditor can pull samples of communications which may be ones that were not reviewed by the entity during its review check. So, does this mean the entity will have to review every communication just in case the auditor pulls a sample of communications? Under this scenario, if the auditor finds instances of noncompliance they are to turn them over to Enforcement. This is very problematic and does not remove the "zero defects" issue.

Individual

asd

asdf

Agree

Individual

Brett Holland

Kansas City Power & Light

Agree

Southwest Power Pool - Robert Rhodes

Group

ISO / RTO Standards Review Committee

Greg Campoli

No

General a. The SRC disagrees with the need for standards to repeat and confirm Operating Instructions for normal operating system conditions. Any and all instructions will either change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. Unlike its COM-003-1 Draft 5 predecessor, this draft no longer allows the Responsible Entity to specify the instances where the issuer of an oral two party, person-to-person Operating Instruction is required to exercise 3-part communication. Without this provision, the standard now requires 3-part communication whenever a Responsible Entity issues an Operating Instruction. To track every Operating instruction is overly burdensome, and may in fact hurt reliability as System Operators will now place focus on implementing and completing the 3-part communication process rather than concentrating

on the actions needed to achieve a reliability outcome. The SRC supports relying on the OC's Reliability Guidance that supports 3-part communication for all oral two party, person-to-person communications. The SRC proposes that this approach be used for a two year trial period. During that trial period NERC should collect information on the number of reliability events caused by communications errors. The ERO could then use the data to justify added requirements if the data justified the need. b. R3 in conjunction with R1 is a zero tolerance standard. All parties (Industry as well as the SDT) have stated that a zero tolerance standard for Operating Instructions during normal conditions is inappropriate. The SRC recommends that R3 be deleted. c. There is no rationale given for the omission of Load-Serving Entity (LSE) as an Applicable entity. The TOP-001-2 standard, as referenced in the Rationale and Technical Justification document, holds the LSE responsible for complying with Reliability Directives from its TOP. If, as the standard implies, tightened communication is required for any and all Reliability Directives and Operating Instructions, then there is no reason that LSE is not included in this standard. We would like to understand the rationale/technical basis for excluding the LSE and determine whether that same rationale should be applied to other parts or to the entire standard. Absent a rationale/technical reason for omission of LSE, we ask that this entity also be subject to the requirement. The SRC recommends that LSE be added to the standard Requirements d. R1.3 is unclear in two aspects: • To "wait" is not a 2-part action, and is not measurable. The SRC questions how an entity would be assessed regarding whether or not it waited or not waited? The SRC recommends that the word "wait" be replaced with "obtain" or "collect" a response. • In the second sentence, the phrase "or if no response is received" is open-ended. The SRC asks "When should the issuing entity take one of the bulleted actions listed? The SC proposes that the SDT to add a time frame in this sentence such as: "or if no response is received in X minutes". Without the time frame, it will not be possible for the issuing entity to know when it is supposed to follow up, and for the Compliance Enforcement Authority to assess if Part 1.3 was complied with. The above comment also applies to Part 2.2. e. Requirement 1 is a mandate to document the applicable (issuing) entity's protocols for communications. And lists the requirements that must be in those protocols. Part 1.4 however, is an obligation on the receivers of the Operating Instruction. Such an obligation on the receiver is not appropriate for inclusion in the issuer's communication protocol unless of course the issuer's protocol document is distributed to all potential recipients of the Operating Instructions. However, there is no requirement for the BA, RC or TOP to distribute their communication protocol document hence the inclusion of Part 1.4 in their communication protocol document is inappropriate and serves no purpose. f. Part 1.5: The intent of this part is unclear or the requirement is incomplete, leading to an unnecessary or missing action mandated by the requirement, or the potential for non-compliance despite best effort. Part 1.5 requires the issuer (e.g. a BA) of an Operating Instruction that uses a one-way burst messaging system for communicating common messages to multiple parties to obtain confirmation from at least one recipient (e.g. a GOP). The intent of using the burst messaging system is to achieve efficiency by eliminating the need for one-on-one communication of the same message and the need for confirming receipt of the message. The requirement for the issuer to confirm receipt by at least one receiver of the message thus mitigating the reason for using the burst messaging system. On the other hand, to be effective, a requirement to confirm at least one

recipient receives the message requires a complementary obligation on the receiving entities to acknowledge receipt of the Operating Instruction. However, there is no requirement in the standard to require the receiving entities (say, a GOP or a DP) to provide that confirmation. The only requirement for responding to Operating Instruction transmitted through the burst messaging system is when the communication is not understood by the recipient as stipulated in Part 1.6 and Part 2.3. If all recipients understand (or think they understand) the Operating Instruction so transmitted, the issuing party (e.g. a BA) will not receive any confirmation at all. In this case, the issuing party (e.g. the BA) will not be able to comply with Part 1.5. We suggest the SDT to delete requirement 1.5. g. Requirement R5 requires the BA, RC and TOP to implement a method to: evaluate the communications protocols developed in Requirement R1; assess adherence to the protocol; provide feedback; and make adjustments as necessary. There is no such requirement for the GOP and DP who are also required to develop their communication protocol per Requirement R2. The reason for not having such a requirement is not presented in the posted Rationale and Technical Justification document. The SRC recommends the SDT add this requirement to close the gap. h. The Industry-approved COM-002 states “When a Reliability Coordinator, Transmission Operator, or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator, or Balancing Authority shall identify the action as a Reliability Directive to the recipient.” However, the current draft reads “Require the issuer of a Reliability Directive to identify the action as a Reliability Directive to the receiver.” The previous version allowed the RC, TOP or BA to pre-define what system conditions constitute a Reliability Directive in an operating procedure instead of during pressing oral communications, in effect, developing a standing definition, the new draft appears to eliminate that needed flexibility The SRC recommends the SDT to retain the previously approved text.

No

Requirements R3 and R4 were mapped from Requirements R1 and R2 of in Draft 5 of the COM-003-1 standard. In that draft, both of these requirements were assigned a LOW VRF, with which we concurred. In the proposed COM-002-4, the SDT proposes that these two requirements (now R3 and R4) be assigned a HIGH VRF “... because failure to use the communications protocols during an emergency could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures.” We do not agree with the HIGH VRF since miscommunication alone does not and cannot cause instability. There needs to be another action or inaction combined with an event on the BES to result in any disturbance that results in instability. Even if we agree to some extent that failure to use the communication protocol during an emergency could contribute to bulk electric system instability, these two requirements also cover non-emergency situations. Under the latter conditions, we are unable to support the argument that failure to use the communications protocols could cause or contribute to bulk electric system instability. At most, we can accept a MEDIUM VRF assigned to these two requirements, but not a HIGH. The SRC recommends the SDT to revise these VRFs accordingly.

Yes

The SDT tries to avoid making this standard a zero tolerance by using explanations in the

Measures, VSLs and RSAWs. However it is our understanding that the words of the requirement form the basis for compliance (the other venues are not part of the standard they are part of the compliance program that is not subject to Industry or regulatory approval). The SRC recommends all text that is meant to mitigate the impact of the words in the requirement be placed in that requirement. Please note that CAISO and PJM abstained from these comments and will submit their own comments independently.

Individual

Matthew Beilfuss

Wisconsin Electric (WEPCO)

Yes

Yes

Yes

R1.4 / R2: It should be clear that it is the issuer’s responsibility to ensure three-way conversation occurs. Situations where an issuer fails to prompt the receiver to partake in a 3-way conversation during issuance of an Operating Instruction should not be a violation on the part of the receiver. R1.7: The protocol should include a format for time identification, identifying specific instances for using the protocol becomes more problematic. An instance could mean a number of things, including: (1) when issuing Operating Instructions to a receiver in a different time zone; (2) when issuing specific types of Operating Instructions, or when a time component would materially impact an Operating Instruction. Alternate language for R1.7, “Specify the time format to use when issuing an oral or written Operating Instruction.” The R5 requirement to implement a method to evaluate the communications protocols provides a more flexible method for evaluating “instances.” R1.9: Comments similar to R1.7, alternate language for R1.9, “Specify the alpha-numeric clarifiers to use when issuing an oral Operating Instruction.” The R5 requirement to implement a method to evaluate the communications protocols provides a more flexible method for evaluating “instances.” R2 / R4: These requirements should also be made applicable to Load Serving Entities, Balancing Authorities, and Transmission Operators. All are potential “receivers” of Operating Instructions. The following Standards (mandatory or in process) establish RC and TOP authority for issuing Operating Instructions. • Mandatory Standards Subject to Enforcement: o IRO-001-1.1 R3. The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. o TOP-001-1a R3. Each Transmission Operator, Balancing Authority, and Generator Operator shall comply with reliability directives issued by the Reliability Coordinator, and each Balancing Authority and Generator Operator shall comply with reliability directives issued by the Transmission Operator, unless such actions would violate safety, equipment, regulatory or statutory requirements. Under these circumstances the Transmission Operator, Balancing Authority or Generator Operator shall immediately inform the Reliability Coordinator or Transmission Operator of the inability to perform the directive so that the Reliability Coordinator or

Transmission Operator can implement alternate remedial actions. • Filed and Pending Regulatory Approval o IRO-001-3 R2: Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator’s direction unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements. o TOP-001-2 R1. Each Balancing Authority, Generator Operator, Distribution Provider, and Load-Serving Entity shall comply with each Reliability Directive issued and identified as such by its Transmission Operator(s), unless such action would violate safety, equipment, regulatory, or statutory requirements. R2 / R4 / R5: The standard as drafted requires the DP and GOP to document and implement their protocols in the role as a receiver. However, R5 or similar language establishing an evaluation program is identified only for the Balancing Authority, Reliability Coordinator, and Transmission Operator. As a result, compliance for the DP and GOP will be in a zero defect environment with no opportunity to internally set-up a program to evaluate and assess effectiveness. We highly recommend making R5 applicable to all receivers of Operating Instructions. Alternate language for R5, “Each Balancing Authority, Reliability Coordinator, Transmission Operator, Generation Operator, and Distribution Provider shall implement a method to evaluate the communication protocols developed in Requirements R1 or R2”

Individual

Michelle D’Antuono

Ingleside Cogeneration LP (Occidental Chemical Corporation)

No

Ingleside Cogeneration agrees in general with the Operating Instruction concept proposed by the project team. It correctly distinguishes between entities who issue and receive Operating Instructions and those who only receive them. In addition, protocols can be developed which vary by the criticality of the communication – allowing much more flexibility in the delivery of a routine Operating Instruction as compared to a Reliability Directive. However, we do not believe that Requirements R3 and R4, which state that entities “shall implement the documented communications protocols”, can be consistently enforced. Although we understand the intent to leverage the Measures, VSLs, and auditor guidance in the RSAW to determine when a violation takes place, is not clear that they would prevail in a finding of violation. In addition, the intent which seems to be reasonable now, could change over time to be more restrictive if an RE, NERC, or FERC should so choose. FERC has consistently ruled that reliability violation outcomes must be consistent, deterministic, and repeatable. Ingleside believes that mandatory bright-line criteria can be developed to assure such an outcome – but COM-002-4 as written relies too heavily on CEA opinion. There is a place for subjectivity in any risk-based evaluation, but that balance has not been struck in our view.

No

The enforcement of COM-002-4 relies heavily on the “High” VSL for requirements R3 and R4 which call for a violation to be assessed on a responsible entity who “demonstrates a consistent pattern of not using the documented communications protocols” for routine Operating Instructions. There is no definition of “pattern” given in the standard or NERC

glossary. It is possible that some CEAs would consider a pattern to be 10% or more of all Operating Instructions – others could assess a violation when two or more errors occur. Also, there is no differentiation between situations where documentation is inadequate as compared to those where Operating Instructions are inadequately performed. If “undocumented” equates to a “miss”, Ingleside Cogeneration believes the chances of a “pattern” being detected go up significantly. In our view, the criteria that Enforcement will use to determine a violation must be vetted as part of this project. In addition; we would like to see language added to the VSL allowing to consideration of the outcomes of miss-executed Operating Instructions. Those that led to a BES threat or even an outage must weigh heavily in an assessment – those that do not should be less of a factor. This was the primary criteria in COM-003-1 Draft 6, but has disappeared completely in COM-002-4. Even though there were concerns that a causal tie cannot be made under every circumstance, we believe that a reasonable solution can be found through the development of specific Compliance criteria. The VSLs for R3 and R4 seem to determine what constitutes a violation, which is not the purview of the VSLs. The language “demonstrates a consistent pattern of not using the documented communications protocols” is determinative of a violation. Perhaps some modified form of this wording could be included in the Requirements themselves. The VSLs for R3 and R4 are also “stacked” on the High and Severe level. Obviously, the communications are important, but without the emphasis on outcomes, there can’t be High and Severe VSLs. See AEP’s comments.

Yes

1. The SDT should consider having the issuer of an oral, two-party, person-to-person Operating Instruction identify the communication as such much like a Reliability Directive. Since the issuer will have to use three part communications in both cases, this will avoid any confusion on the receiver’s part concerning whether the communication is a Reliability Directive, Operating Instruction, or other type of communication. 2. In M3 and M4, there needs to be clarity on what constitutes an “independent review.” The same comment is applicable to “degree of independence” in the proposed RSAW. 3. Clarification is also needed for R5.1 “feedback to issuers and receivers.” We understand this to mean internal feedback from the internal review to the issuers and receivers. However, it could be construed as BA to GOP, etc. 4. In R1.2, the words “or written” should be deleted. This standard doesn’t seem to pertain to written or electronic communications. The term “written” could be construed as an electronic dispatch instruction.

Individual

Kathleen Goodman

ISO New England, Inc.

Agree

IRC SRC

Individual

Denise M. Lietz

Puget Sound Energy

Yes



No
The severe VSLs for requirements R3 and R4 effectively add a requirement to the standard by requiring a responsible entity to use its communications protocols when issuing or receiving a Reliability Directive. This is inconsistent with the measurements for those requirements, which address only management controls for the implementation of the protocols. It is also inconsistent with the draft RSAW language for these requirements, which do not address this issue either. For clarity, this additional requirement should be included in the standard's requirement and measurement language, not just in the VSL language. It is preferable to include it as a separate requirement, since the related measure will be much different than those addressing the implementation of the communications protocols.
No
Individual
Molly Devine
Idaho Power Co.
Yes
Yes
Yes
I don't believe the terms "Transmission interface Elements" and "Transmission Interface Facilities" in Requirement 1.8 the terms are defined anywhere. In discussions internally, there have been differing opinions on what the scope of these.
Individual
Oliver Burke
Entergy Services, Inc.
Agree
Entergy support comments provided by SERC OC Review Group.
Group
Duke Energy
Michael Lowman
Yes
Duke Energy would like to commend the SDT's efforts on developing a Communications Standard that is on the right path. We agree, in general, that this standard is intended to be a risk/process based standard and not a zero defect standard. Duke Energy's balloting position is predicated on the assurances from the ERO and RRO that the standard's enforcement will be from a process/risk based approach as opposed to a zero defect approach.
No
Duke Energy would like for the SDT to clarify the meaning of "consistent pattern" in the VSLs for R3 and R4. We are concerned with how an auditor determines what constitutes a "consistent pattern" of non-compliance. Once the SDT has clarified the meaning of "consistent pattern", Duke Energy recommends adding similar language to the Severe VSLs for

Requirements 3 and 4 for a Reliability Directive. If the industry is going to be measured on the effectiveness of their internal controls process, as outlined in the Measures and in the RSAW, a zero-defect VSL should not be the answer.

Yes

Duke Energy suggests rewording, for clarity, the definition of Operating Instruction as follows: “Operating Instruction — A command by operating personnel responsible for the Real-time generation control and operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element or Facility of the Bulk Electric System. A Reliability Directive is one type of an Operating Instruction. A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.” Duke Energy seeks clarification on the absence of a provision requiring the GOP and DP from implementing a method to evaluate the communications protocols developed in R2. Also, FERC has not approved Reliability Directive as an official definition in the NERC Glossary of Terms. Duke Energy recommends adding this definition to the new COM-002-4 standard for consistency and to provide clarification to this standard.

Group

Midwest Reliability Organization NERC Standards Review Forum (MRO NSRF)

Russ Mountjoy

No

The MRO NSRF agrees with the Independent Expert Review Panel and NERC Management on the recommendation of combining COM-002-3 and COM-003-1 into one Operating Personnel Communications Reliability Standard. The NSRF disagrees with the decision to waive the standards development procedures. For such a substantial change, a 15 day review and comment period does not allow sufficient time for consideration of the proposed changes and comment coordination Recommendation 26 states, “...ensure that all key parties, including state and local officials, receive timely and accurate information.” This draft does not address communicating to entities outside of the identified functional entities. Each of the cited scenarios for Recommendation 26 (p. 56, 65 & 67) were categorized under “Cause 2 – Inadequate Situational Awareness” this draft standard does not address System Operator situational awareness, only how to communicate instructions.

No

The MRO NSRF recommends that the drafting team should clarify what is a “consistent pattern of not using the documented communication protocols.” The NSRF also believes that R3 and R4 should include lower and moderate VSLs for errors in the use of communication protocols that do not rise to the level of a “consistent pattern of not using the documented communication protocols.” The Violation Severity Levels imply you are only non-compliant for operating instructions if you show a pattern of not following your protocols. The problem is the RSAW states that system events should be sampled, and if instances of nonconformance with the protocols are found, the issue should be turned over to the Compliance Enforcement Authority, who will then make a determination whether there was a pattern. Are two data points a pattern? Is this considered a trend, too? The NSRF recommends the development of

clear numerical thresholds for the VSLs. "In circumstances where voice recordings are reviewed, auditors should consider requesting recordings commensurate with known events in the entity's footprint during the audit period, as Operating Instructions may be more likely to occur during, and related to, such events...". This goes against the NERC process of random sampling. Auditors are trained and should be industry experts. They do not need auditor notes that explicitly guide them on how to audit a requirement. Auditors need to read each Requirement and understand what the intent is, just like every applicable entity is required to do. Recommend that if "Note to Auditors" needs to be present within the RSAW that R3 and R4 wording be deleted and replaced with R5's Note to Auditor wording; "Auditor should assess whether evidence related to the management practices providing reasonable assurance of implementation of communication protocols provided by entity for Requirement...". If the RSAW SDT will not provide this change then a foot note with a disclaimer needs to be added.

Yes

1. The Purpose seems to be wordy and loosely written. Recommend the Purpose to read, "To reduce the possibility of miscommunications that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES) by establishing Operating Instructions with predefined communication protocols". 2. R1.2 and R2.1, remove "An alternate language may be used for internal operations" as this will not be used between two different operating personal and the first sentence already allows for other languages to be used, if agreed upon. 3. The proposed definition of Operating Instruction defines a Reliability Directive as a subset or one type of Operating Instruction. However, the current definition of Reliability Directive refers to a broader set of "communications" than "commands" referred to in the proposed definition of Operating Instruction. The drafting team should reconcile the use of the broader term "communication" with the narrower term "command," 4. R1.7, R1.8 and R1.9, all speak of "specifying" time identification, nomenclature and instances of alpha-numeric clarifiers, respectfully. Recommend that a statement similar to CIP-002-5.1, R3.1 be added that reads "a discrete list of all Operating Instructions is not required". This statement has been vetted within the CIP version 5 Standard, CIP-002 and would allow entities to determine (specify) what R1.7, R1.8 and R1.9 need to refer too. 5. R3. Add at the end of Requirement 3 (after the words Requirement 1) "and remediate noted exceptions identified as provided in R5". (This aligns with Measurement 3 (M3).) M4 (Measurement 4) calls for an "...independent review of operating personnel's adherence to the protocols established in Requirement 2". M4 in effect is expanding R4. This independent review should be removed from M4 and we suggests the following for M4: after the words "Bulk Electric System, spreadsheets, memos or logs[.]" place a period. 6. R5.2, please change "modifies" to "modify". 7. The NSRF recommends that the drafting team update R1 and R2 to allow entities to inform the RC, BA, or TOP of the inability to comply with an Operating Instruction or Reliability Directive if doing so would violate safety, equipment, regulatory, or statutory requirements. 8. The NSRF suggests that the Implementation Plan be updated to reflect necessary conforming changes to other standards. The NSRF notes that proposed revisions to IRO-001-3 and TOP-001-2 would refer to "Reliability Directives." The NSRF believes that other standards that incorporate terms with a meaning similar to Operating Instruction or Reliability Directive should be updated to include defined terms. BAL-STD-002-0 refers to "any instruction, directive, order or suggested action." CIP-002-

5 refers to “operational directives.” INT-010-1 refers to Interchange schedules “directed” by the Reliability Coordinator. IRO-004-2 R1 refers to “directives.” VAR-001-2 R6 refers to “direct[ing] the Generator Operator to maintain or change its voltage schedule or its Reactive Power schedule.” VAR-001-3 M3 refers to evidence of “issued directives.” VAR-002-1.1.B R2.1 refers to actions “directed by the Transmission Operator,” and M3 refers to responses to “Transmission Operator’s directives.” The NSRF recommends that these standards be updated to incorporate the term Operating Instruction or Reliability Directive to avoid industry confusion about which types of communications these standards are intended to describe. COM-002-4 Proposed RSAW, comments: The MRO NSRF does not agree with the contents of the COM-002-4 RSAW. Per the SPM, footnote 19 of the SPM says “While RSAWs are not part of the Reliability Standard; they are developed through collaboration of the SDT and NERC Compliance Staff. A non-binding poll, similar to what is done for VRFs and VSLs may be conducted for the RSAW developed through this process to gauge industry support for the companion RSAW to be provided for informational purposes to the NERC Board of Trustees.” (Emphasis added). Please note the following items expand the scope of the applicable Requirement(s). Under Note to Auditor; The RSAW drafting team starts to add additional compliance actions and there are no foot notes associated, either. Note that footnote 1 states, “While the information included in this RSAW provides some of the methodology that NERC has elected to use to assess compliance with the requirements of the Reliability Standard, this document should not be treated as a substitute for the Reliability Standard or viewed as additional Reliability Standard requirements. In all cases, the Regional Entity should rely on the language contained in the Reliability Standard itself, and not on the language contained in this RSAW, to determine compliance with the Reliability Standard.” And foot notes 3, 4 and 5 all state that “These items are not mandatory and other forms and types of evidence may be submitted at the entity’s discretion”. R1, well written and no additional wording was interjected that expands the Requirement. R2, well written and no additional wording was interjected that expands the Requirement. Per the RSAW; R3 and R4, do not relate to the actionable words of the Requirement. As stated in R3, protocols are to be “implemented” per R1. But under Compliance assessment Approach for R3 the first sentence states for the auditor to review management practices to assure that R3 is “effective”. This statement needs to be deleted as it does not support Requirement 3. For both R3 and R4 these types of statements should be deleted.

Group

SERC OC Review Group

Stuart Goza

Yes

Yes

Yes

The SDT is respectfully requested to rearrange the sentences in the Operating Instruction definition to differentiate between what the command is and what it is not. The recommendation follows: A command by operating personnel responsible for the Real-time generation control and operation of the interconnected Bulk Electric System to change or

preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. A Reliability Directive is one type of an Operating Instruction. A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction. The SDT is requested to clarify the applicability of COM-002-4 for the Distribution Provider (DP) with language that limits DP applicability to load reduction or load shedding. The Violation Severity Levels imply you are only non-compliant for operating instructions if you show a pattern of not following your protocols. The problem is the RSAW says that system events should be reviewed, and if instances of nonconformance with the protocols are found, the issue will be turned over to the Compliance Enforcement Authority, who will then make a determination whether there was a pattern. Are two data points a pattern? The standard should not focus on sampling events. The standard should let the entity provide the samples used as part of the periodic reviews of their operators' communications. The RSAW should be changed and the standard should be clear that if the entity has a protocol document that lays out its expectations of its operators, periodically checks for conformance with the protocols, and implements corrective actions when deficiencies are found, the entity is compliant. In several places, including the implementation plan, there is mention of retiring COM-002-3. This standard was approved by the NERC BoT but not submitted to FERC. Therefore, we suggest that the SDT review the language and modify as necessary to capture the anticipated NERC BoT future action regarding COM-002-3. The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Review Group only and should not be construed as the position of the SERC Reliability Corporation, or its board or its officers.

Group

Florida Municipal Power Agency

Frank Gaffney

No

In regards to Order 693, P 532: "... We also believe an integral component in tightening the protocols is to establish communication uniformity as much as practical on a continent-wide basis. This will eliminate possible ambiguities in communications during normal, alert and emergency conditions ..." FMPA believes that only the RC needs to have protocols that everyone else follows. Everyone within an RC talks with each other; therefore, everyone's protocols ought to be similar if not the same within an RC area, e.g., entities within an RC ought to use similar time stamps, similar nomenclature, etc. There are a couple of ways that this could be done: i) the RC could be the only one to develop protocols that everyone else follows within their area; or ii) the RC develops "pro forma" protocols that everyone else uses to develop their protocols (similar to FERC developing the Pro Forma OATT and each TSP using that Pro Forma to develop their OATTs, with the associated need to justify deviations).

Yes

Yes

FMPA appreciates the efforts of the SDT. We believe it is the best effort to date in developing the standard. However, FMPA is voting "Negative" primarily due to regulatory uncertainty concerning monitoring and enforcement, and we also have concerns regarding the standard

itself. OTHER ISSUES WITH THE STANDARD The SDT incorporated two approaches to the standard: 1. Performance Measurement: Zero defect requirements with RAI type enforcement in R3 and R4 2. Internal Controls Measurement where we measure the internal controls themselves in R1, R2 and R5 The standard should not include both of these types of measurements, and it would be better if only one of these two methods were contained in the standard. R3 and R4 as written are “zero defect” requirements for all Operating Instructions. The SDT tries to mitigate the “zero defect” problem through the VSLs and the RSAW, which depend on internal controls. This creates a double jeopardy with R5. There are two ways to resolve this: a) Measure performance for only Reliability Directives by replacing “Operating Instruction” within R3 and R4 with “Reliability Directives” (FMPA’s preferred alternative as further described below). b) Remove R5. If R3 and R4 are retained as is, R5 is not necessary and should be deleted. With the audit methodology proposed for R3 and R4 of evaluating management practices / internal controls, which would include the protocols themselves, the assessment described in R5 would happen naturally to avoid a “pattern” of failure to follow the protocols. DPs are a special case within the standard. FMPA believes that DPs will not receive any Operating Instructions with the exception of Reliability Directives to shed load, or Operating Instructions associated with a cranking path, since they do not own or operate “an Element of the Bulk Electric System or Facility of the Bulk Electric System. As such, DPs should only be measured against performance and not internal controls, e.g., R3 and R4, not R5, due to the very rare occurrence of an Operating Instruction being given to a DP. As such, the expectation for audit is that DPs will not have the same level of internal controls as other registered functions since there will be no statistical significance to rely on in sampling. As such, if R5 is retained, DPs should not be included as an applicable entity to that requirement.

ISSUES WITH THE RSAW The RSAW gives the auditor complete subjective discretion and decision making as to what constitutes an effective management practice / internal control. Such unfettered discretion is a recipe for: i) inconsistent treatment, not only between regions, but between different auditors within a region; and ii) conflict between entities and auditors as to what is and is not an effective internal control. FMPA supports moving towards RAI; but in order to do so, expectations must be set to avoid unnecessary conflict and inconsistency. As such, the SDT ought to develop benchmarks or criteria for what would constitute effective management practices/internal controls in the next version of the RSAW if R3 and R4 are retained as written. In addition, FMPA is especially concerned about the auditor having the experience and wisdom necessary to properly scale their subjective judgments to the entity. For instance, as discussed above concerning a DP that will receive very, very few Operating Instructions, internal controls that require statistical sampling of voice recordings makes no sense. As such, we suggest that the next draft of the RSAW include “benchmark” internal controls or other criteria for at least three different size entities (large, medium and small) so that the auditor has guidance as to how to scale their expectations. Another source of ambiguity that will give rise to unnecessary inconsistency and conflict is the ambiguous phrase “consistent pattern”. The SDT is also encouraged to set expectations regarding what “consistent pattern” is intended to mean. The standard, as written, depends on the successful implementation of RAI; yet, we are not confident in that successful implementation. So far, we have heard a great short story; but, the story does not have nearly enough depth to make for a

good novel. And, we have a lot of concern over the details around RAI. If not implemented correctly, RAI could make our lives much worse than they already are, not better. As such, if we are going to depend on RAI to audit R3 and R4, we need more meat on the bone of what that RAI process would look like for this standard. WHEN SHOULD AN ENTITY SELF REPORT? R3 and R4 are written as zero-defect requirements. However, the expectation is that there would not be a violation as long as the entity has effective internal controls. Such internal controls may reveal instances where the communication protocols were not followed. Is an entity expected to self-report those instances, or only self-report if the entity identifies a pattern of failing to follow those protocols? CONCLUSION FMPA recommends that either: 1) The SDT made R3 and R4 only applicable to Reliability Directives and retain R5 for other Operating Instructions (FMPA's preferred method since it does not depend on successful implementation of RAI while allowing RAI to mature, and addresses the "self-report" issue). 2) The SDT put much more meat on the bone of how RAI would be used for COM-002-4 by setting expectations of both the auditors and the entities concerning mutual agreement about what constitutes effective internal controls for various size entities and various registrations.

Individual

Silvia Parada Mitchell

NextEra Energy

Yes

NextEra Energy (NextEra) appreciates the work of the SDT. NextEra has a number of recommended changes based on its experience as RC agent, large DP, TOP and BA and GOP, as well as TOP and GOP in multiple regions. Definition of Operating Instruction. NextEra is concerned that the definition of Operating Instruction is overly board, subject to multiple interpretations and goes well beyond communications that could impact the reliability of the Bulk Electric System. To clarify Operating Instruction and have it pertain to communications that can impact reliability, NextEra recommends that Operating Instruction be amended to read as follows: "A Reliability Directive; or, a non-emergency command by operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System to: (i) switch in or out a Bulk Electric System Element or Facility or (ii) mitigate a SOL or IROL. Any discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction. A Reliability Directive is a type of an Operating Instruction." Applicability of DPs and GOPs. NextEra is concerned that without qualification on the applicability of DPs and GOPs the Standard is vague and will have unintended consequences. Thus, NextEra recommends that GOPs be qualified in the same manner that the PER-005 SDT is qualifying GOPs. To NextEra, such a qualification and syncing up of PER-005's section "4.1.5 Generator Operators" is needed because PER-005 is related to the training associated with communications, and, thus, is targeting the personnel who need to be trained to effectively communicate and receive Operating Instructions and Reliability Directives. Hence, the population of applicable GOPs should be the same in both Standards. With respect to DPs, NextEra only sees DPs being applicable when they are required to curtail load via a Reliability Directive or conduct switching of BES facility – both of which rarely occur. To fail to limit the

applicability to DPs to personnel who receive Reliability Directives to curtail load or Operating Instructions/Reliability Directives to switch a BES facility will lead to confusion and over application of the Standard to DPs for no reliability reason. Thus, NextEra recommends that both GOPs and DPs applicability sections be revised pursuant to these comments. R1. NextEra is concerned with the lack of coordination between an RC, TOP and BA in one RC region as well as across the Interconnections. Reliability will not likely be served by having multiple protocols in one RC region and across RC regions. One approach that NextEra supports is to recommend in the implementation plan that RCs, TOPs and BAs coordinate their protocols, and that NERC facilitate the coordination of these protocols. R1.1 NextEra favors retaining R1.1 so that the RC, TOP or BA must state it is issuing a Reliability Directive. Without this requirement, receiving parties will not understand the importance of a Reliability Directive during an Emergency or leading up to a possible Emergency versus an Operating Instruction issued during a non-Emergency state. At the same time that NextEra favors retaining, R1.1, it is concerned that application of a strict zero tolerance approach will not consider the facts and circumstances of the situation. For example, during an emergency, an operating person may forget to state “Reliability Directive” but otherwise indicate that the situation is an Emergency, and he or she requires action from the receiver. Thus, for purposes of self-reporting, during an audit or spot check, there should be discretion not to find a violation simply because the word Reliability Directive was not used. NextEra will address this issue below in the context of the draft RSAW. R2 and subrequirements. NextEra does not see the value of documented protocols for receivers only – i.e., DPs and GOPs. DPs and GOPs need to use three-way communication when provided a Reliability Directive or Operating Instruction; this is performance of a task, a documented protocol for this task is unnecessary, administrative in nature and problematic. For example, what if a GOP or DP implemented a different written protocol than a RC, TOP or BA – the issuer; such a situation will not help reliability, but only add to confusion and possible mistakes. As NERC Standards are to be drafted to be results-based, this is a perfect situation in which the DPs and GOPs are more appropriately required to perform, than to have a documented protocol. Therefore, NextEra, recommends that R2 and its subrequirements read as follows: “R2. Each Distribution Provider and Generator Operator that receives an Operating Instruction shall: [Violation Risk Factor: Low][Time Horizon: Long-term Planning] 2.1. Respond using the English language, unless agreed to otherwise. An alternate language may be used for internal operations. 2.2. Take one of the following actions for an oral two-party, person-to-person Operating Instruction: • Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct. • Request that the issuer reissue the Operating Instruction. 2.3. Request clarification from the issuer if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g., an all call system).” This performance-based approach also nullifies the need for R4, thus, that requirement should be deleted. R5. NextEra supports R5; however, it is not clear how R5 is or is not connected to moving away from a zero tolerance environment. To clarify this connection, NextEra will recommend, below, specific changes to the RSAW. Implementation Plan. Moving the implementation plan to 18 months would facilitate the industry considering that operators work on multiple shifts and multiple training will be required as well as provide time to conduct



the recommendation coordination of protocols among RCs, TOPs and BAs. Also, the 18 month implementation would provide time for a robust pilot program, as offered by some regions, along with an assessment and the follow-up to ensure success of the implementation of non-zero defect compliance and enforcement program. Measures and RSAW overall. NextEra thanks NERC for providing a draft RSAW. The RSAW, however, needs to be significantly re-written in order to sync up with COM-004-2 and set forth a reasonably understood and predictable compliance and enforcement approach. For example, the measures and RSAW both introduce management practices, which are not required by the Standard's requirements. The term "management practices" should be deleted from both the Measures and RSAW, and replaced with more directly applicable language, such as "implemented the communication protocols." To facilitate the re-writing of the RSAW, NextEra recommends that the following language be used in R3. RSAW R3. Evidence Requested. That the communication protocols set forth in R1 and its subrequirements have been implemented and are followed by the applicable operating personnel, with the understanding that zero tolerance implementation is not required, given that under certain circumstances an operating personnel may not have followed the communication protocols, yet sufficiently communicated the need for the receiver to follow the Operating Instruction, and, thus the reliability of the Bulk Electric System was served. For example, the operating personnel may not have identified a Reliability Directive, as required by R1.1, but did communicate that there was an Emergency and that the receiver needed to follow the instructions. In these instances, the auditor shall work with the entity to understand the circumstances and determine whether a violation is warranted. Evidence may include spreadsheets, memos, or logs and any noted exceptions to following the communication protocols set forth in R1 and its subrequirements. RSAW Compliance Assessment Approach Specific to COM-002-4, R3. Review the evidence provided to gain reasonable assurance that R1 and its subrequirements have been implemented, with the understanding that zero tolerance implementation is not required, given that under certain circumstances an operating personnel may not have followed the communication protocols yet sufficiently communicated the need for the receiver to follow the Operating Instruction, and, thus the reliability of the Bulk Electric System was served. Only if above implementation of R1 and its subrequirements are deemed insufficient to provide reasonable assurance, apply other audit procedures as necessary to gain confidence regarding the implementation of the communication protocols. See 'Note to Auditor' section for additional details. RSAW Auditors Note R3. The auditor may interview SMEs and pull a statistically random sample of the entity's communications from their available voice recordings (limited to the prior 90 calendar days) and if instances of noncompliance with the protocols are found (without a reasonable exception due to the facts and circumstances), the possible non-compliance will be submitted to Enforcement, which will make the determination whether the entity demonstrates a consistent pattern of not using their documented communications protocols and, if applicable, the severity of the violation. For purposes of a statistically random sample, auditors may not request more than 15 days of recordings. Also, findings of possible non-compliance during the review of the statistically random sample, may not lead to additional review of voice recordings, unless necessary by Enforcement to determine the severity of the violation, and even in those cases the review of voice recordings shall be limited to sampling of additional

days (no more than 15 days) to determine a pattern. RSAW existing R4 (if not deleted as recommended above). Evidence Requested. That the communication protocols set for in R2 and its subrequirements have been implemented and are followed by the applicable operating personnel receiving an Operating Instruction, with the understanding that zero tolerance implementation is not required, given that under certain circumstances an operating personnel may not have followed the communication protocols, yet sufficiently received and communicated back the Operating Instruction, and, thus, the reliability of the Bulk Electric System was served. For example, the operating personnel receiving a Reliability Directive may not repeat that it heard the term Reliability Directive used, but sufficiently communicated that it would implement the instruction given. In these instances, the auditor shall work with the entity to understand the circumstances and determine whether a violation is warranted. Evidence may include spreadsheets, memos, or logs and any noted exceptions to following the communication protocols set forth in R2 and its subrequirements. RSAW Compliance Assessment Approach Specific to COM-002-4, R4. Review the evidence provided to gain reasonable assurance that R2 and its subrequirements have been implemented, with the understanding that zero tolerance implementation is not required, given that under certain circumstances an operating personnel may not have followed the communication protocols, yet sufficiently communicated that it would follow the Operating Instruction, and, thus, the reliability of the Bulk Electric System was served. Only if above implementation of R2 and its subrequirements are deemed insufficient to provide reasonable assurance, apply other audit procedures as necessary to gain confidence regarding the implementation of the communication protocols. See 'Note to Auditor' section for additional details. RSAW Auditors Note R4. The auditor may interview SMEs and pull a statistically randomly valid sample of the entity's communications from their available voice recordings (limited to the prior 90 calendar days) – provided the DP or GOP have voice recordings. If instances of noncompliance with the protocols are found (without a reasonable exception due to the facts and circumstances), the possible non-compliance will be submitted to Enforcement, which will make the determination whether the entity demonstrates a consistent pattern of not using their documented communications protocols, and, if applicable, the severity of the violation. For purposes of a statistically random sample, auditors may not request more than 15 days of recordings, provided the DP or GOP have voice recordings. Also, findings of possible non-compliance during the review of the statistically random sample may not lead to additional review of voice recordings, unless deemed necessary by Enforcement to determine the severity of the violation, and even in those cases the review of voice recordings shall be limited to sampling of additional days (no more than 15 days) to determine a pattern. NextEra also recommends that the following language be used in the RSAW if the newly NextEra drafted R2 and its subrequirements, above is adopted: RSAW new NextEra R2 set forth above. Evidence Requested. That R2 and its subrequirements have been executed by the applicable operating personnel receiving an Operating Instruction, with the understanding that zero tolerance execution is not required, given that under certain circumstances an operating personnel may not have strictly executed R2, yet sufficiently received and communicated back the Operating Instruction, and, thus, the reliability of the Bulk Electric System was served. For example, the operating personnel receiving a Reliability Directive may not repeat that it heard the term

Reliability Directive used, but sufficiently communicated that it would execute the instruction given. In these instances, the auditor shall work with the entity to understand the circumstances and determine whether a violation is warranted. Evidence may include spreadsheets, memos, or logs and any noted exceptions to following the communication protocols set forth in R2 and its subrequirements. RSAW Compliance Assessment Approach Specific to COM-002-4, new NextEra R2. Review the evidence provided to gain reasonable assurance that R2 and its subrequirements have been executed, with the understanding that zero tolerance execution is not required, given that under certain circumstances an operating personnel may not have followed the communication protocols, yet sufficiently communicated that it would follow the Operating Instruction, and, thus, the reliability of the Bulk Electric System was served. Only if above execution of R2 and its subrequirements are deemed insufficient to provide reasonable assurance, apply other audit procedures as necessary to gain confidence regarding the execution R2. See 'Note to Auditor' section for additional details. RSAW Auditors Note new NextEra R2. The auditor may interview SMEs and pull a statistically randomly valid sample of the entity's communications from their available voice recordings (limited to the prior 90 calendar days) – provided the DP or GOP has voice recordings. If instances of noncompliance with R2 are found (without a reasonable exception due to the facts and circumstances), the possible non-compliance will be submitted to Enforcement, which will make the determination whether the entity demonstrates a consistent pattern of not using their documented communications protocols and, if applicable, the severity of the violation. For purposes of a statistically random sample, auditors may not request more than 15 days of recordings, provided the DP or GOP has voice recordings. Also, findings of possible non-compliance during the review of the statistically random sample, may not lead to additional review of voice recordings, unless deemed necessary by Enforcement to determine the severity of the violation, and even in those cases the review of voice recordings shall be limited to sampling of additional days (no more than 15 days) to determine a pattern.

Group
DTE Electric
Kathleen Black
Yes
Yes
Yes
R2 Section 2.1 requires a response in English to an oral or written Operating Instruction. Section 2.3 only requires the receiver to respond if the Operating Instruction is not understood implying a response may not be required. Suggest adding "When a response is required" to R2 Section 2.1: 2.1 When a response is required, require the receiver of an oral or written Operating Instruction respond using the English language, unless agreed to otherwise. An alternative language may be used for internal operations.
Group
Exelon Registerd Entities
Chris Scanlon

Segment 1 BGE, Segment 3 ComEd, Segment 4 CECD, Segment 5 Exelon Nuclear, Segment 6 CEG; all submit the following comments in support of their negative vote.

No

2003 Blackout Report Recommendation No. 26 reads: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate. (footnote omitted) NERC should work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations, and ensure that all key parties, including state and local officials, receive timely and accurate information. NERC should task the regional councils to work together to develop communications protocols by December 31, 2004, and to assess and report on the adequacy of emergency communications systems within their regions against the protocols by that date." • While Exelon believes that COM-002-4 goes beyond the Recommendation and includes the requirement to implement communication protocols for operating BES elements in non-emergency and other non-critical situations, Exelon also recognizes that the NERC Board believes that the words "especially for" in the recommendation are the reason to include a standard for normal communications. We also understand that in paragraph 540 of Order No. 693, FERC directed the ERO to expand the applicability of the communication standard to distribution providers (DP's) but that directive tied back to communications protocols "especially for communications during alerts and emergencies." However, although Recommendation 26 addresses "key parties" and FERC directive addresses DP's in the context of Blackout Recommendation No. 26, we don't believe that either was intended to include DP's and GOP's for non-emergency /Operating Instructions communications. There is no evidence that failure by DP's and GOP's to follow Operating Instructions has caused a reliability gap in the BES.

No

• VSL for R4 introduces the concept of "consistent pattern" of behavior. This is undefined and subjective. Entities operating in multiple regions may be subject to varying interpretations of this language.

No

The Exelon companies have voted affirmatively for previous versions of the COM standards including COM-002-3 (pending filing) and COM-003-1 (predecessor to COM-002-4 recently defeated at ballot). We do however have concerns with the process used to arrive at COM-002-4 and some of the content of the standard and have therefore cast a negative ballot for this rev. • COM-002-4 represents more than a revision in response to comments of the previously balloted standard. Several other approved standards are proposed to be modified as part of this Project. Additionally, the change from COM-003-1 to COM-002-4 regarding Operating Instructions is significant. In the time allotted, Exelon has not been able to conduct a sufficient review of the impacts to all of its business units. • M4 says that "independent review" of the entity's evidence should be done to demonstrate adherence to the protocols. What is an "independent review"? Is it a second operator, an operations supervisor, a management person from a separate business area, a contractor? More clarity on this issue is required. • M4 and the RSAW "Notes to Auditor" for R4 and Data Retention make it clear that an entity (DP

and GOP) will need to be able to produce two years of evidence and 90 days of voice recordings. As noted above, this is a significant change from COM-003-1 and Exelon has not had sufficient time to assess the potential impact of the increased compliance burden to the DP and GOP because of the changes requiring these entities to have evidence of compliance for all Operating Instructions, not just Operating Instructions that were not followed and led to a Directive. (COM-003-1 R3) In the technical document, the SDT points to a potential “reliability gap” if DPs and GOPs are not included. More information is needed on the nature of this potential gap in order to determine whether this extension is technically supported. • Several Regions are currently conducting pilots to develop the RAI/Internal Control initiative. Repeated references to and instructions to the auditors in the RSAW to review internal controls are premature. • Exelon agrees with the recommendation made by EEI and others that COM-002-3 be filed with FERC. Exelon feels that other COM Projects have been responsive to the Order No. 693 directives. Related Projects already approved by FERC and/or the NERC BOT include: COM-001-1.1 (FERC effective date 5/13/2009), COM-001-2, (NERC BOT approved, 11/7/2012), COM-002-2 (FERC effective date 6/18/2007), COM-002-3 (NERC BOT approved 11/7/2012). • The definition of Operating Instruction may be misinterpreted to mean that an OI is a command applicable to personnel responsible for “Real-time generation control and operation of the interconnected Bulk Electric System” as opposed to “Real-time generation control and/or operation of the interconnected Bulk Electric System”. Please consider this clarification.

Individual

Terri Pyle

Oklahoma Gas & Electric Company

No

Recommendation 26 says “Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate.” It is difficult to see how including or forcing a communications protocol for non-emergency operations fulfills this recommendation. Furthermore, the 2003 Blackout report suggested a lack of situational awareness was a key causal component and yet no link between three part communication and identified lack of situational awareness has been made. We therefore believe that the significant and unreasonably burdensome compliance obligations associated with this broad expanse is unjustified.

No

Given our belief that establishing a communications protocol for non-emergency communications is overly burdensome, we fail to see the need for VRFs any greater than low.

Yes

• The use of terms such as “reasonable assurance” in the measures and “reasonably designed” in the RSAW leaves us little guidance on how an auditor might interpret those terms. • OG&E finds significant parallels in the proposed revision to the COM-002-3 standard and those standards called out for retirement in the Paragraph 81 project. OG&E believes that requiring a standard for three-part communication for non-emergency communication fits several of the criteria in Paragraph 81 such as: o Criterion A: Little, if any benefit or protection to the reliable operation of the BES ♣ Because there are no instances of any significance in which the lack of

three-part communication contributed to a reduction in reliable operation of the BES, requiring three-part communication for non-emergency conditions, complete with implementation/documentation/assessment/remediation requirements seems unwarranted, especially given the significant effort required to demonstrate compliance. ♣ In the “NERC Management Response to the Questions of the NERC Board of Trustees on Reliability Standard COM-003-1” dated September 6, 2013, an attempt is made to tie the lack of three-part communication during non-emergency conditions to a lack of situational awareness, thus implicating it in FERC’s Recommendation 26 of the 2003 Blackout Report. There is little, if any evidence to suggest that the lack of the use of three-part communication had any impact on the 2003 blackout, or any other significant reliability failure in North America. In its response, NERC Management uses the term “could” several times. For example, on page 1, they state, “... miscommunication by operating personnel could result in switching errors during routine switching of Bulk Electric System Elements, which could jeopardize the reliable operation of the Bulk Electric System” (emphasis added). We believe that the amount of additional compliance and operational burdens that will be imposed by this standard should be due to a situation that would jeopardize the reliable operation of the BES, rather than anything that could do so. o

Criteria B: ♣ B1: Administrative –B2: Data Collection/Data Retention – The activities required in the proposed standard would involve a significant amount of data collection and data retention to prove compliance. In its response to the NERC BOT, NERC Management states (on page 7), “Second, concerns over creating an operational and compliance environment that requires mining of hundreds, thousands or millions of routine/normal communications to prove compliance or make a finding of reasonable assurance of compliance was consistently cited in comments to all drafts of COM-003-1. NERC plans to address this issue in the compliance section of the standard and in development of the RSAW concurrently with development of the standard.” Nowhere in the proposed standard can we find any meaningful attempt to address this issue. That leaves entities to the interpretations of various auditors to find “reasonable assurance of compliance”, which would increase their compliance risk, and therefore their compliance effort, beyond what we believe to be reasonable, especially given the minimal benefit to the reliable operation of the BES. ♣ B3. Documentation – As stated our comments above, the amount of documentation that will be required to prove compliance with COM-002-4 will be significant. In order to demonstrate compliance with the proposed standard, entities will be required to create additional documentation, audit period to audit period, in order to demonstrate compliance. Protocols will have to be developed, maintained, and distributed, on a regular basis. They will have to be reviewed, and that review documented. For a single standard, this may not seem like much, but when combined with the significant efforts already required of us today for standards that we do believe have a positive impact on reliability, we find the continual additions to our workload unsustainable, especially given the lack of empirical data to support such an increase. • Finally, every Transmission Operator that OG&E is aware of uses three-part communication, in some form, when performing routine switching and as well as some other operations. We train our operators in three-part communication and we assess their performance. In fact, the use of three-part communication is a part of their performance assessments throughout the year and their annual performance appraisals reflect their performance in that regard. In short, OG&E finds

little value in an additional NERC Reliability Standard that addresses a “best practice” that has never been implicated in any significant reliability failure; at least as far as has been published in North America and we believe that our collective effort should be spent focusing on those issues that have been a problem and that continue to be a challenge for the industry. Three-part communication for non-emergency conditions is not one of those.

Individual

Daniel Duff

Liberty Electric Power, LLC

No

The blackout report, in Recommendation 26, states "NERC should work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations, and ensure that all key parties, including state and local officials, receive timely and accurate information." Operating instructions in non-emergency situations are, by definition, not "communications during alerts, emergencies, or other critical situations". Order 693 similarly states "(4) requires tightened communications protocols, especially for communications during alerts and emergencies. With respect to this final issue, the Commission proposed alternatively to direct NERC to develop a new Reliability Standard that responds to Blackout Report Recommendation No. 26, which deals with the need for tightened communications protocols." Again, the focus of the order is on "alerts and emergencies". The error of stating 693 requires non-emergency communications protocols is repeated in the SAR, which was developed prior to the enforcement date of the standards. Not surprisingly, there was little attention paid to the error by industry, as most were scrambling to confirm their programs were in compliance prior to June 8th 2007. As there is not a specific directive from FERC or the Blackout Report mandating the development of communications protocols for routine interactions between RE's, the SAR should be remanded.

No

VRF/VSL for R4 penalizes a "consistent pattern of not using the protocols". This would trigger a violation even if the pattern was discovered by implementing a review of evidence under M4. The VRF/VSL should be for not implementing the review, instead of for discovery of the issue.

Yes

M4 requires an "independent review of operating personnel’s adherence to the protocols established in Requirement R2.". The word "independent" should be removed, as small entities may only have staff in the supervisory chain trained and capable of performing an accurate review of the implementation of the communications program.

Individual

Jen Fiegel

Oncor Electric Delivery Company LLC

No

COM-002-4 goes beyond the August 2003 Blackout Report Recommendation number 26, FERC Order 693 for neither identify requirements for normal operations. Oncor concurs with Austin Energy’s comment that EOP-001-2, R3.1 and COM-002-2, R2 already address the requirements

of the Blackout Report and FERC Order 693. In addition, the COM Standards were evaluated by the NERC Operating Committee (OC) who recommended guidelines on normal operations protocols not mandatory standards.

No

The VSLs proposed for all Requirements are designed as prescriptive zero-tolerance and appear to step backward from the global objective of transitioning to results, risk based standards which support the reliability of the BES. Oncor recommends the requirements be defined and the VRF/VSL be developed based on the risk to the reliability of the BES. For example, in normal or emergency operations, not following the letter of the law is not indicative of a severe reliability risk to the BES. Additionally, Oncor concurs with Austin Energy's comments: Regarding R3 and R4: These VSLs create a "zero tolerance" situation. If an entity fails to follow the communication protocol when issuing or receiving a Reliability Directive one time, even if there is no adverse impact to the BES, it is a violation. While there is the potential of risk if documented communications protocols are not followed, this should not somehow imply that incorrect operations occurred as a result. The severe category should be reserved for only those instances in which documented communications protocols were not followed and the failure resulted in an emergency operation or reliability issue. As a result, we suggest "demoting" each existing VSL to a lower level and limiting the Severe VSL to only those instances that resulted in an adverse impact on the BES (suggestions provided below). Low - The responsible entity demonstrates a consistent pattern of not using the documented communications protocols developed in Requirement R1 for Operating Instructions that are not Reliability Directives. Moderate – The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving a Reliability Directive. High – The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving an Operating Instruction and that failure resulted in an emergency operation or reliability issue. Severe - The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving a Reliability Directive and that failure resulted in an emergency operation or reliability issue. Regarding the VSL for R3 and R4: Use of the term "consistent pattern" is vague and will be difficult to determine and analyze.

Yes

Oncor recommends Requirement 5 be removed and the Measurements be re-evaluated to remove the internal controls additives. Reliability Standards must be revised to focus on strategic and critical reliability objectives incorporating requirements for meeting and sustaining reliability of the BES. The current state of Standards must transition from a prescriptive zero tolerance approach to results-based requirements which assure the reliability and security of the critical infrastructure. A reliability results-based approach should not be an additive to the Reliability Standards; hence, controls requirements should not be incorporated within the Standards, rather controls should be considered at the Program level. Reliability Standards should define the results ("what") Entities are mandated to meet and maintain and the "how" should be handled by each Entity for there is not a "one size fits all". Incorporating internal controls as requirements and prescriptive measurements can lead to unintended consequences and again, an additive versus a process that helps provide a registered entity



with reasonable assurance they comply with the Standard(s) or the operating function(s) and processes that the Standard(s) require.

Individual

David Jendras

Ameren

Agree

We generally support the SERC OC comments. We believe that combining the two standards is the right approach.

Group

US Bureau of Reclamation

Erika Doot

Yes

The Bureau of Reclamation (Reclamation) agrees with NERC’s decision to combine COM-002 and COM-003 into one standard. However, Reclamation disagrees with the decision to waive the standards development procedures. For such a substantial change, a 15 day review and comment period does not allow sufficient time for consideration of the proposed changes and comment coordination.

No

Reclamation recommends that the drafting team clarify what is a “consistent pattern of not using the documented communication protocols.” Reclamation also believes that R3 and R4 should include lower and moderate VSLs for errors in the use of communication protocols that do not rise to the level of a “consistent pattern of not using the documented communication protocols.” Reclamation recommends the development of clear numerical thresholds for the VSLs.

1. Reclamation recommends that the drafting team revise the definitions of Operating Instruction and Reliability Directives to make sure they are clear and consistent. First, Reclamation suggests that the drafting clarify the term “command” because most day-to-day communications between Transmission Operators or Balancing Authorities are phrased as requests rather than commands. The definition of Operating Instruction exempts “discussions of general information and of potential options or alternatives,” without recognizing that these discussions generally result in mutually agreed upon decisions of how to operate the Bulk Electric System (rather than resulting in commands). Reclamation suggests that the drafting team choose another term or define the term command to reflect this operational reality. Second, the proposed definition of Operating Instruction defines a Reliability Directive as a subset or one type of Operating Instruction. However, the current definition of Reliability Directive refers to a broader set of “communications” than “commands” referred to in the proposed definition of Operating Instruction. The drafting team should reconcile the use of the broader term “communication” with the narrower term “command,” and preferably revise the term command as explained above. Third, under the proposed definition, Operating Instructions that can be issued by a seemingly broader array of “operating personnel” than Reliability Directives, which can only be issued by Reliability Coordinators, Balancing

Authorities, and Transmission Operators. Reclamation suggests that the definition of Operating Instruction should be updated to refer to instructions “from a Reliability Coordinator, Transmission Operator, or Balancing Authority” to clarify that Generator Operators and Distribution Providers do not issue internal Operating Instructions. 2. Reclamation recommends that the drafting team update R1 and R2 to allow entities to inform the RC, BA, or TOP of the inability to comply with an Operating Instruction or Reliability Directive if doing so would violate safety, equipment, regulatory, or statutory requirements. Reclamation recommends that the drafting team incorporate language similar to IRO-001.1a and TOP-001-1a, for example the drafting team could add an R2.4 which states “Each Transmission Operator, Balancing Authority, and Generator Operator shall comply with Operating Instructions issued by the Reliability Coordinator, and each Balancing Authority and Generator Operator shall comply with Operating Instructions issued by the Transmission Operator, unless such actions would violate safety, equipment, regulatory or statutory requirements. Under these circumstances the Transmission Operator, Balancing Authority or Generator Operator shall immediately inform the Reliability Coordinator or Transmission Operator of the inability to perform the Operating Instruction so that the Reliability Coordinator or Transmission Operator can implement alternate remedial actions.” 3. Finally, Reclamation suggests that the Implementation Plan be updated to reflect necessary conforming changes to other standards. Reclamation notes that proposed revisions to IRO-001-3 and TOP-001-2 would refer to “Reliability Directives.” Reclamation believes that other standards that incorporate terms with a meaning similar to Operating Instruction or Reliability Directive should be updated to include defined terms. BAL-STD-002-0 refers to “any instruction, directive, order or suggested action.” CIP-002-5 refers to “operational directives.” INT-010-1 refers to Interchange schedules “directed” by the Reliability Coordinator. IRO-004-2 R1 refers to “directives.” VAR-001-2 R6 refers to “direct[ing] the Generator Operator to maintain or change its voltage schedule or its Reactive Power schedule.” VAR-001-3 M3 refers to evidence of “issued directives.” VAR-002-1.1.B R2.1 refers to actions “directed by the Transmission Operator,” and M3 refers to responses to “Transmission Operator’s directives.” Reclamation recommends that these standards be updated to incorporate the term Operating Instruction or Reliability Directive to avoid industry confusion about which types of communications these standards are intended to describe.

Individual

Texas Reliability Entity

Texas Reliability Entity

Yes

Texas RE generally supports the approach taken in this draft: combining COM-002 and COM-003 into one comprehensive communications standard. However, we feel that the current draft is seriously defective because the REQUIREMENTS do not clearly and completely set forth criteria by which compliance can be assessed (R3 and R4).

No

See comments below under Question 3.

Yes

1. Texas RE generally supports the approach taken in this draft: combining COM-002 and COM-003 into one comprehensive communications standard. However, we feel that the current draft is seriously defective because the REQUIREMENTS do not clearly and completely set forth criteria by which compliance can be assessed (R3 and R4). 2. The existence of a violation should be determinable by applying the REQUIREMENTS to the evidence, without reference to the VSLs. However, in this draft, the VSLs for R3 and R4 appear to be intended to define what constitutes a violation, rather than the Requirements. Texas RE urges the drafting team to clearly state what is required for compliance in the REQUIREMENTS only. VSLs are intended to indicate the severity of a violation, not the existence of a violation. 3. The apparent intent of this draft is that an entity is to be deemed compliant in a non-emergency situation unless there is a “consistent pattern of not using the documented communications protocols.” That is an extremely vague threshold that will be very difficult to enforce. How are we supposed to consistently determine whether a “consistent pattern” exists? What if an entity fails to follow its protocols 25% of the time, but there is no “consistent pattern” to the failures? 4. Texas RE opposes the zero-defect application of this standard in connection with Reliability Directives. The circumstances of a violation, including system impact, are taken into account in the enforcement process when determining a penalty. The standard requirements should focus on an entity’s conduct and performance, which are under its control, not on system occurrences, which may be out of the entity’s control. Furthermore, having different requirements for different situations will be disruptive in the control room and can adversely affect reliability. 5. Consider whether this standard should apply to Load Serving Entities (LSE) as recipients of Operating Instructions. Note that TOP-001-01a Requirement R4 contemplates that LSEs will receive “reliability directives” from TOPs. TOP-001-2 (pending regulatory approval) also includes LSEs as recipients of “Reliability Directives.” 6. RSAW: On page 9 and page 12, the draft RSAW states “Sampling is not a part of the audit process unless the auditor determines that the internal control is not properly designed or is ineffective. If the auditor cannot rely on the entity’s controls to gain reasonable assurance of compliance, then the auditor can pull a sample of the entity’s communications from their available voice recordings (limited to the prior 90 calendar days) . . .” (6A) This is written in a manner that leads a reader (e.g. Auditor or Registered Entity) to believe the CEA cannot review actual performance (e.g. voice recordings) unless the CEA first finds that the entity’s controls are deficient or defective. In order to assess the internal controls by listening to a voice recording the Regional Entity will have to put the Registered Entity in a defensive posture. Is that the expectation of the RSAW drafters? We hope not, as Texas RE would expect to be able to review voice recordings as part of any assessment engagement, even if the controls appear to be in order. [The NERC Sampling Methodology specifically lists voice recordings in the discussion of statistical sampling: “Statistical sampling helps ensure a high confidence level of compliance for the larger population of documents when a smaller population is statistically sampled. The confidence level for the Sampling Methodology is set at 95%. Statistical sampling should be employed when auditing all processes, procedures and any documentation-related evidence (documents, logs, voice recordings, etc.) when a sample is required because the entire population cannot be audited. The use of RAT-STATS in tandem with the Sampling Methodology lends itself nicely to support this approach.”] (6B) The 90-day retention period is too short. The CEA could easily

need to review recordings for a longer period, particularly if it becomes concerned about the entity’s performance or needs to determine whether a “consistent pattern” exists. Advancing technology has mitigated many earlier limitations with respect to retention of data, including voice recordings. (6C) Recordings associated with Reliability Directives should be retained until the next audit, or else the CEA will need to conduct spot checks after each “Emergency or Adverse Reliability Impact” occurs. 7. RSAW: On page 10 and page 12, the draft RSAW states: “. . . if instances of noncompliance with the protocols are found, they will be turned over to Enforcement, which will make the determination whether the entity demonstrates a consistent pattern of not using their documented communications protocols and, if applicable, the severity of the violation.” (7A) This provision reflects the inappropriate failure to clearly state what constitutes compliance in the REQUIREMENTS. If a “consistent pattern” of errors is required to constitute a violation, that needs to be stated in the REQUIREMENT, not in the VSL, and it should be addressed by Compliance, not by Enforcement, in the first instance. (7B) This language should not even be in the RSAW – it appears to forbid the auditor from making a compliance determination and it turns the auditor into a mere collector of evidence for Enforcement. We are not aware of any justification or precedent for this allocation of responsibility.

Group

EPSA

Jack Cashin

Yes

Companies have strongly responded to the 2003 Blackout Report with strengthened communications protocols. Since 2003 companies have responded by reinforcing their reliability regimes with a host of management, training, communications, and technology tools. Therefore, much of what addresses the substance of the standard has taken place in the intervening 10 years since the event. EPSA believes that NERC management and staff have not clearly described the reliability gap that takes place between what the Board has already approved, and the Order No. 693 directive. Reliability would be better served if questions around the perceptions of a reliability gap were responded to in detail. The seven year old directive is both dated and vague in light of the steps taken by registered entities since the Blackout.

No

Comments: It is not clear from the draft standard what language would prevail in a finding of violation – the Requirement, Measure, VSL, or RSAW. Without better definition in the Standard over which language prevails makes consensus agreement with the measures difficult. While some requirements would seem eligible for Find, Fix and Track (FFT) treatment due to a high measurement designation would not qualify for FFT . In addition, while the intent seems reasonable at this time, this could change over time should an RE, NERC or FERC choose to make it more restrictive.

Yes

EPSA supports the development and approval of a single, combined communication protocols Reliability Standard that covers emergency, alert and normal operating conditions for the BES,

while recognizing that performance expectations for applicable registered entities and NERC’s approach to compliance and enforcement should differentiate between emergency and nonemergency conditions. The proposed draft standard COM-002-4 strikes an appropriate balance between these considerations, and responds to the NERC Board’s and Standards Oversight and Technology Committee’s Resolutions. Competitive suppliers however are concerned that the severely shortened, 15-day comment and ballot period directed by the Standards Committee for COM-002-4 will foreclose resolution of major technical objections to the proposed standard. The proposed draft relies heavily on the as-yet untested application of the NERC Reliability Assurance Initiative (RAI). Small changes to the Compliance Elements of the proposed standard – the Measures, Violation Risk Factors, Violation Severity Levels and Reliability Standard Audit Worksheets – would undermine the balance of what EPSA supports. Consequently, delays in the development and implementation of RAI will certainly jeopardize successful implementation of COM-002-4. Control Room operators will find it difficult to capture every oral Operating Instruction that must be transacted using the proper protocol. COM-002-4 offers a solution where the Compliance Enforcement Authorities (CEAs) look for a situation where a “pattern” of lapses occurs in the transaction of routine Operating Instructions. However, there is no definition of “pattern” given in the standard or NERC glossary. It is possible that some CEAs would consider a pattern to be 10 percent or more of all Operating Instructions – others could assess a violation when two or more errors occur. Also, there is no differentiation between situations where documentation is inadequate as compared to those where Operating Instructions are inadequately performed. If “undocumented” equates to a “miss,” your chances of a “pattern” being detected go up significantly.

Individual

Don Schmit

Nebraska Public Power District

No

NPPD agrees with combining COM-002-3 and COM-003-1 into one Standard. We do not agree that COM-002-4 addresses the August 2003 Blackout Report Recommendation number 26. The recommendation addressed effectiveness of alerts, emergencies, or other critical situations and not normal operating communications.

No

Suggest the following changes: For R1; Severe- No documented communication protocols, High- documented protocols missing from 5 to 8 sub-requirements in R1. Medium-missing 3 or 4 sub-requirements, Low-missing one or two sub-requirements. R2; Severe- no communication protocols, High- missing 2 of 3 sub-requirements of R2, Moderate: missing 1 of 3 sub-requirements of R2. R3 and R4; See changes in Question 3 below. R5: as is, but re-classify to Moderate or High.

Yes

Revise the Purpose Statement to read: “Minimum communication protocols for the issuance of Operating Instructions with the intended affect to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the BES”. The former purpose

statement says to “tighten communications” which makes it sound as though communications need to be prescriptive. Within the definition of “Operating Instruction” provided it states “...A discussion of general information and of potential options or alternatives to resolve BES operating concerns...”. NPPD believes that it is imperative to BES reliability for operators to be able to discuss possible options or actions to help system reliability. A Reliability Directive or Operating Instruction may result from that discussion or may change the Reliability Directive or Operating Instruction based upon the discussion. The purpose should not be to “tighten” communications, but to broaden and provide for “effective” communications. The purpose of the Standard appears to be to provide “minimum communication” protocols for the industry.

R3. Add at the end (after the words Requirement 1) “and remediate noted exceptions identified in R5”. This aligns with the Measurement 3 (M3). The VSL for R3 needs to change to correlate to R3: for the High VSL after “Requirement R1” add “or remediating noted exceptions identified in R5” for Operating Instructions that are not Reliability Directives. The Severe VSL should read the same way as the High VSL, except for the issuing or receiving of a Reliability Directive.

R4. Add at the end (after the words Requirement 2) “and remediate noted exceptions identified in R5”. This aligns with the Measurement 4 (M4); however M4 does need to change to reference back to Requirement R5 in a similar way that M3 does. The VSL for R4 needs to change to correlate to R4: for the High VSL after “Requirement R2” add “or remediating noted exceptions identified in R5” for Operating Instructions that are not Reliability Directives. The Severe VSL should read the same way as the High VSL, except for the receiving of a Reliability Directive.

R5. NPPD suggests that that sub-requirement 5.1 and 5.2 be removed. R5 adequately covers the requirement to evaluate communications protocols. Sub-requirements 5.1 and 5.2 are ambiguous and lead to auditors to interject their own “standards” for adherence and effectiveness. NPPD appreciates the considerations and changes made by the drafting team and with the additional changes identified above we will change our vote in support of this proposed Standard.

Group

PPL NERC Registered Affiliates

Brent Ingebrigtsen

Yes

These comments are submitted on behalf of the following PPL NERC Registered Affiliates: Louisville Gas and Electric Company and Kentucky Utilities Company; PPL EnergyPlus, LLC; and PPL Generation, LLC, on behalf of its NERC registered entities. The PPL NERC Registered Affiliates are registered in six regions (MRO, NPCC, RFC, SERC, SPP, and WECC) for one or more of the following NERC functions: BA, DP, GO, GOP, IA, LSE, PA, PSE, RP, TO, TOP, TP, and TSP. PPL NERC Registered Affiliates recognize the need for industry standards applicable to certain communications. However, the current draft version of COM-002-4 requires change. We have the following questions that we would like the SDT to consider and respond to as part of the next draft: 1) There is no lesser VSL for R3 and R4 other than for a “consistent pattern of not using the communication protocols” developed in accordance with R1 or R2 for Operating Instructions that are not Reliability Directives. Does this mean that the SDT intends that there would be no violation unless there is a “consistent pattern” of not using such documented

protocols? 2) What would constitute a “consistent pattern” of not following the communication protocols? 3) If, for example, a BA, RC or TOP develops and implements a communications protocol which addresses the requirements and performs periodic sampling of communications among the issuers and recipients of the Operating Instructions to determine adherence to the protocols (e.g., 95% confidence), would identification of any issues with appropriate corrective action by the affected parties meet the compliance requirement? Along with a significant majority of the industry, we supported COM-002-3 (Version 3) developed under NERC project 2006-06 and approved by the NERC Board of Trustees. We support NERC filing COM-002-3 with the Applicable Governmental Authorities for approval and ending Project 2007-02. In the event that NERC moves the current draft of COM-002-4 forward the draft should be revised as follows. This current draft does not include the “Reliability Directive” definition that industry and the NERC BOT approved in COM-002-3. Likewise, the implementation plan that is posted with this first draft of COM-002-4 indicates that there are “Prerequisite Approvals” needed “of the definition of ‘Reliability Directive’”. The current definition of Reliability Directive is now unclear as the term had been defined in the Board approved COM-002-3 but is not included in this draft. Therefore, we suggest adding the definition of Reliability Directive into Definitions of Terms Used in Standard as follows:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact. Similarly, we had previously proposed in comments to COM-003-1 drafts a clear definition of Operating Instruction and suggests the following:

Operating Instruction: A Real-time Operations command, other than a Reliability Directive, by a System Operator of a Reliability Coordinator, or of a Transmission Operator, or of a Balancing Authority, where the recipient of the Real-time Operations command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. A discussion of general information, potential options and/or alternatives to resolve Bulk Electric System operating concerns is not a command and is not an Operating Instruction. An Operating Instruction is exclusive and distinct from a Reliability Directive. There is no overlap between an Operating Instruction and Reliability Directive. Only in concert with these two definitions, we propose only the following Requirements as part of COM-002-4: [R1 through R3 are for Reliability Directives and are identical to those in approved COM-002-3 with clarification for burst messages in R2.1 through R2.2] R1. When a Reliability Coordinator, Transmission Operator, or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator, or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time] R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase, or recapitulate the Reliability Directive. [Violation Risk Factor: High][Time Horizon: Real-Time] R2.1 The issuer of an oral Reliability Directive using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) is required to verbally or electronically confirm receipt from at least one receiving party. R2.2 The receiver of an oral Reliability Directive receiving a one-way burst messaging system to communicate a

common message to multiple parties in a short time period (e.g. an All Call system) shall request clarification from the issuer if the communication is not understood. R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall either: [Violation Risk Factor: High][Time Horizon: Real-Time] Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or Reissue the Reliability Directive to resolve a misunderstanding. [R4 through R7 are for those instances where an entity determines Operating Instructions are necessary in their protocol and are based upon the comments provided by PPL NERC Registered Affiliates in COM-003-1 draft 5] R4. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop and implement documented communication protocols that outline the communications expectations of its System Operators. The documented communication protocols will address, where applicable, the following:[Violation Risk Factor: Low] [Time Horizon: Long-term Planning ] 4.1. Use of the English language when issuing or responding to an oral or written Operating Instruction, unless another language is mandated by law or regulation. 4.2. Instances that require time identification when issuing an oral or written Operating Instruction, and the format for that time identification. 4.3. Nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction. 4.4. Instances where alpha-numeric clarifiers are necessary when issuing an oral Operating Instruction, and the format for those clarifiers. 4.5. Instances where the issuer of an oral two party, person-to-person Operating Instruction is required to: Confirm that the response from the recipient of the Operating Instruction was accurate, or Reissue the Operating Instruction to resolve a misunderstanding. 4.6. Require the recipient of an oral two party, person-to-person Operating Instruction to repeat, restate, rephrase, or recapitulate the Operating Instruction, if requested by the issuer. 4.7. Instances where the issuer of an oral Operating Instruction using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) is required to verbally or electronically confirm receipt from at least one receiving party. 4.8. Require the receiver of an oral Operating Instruction using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the issuer if the communication is not understood. 4.9. Coordination with affected Reliability Coordinators', Balancing Authorities', Transmission Operators', Distribution Providers', and Generator Operators' communication protocols. R5. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop method(s) to assess System Operators' communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R4. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Operations Assessment ] R6. Each Distribution Provider and Generator Operator shall develop and implement documented communication protocols that outline the communications expectations of its operators. The documented communication protocols will address, where applicable, the following: [Violation Risk Factor: Low] [Time Horizon: Long-term Planning ] 6.1. Use of the English language when responding to an oral or written Operating Instruction, unless another language is mandated by law or regulation. 6.2. Require the recipient of an oral two party, person-to-person Operating



Instruction to repeat, restate, rephrase, or recapitulate the Operating Instruction, if requested by the issuer. 6.3. Require the receiver of an oral Operating Instruction using a one-way burst messaging system to communicate a common message to multiple parties in a short time period (e.g. an All Call system) to request clarification from the issuer if the communication is not understood. R7. Each Distribution Provider and Generator Operator shall develop method(s) to assess operators' communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R6. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning /Operations Assessment ] In summary, we do not agree with imposing three-part communications on the industry for all normal / routine operating instructions.

Group

Hydro One Networks inc.

Sasa Maljukan

Yes

Hydro One fully supports combining two standards into one. From the early drafts we believed that in order to make it easier for entities to comply single communication standard is the right way to go. However, on one occasion, drafting team rejected requests for combining two standards on the ground that COM-002 SAR doesn't give enough room for this to be done and that brand new standard must be developed. How is the SDT planning to address possible challenges from the industry? Would margining two standards into COM-003 which has broader scope relieve this notion?

Yes

Yes

Hydro One agrees with the comments submitted by the NPCC RSC and would like to offer following additional comments: Hydro One believes that the issue of three part communication is major stumbling block in passing this standard. Hydro One understands the reasons behind it and generally is not opposed to tightened communication for both Operating and Reliability directives. However, our issue and consequently the negative vote on this draft is primarily due to lack of coordination between the entities. Additionally, we don't agree with the general direction this standard is taking when it comes to compliance with this standard. We feel that violation of three part communication should constitute non-compliance with the standard ONLY if it played a part in the event. Otherwise it should be treated as non-violation and be handled through identify, asses and correct approach. We see these two issues as important enough to cast a negative vote. If corrected, we'd be open to supporting this standard in the future. In addition to above we'd like to offer following comments: 1. General Comment: We feel that the current draft is lacking coordination of communication protocols. We recommend that the SDT reassesses the need and assigns clear accountabilities to RC or others as appropriate. We believe that this component is essential in ensuring clear and reliable communication between entities. 2. In R1.2 the alternate language can be used for internal operation and if agree otherwise. For clarity purposes we'd like to see the standard address following questions: - Who can agree otherwise? - What is the meaning of internal operation? Is this operation internal to one entity? What if this is a vertically integrated utility? We believe

that these two instances are vague and must be further defined to avoid future interpretations. 3. R2.2 – see the comment above Section 1.2 Data Retention states “...the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.” This statement is vague and unenforceable. Hydro One recommends the SDT removes this sentence and provide clear, measurable direction regarding the retention period. 4. We understand that due to the rush for this standard to be developed SDT and NERC staff didn’t have time to develop the RSAW and post it together with the standard (RSAW was posted sometimes at a later date). We hope that this is exception rather than the rule and that in the future RSAWs are going to be developed in time to be posted together with the standard.

Individual

Alice Ireland

Xcel Energy

Yes

Yes

Yes

While we think this draft standard is superior to the previous drafts, we have some issues that should be addressed first. Suggest changing language in the purpose section from “to tighten communications” to “to strengthen communications” The “Real-time generation control and operation” language in the definition for Operating Instruction is confusing. As written the definition seems to limit Operating Instructions being issued only by personnel that control and operate generation. Suggest changing the language to “A command by operating personnel responsible for the Real-time generation control or operation of the interconnected Bulk Electric System...” In R1.8, what is the definition for “Transmission interface”? This seems to be alluding to interconnection facilities, but is not definitive. If the intent was for Transmission interconnections, suggest the language be “Specify the nomenclature for Transmission interconnecting Elements and Transmission interconnecting Facilities between two parties when issuing an oral or written Operating Instruction.”

Individual

Gregory Campoli

New York Independent System Operator

No

It remains unclear that additional work is needed to address recommendations from the August 2003 Black out Report or to address concerns raised in FERC Order 693. Much work has been completed to date that should address issues raised in those comments. We agree with the SRC in relying on the OC’s Reliability Guidance that supports 3-part communication for all oral two party, person-to-person communications. The SRC proposes that this approach be used for a two year trial period. During that trial period NERC should collect information on the number of reliability events caused by communications errors. The ERO could then use the data to justify added requirements if the data justified the need. To date it does not appear that data exists to support that need for and additional communication standards.

No

The NERC Compliance Monitoring and Enforcement Program is based on FERC approved requirements and registered entities are obligated to demonstrate compliance with Reliability Standard requirements. The proposed VSL introduce an additional layer of compliance without being clearly defined in the proposed requirement. The proposed requirements are structured to include: 1) document, 2) implement and 3) evaluate communication protocols. The VSL should be developed from these three components of the standard and not introduce a 'zero defect' enforcement approach as is proposed in VSL R3 and others. NERC's recent direction was to move away from 'zero defect' standards and approach compliance from an 'identify, assess and correct' approach for controls type standards that have high frequency activity that do not immediately pose a reliability risk. The proposed requirements follow that approach. The proposed VRF's incorrectly introduce a 'zero defect' approach through a 'back door'. An entity may 'implement' a protocol, but one occurrence of not following that protocol does not warrant an entity to be non compliant, as proposed in the standard. If the drafting team is looking for a 'zero defect' standard, then the words need to be in the requirement. However we continue to believe that this is unnecessary, since a 'zero defect' requirement for poor communication already exist in current IRO/TOP Standards for not following directives.

Yes

We have specific questions to individual requirements below: R1.1 Require the issuer of a Reliability Directive to identify the action as a Reliability Directive to the receiver. The NYISO request confirmation from the SDT that identification of Reliability Directives can be made in policies or procedures agreed to by all parties. This will allow an entity to ensure consistent communications for all conditions without having to add additional information into the dialogue for emergency conditions that could complicate the interaction. 1.5. Require the issuer of an oral Operating Instruction to verbally or electronically confirm receipt by at least one receiver when issuing the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g., an all call system). This requirement appears to require a confirmation that the all call was completed. The NYISO is requesting confirmation from the SDT that an electronic confirmation that the one-way communication was completed to the intended parties. For the following: 1.7. Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification. 1.8. Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction. 1.9. Specify the instances where alpha-numeric clarifiers are required when issuing an oral Operating Instruction and the format for those clarifiers. The NYISO is requesting confirmation from the SDT that in some cases an entity may have no instances where time identification, nomenclature or alpha-numeric's will be required and that the SDT did not intend this to be a case of non-compliance. The NYISO would also like to ask the drafting team what jurisdiction or authority the initiator of the communication has over the receiver of the communication. Some requirements require the entities communication protocol to have an obligation on the receiver to take action with no apparent authority to enforce that requirement. The NYISO would also like the SDT to consider the relationship between R1, 'have a protocol' and R3 'implement a protocol'. We believe that to

have a protocol is simply an administrative requirement that could be incorporated into a single requirement. One requirement could exist to 'implement a protocol that shall at a minimum...'. To have a protocol has no impact on reliability. We believe this would be a recommendation based on the paragraph 81 work.

Individual

Lee Layton

Blue Ridge Electric

Yes

The draft expands the scope of COM-002 to include DP's, however, I don't see any rational offered for including DP's who have no impact to the BES.

Individual

Brian Evans-Mongeon

Utility Services, Inc

No

Not following a communications protocol when the Operating Instruction is a Reliability Directive is a zero tolerance instance. So even if directive is followed and any BES situation is mitigated, it is still a Severe Violation. This is extreme, and the VSLs for R4 should be reduced. If a Reliability Directive is not followed there are violations of other standards, which are severe, so a lowering of this VSL will not affect the reliability of the BES. VSLs for all Operating Instructions should be graduated within the VSL table as opposed to being passed onto Enforcement to make a determination of a "Consistent Pattern." This will provide clearer guidance to industry on Violation Severities. For example, they could range from Low to High, with failures in less than 1/3 as Low VSL, less than 2/3 as Medium, and failure in more than 2/3 as High. R4: More clarity needs to be provided on how a "consistent pattern" will be established. Most of the applicable entities do not record phone conversations. The RSAW states that any instances of non-compliance will be turned over to Enforcement to determine a "consistent pattern." This is zero-defect language as each instance will be considered a PV.

No

The applicability of the standard should be written to exclude DPs that do not own or operate BES equipment. As per the definition of Operating Instruction "A command ... to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System..." Entities that do not have real-time control of Elements or Facilities of the BES should be removed from the applicability of the standard. It is excessive to mandate that DPs in this situation, that never receive Operating Instructions, have a Communications Protocol, and implement that protocol. Suggest adding the following to Section 4: 4.1.2 Distribution Provider with control of Elements or Facilities of the Bulk Electric System. M3 and M4 are difficult to understand and suggest edits to clarify: Each Distribution Provider and Generator Operator shall provide evidence that it implemented the documented communication protocols such that the entity has reasonable assurance that protocols established in Requirement R2 are being followed by personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Evidence should

show periodic, independent review of the operating personnel’s adherence to protocols established in R2. Evidence may include, but is not limited to • Descriptions of the management practices in place, • spreadsheets, • memos, or • logs, R5.1 is redundant with R3 as both require assessment of adherence to protocols established in R1. If part of “Implementation” (covered in R3) includes an assessment of the communication protocols, R5 should be limited to only correcting discovered and correcting deficiencies with the protocols and the implementation of those protocols. If not removed as redundant, Requirement 5.1 should specify that the assessment will be limited to the operating personnel of the individual entity for both issuing and receiving Operating Instructions. As it is written now it would be the responsibility of the BA, RC and TOP to assess compliance with communication protocols to all entities involved in every communication, including the receiving GOPs and DPs, and other BAs, RCs and TOPs based on the Operating Instruction as “issuer and receiver” are not defined. Suggested Rewording of R5.1: “Assesses adherence to the communications protocols to provide feedback to entity personnel” R2 requires DPs and GOPs to call the issuer in an all call situation if the Operating Instruction is not understood. If the Operating Instruction is misunderstood, and the entity believes it has taken the appropriate action, but was incorrect creates a potential violation scenario. This needs to be clearly addressed as a Potential Violation in this instance could be severe (if the OI is a Reliability Directive) and could be a Potential Violation of several other standards as well (not following a Reliability Directive). RSAW Comments: The “Note to Auditor” related to R3 and R4 is outside of the scope of the standard. Placing the examination of Internal Control within the RSAW effectively requires entities to have Internal Controls, which expands the scope of the standard significantly.

Group

Dominion

Connie Lowe

Yes

Yes

Yes

It does not appear that there are any requirements to coordinate communication protocols established in R1 with those established in R2. For instance, R1 contains 9 sub-requirements whereas R2 only contains 3 sub-requirements. Does the SDT maintain that coordination is not necessary expecting that the recipient will be instructed by the issuer to either repeat or confirm any information that is included in parts 1.5, 1.6, 1.7, 1.8, or 1.9 that is vital to understanding the Reliability Directive or Operating Instruction? There is no value in having a documented communications protocol if the entity does not intend to implement it. We therefore suggest that requirements 3 & 4 either be added into the body of R1 and R2 respectively, or as sub-requirements of R1 and R2 respectively. The VSLs and RSAW should be modified accordingly. The Violation Severity Levels imply an entity is non-compliant for operating instructions only if a pattern of not following its protocols is demonstrated. However, the RSAW says that system events should be reviewed, and if instances of nonconformance with the protocols are found, the issue will be turned over to the Compliance Enforcement Authority, who will then make a determination whether there was a pattern. We suggest that

the RSAW be changed to explicitly indicate that if the entity has a documented protocol that defines the expectations of its operators, requires periodic checks to validate conformance with the protocols, and implements corrective actions when deficiencies are found, the entity will be determined to be compliant In several places, including the implementation plan, there is mention of retiring COM-002-3. This standard was never FERC approved, therefore Dominion suggests changing this from retiring COM-002-3 to withdrawing COM-002-3.

Group

Southern Company: Southern Company Services, Inc.; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation; Southern Company Generation and Energy Marketing

Marcus Pelt

Yes

No

R3 & R4 - While there is the potential of risk if documented communications protocols are not followed, this should not somehow imply that incorrect operations were performed as a result. The severe category should be reserved only for those instances in which documented communications protocols were not followed \*and\* which resulted in an emergency operation or reliability issue. As a result, we suggest “demoting” each existing VSL to a lower level, and editing the Severe VSL and limit it to only those instances that resulted in an emergency operation or reliability issue (suggestions provided below). Low - The responsible entity demonstrates a consistent pattern of not using the documented communications protocols developed in Requirement R1 for Operating Instructions that are not Reliability Directives. Moderate – The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving a Reliability Directive. High – The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving an Operating Instruction \*and\* resulting in an emergency operation or reliability issue. Severe - The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving a Reliability Directive \*and\* resulting in an emergency operation or reliability issue. Southern also suggests (per comments below in section 3 on R5) that the VRF’s and VSL’s should be deleted for R5.

Yes

Standard Comments: R2 - We disagree with the DP and GOP being required to have a documented communications protocol. The requirement should simply require these two entities to use 3-part communication (i.e. repeat back) for Operating Instructions. Requiring a document is a purely administrative requirement and certainly meets the Paragraph 81 criteria. R5 - In NERC’s own Q&A document for RAI prepared by the Risk-Based Reliability Compliance Working Group (RBRCWG), the following statements are made: “An entity can voluntarily establish internal controls designed to reduce its control risk, which could have a positive influence on the scoping of compliance monitoring by the Regional Entity. Conversely, the entity can voluntarily elect to not establish internal controls or share them with the Regional Entity.” This is inconsistent with the direction of the proposed Standard COM-002-4, R5. This

not only requires an internal control, but also requires that the control be shared with the Regional Entity (during audits). Also, consider that an entity can develop and implement a robust communication protocol consistent with COM-002-4 requirements and flawlessly follow its communication protocol, yet be found in violation of COM-002-4 by failing to demonstrate that it has adequate (subjective) management (internal) controls in place. This is inconsistent with the RAI guidance provided by NERC regarding the voluntary nature of internal controls. So, in principle, internal controls should not be dictated in a reliability standard. This goes against the principle of “Results-Based” standards. The intended result is effective communications. This can be attained with Requirements 1 through 4. No one will argue that internal controls won’t help ensure that the desired results are achieved. However, Requirement 5 is not absolutely necessary for the results to be achieved, and therefore, should not be included in the standard and should be removed. R5.1 – We understand the thought that the BA, RC, and TOP will be assessing both the issuer’s and receiver’s adherence to the communications protocols; however, there needs to be some obligation on the receiver’s end to incorporate the feedback in their management practices. M3 and M4 – It is not clear what is meant by “independent review of operating personnel’s adherence to the protocols”. We recommend clarifying that this independent review only implies that the operator cannot assess their own communications. This assessment can be conducted by the operator’s management that is responsible for developing and training on the protocols or other groups within the entity’s organization that the operator’s management deems appropriate to provide an independent assessment. This same comment applies to the RSAW for R3 and R4. RSAW Comments: It appears that the intent of the revised COM-002-4 standard and the RSAW is to eliminate the “zero defect” concern expressed by the industry. Southern appreciates the SDT and NERC’s move in this direction; however we recommend modifying the RSAW to make it clear that as long as registered entities have a protocol document that lays out its expectations of its operators, periodically checks for conformance with the protocols, and implements corrective actions when deficiencies are found, the entities are compliant. Specifically, the Compliance Assessment Approach specific to COM-002-4, R3 as drafted provides the CEAs too much subjectivity. There needs to be more defined rule set and objective criteria that are used to determine if an entity’s internal controls around operating personnel adherence to the documented communications are insufficient. For example, CEAs should not have the flexibility to determine if the design frequency, volume of communications reviewed, and independence of the review party are sufficient. These parameters should be left up to the entity. The compliance approach should simply provide for the auditors to review the entity’s management practices related to assessing operators’ communications and actual evidence of such review to ensure these management practices are occurring. The RSAW should be modified to state that entity’s management practices should only be allowed to be deemed insufficient if: a) there is no evidence that management practices exist to assess operating personnel’s adherence to communications protocols or b) evidence demonstrates a pattern of not following the documented communications protocols.

Individual

John Brockhan

CenterPoint Energy Houston Electric

Yes

CenterPoint Energy agrees that the proposed COM-002-4 Standard addresses the August 2003 Blackout Report Recommendation number 26, FERC Order 693, and the COM-003-1 SAR however, the Company believes it goes beyond what is necessary to address the recommendations and ensure reliable communications. In addition CenterPoint Energy is concerned the proposed Standard may actually have the unintended opposite impact and impair reliable communication. See response to Q3 below.

No

CenterPoint Energy strongly disagrees with any Moderate or higher VSL for failure to document part of a procedure. See proposed VSL's for R1 and R2. The focus should remain on reliable operation of the system. If an entity is consistently using the required elements in its normal and emergency communications, failure to document a portion of that procedure should result in no more than a Lower VSL.

Yes

CenterPoint Energy strongly believes the stakeholder and NERC BOT approved COM-002-3 adequately addresses the FERC directive and no other Standard is necessary. CenterPoint Energy is very concerned regarding certain aspects of the proposed COM-002-4. The Company firmly believes R1.1 has great potential to detract from reliable operation of the Bulk Electric System (BES). By definition, a Reliability Directive is issued when an entity is in an Emergency situation or an unplanned system event has occurred that is causing an Adverse Reliability Impact on the BES. In these situations System Operators are analyzing multiple screens of data, reviewing various options of possible actions to take, and determining the other entities and personnel that need to be notified of the event. To inject a requirement to identify a command as a Reliability Directive into this environment has a high probability of negatively impacting the System Operator's response by causing the System Operator to hesitate in issuing the appropriate command thereby delaying the needed action. In addition this introduces the possibility of confusion on the part of the issuer and the receiver. At what point during an unplanned system event does it become an Emergency and therefore an Operating Instruction becomes a Reliability Directive requiring a special identification? In this highly stressful situation the System Operator does not need to be considering anything else other than what actions need to be taken in order to stabilize the BES and to protect life and property. CenterPoint Energy does not believe this requirement enhances reliable operation of the BES and in fact could impair that reliability at a crucial time. In addition CenterPoint Energy believes R1.8 is unnecessary since it is redundant with current TOP-002-2.1b requirement R18 which requires the use of common line identifiers when referring to transmission facilities of an interconnected network. CenterPoint Energy strongly recommends deletion of R1.1. While the Company believes R1.8 is unnecessary, redundant, and offers no enhancement to reliable communication CenterPoint Energy would be able to support COM-002-4 if R1.1 was deleted.

Individual

Patricia Robertson

BC Hydro



Yes
1. Purpose: The word "tighten" implies what the revisions to the standard are expected to do and doesn't reflect what the standard purpose is. BC Hydro recommends revising. 2. R1.5: Why is the requirement to confirm receipt for only one receiver and not all receivers for the multiple party message?
Group
SPP Standards Review Group
Robert Rhodes
Yes
We can support the combination of the two standards although we still have reservations regarding the need to introduce Operating Instructions in order to address Recommendation 26 which we see as strictly for emergency situations. We provide Recommendation 26 to support our position. "NERC should work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations, and ensure that all key parties, including state and local officials, receive timely and accurate information. NERC should task the regional councils to work together to develop communications protocols by December 31, 2004, and to assess and report on the adequacy of emergency communications systems within their regions against the protocols by that date."
No
The VSLs need to be modified to reflect the changes we propose in response to Question 3.
Yes
In order to more closely link the internal control process in R5 to the implementation of the protocols as required in R3 and R4, we propose revised language for R3 and R4. Additionally, we believe it was the intent of the SDT to provide the flexibility contained in R5 to the DP and GOP in addition to the BA, RC and TOP. Therefore, the DP and GOP should be included in R5. With that linkage established to R3 and R4, we propose that Parts 5.1 and 5.2 be deleted. Associated Measures and VSLs will need to be modified to reflect these changes. For example, the High VSL for R3 should now incorporate the remediation concept since without it the VSL implies zero-tolerance even though consistent pattern language is provided. To be non-compliant the responsible entity would have to demonstrate a consistent pattern of non-adherence to its protocols and a lack of remediation for the given situation. R3 - Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement the documented communications protocols developed in Requirement R1 and remediate noted exceptions for Operating Instructions which are not Reliability Directives in fulfillment of Requirement R5. Exceptions are not allowed for Reliability Directives. R4 - Each Distribution Provider and Generator Operator shall implement the documented communications protocols developed in Requirement R2 and remediate noted exceptions for Operating Instructions which are not Reliability Directives in fulfillment of Requirement R5. Exceptions are not allowed for Reliability Directives. Furthermore, this process should not be an audit of our internal controls. It should be an audit of the implementation of our communications protocols and our efforts to correct exceptions to the non-use of those protocols. This being the case, language such as 'reasonable

assurance' and 'reasonably designed' which is in both the standard (M3 and M4) and the RSAW (pages 9 and 15) needs to be eliminated. R1.5 and R1.6 cover one-way burst messaging systems which create unique operating situations when it comes to issuing Operating Instructions. In previous versions of COM-003-1 the SDT deleted this requirement. We suggest deleting it in this draft. It is a difficult situation to handle and does not present itself to cleanly handling 3-part communication. Having only one party confirm receipt of a Reliability Directive which has been sent to potentially tens of entities, does not provide a secure mode of operation nor does it address Recommendation 26. To eliminate the possibility of confusion over the use of 'internal operations' we suggest pulling the language in its entirety from COM-001-1.1, R4 into COM-002-4, R1.2. Replace 'real-time' with 'Real-time' in M3, M4 and M5.

Individual

Jason Snodgrass

Georgia Transmission Corporation

No

Both Reliability Directives and Operating Instructions have a HIGH VRF which appears inconsistent with previous drafts of the definitions and use of the two terms. R3 & R4 - While there is the potential of risk if documented communications protocols are not followed, this should not somehow imply that incorrect operations were performed as a result. The severe category should be reserved only for those instances in which documented communications protocols were not followed \*and\* which resulted in an emergency operation or reliability issue. As a result, we suggest "demoting" each existing VSL to a lower level, and editing the Severe VSL and limit it to only those instances that resulted in an emergency operation or reliability issue (suggestions for R4 provided below). Lower - The responsible entity demonstrates a consistent pattern of not using the documented communications protocols developed in Requirement R2 for Operating Instructions that are not Reliability Directives. Moderate - The responsible entity did not use the documented communications protocols developed in Requirement R2 when receiving a Reliability Directive. High - The responsible entity did not use the documented communications protocols developed in Requirement R2 when receiving an Operating Instruction \*and\* resulting in an emergency operation or reliability issue. Severe - The responsible entity did not use the documented communications protocols developed in Requirement R2 when receiving a Reliability Directive \*and\* resulting in an emergency operation or reliability issue. These aforementioned suggestions could also be duplicated for R3 with respect to issuers.

Yes

R2 - GTC disagrees with the DP and GOP being required to have a documented communications protocol. The requirement should simply require these two entities to use 3-part communication (i.e. repeat back) for Operating Instructions. Requiring a document is a purely administrative requirement and certainly meets the Paragraph 81 criteria. The following is suggested: R2 Each Distribution Provider and Generator Operator that receives an Operating Instruction shall: 2.1 Respond using the English language unless agreed to otherwise. An alternate language may be used for internal operations. 2.1.1 Oral Operating Instructions shall be responded to orally. 2.1.2 Written Operating Instructions shall be responded to in writing.

2.2 Take one of the following actions: • Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct. • Request that the issuer reissue the Operating Instruction. 2.3 Request clarification from the issuer if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g., an all call system). R5 - GTC believes internal controls type language is not appropriate within Reliability Standards Requirements and recommends deletion of R5. Specifically, since R3 and R4 are requirements to implement the communication protocols of R1 and R2 and must be adhered to (zero tolerance), it seems R5 is unnecessary to meet the objective of this Standard identified in the purpose statement and would seem to be more closely aligned with Paragraph 81 principles as administrative. Additionally, in NERC's own Q&A document for RAI prepared by the Risk-Based Reliability Compliance Working Group (RBRCWG), the following statements are made: "An entity can voluntarily establish internal controls designed to reduce its control risk, which could have a positive influence on the scoping of compliance monitoring by the Regional Entity. Conversely, the entity can voluntarily elect to not establish internal controls or share them with the Regional Entity." This is inconsistent with the direction of the proposed Standard COM-002-4, R5. This not only requires an internal control, but also requires that the control be shared with the Regional Entity (during audits). In summary, internal controls should not be listed as a requirement in a Reliability Standard. This goes against the principle of "Results-Based". The intended result is effective communications. This can be attained with Requirements 1 through 4. However, Requirement 5 is not absolutely necessary for the results to be achieved, and therefore, should not be included in the standard and should be removed. While GTC firmly supports moving away from zero-tolerance standard requirements, the RAI-related compliance elements of the proposed COM-002-4 appear to be premature as the RAI remains under development. Until the RAI program is more fully developed it's unclear how COM-002-4 would be audited. RAI and related changes to the Compliance Monitoring and Enforcement Program (CMEP) must be fully developed to ensure all parties (NERC, Regional Entities and Registered Entities) understand the rules of the road before being asked to approve a standard that relies on information and processes not yet finalized. Additionally, the RSAW for COM-002-4 depends on the implementation of the Reliability Assurance Initiative (RAI) which is not expected to be implemented until 2016. It seems unreasonable to utilize an internal controls approach to auditing until the criteria for such evaluation has been clearly explained to the stakeholders. -Both the terms Operating Instruction and Reliability Directive are used in this standard with little guidance on when to use a Reliability Directive which is described as a type of Operating Instruction.

Individual

Allen Mosher - APPA Staff

American Public Power Association

Yes

APPA staff supports the development and approval of a single, combined communication protocols Reliability Standard that covers emergency, alert and normal operating conditions for the BES, while recognizing that performance expectations for applicable registered entities and

NERC's approach to compliance and enforcement should differentiate between emergency and non-emergency conditions. Our initial review indicates the recently proposed draft standard COM-002-4 strikes an appropriate balance between these considerations, while fully responding to the NERC Board's and Standards Oversight and Technology Committee's Resolutions. We commend the SDT for its efforts. However, additional work is necessary to address technical concerns with the draft standard. See below.

No

No. APPA has concerns with several Compliance Elements, including the VRFs and VSLs in proposed COM-002-4. (1) The VRFs for DPs under R3 and R4 should be lowered, since non-compliance by these functions (within vertically integrated entities) or by these functional entities (if structurally separate) will pose minimal risk to the BES because they do not own or operate BES facilities. BES protective devices such as UFLS and UVLS relays operate automatically. (2) The Severe VSL for R3 and R4 requires specific zero defect performance when a Reliability Directive is issued or received. This is conceptually sound reliability performance objective, but it should be stated in the Requirements, as is the case in COM-002-3, with appropriate limitations to Reliability Directives, rather than burying the Requirement in the VSLs or in other Compliance Elements. (3) More fundamentally, the proposed draft relies heavily on the as-yet untested application of the NERC Reliability Assurance Initiative. Even modest changes to the Compliance Elements of the proposed standard – the Measures, Violation Risk Factors, Violation Severity Levels and Reliability Standard Audit Worksheets – would undermine the balance outlined above. Further delays in the development and implementation of RAI will certainly jeopardize successful implementation of COM-002-4.

Yes

(1) Project Plan: APPA staff supports the development and approval of a single, combined communication protocols Reliability Standard that covers emergency, alert and normal operating conditions for the BES, while recognizing that performance expectations for applicable registered entities and NERC's approach to compliance and enforcement should differentiate between emergency and non-emergency conditions. Our initial review indicates the recently proposed draft standard COM-002-4 strikes an appropriate balance between these considerations, while fully responding to the NERC Board's and Standards Oversight and Technology Committee's Resolutions. We are nonetheless concerned that the severely shortened, 15-day comment and ballot period directed by the Standards Committee for COM-002-4 will foreclose resolution of major technical objections to the proposed standard. (2) Reliability Objectives and Approach to Compliance Assurance: APPA Staff believes a strict, zero defect performance expectation for use of three-part communications by operating personnel is appropriate for the issuance of and response to Reliability Directives during emergencies and other adverse operating conditions on the BES. In marked contrast, the emphasis for Operating Instructions issued during normal conditions should be on behavioral, management and compliance assurance. First, each BES system operator should be trained in three-part communications (and other communication protocols) such that his or her use of such practices during normal operations is equally routine during emergency conditions. Second, each registered entity's management team should be confident that its operating personnel will follow the protocols on a consistent basis and that management practices and controls will

detect both departures from these communication protocols, as well as opportunities for improved performance. Third, NERC and regional compliance and enforcement staff should have reasonable assurance that the evidence proffered by each registered entity demonstrates it meets these performance expectations. (3) Applicability of the Standard: For a number of very practical considerations, APPA Staff urges the SDT, NERC staff and the NERC Board of Trustees to be cautious and measured in their efforts to bring this project to conclusion. The combined communication standard is unusual if not unique among NERC standards in that it touches on the day-to-day activities of thousands of industry employees engaged in real time operations and that its application as drafted will apply to many thousands of routine communications every day. APPA Staff urges the SDT to clarify which operation personnel are subject to the proposed standard, including whether Operating Instructions include oral communications issued and received within a single functional entity. The standard does not clarify such applicability beyond referring to “issuers” and “receivers” of Operating Instructions. Is the standard’s applicability limited to NERC certified operators? Control center operating personnel for all functions, even for individuals that do not operate or supervise operation of BES elements? Does the standard include training for field personnel? APPA Staff believes that operators and field personnel should use three-part communications to ensure safety, equipment protection and quality of retail service. However, the proposed open-ended Applicability to potentially ALL operating and field personnel of all BAs, DPs, RCs, TOPs and GOPs is overly broad for a NERC reliability standard. The training burdens and the documentation that each entity has implemented a systematic approach to such training is clearly burdensome. APPA Staff also recommends that the SDT clarify the Applicability of the draft standard, to eliminate applicability to small DPs under either a size threshold such as a peak load of less than 100 MW or that do not operate and staff a 24/7 distribution control center. (4) Compliance Assurance, Implementation Plan and Regulatory Certainty: APPA Staff believes the immature, untested nature of RAI takes the proposed standard beyond “in flight maintenance” into the world of simultaneous program design and operation. A poorly designed or implemented standard could actually increase the risk of BES performance errors, by diverting the focus of operators and management from what is being communicated to how the communication takes place. For these reasons, it is imperative that NERC and the industry have a clear, common understanding of the communication protocols and management controls that will be required at least one year prior to the effective date of the proposed standard. We support a balanced approach that focuses on education and training during a 12-month trial period to allow the industry to implement training programs and test its processes. Any failures identified in an audit or an events analysis during the trial period would not trigger any penalties, but would be noted for further evaluation. After the trial period, any failures would trigger an automatic re-training or coaching of the individual(s) in question, as well as improvements to the registered entity’s management controls. Finally, APPA Staff seeks assurance that NERC will not seek to modify the Compliance Elements of proposed COM-002-4 after it has been approved by the registered ballot body, without due process that protects the balance now present in the standard. Even modest changes to the Measures, VSLs, or RSAWs, such as changing “Reliability Directive” to “Operating Instruction” in the Severe VSL for Requirement R3, would transform COM-002-4 into a zero defect standard and drown the

industry and NERC in compliance administrivia.
Individual
Ronald L Donahey
Tampa Electric Company
No
Yes
The issue of zero defect in operating Instructions requiring three way communications is unacceptable. The Notes to the Auditor giving the auditor unlimited power to determine that the internal controls are not properly designed or is ineffective is not acceptable
Group
National Grid
Michael Jones
Yes
<p>National Grid appreciates the opportunity to provide the following comments. National Grid believes that clear communication is important for the reliable operation of the system in both normal and emergency conditions. To ensure that communication protocols are followed in both normal and emergency conditions, National Grid includes proper communication protocols in continuing operating training. In addition, National Grid has internal controls to assess adherence to communication protocols in both normal and emergency conditions. National Grid's concern regarding COM-002-4 is the additional, open-ended, compliance burden that will be added if communication protocols under normal conditions are added to the scope of the COM standard. National Grid appreciates the information provided in the draft Reliability Standard Audit Worksheet (RSAW) regarding the audit and enforcement approach. It should be clearly described, within the reliability standard, that the reliability standard is not a "zero-defect" standard for every communication. As written, the draft COM-002-4 standard requirements could be interpreted to be "zero-defect" requirements. National Grid provides the following recommended solution for the COM-002-4 standard:</p> <p>Requirements: R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall document communications protocols that specify the use of repeat-back and acknowledgements (three-way communication) of Operating Instructions and Reliability Directives for Normal and Emergency communications. 1.1. The communication protocol shall require the issuer and receiver of an oral Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations. Violation Risk Factor: Low - Time Horizon: Long-term Planning R2. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement a method to evaluate the communications protocols developed in requirement R1 that: 2.1. Assesses adherence to the communications protocols to provide feedback to issuers and receivers of Operating Instructions and Reliability Directives. 2.2. Assesses the effectiveness of the communications protocols and modifies those protocols, as necessary. Violation Risk Factor: Low - Time Horizon: Operations Planning</p>

Individual
D Mason
Hetch Hetchy Water and Power
Yes
The Independent Industry Experts Panel provided a "point-on" review of the COM-003 draft standard. That review included recommended some simple and clear language to define the reliability objectives of a combined COM-002/COM-003 Standard. Instead, the drafting team has opted to draft more complex and unintuitive language without any obvious need for the for the additional requirements, despite the availability a simpler, more intuitive solution.
Individual
Ryan Walter
Tri-State Generation and Transmission Association, Inc.
No
Tri-State believes that this proposal goes beyond what was contemplated in the Blackout Recommendation as well as FERC Order 693 directives 1 and 3 of paragraph 540. Additionally, Tri-State feels that a new term to define "Operating Instruction" is not warranted or required to fulfill either the FERC directive or Blackout Recommendations and is creating confusion where it is not needed. While the Final Blackout Report Recommendation 26 recommended tightening communications protocols, it emphasized communications during alerts and emergencies. This draft has pulled Reliability Directives and Operating Instructions into one definition and the draft does little to differentiate between the two. They appear to both be held to the same expectations and standards with minimal differentiation. Further work needs to be done on the definition and differentiation between the expectations and risk for communicating during alerts and emergencies and during normal operating instructions. The additional administrative burden added here for normal Operating Instructions does not add value to BES reliability and substantially increases the compliance burden. Tri-State requests further clarity of the Operations Instructions definition with clear expectations between emergencies, alerts and normal communication. Also, Tri-State requests feedback as to how standards for normal communication will address actual events that occurred during the Blackout and how this standard is providing a foundation for BES risk assessments and prioritization, which the RAI is working towards. R3 and R4 are written in a zero tolerance fashion: "implement the documented communications protocols". This opens up industry to have to document, review and monitor all communications for emergencies, alerts and normal communications to effectively complete audits with no findings. Having the normal Operating Instructions included with the emergency and alert communications does not allow the industry to maximize their limited resources for the issues that are of higher risk. The added burden of assessing and evaluation the programs for identifying, assessing and correcting (R3-R4 RSAW) are also premature. The industry has not developed and vetted these practices to have a strong and regionally consistent foundation to be audited from. Tri-State requests feedback for what exactly R5 is seeking. R5.1 appears to be a reiteration of R3 and R4 ("implement" versus "assess adherence"). Who or what determines "effectiveness of the

communication protocols” in 5.2? What are the expectations for documentation of this? It is the communication programs and the final results of that program that impact the BES reliability. The internal control programs will support the industry to achieve these goals with more consistency, but should not be included within the standards. Tri-State recommends eliminating R5. Language more specific to the communication as opposed to the control programs should be considered, if needed.

No

In order to develop appropriate VRFs and VSLs, it will be imperative to differentiate between Reliability Directives and Operating Instructions. It must be clear which Operating Instructions will be monitored and audited and the expectations for each type of communication. There is a difference between the risk and impact to the BES under these various conditions and the VSLs should reflect that. Tri-State does not find that evaluating, auditing and administratively following normal Operating Instructions to this degree of specificity provides the BES reliability value that the Blackout recommendations were seeking.

Yes

For the reasons listed in response to Questions 1 and 2, Tri-State cannot support expanding COM-002 as it is shown in this draft. It adds a tremendous amount of administrative burden and does not enhance the BES reliability.

Group

Colorado Springs Utilities

Kaleb Brimhall

SPP Standards Review Group

Yes

Requirement 1.8 should not be included, it is proposed to be removed under Paragraph 81.

Group

Luminant

Brenda Hampton

Yes

While neither the August 2003 Blackout Report Recommendation number 26 nor Order 693 requires three-part communications or any established communication protocol for normal operations, EOP-001-2, R3.1 and COM-002-2, R2 already address the requirements of the Blackout Report and FERC Order 693. Therefore, in keeping the requirements from COM-002-2 as part of the COM-002-4 standard, we can reasonably argue that the Standard addresses the recommendation.

No

We do not agree with VSLs for R3 & R4. While there is the potential of risk if documented communications protocols are not followed, this should not somehow imply that incorrect operations were performed as a result. The severe category should be reserved only for those instances in which documented communications protocols were not followed \*and\* the Operating Instructions were not implemented correctly which resulted in an Emergency or



Adverse Reliability Impact. As a result, we suggest the following Violation Severity Levels which results in limiting the High and Severe levels to only those instances that resulted in an Emergency or Adverse Reliability Impact: Low - The responsible entity demonstrates a consistent pattern of not using the documented communications protocols developed in Requirement R1 for Operating Instructions that are not Reliability Directives. Moderate – The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving a Reliability Directive. High – The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving an Operating Instruction \*and\* the Operating Instruction was not implemented correctly resulting in an Emergency or Adverse Reliability Impact. Severe - The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving a Reliability Directive \*and\* the Reliability Directive was not implemented correctly which make the Emergency or Adverse Reliability Impact worse.

Yes

While, under the circumstances, we fully support combining COM-002-3 and COM-003-1 into one communication protocol and appreciate the efforts of the Standards Drafting Team to draft this combined standard in such a short time frame, we do not believe this standard contains clear requirements at this point. Requirements R3 and R4 simply requires the communication protocols to be implemented. The Measure for those requirements requires evidence which may include descriptions of management practices that provide the entity reasonable assurance that protocols are being followed. The RSAW requires the auditor to consider the frequency and volume of communications reviewed as part of the audit process even though communication review is not required by R3 & R4 nor M3 & M4. Additionally we do not believe that this "communication review" should be a requirement to reasonably assure compliance with the communication protocol. Not only is it not necessary to reasonably assure compliance as ongoing periodic training can suffice but due to the fact that we have hundreds of communications with the RC, BA and TOP on a monthly basis and very few if any of those communications result in an Operating Instructions it will be very burdensome to find calls to review. So to reasonably assure compliance with the communication protocol and to not create an undue compliance burden we suggest that R3 & R4 implementation requirement be changed to require periodic communication protocol reviews and ongoing operator training on the communication protocol. In addition, Requirements 1.2 and 2.1 introduce the idea of written Operating Instructions while the other requirements covering the issuance of clear concise instructions and the requirements covering the receipt and understanding of the instruction do not cover written Operating Instructions at all. To ensure that communications are tightened as required by Recommendation #26 and the SAR then the reference to a written instruction should be removed from the requirements and the definition of the Operating Instruction should be refined as follows: "An oral command by operating personnel responsible...."

Individual

Cheryl Moseley

Electric Reliability Council of Texas, Inc.
Yes
ERCOT respectfully submits these comments on COM-002-4 in conjunction with the IRC's input to the NERC BoT, and the IRC SRC comments. ERCOT does not believe that COM-002-4, or COM-003 if it is developed further, should be a zero tolerance standard.
Group
Bonneville Power Administration
Jamison Dye
Yes
Yes
Yes
BPA generally supports the proposed standard and suggests that a note be included for R1.5 and R1.6 stating that one-way burst communications for operating instructions is not recommended as it would limit the ability to receive a response from all entities involved.
Group
PacifiCorp
Ryan Millard
Yes
Yes
Yes
PacifiCorp appreciates the diligence and dedication of the Standard Drafting Team and recognizes the improvements that were made in response to industry comments from the previous draft. There are a few additions, however, that PacifiCorp would like the drafting team to clarify: Firstly, in light of the fact that NERC has not finalized or implemented the RAI project, PacifiCorp would like to know why the drafting team included internal control language in the COM-002-4 RSAW? This language seems to anticipate what the end-state of the RAI Initiative is going to be (see "Note to Auditor" on pages 9-15 of the RSAW). In the absence of a final auditor handbook (which is supposed to be consistent across regions), PacifiCorp would like to know how an auditor can determine whether an internal control is "properly designed" or "effective"? Secondly, in M3 and M4 of the proposed COM-002-4 standard the drafting team has added language that includes, "Evidencing periodic, independent review of operating personnel's adherence to the protocols established in R2 and R5." It does not seem clear to PacifiCorp what the periodicity is expected to be or what constitutes an "independent" review? Although these points do not influence our support of the COM-002-4 standard, PacifiCorp strongly recommends that the drafting team reconsider including internal control review language in the RSAW until the RAI initiative has been fully implemented and auditor guidance has been formally developed and distributed across all regions.
Individual

Russell A. Noble
Cowlitz County PUD
No
Please see comment submitted by the Western Small Entity Comment Group, Steve Alexanderson.
Yes
Cowlitz voted affirmative only to avoid the possibility of the BOD circumventing the Standard Development process. Please consider carefully comment by the Western Small Entity Comment Group submitted by Steve Alexanderson. We strongly suggest the standard be further amended as suggested before submittal to FERC.
Group
ACES Standards Collaborators
Ben Engelby
No
(1) This standard does not address the directive to "tighten communications." This draft is a reproduction of prior COM-003-1 drafts, with unnecessary protocols that do not improve reliability of the BES. For example, it is unnecessary to include a requirement to use the English language in all but a small handful of areas of the Eastern, Western and ERCOT interconnections. This will result in unnecessary compliance burdens that do not support reliability contrary to the RAI. (2) We appreciate the SDT combining COM-002-3 and COM-003-1. (3) Broad applicability to DPs is inappropriate. DPs do not operate or own Elements of the BES. Thus, they cannot "change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System" as defined in the definition of Operating Instruction. Thus, they will never receive an operating instruction and should not be put in the position of having to demonstrate compliance with a requirement that can never impact them. This approach is contrary to the RAI initiative to refocus compliance efforts on higher risk requirements that actually impact reliability. While a DP may be required to reduce load, this is essentially a reliability directive and not an operating instruction. What other actions would a BA, TOP or RC require of a DP besides to reduce load? We can think of none and cannot fathom applicability for operating instructions to DPs.
No
We disagree with the content of COM-003-1, as there should not be detailed protocols. Since we disagree with the content of the standard, we also disagree with the VSLs. Further, both Reliability Directives and Operating Instructions have a HIGH VRF which appears inconsistent with previous drafts of the definitions and use of the two terms.
Yes
We do not understand the urgency to request a waiver to the SPM for this project. The NERC BOT resolution did not require a new standard to be developed by the November BOT meeting. Due to the shortened time frame, industry does not have enough time to fully vet the issues with SMEs. This standard lacks technical justification to justify the reduced comment and ballot period. There are serious compliance impacts from the proposed requirements and not enough

guidance on when to self-report instances of miscommunication. This will only further serve to perpetuate the current compliance approaches that place too much emphasis on minor details that do not support reliability.

Individual

RoLynda Shumpert

South Carolina Electric and Gas

Agree

SERC OC Review Group

Individual

Kenn Backholm

Public Utility District No.1 of Snohomish County

Agree

American Public Power Association ("APPA")

Individual

John Tolo

Tucson Electric Power

Yes

Yes

Yes

While I agree with the combining of COM standards, I have a disagreement with the definition of operating instruction. I would whole-heartedly agree that this protocol be adhered to during emergency or abnormal conditions, but not during normal conditions. The mere fact that a System Operator calls a remote generation plant to raise 25-30-50 MW should not necessitate a three-point communication. There are times when those instructions are given to another System Operator who then calls the plant, therefore doubling up on three-point communications.

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# Consideration of Comments Summary

Project 2007-02 Operating Personnel  
Communications Protocols

January 2, 2014

**RELIABILITY | ACCOUNTABILITY**



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Atlanta, GA 30326

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## Introduction

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The Project 2007-02 Drafting Team (OPCP SDT) thanks all commenters who submitted comments on the COM-002-4 Operating Personnel Communications Protocols standard. The standard was posted for a 14-day public comment period from October 21, 2013 through November 4, 2013. Stakeholders were asked to provide feedback on the standard and associated documents through a special electronic comment form. There were 77 sets of comments, including comments from approximately 178 different people from approximately 115 companies representing all 10 Industry Segments.

All comments submitted may be reviewed in their original format on the standard's [project page](#).

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Mark Lauby, at 404-446-2560 or at [mark.lauby@nerc.net](mailto:mark.lauby@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

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<sup>1</sup> The appeals process is in the Standard Processes Manual: [http://www.nerc.com/files/Appendix\\_3A\\_StandardsProcessesManual\\_20120131.pdf](http://www.nerc.com/files/Appendix_3A_StandardsProcessesManual_20120131.pdf)

# Consideration of Comments

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## Purpose of Consideration of Comments Summary

The OPCP SDT appreciates the comments from industry regarding the COM-002-4 standard. All comments were reviewed carefully by the OPCP SDT and changes were made to the standard accordingly. While all comments were reviewed, the new Standards Process Manual (SPM) does not require responses to each individual comment when an additional ballot is needed. However, this document provides a summary of responses to comments. The following pages will provide a summary of the comments received and how the comments were addressed by the OPCP SDT.

## COM-002-4 Comments

### *Operating Instruction Definition*

Several commenters provided alternative language to provide clarity for the Operating Instruction definition. After reviewing the comments, and considering the NERC Board of Trustees' November 7<sup>th</sup> 2013 Resolution<sup>2</sup>, the OPCP SDT has revised the definition of Operating Instruction to remove the reference to Reliability Directive. This was primarily in response to a NOPR issued by FERC<sup>3</sup> which proposed to remand the filing that contained the definition of Reliability Directive. This action would result in Reliability Directive not being a defined term. Furthermore, the OPCP SDT inserted parentheses to offset the type of communication that is not included in the Operating Instruction definition to provide additional clarity.

### *Applicability*

Several commenters expressed concern with the standard's applicability to Generator Operators (GOP) and Distribution Providers (DP). The concerned entities commented that some DPs and GOPs do not have 24/7 staff or do not use, own, or operate Bulk Electric System (BES) facilities. Further, some entities expressed concern that the current wording of the standard might require them to begin 24-hour operations, and require them to install recording equipment, even if they never receive an Operating Instruction.

In response to the comments and the NERC Board Resolution, the OPCP SDT revised the standard to clarify that DPs and GOPs are required to a) train their operators prior to receiving an Operating Instruction, and b) use three-part communication when receiving an Operating Instruction during an Emergency. In addition, the measures have been revised to show that a DP or GOP can demonstrate compliance for use of three-part communication when receiving an Operating Instruction during an Emergency by providing an attestation from the issuer of the Operating Instruction. If a DP or GOP never receives an Operating Instruction, no requirement in this standard would apply to them. To clarify, it was never the intent of the OPCP SDT to require entities to change their staffing, or to install any additional equipment to demonstrate compliance.

### *Non-Emergency Operations*

Some entities stated that the communications protocols specified in COM-002-4 should not apply to non-Emergency or day-to-day operations. Similarly, some entities expressed concern that three-part communications are not necessary for non-Emergency and day-to-day operations.

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<sup>2</sup> See [http://www.nerc.com/gov/bot/Board of Trustees Quarterly Meetings/Board COM Resolution 11.7.13 v1 AS APPROVED BY BOARD.pdf](http://www.nerc.com/gov/bot/Board%20of%20Trustees%20Quarterly%20Meetings/Board%20COM%20Resolution%2011.7.13%20v1%20AS%20APPROVED%20BY%20BOARD.pdf)

<sup>3</sup> See [http://www.nerc.com/FilingsOrders/us/FERCOrdersRules/NOPR TOP IRO RM13-12 RM13-14 RM13-15 20131121.pdf](http://www.nerc.com/FilingsOrders/us/FERCOrdersRules/NOPR%20TOP%20IRO%20RM13-12%20RM13-14%20RM13-15%2020131121.pdf)



The OPCP SDT respectfully disagrees with these comments. From a practical standpoint, one set of communications protocols for both emergency and non-emergency situations will reduce confusion for operating personnel. In particular, operating personnel would not have to switch to a different set of (potentially unfamiliar) communications protocols in stressful emergency situations. This is especially true for three-part communications. Operating personnel should be using three-part communications in day-to-day operations so that the use of three-part communications during emergency conditions is natural and supports effective communications. Also, FERC Order No. 693 directed the OPCP SDT to address both emergency and non-emergency communications protocols. The NERC Board of Trustees also directed the Standards Committee and the OPCP SDT to draft a single Reliability Standard that includes communications protocols for emergency and non-emergency operations. A new draft of COM-002-4 was developed in response to this input.

### *Requirement R1 Clarification*

Several commenters requested more clarity in Requirement R1. Some entities expressed confusion over whether a receiver of an Operating Instruction was required to respond when operating personnel that issued an Operating Instruction were required to confirm a response. Other entities wanted more clarity as to what actions may be taken by operating personnel issuing an Operating Instruction when no response was received. Additionally, several entities stated that some of the protocols were unnecessary, specifically the use of English and the use of alpha-numeric clarifiers.

The OPCP SDT revised Requirement R1 to provide more clarity as well as provide more latitude to operating personnel issuing an Operating Instruction. The revised requirement states that operating personnel that issue an Operating Instruction may take an alternate action to issue an Operating Instruction when the receiver does not respond or if the receiver does not understand the Operating Instruction. This revision more accurately reflects the scope of actions that an issuer of an Operating Instruction can take. In response to the comments above, the OPCP SDT removed Part 1.8 which required entities to specify which instances required alpha-numeric clarifiers in their communications protocols. The requirement for the use of the English language was retained, since it was incorporated from COM-001-1.1 Requirement R4.

### *GOP and DP Documented Communications Protocols and Three-Part Communications*

Some entities commented that GOPs and DPs should not be required to develop documented communications protocols because they only receive Operating Instructions and/or Reliability Directives.

The OPCP SDT agrees that the requirement to develop documented communications protocols for DPs and GOPs is not necessary. The OPCP SDT removed the seventh posting's Requirement R2, which required documented communications protocols for GOPs and DPs that receive Operating Instructions. In the eighth posting, the only requirements that apply to DPs and GOPs are Requirements R3 and R6. Requirement R3 requires initial training for operating personnel who can receive an Operating Instruction. Requirement R6 requires receivers of Operating Instructions issued during an Emergency to use three-part communications. Requirement R5 supports Requirement R6 by requiring each BA, RC, and TOP that issues an Operating Instruction during an Emergency to use three-part communications. Therefore, the OPCP SDT reduced the administrative burden on GOP and DP while covering any reliability gap by requiring GOPs and DPs receiving Operating Instructions during an Emergency to engage in three-part communications.

### *"Implement" and Training*

Several entities requested clarification for the word "implement" in Requirements R3 and R4 from the seventh posting. They expressed concern that the term was difficult to demonstrate compliance with.

In response, the OPCP SDT removed those requirements and added Requirements R2 and R3 in the eighth posting. Requirement R2 now requires each BA, RC, and TOP to conduct initial training for each operator responsible for the Real-time operation of the interconnected BES on the documented communications protocols developed in Requirement R1. Requirement R3 requires each DP and GOP to conduct initial training for each operator who can receive an Operating Instruction. The OPCP SDT originally intended “implement” to include this initial training but determined an initial training requirement more clearly captures this intent. In addition, Requirement R4 was added to require BAs, RCs, and TOPs to at least once every 12 months assess adherence by its operating personnel to the documented communication protocols in Requirement R1 and to provide feedback to its operators on their performance, including any appropriate corrective actions. It also requires these entities to assess the effectiveness of their communications protocols and make changes as necessary to improve the effectiveness of the protocols. The requirement of entities to self assess, self identify and provide feedback to its operators was also included in the Board of Trustees’ resolution. Further, the OPCP SDT believes that it is good operating practice for an entity to periodically evaluate the effectiveness of their protocols and improve them when possible. Additionally, the OPCP SDT also believes it is good operating practice to provide operators with performance feedback on their adherence to the entity’s documented protocols. This provides entities an opportunity to evaluate their operators’ performance and take corrective actions where necessary, which could prevent a miscommunication from occurring and thus quite possibly prevent an event which could harmful to the reliability of the Bulk Electric System.

The OPCP SDT believes the combination of R1-R4 and a non-zero tolerance approach to compliance, for Operating Instructions issued/received during a non-Emergency, represents an improvement over the previous “implement” terminology as it better captures an approach that improves reliability by providing a shorter assessment and correction cycle for an entity than a traditional audit schedule and reduces the associated compliance burden concurrently.

### *Consistent Pattern*

Several commenters expressed concern with the phrase “consistent pattern” in the VSLs for Requirements R3 and R4.

The OPCP SDT agrees that the term is vague and has removed it from the revised VRFs and VSLs.

### *VRFs and VSLs*

Several commenters requested revised VRFs and VSLs.

The OPCP SDT modified the VRFs and VSLs to better reflect the differences in severity of violating a documents requirement (*i.e.* Requirement R1), violating a training or assessment requirement (*i.e.* Requirements R2, R3 and R4) and violating a requirement when issuing or receiving an Operating Instruction during an Emergency (*i.e.* Requirements R5, R6 and R7). In addition, the OPCP SDT focused on using clear language in the VSLs.

### *Zero Defect Standard*

Some entities expressed concern that posting seven of the standard had elements that had no tolerance for compliance deviations. Given that the Board directed the OPCP SDT to include no exceptions for using three-part communications for emergency communications, the OPCP SDT determined that the standard must maintain this aspect in a few requirements. However, the OPCP SDT took this approach only for

Operating Instructions issued during an Emergency in Requirements R5, R6, and R7. Therefore, the OPCP SDT limited the zero tolerance approach to only Emergency communications in the standard.

*Compliance/Enforcement*

Several commenters expressed concern over compliance with the requirements and their enforceability.

In response, the OPCP SDT focused on eliminating vague terms from the standard that would create ambiguity in compliance with the standard. In addition, the comments have been provided to NERC Compliance to use in revising the RSAW that is posted with the eighth posting of the standard.

**Standard Development Roadmap**

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

**Development Steps Completed:**

1. The Standards Committee (SC) approved the Standard Authorization Request (SAR) for posting on March 1, 2007.
2. The SAR was posted for comment from March 19 through April 17, 2007.
3. The SC sought SAR drafting team nominations April 18 through May 2, 2007.
4. The SAR drafting team posted reply comments to industry comments received on the first posting of the SAR on June 8, 2007.
5. Standard drafting team appointed by SC Executive Committee on June 28, 2007.
6. Version 1 draft of COM-003-1 Standard posted November 2009 for Informal Comments closed January 15, 2010.
7. Version 2 draft of COM-003-1 Standard posted May 2012 for Formal Comments, Initial Ballot closed June 20, 2012.
8. Version 3 draft of COM-003-1 Standard posted August 2012 for Formal Comments, Ballot closed September 22, 2012.
9. Version 4 draft of COM-003-1 Standard posted November 2012 for Formal Comments, Ballot closed December 13, 2012.
10. Version 5 draft of COM-003-1 Standard posted March 2013 for Formal Comments, Ballot closed April 5, 2013.
11. Version 6 draft of COM-003-1 Standard posted June 2013 for Formal Comments, Ballot closed July 19, 2013.
12. COM-003-1 renumbered as COM-002-4. Version 1 draft of COM-002-4 Standard posted October 2013 for Formal Comments, Ballot closed November 7, 2013.
13. On December 12, 2013, the Standards Committee approved a waiver of the Standard Processes Manual to shorten the formal comment and ballot period, from 45 days to 30 days.

**Description of Current Draft:**

This is the second draft of a revised standard (eighth posting of a communications standard) requiring the use of standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The standard drafting team is posting this standard for a shortened 30 day formal Comment and 10 day Ballot period per the Standards Committee wavier.

**Future Development Plan:**

<b>Anticipated Actions</b>	<b>Anticipated Date</b>
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## COM-002-4 Operating Personnel Communications Protocols

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1. Additional ballot of Standard	January 2014
2. Final ballot of Standard	February 2014
3. Board adopts standard	TBD

### **Definitions of Terms Used in Standard**

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

Operating Instruction — A command by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. (A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.)

**A. Introduction**

1. **Title:** Operating Personnel Communications Protocols
2. **Number:** COM-002-4
3. **Purpose:** To improve communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES).
4. **Applicability:**
  - 4.1. **Functional Entities**
    - 4.1.1 Balancing Authority
    - 4.1.2 Distribution Provider
    - 4.1.3 Reliability Coordinator
    - 4.1.4 Transmission Operator
    - 4.1.5 Generator Operator
5. **(Proposed) Effective Date:** The standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date the standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

**B. Requirements**

- R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum: *[Violation Risk Factor: Low][Time Horizon: Long-term Planning]*
  - 1.1. Require its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
  - 1.2. Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions:
    - Confirm the receiver’s response if the repeated information is correct.
    - Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver.

- Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.
- 1.3. Require its operating personnel that receive an oral two-party, person-to-person Operating Instruction to take one of the following actions:
    - Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct.
    - Request that the issuer reissue the Operating Instruction.
  - 1.4. Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.
  - 1.5. Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.
  - 1.6. Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.
- R2.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall conduct initial training for each of its operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System on the documented communications protocols developed in Requirement R1 prior to that individual operator issuing an Operating Instruction. *[Violation Risk Factor: Low][Time Horizon: Long-term Planning]*
- R3.** Each Distribution Provider and Generator Operator shall conduct initial training for each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction to either: *[Violation Risk Factor: Low][Time Horizon: Long-term Planning]*
- Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or
  - Request that the issuer reissue the Operating Instruction.
- R4.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall at least once every twelve (12) calendar months: *[Violation Risk Factor: Medium][Time Horizon: Operations Planning]*
- 4.1. Assess adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, provide feedback to those operating personnel and take corrective action, as appropriate to address deviations from the documented protocols.
  - 4.2. Assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modify its documented communication protocols, as necessary.



- R5.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]
- Confirm the receiver's response if the repeated information is correct (in accordance with Requirement R6).
  - Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver, or
  - Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.
- R6.** Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that receives an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]
- Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or
  - Request that the issuer reissue the Operating Instruction.
- R7.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency shall confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]

**C. Measures**

- M1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1.
- M2.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide training records related to its documented communications protocols developed for Requirement R1 such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R2.
- M3.** Each Distribution Provider and Generator Operator shall provide its initial training records for its operating personnel such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R3.
- M4.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence of its assessments, including spreadsheets, logs or other evidence of feedback, findings of effectiveness and any changes made to its documented communications protocols developed for Requirement R1 in fulfillment of

Requirement R4. The entity shall provide evidence that it took appropriate corrective actions as part of its assessment for all instances where an operating personnel's non-adherence to the protocols developed in Requirement R1 is the sole or partial cause of an Emergency and for all other instances where the entity determined that it was appropriate to take a corrective action to address deviations from the documented protocols developed in Requirement R1.

- M5.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issued an oral two-party, person-to-person Operating Instruction during an Emergency, excluding oral single-party to multiple-party burst Operating Instructions, shall have evidence that the issuer either: 1) confirmed that the response from the recipient of the Operating Instruction was correct; 2) reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver; or 3) took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver. Such evidence may include, but is not limited to, dated and time-stamped voice recordings, or dated and time-stamped transcripts of voice recordings, or dated operator logs in fulfillment of Requirement R5.
- M6.** Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that was the recipient of an oral two-party, person-to-person Operating Instruction during an Emergency, excluding oral single-party to multiple-party burst Operating Instructions, shall have evidence to show that the recipient either repeated, not necessarily verbatim, the Operating Instruction and received confirmation from the issuer that the response was correct, or requested that the issuer reissue the Operating Instruction in fulfillment of Requirement R6. Such evidence may include, but is not limited to, dated and time-stamped voice recordings dated operator logs, an attestation from the issuer of the Operating Instruction, voice recordings (if the entity has such recordings), memos or transcripts.
- M7.** Each Balancing Authority, Reliability Coordinator and Transmission Operator that issued a written or oral single or multiple-party burst Operating Instruction during an Emergency shall provide evidence that the Operating Instruction was received by at least one receiver. Such evidence may include, but is not limited to, dated and time-stamped voice recordings, dated operator logs, electronic records, voice recordings (if the entity has such recordings), memos or transcripts.

## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance Enforcement Authority**

As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority" means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

#### **1.2. Data Retention**

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to

provide other evidence to show that it was compliant for the full time period since the last audit.

Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, and Transmission Operator shall each keep data or evidence for each applicable Requirement for the current calendar year and one previous calendar year, with the exception of voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.

If a Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, or Transmission Operator is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

### **Compliance Monitoring and Assessment Processes**

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

### **1.3. Additional Compliance Information**

None

**COM-002-4 Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R1</b>	Long-term Planning	Low	<p>The responsible entity did not specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification, as required in Requirement R1, Part 1.5</p> <p>OR</p> <p>The responsible entity did not specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction, as required in Requirement R1, Part 1.6.</p>	<p>The responsible entity did not require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise, as required in Requirement R1, Part 1.1. An alternate language may be used for internal operations.</p>	<p>The responsible entity did not include Requirement R1, Part 1.4 in its documented communication protocols.</p>	<p>The responsible entity did not include Requirement R1, Part 1.2 in its documented communications protocols</p> <p>OR</p> <p>The responsible entity did not include Requirement R1, Part 1.3 in its documented communications protocols</p> <p>OR</p> <p>The responsible entity did not develop any documented communications protocols as required in Requirement R1.</p>

**COM-002-4 Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R2</b>	Long-term Planning	Low	N/A	N/A	An individual operator responsible for the Real-time operation of the interconnected Bulk Electric System at the responsible entity issued an Operating Instruction, prior to being trained on the documented communications protocols developed in Requirement R1.	An individual operator responsible for the Real-time operation of the interconnected Bulk Electric System at the responsible entity issued an Operating Instruction during an Emergency prior to being trained on the documented communications protocols developed in Requirement R1.
<b>R3</b>	Long-term Planning	Low	N/A	N/A	An individual operator at the responsible entity received an Operating Instruction prior to being trained.	An individual operator at the responsible entity received an Operating Instruction during an Emergency prior to being trained.

**COM-002-4 Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R4</b>	Operations Planning	Medium	<p>The responsible entity assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions and provided feedback to those operating personnel and took corrective action, as appropriate</p> <p>AND</p> <p>The responsible entity assessed the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modified its documented communication</p>	<p>The responsible entity assessed adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, but did not provide feedback to those operating personnel</p> <p>OR</p> <p>The responsible entity assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions and provided feedback to those operating personnel but did not take corrective action, as appropriate</p> <p>OR</p> <p>The responsible entity assessed the effectiveness of its documented communications protocols</p>	<p>The responsible entity did not assess adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions</p> <p>OR</p> <p>The responsible entity did not assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions.</p>	<p>The responsible entity did not assess adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions</p> <p>AND</p> <p>The responsible entity did not assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions.</p>

**COM-002-4 Operating Personnel Communications Protocols**

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R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
			<p>protocols, as necessary</p> <p>AND</p> <p>The responsible entity exceeded twelve (12) calendar months between assessments.</p>	<p>in Requirement R1 for its operating personnel that issue and receive Operating Instructions, but did not modify its documented communication protocols, as necessary.</p>		

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R5	Real-time Operations	High	N/A	<p>The responsible entity that issued an Operating Instruction during an Emergency did not take one of the following actions:</p> <ul style="list-style-type: none"> <li>Confirmed the receiver's response if the repeated information was correct (in accordance with Requirement R6).</li> <li>Reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver.</li> <li>Took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver.</li> </ul>	N/A	<p>The responsible entity that issued an Operating Instruction during an Emergency did not take one of the following actions:</p> <ul style="list-style-type: none"> <li>Confirmed the receiver's response if the repeated information was correct (in accordance with Requirement R6).</li> <li>Reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver.</li> <li>Took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver.</li> </ul> <p>AND</p> <p>Instability, uncontrolled separation, or cascading failures occurred as a result.</p>



**COM-002-4 Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R6</b>	Real-time Operations	High	N/A	The responsible entity did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction.	N/A	The responsible entity did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction  AND  Instability, uncontrolled separation, or cascading failures occurred as a result.
<b>R7</b>	Real-time Operations	High	N/A	The responsible entity that that issued a written or oral single-party to multiple-party burst Operating Instruction during an Emergency did not confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.	N/A	The responsible entity that that issued a written or oral single-party to multiple-party burst Operating Instruction during an Emergency did not confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction  AND  Instability, uncontrolled separation, or cascading failures occurred as a result.

**E. Regional Variances**

None

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	February 7, 2006	Adopted by Board of Trustees	Added measures and compliance elements
2	November 1, 2006	Adopted by Board of Trustees	Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Retired R1, R1.1, M1, M2 and updated the compliance monitoring information. Replaced R2 with new R1, R2 and R3.
2a	February 9, 2012	Interpretation of R2 adopted by Board of Trustees	Project 2009-22
3	November 7, 2012	Adopted by Board of Trustees	

## Standard Development Roadmap

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

### Development Steps Completed:

1. The Standards Committee (SC) approved the Standard Authorization Request (SAR) for posting on March 1, 2007.
2. The SAR was posted for comment from March 19 through April 17, 2007.
3. The SC sought SAR drafting team nominations April 18 through May 2, 2007.
4. The SAR drafting team posted reply comments to industry comments received on the first posting of the SAR on June 8, 2007.
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11. Version 6 draft of COM-003-1 Standard posted June 2013 for Formal Comments, Ballot closed July 19, 2013.
12. COM-003-1 renumbered as COM-002-4. Version 1 draft of COM-002-4 Standard posted October 2013 for Formal Comments, Ballot closed November 7, 2013.
13. On December 12, 2013, the Standards Committee approved a waiver of the Standard Processes Manual to shorten the formal comment and ballot period, from 45 days to 30 days.

### Description of Current Draft:

This is the ~~first~~second draft of a revised standard (~~seventh~~eighth posting of a communications standard) requiring the use of standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The standard drafting team is posting this standard for a ~~15-shortened 30 day concurrent Formal~~formal Comment ~~period~~ and 10 day Ballot period per the Standards Committee wavier.

### Future Development Plan:

**COM-002-4 Operating Personnel Communications Protocols**

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<b>Anticipated Actions</b>	<b>Anticipated Date</b>
1. Additional ballot of Standard	<del>October 2013</del> <u>January 2014</u>
2. Final ballot of Standard-	<del>November 2013</del> <u>February 2014</u>
3. Board adopts standard-	<del>November 2013</del> <u>TBD</u>

DRAFT

### Definitions of Terms Used in Standard

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

Operating Instruction — A command by operating personnel responsible for the Real-time ~~generation control and~~ operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. ~~(A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction. A Reliability Directive is one type of an Operating Instruction.)~~

## A. Introduction

1. **Title:** Operating Personnel Communications Protocols
2. **Number:** COM-002-4
3. **Purpose:** To ~~tighten~~improve communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES).
4. **Applicability:**
  - 4.1. **Functional Entities**
    - 4.1.1 Balancing Authority
    - 4.1.2 Distribution Provider
    - 4.1.3 Reliability Coordinator
    - 4.1.4 Transmission Operator
    - 4.1.5 Generator Operator
5. **(Proposed) Effective Date:** The standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date the standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

## B. Requirements

- R1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall ~~have~~develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum:  
*[Violation Risk Factor: Low][Time Horizon: Long-term Planning]*
- ~~1.1.~~ Require ~~the issuer of a Reliability Directive to identify the action as a Reliability Directive to the receiver.~~
- ~~1.2.1.1.~~ Require the issuer and receiver of its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
- ~~1.3.1.2.~~ Require the issuer of its operating personnel that issue an oral two-party, person-to-person Operating Instruction ~~to wait for a response from the receiver. Once a response is received, or if no response is received, require the issuer~~ to take one of the following actions:

- Confirm the receiver's response if the repeated information is correct.
- Reissue the Operating Instruction if the repeated information is incorrect; ~~if the receiver does not issue a response~~; or if requested by the receiver.
  - ~~Require the receiver of~~ Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.

~~1.4.1.3.~~ Require its operating personnel that receive an oral two-party, person-to-person Operating Instruction to take one of the following actions:

- Repeat, not necessarily verbatim, the Operating Instruction and ~~wait for~~ receive confirmation from the issuer that the ~~repetition~~ response was correct.
- ~~Request that the issuer reissue the Operating Instruction.~~
  - Request that the issuer reissue the Operating Instruction.

~~1.5.~~ Require the issuer of an its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to ~~verbally or electronically confirm receipt by at least one receiver when issuing or verify that the Operating Instruction through was received by at least one way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g., an all call system).~~

~~1.6.1.4.~~ Require the receiver of an oral the Operating Instruction ~~to request clarification from the issuer if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g., an all call system).~~

~~1.7.1.5.~~ Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.

~~1.8.1.6.~~ Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.

~~2.0.~~ Specify Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall conduct initial training for each of its operating personnel responsible for the instances where alpha-numeric clarifiers are required when Real-time operation of the interconnected Bulk Electric System on the documented communications protocols developed in Requirement R1 prior to that individual operator issuing an ~~oral~~ Operating Instruction ~~and the format for those clarifiers.~~

~~R3.R2.~~ Each Distribution Provider and Generator Operator shall have documented communications protocols. The protocols shall, at a minimum: *[Violation Risk Factor: Low][Time Horizon: Long-term Planning]*

~~2.1.~~ Require the receiver of an oral or written Operating Instruction to respond using the English language, unless agreed to otherwise. An alternate language may be

~~used~~ Each Distribution Provider and Generator Operator shall conduct initial training for ~~internal operations~~.

~~2.2.R3.~~ Require the receiver of each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction to take one of the following actions: either: *[Violation Risk Factor: Low][Time Horizon: Long-term Planning]*

- Repeat, ~~not necessarily verbatim~~, the Operating Instruction and ~~wait for~~ receive confirmation from the issuer that the ~~repetition~~ response was correct, ~~or~~
- Request that the issuer reissue the Operating Instruction.

~~2.0.~~ Require the receiver of an oral Operating Instruction to request clarification from the issuer if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g., an all-call system).

~~R5.R4.~~ Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall ~~implement the documented communications protocols developed in Requirement R1~~ at least once every twelve (12) calendar months: *[Violation Risk Factor: High/Medium][Time Horizon: Real-time Operations] Planning]*

~~Each Distribution Provider and Generator Operator~~ 4.1. Assess adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, provide feedback to those operating personnel and take corrective action, as appropriate to address deviations from the documented protocols.

4.2. Assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modify its documented communication protocols, as necessary.

~~R6.R5.~~ Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall ~~implement the documented communications protocols developed in Requirement R2~~ either: *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*

- Confirm the receiver's response if the repeated information is correct (in accordance with Requirement R6).
- Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver, or
- Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.



R6. Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that receives an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*

- Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or
- Request that the issuer reissue the Operating Instruction.

—Each Balancing Authority, Reliability Coordinator, and Transmission Operator ~~shall implement a method to evaluate the communications protocols developed in Requirement R1 that:~~ *[Violation Risk Factor: Low][Time Horizon: Operations Planning]*

R7. 5.1. —~~Assesses adherence to the communications protocols~~that issues a written or oral single-party to ~~provide feedback to issuers and receivers~~multiple-party burst Operating Instruction during an Emergency shall confirm or verify that the Operating Instruction was received by at least one receiver of Operating Instructions. ~~the Operating Instruction.~~ *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*

5.2. ~~Assesses the effectiveness of the communications protocols and modifies those protocols, as necessary.~~

### C. Measures

M1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1.

M2. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide training records related to its documented communications protocols developed for Requirement R1 such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R2.

M2-M3. Each Distribution Provider and Generator Operator shall provide its ~~documented communications protocols developed for Requirement R2.~~initial training records for its operating personnel such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R3.

M3-M4. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence ~~that it implemented the documented communication protocols which may include, but is not limited to, descriptions of the management practices in place that provide the entity reasonable assurance that protocols established in Requirement R1 are being followed by personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System, spreadsheets, memos, or logs, evidencing periodic, independent review of operating personnel's adherence to the protocols established in Requirement R1 and the remediation of noted exceptions in fulfillment of Requirement R5~~of its assessments, including spreadsheets, logs or other evidence of feedback, findings of effectiveness

and any changes made to its documented communications protocols developed for Requirement R1 in fulfillment of Requirement R4. The entity shall provide evidence that it took appropriate corrective actions as part of its assessment for all instances where an operating personnel's non-adherence to the protocols developed in Requirement R1 is the sole or partial cause of an Emergency and for all other instances where the entity determined that it was appropriate to take a corrective action to address deviations from the documented protocols developed in Requirement R1.

~~M4.~~ Each Distribution Provider and Generator Operator shall provide evidence that it implemented the documented communication protocols which may include, but is not limited to, descriptions of the management practices in place that provide the entity reasonable assurance that protocols established in Requirement R2 are being followed by personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System, spreadsheets, memos, or logs, evidencing periodic, independent review of operating personnel's adherence to the protocols established in Requirement R2.

~~M5.~~ Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide descriptions and associated evidence of the management practices in place that demonstrate a review of communications with operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System and evidence that the entity evaluates the effectiveness of its documented communications protocols in fulfillment of Requirement R5. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issued an oral two-party, person-to-person Operating Instruction during an Emergency, excluding oral single-party to multiple-party burst Operating Instructions, shall have evidence that the issuer either: 1) confirmed that the response from the recipient of the Operating Instruction was correct; 2) reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver; or 3) took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver. Such evidence may include, but is not limited to, dated and time-stamped voice recordings, or dated and time-stamped transcripts of voice recordings, or dated operator logs in fulfillment of Requirement R5.

~~M6.~~ Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that was the recipient of an oral two-party, person-to-person Operating Instruction during an Emergency, excluding oral single-party to multiple-party burst Operating Instructions, shall have evidence to show that the recipient either repeated, not necessarily verbatim, the Operating Instruction and received confirmation from the issuer that the response was correct, or requested that the issuer reissue the Operating Instruction in fulfillment of Requirement R6. Such evidence may include, but is not limited to, dated and time-stamped voice recordings dated operator logs, an attestation from the issuer of the Operating Instruction, voice recordings (if the entity has such recordings), memos or transcripts.

~~M5-M7.~~ Each Balancing Authority, Reliability Coordinator and Transmission Operator that issued a written or oral single or multiple-party burst Operating Instruction during an Emergency shall provide evidence that the Operating Instruction was received by at least one receiver. Such evidence may include, but is not limited to, dated and time-

stamped voice recordings, dated operator logs, electronic records, voice recordings (if the entity has such recordings), memos or transcripts.

## D. Compliance

### 1. Compliance Monitoring Process

#### 1.1. Compliance Enforcement Authority

As defined in the NERC Rules of Procedure, “Compliance Enforcement Authority” means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

#### 1.2. Data Retention

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, and Transmission Operator shall each keep data or evidence for each applicable Requirement for the current calendar year and one previous calendar year, with the exception of voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.

If a Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, or Transmission Operator is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

#### **Compliance Monitoring and Assessment Processes**

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

**1.3. Additional Compliance Information**

None

DRAFT

COM-002-4 Operating Personnel Communications Protocols

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	Low	<p>The responsible entity did not specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification, as required in Requirement R1, Part 1.75</p> <p>OR</p> <p>The responsible entity did not specify the- nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction, as required in Requirement R1, Part 1.86.</p> <p>OR</p>	<p>The responsible entity did not require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise, as required in Requirement R1, Part 1.21. An alternate language may be used for internal operations.</p>	<p>The responsible entity did not include Requirement R1, Part 1.54 in its documented communication protocols.</p> <p>OR</p> <p><del>The responsible entity did not include Requirement R1, Part 1.6 in its documented communications protocols.</del></p>	<p>The responsible entity did not include Requirement R1, Part 1.12 in its documented communications protocols</p> <p>OR</p> <p>The responsible entity did not include Requirement R1, Part 1.3 in its documented communications protocols</p> <p>OR</p> <p><del>The responsible entity did not include Requirement R1, Part 1.4 in its documented communications protocols</del></p> <p>OR</p> <p>The responsible entity did not develop any documented communications protocols as required in Requirement R1.</p>

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			The responsible entity did not specify the instances where alpha-numeric clarifiers are required when issuing an oral Operating Instruction and the format for those clarifiers, as required in Requirement R1, Part 1.9.			
R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R2	Long-term Planning	Low	N/A	<del>The responsible entity did not require the receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise, as required in Requirement R2, Part 2.1. An alternate language may be used for internal operations.-N/A</del>	<del>The</del> <u>An individual operator responsible for the Real-time operation of the interconnected Bulk Electric System at the</u> responsible entity <del>did not</del> include Requirement R2, Part 2.3 in its issued an Operating Instruction, prior to being trained on the documented communication <u>communic</u>	<del>The</del> <u>An individual operator responsible for the Real-time operation of the interconnected Bulk Electric System at the</u> responsible entity <del>did not</del> include Requirement R2, Part 2.2 in its issued an Operating Instruction during an Emergency prior to being trained on the documented communications protocols developed in Requirement R1.

COM-002-4 Operating Personnel Communications Protocols

					<p><u>ations protocols developed in Requirement R1.</u></p>	<p><del>OR</del> The responsible entity did not develop any documented communications protocols as required in Requirement R2.</p>
R3	<p><u>Real-time Operations</u> <u>Long-term Planning</u></p>	<p><u>HighLow</u></p>	N/A	N/A	<p><del>The</del> <u>An individual operator at the responsible entity demonstrates a consistent pattern of not using the documented communications protocols developed in Requirement R1 for</u> <u>received an Operating Instructions that are not Reliability Directives. Instruction prior to being trained.</u></p>	<p><del>The responsible entity did not use the documented communications protocols developed in Requirement R1 when issuing or receiving a Reliability Directive.</del></p> <p><u>An individual operator at the responsible entity received an Operating Instruction during an Emergency prior to being trained.</u></p>

COM-002-4 Operating Personnel Communications Protocols

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R4	Real-time Operations Planning	High Medium	<p><del>N/A</del>The responsible entity assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions and provided feedback to those operating personnel and took corrective action, as appropriate</p> <p><u>AND</u></p> <p>The responsible entity assessed the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modified its</p>	<p><del>N/A</del>The responsible entity assessed adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, but did not provide feedback to those operating personnel</p> <p><u>OR</u></p> <p>The responsible entity assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions and provided feedback to those operating personnel but did not take corrective action, as appropriate</p> <p><u>OR</u></p> <p>The responsible entity assessed the effectiveness of its documented communications protocols</p>	<p>The responsible entity <del>demonstrates a consistent pattern of did</del> not <del>using</del> assess adherence to the documented communications protocols developed in Requirement R2 for in Requirements R1 by its operating personnel that issue and receive Operating Instructions <del>that are</del></p> <p><u>OR</u></p> <p>The responsible entity did not Reliability Directives assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions.</p>	<p>The responsible entity did not <del>use</del> assess adherence to the documented communications protocols developed in Requirements R1 by its operating personnel that issue and receive Operating Instructions</p> <p><u>AND</u></p> <p>The responsible entity did not assess the effectiveness of its documented communications protocols in Requirement R2 when receiving a Reliability Directive R1 for its operating personnel that issue and receive Operating Instructions.</p>



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			<u>documented communication</u>			
<u>R #</u>	<u>Time Horizon</u>	<u>VRF</u>	<u>Violation Severity Levels</u>			
			<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>

COM-002-4 Operating Personnel Communications Protocols

			<p><u>protocols, as necessary</u></p> <p><u>AND</u></p> <p><u>The responsible entity exceeded twelve (12) calendar months between assessments.</u></p>	<p><u>in Requirement R1 for its operating personnel that issue and receive Operating Instructions, but did not modify its documented communication protocols, as necessary.</u></p>		
<u>R.#</u>	<u>Time Horizon</u>	<u>YRE</u>	<u>Violation Severity Levels</u>			
			<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>

COM-002-4 Operating Personnel Communications Protocols

R5	<u>Real-time Operations Planning</u>	<u>Low</u> <u>High</u>	N/A	<p><u>N/A</u>The responsible entity that issued an <u>Operating Instruction</u> during an <u>Emergency</u> did not take one of the following actions:</p> <ul style="list-style-type: none"> <li><u>Confirmed the receiver's response if the repeated information was correct (in accordance with Requirement R6).</u></li> <li><u>Reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver.</u></li> <li><u>Took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver.</u></li> </ul>	N/A	<p>The responsible entity that issued an <u>Operating Instruction</u> during an <u>Emergency</u> did not implement a method for evaluating its communications protocols as specified take one of the following actions:</p> <ul style="list-style-type: none"> <li><u>Confirmed the receiver's response if the repeated information was correct (in accordance with Requirement R5R6).</u></li> <li><u>Reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver.</u></li> <li><u>Took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver.</u></li> </ul> <p><u>AND</u></p> <p><u>Instability, uncontrolled separation, or cascading failures occurred as a result.</u></p>
<u>R.#</u>	<u>Time Horizon</u>	<u>VRE</u>	<u>Violation Severity Levels</u>			
			<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>

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<p><u>R6</u></p>	<p><u>Real-time Operations</u></p>	<p><u>High</u></p>	<p><u>N/A</u></p>	<p><u>The responsible entity did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction.</u></p>	<p><u>N/A</u></p>	<p><u>The responsible entity did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction</u></p> <p><u>AND</u></p> <p><u>Instability, uncontrolled separation, or cascading failures occurred as a result.</u></p>
<p><u>R7</u></p>	<p><u>Real-time Operations</u></p>	<p><u>High</u></p>	<p><u>N/A</u></p>	<p><u>The responsible entity that that issued a written or oral single-party to multiple-party burst Operating Instruction during an Emergency did not confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.</u></p>	<p><u>N/A</u></p>	<p><u>The responsible entity that that issued a written or oral single-party to multiple-party burst Operating Instruction during an Emergency did not confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction</u></p> <p><u>AND</u></p> <p><u>Instability, uncontrolled separation, or cascading failures occurred as a result.</u></p>

**E. Regional Variances**

None.

**Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	February 7, 2006	Adopted by Board of Trustees	Added measures and compliance elements
2	November 1, 2006	Adopted by Board of Trustees	Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Retired R1, R1.1, M1, M2 and updated the compliance monitoring information. Replaced R2 with new R1, R2 and R3.
2a	February 9, 2012	Interpretation of R2 adopted by Board of Trustees	Project 2009-22
3	November 7, 2012	Adopted by Board of Trustees	

## Implementation Plan

### Operating Personnel Communications Protocols

#### COM-002-4

#### Standards Involved

Approval:

- COM-002-4 – Operating Personnel Communications Protocols

Retirements:

- COM-001-1.1 Requirement R4 – Telecommunications
- COM-002-2 – Communication and Coordination
- COM-002-3 – Communication and Coordination

#### Prerequisite Approvals

None

#### Revisions to Glossary

The following term is proposed for addition to the NERC Glossary of Terms:

#### Operating Instruction —

A command by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. (A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.)

#### Applicable Entities

Balancing Authority  
Distribution Provider  
Generator Operator  
Reliability Coordinator  
Transmission Operator

#### Conforming Changes to Other Standards

None

**Effective Date**

COM-002-4 and the definition of “Operating Instruction” shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date the standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

**Retirement of Existing Standards:**

COM-001-1.1 Requirement R4, COM-002-2, and COM-002-3, as applicable, shall be retired at midnight of the day immediately prior to the effective date of COM-002-4 in the particular jurisdiction in which the new standard is becoming effective.

# Implementation Plan

## Operating Personnel Communications Protocols

### COM-002-4

#### Standards Involved

Approval:

- COM-002-4 – Operating Personnel Communications Protocols

Retirements:

- COM-001-1.1 Requirement R4 – Telecommunications
- COM-002-2 – Communication and Coordination
- COM-002-3 – Communication and Coordination

#### Prerequisite Approvals

None

~~Approval of the definition of “Reliability Directive”~~

#### Revisions to Glossary

The following term is proposed for addition to the NERC Glossary of Terms:

##### Operating Instruction —

A command by operating personnel responsible for the Real-time ~~generation control and~~ operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. (A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.) ~~—A Reliability Directive is one type of an Operating Instruction.~~

#### Applicable Entities

Balancing Authority  
Distribution Provider  
Generator Operator  
Reliability Coordinator  
Transmission Operator

#### Conforming Changes to Other Standards



None

**Effective Date**

COM-002-4 and the definition of “Operating Instruction” shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date the standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

**Retirement of Existing Standards:**

COM-001-1.1 Requirement R4, COM-002-2, and COM-002-3, as applicable, shall be retired at midnight of the day immediately prior to the effective date of COM-002-4 in the particular jurisdiction in which the new standard is becoming effective.

# DRAFT Reliability Standard Audit Worksheet<sup>1</sup>

## COM-002-4 – Operating Personnel Communications Protocols

*This section to be completed by the Compliance Enforcement Authority.*

**Audit ID:** Audit ID if available; or REG-NCRnnnnn-YYYYMMDD  
**Registered Entity:** Registered name of entity being audited  
**NCR Number:** NCRnnnnn  
**Compliance Enforcement Authority:** Region or NERC performing audit  
**Compliance Assessment Date(s)<sup>2</sup>:** Month DD, YYYY, to Month DD, YYYY  
**Compliance Monitoring Method:** Audit  
**Names of Auditors:** Supplied by CEA

### Applicability of Requirements

	BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	RSG	TO	TOP	TP	TSP
R1	X								X				X		
R2	X								X				X		
R3		X	X												
R4	X								X				X		
R5	X								X				X		
R6	X	X	X												
R7	X								X				X		

<sup>1</sup> NERC developed this Reliability Standard Audit Worksheet (RSAW) language in order to facilitate NERC’s and the Regional Entities’ assessment of a registered entity’s compliance with this Reliability Standard. The NERC RSAW language is written to specific versions of each NERC Reliability Standard. Entities using this RSAW should choose the version of the RSAW applicable to the Reliability Standard being assessed. While the information included in this RSAW provides some of the methodology that NERC has elected to use to assess compliance with the requirements of the Reliability Standard, this document should not be treated as a substitute for the Reliability Standard or viewed as additional Reliability Standard requirements. In all cases, the Regional Entity should rely on the language contained in the Reliability Standard itself, and not on the language contained in this RSAW, to determine compliance with the Reliability Standard. NERC’s Reliability Standards can be found on NERC’s website. Additionally, NERC Reliability Standards are updated frequently, and this RSAW may not necessarily be updated with the same frequency. Therefore, it is imperative that entities treat this RSAW as a reference document only, and not as a substitute or replacement for the Reliability Standard. It is the responsibility of the registered entity to verify its compliance with the latest approved version of the Reliability Standards, by the applicable governmental authority, relevant to its registration status.

The NERC RSAW language contained within this document provides a non-exclusive list, for informational purposes only, of examples of the types of evidence a registered entity may produce or may be asked to produce to demonstrate compliance with the Reliability Standard. A registered entity’s adherence to the examples contained within this RSAW does not necessarily constitute compliance with the applicable Reliability Standard, and NERC and the Regional Entity using this RSAW reserves the right to request additional evidence from the registered entity that is not included in this RSAW. Additionally, this RSAW includes excerpts from FERC Orders and other regulatory references. The FERC Order cites are provided for ease of reference only, and this document does not necessarily include all applicable Order provisions. In the event of a discrepancy between FERC Orders, and the language included in this document, FERC Orders shall prevail.

<sup>2</sup> Compliance Assessment Date(s): The date(s) the actual compliance assessment (on-site audit, off-site spot check, etc.) occurs.

**DRAFT** NERC Reliability Standard Audit Worksheet

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**Subject Matter Experts**

Identify Subject Matter Expert(s) responsible for this Reliability Standard. (Insert additional rows if necessary)

**Registered Entity Response (Required):**

SME Name	Title	Organization	Requirement(s)

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DRAFT

**R1 Supporting Evidence and Documentation**

- R1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum:
- 1.1.** Require its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
  - 1.2.** Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions:
    - Confirm the receiver’s response if the repeated information is correct.
    - Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver.
    - Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.
  - 1.3.** Require its operating personnel that receive an oral two-party, person-to-person Operating Instruction to take one of the following actions:
    - Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct.
    - Request that the issuer reissue the Operating Instruction.
  - 1.4.** Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.
  - 1.5.** Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.
  - 1.6.** Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.

**Definition of Operating Instruction**

A command by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. (A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.)

- M1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1.

**Registered Entity Response to General Compliance with this Requirement (Required):**

## DRAFT NERC Reliability Standard Audit Worksheet

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

### Evidence Requested<sup>3</sup>:

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.

A copy of the documented communication protocols that cover the Requirements outlined in Requirement R1 Parts 1.1 to 1.6.

### Registered Entity Evidence (Required):

The following information is recommended for all evidence submitted:

File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description.

Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

### Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

### Compliance Assessment Approach Specific to COM-002-4, R1

*This section to be completed by the Compliance Enforcement Authority*

	Review the documented communications protocols provided by entity and ensure they address the Parts of R1 as follows:
(1.1)	Requires its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
(1.2)	Requires its operating personnel that issue an oral two-part, person-to-person Operating Instruction to take one of the following actions: confirm the receiver's response if the repeated information is correct, reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver, or take an alternative action to issue a new or the same Operating Instruction if the receiver does not respond.
(1.3)	Requires its operating personnel that receive an oral two-party, person-to-person Operating Instruction to take one of the following actions: repeat, not necessarily verbatim, the Operating

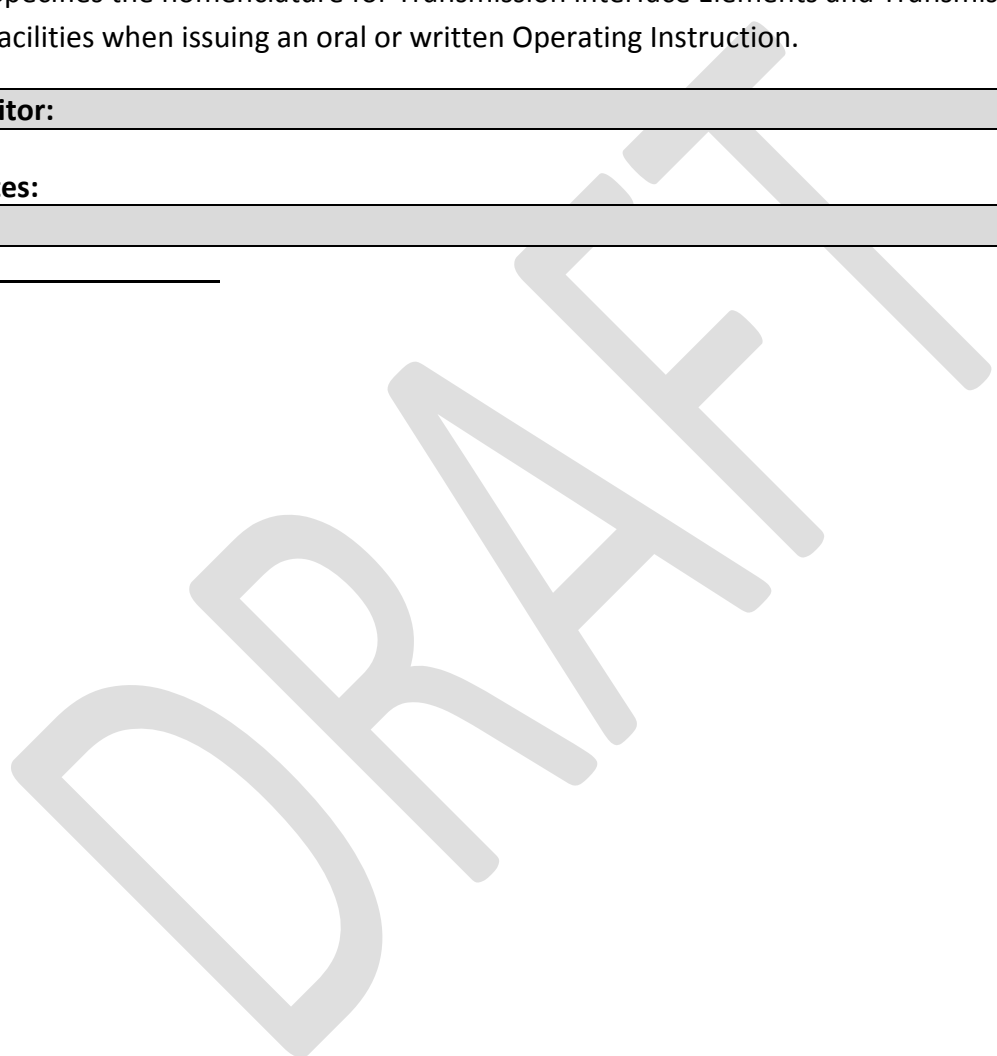
<sup>3</sup> Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity's discretion.

**DRAFT NERC Reliability Standard Audit Worksheet**

	Instruction and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction.
(1.4)	Requires its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.
(1.5)	Specifies the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.
(1.6)	Specifies the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.

**Note to Auditor:**

**Auditor Notes:**



**R2 Supporting Evidence and Documentation**

- R2.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall conduct initial training for each of its operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System on the documented communications protocols developed in Requirement R1 prior to that individual operator issuing an Operating Instruction.
- M2.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide training records related to its documented communications protocols developed for Requirement R1 such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R2.

**Registered Entity Response to General Compliance with this Requirement (Required):**

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

**Evidence Requested<sup>4</sup>:**

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.

Copies of dated attendance logs, agendas, learning objectives, or course materials as outlined in M2.

Organization chart or similar artifact identifying the operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System and the date such personnel began operating the Real-time Bulk Electric System.

**Registered Entity Evidence (Required):**

The following information is recommended for all evidence submitted:  
File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description.  
Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

**Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):**

<sup>4</sup> Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity's discretion.

**DRAFT NERC Reliability Standard Audit Worksheet**

**Compliance Assessment Approach Specific to COM-002-4, R2**

***This section to be completed by the Compliance Enforcement Authority***

Verify applicable operating personnel, or a sample thereof, received the required training prior to the date they began operating the Real-time Bulk Electric System by agreeing selected personnel names to training records.
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<b>Note to Auditor:</b> Requirement R2 requires only initial training; continuing training is not required.
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**Auditor Notes:**

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**R3 Supporting Evidence and Documentation**

- R3.** Each Distribution Provider and Generator Operator shall conduct initial training for each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction to either:
- Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or
  - Request that the issuer reissue the Operating Instruction.
- M3.** Each Distribution Provider and Generator Operator shall provide its initial training records for its operating personnel such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R3.

**Registered Entity Response to General Compliance with this Requirement (Required):**

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

**Evidence Requested<sup>5</sup>:**

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.

Copies of dated attendance logs, agendas, learning objectives, or course materials as outlined in M3.

Organization chart or similar artifact identifying the operating personnel who can receive an oral two-party, person-to-person Operating Instruction and the date such personnel began receiving such instructions.

**Registered Entity Evidence (Required):**

The following information is recommended for all evidence submitted:  
File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description.  
Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

**Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):**

<sup>5</sup> Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity's discretion.

**DRAFT NERC Reliability Standard Audit Worksheet**


**Compliance Assessment Approach Specific to COM-002-4, R3**

*This section to be completed by the Compliance Enforcement Authority*

Verify applicable operating personnel, or a sample thereof, received the required training prior to the date they began receiving oral two-party, person-to-person Operating Instructions by agreeing selected personnel names to training records.
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**Note to Auditor:** Requirement R3 requires only initial training; continuing training is not required.

**Auditor Notes:**

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**R4 Supporting Evidence and Documentation**

- R4.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall, at least once every twelve (12) calendar months:
  - 4.1.** Assess adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, provide feedback to those operating personnel and take corrective action as appropriate to address deviations from the documented protocols.
  - 4.2.** Assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modify its documented communication protocols, as necessary.
  
- M4.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence of its assessments, including spreadsheets, logs or other evidence of feedback, findings of effectiveness and any changes made to its documented communications protocols developed for Requirement R1 in fulfillment of Requirement R4. The entity shall provide evidence that it took appropriate corrective actions as part of its assessment or all instances where an operating personnel’s non-adherence to the protocols developed in Requirement R1 is the sole or partial cause of an Emergency, and for all other instances where the entity determined that it was appropriate to take a corrective action to address deviations from the documented protocols developed in Requirement R1.

**Definition of Emergency**

Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

**Registered Entity Response to General Compliance with this Requirement (Required):**

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

**Evidence Requested<sup>6</sup>:**

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.

- (4.1) Dated spreadsheets, logs, or other evidence of assessment and feedback of operating personnel as outlined in M4.

<sup>6</sup> Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity’s discretion.

**DRAFT NERC Reliability Standard Audit Worksheet**

(4.2) Revisions made to documented communications protocols based on assessments, or minutes of meetings or others summaries evidencing the effectiveness of documented protocols were assessed.

A list or log of corrective actions taken in response to Emergencies occurring on the entity’s system due to non-adherence to documented communications protocols during the audit period.

**Registered Entity Evidence (Required):**

The following information is recommended for all evidence submitted:  
File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description.  
Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

**Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):**

**Compliance Assessment Approach Specific to COM-002-4, R4**

*This section to be completed by the Compliance Enforcement Authority*

	<p>(4.1) Review evidence to gain reasonable assurance that an assessment of operating personnel issuing and receiving Operating Instructions adherence to the documented protocols established in Requirement R1 occurred every twelve months during the audit period. Verify assessment or another artifact includes evidence such as annotations or summaries of providing feedback and taking corrective action, as necessary, in accordance with the requirement.</p>
	<p>(4.2) Review evidence such as document revisions, meetings minutes, or other summaries to gain reasonable assurance that the effectiveness of documented communications protocols in Requirement R1 was assessed every twelve months during the audit period.</p>
	<p>For Emergencies, occurring on the entity’s system, or a sample thereof, assess whether or not an operating personnel’s non-adherence to the documented protocols was the partial or sole cause of the Emergency and if so, verify entity took appropriate corrective actions by reviewing summaries, meeting minutes, or the like, outlining corrective actions taken.</p>

**Note to Auditor:** Auditors can use their general knowledge of the entity’s system, discussions with other Regional Entity/NERC personnel, and discussions with entity personnel to gain an awareness of Emergencies resulting potentially from non-adherence to communications protocols. Such Emergency events can then be reviewed during an audit to determine, if the Emergency was indeed attributable to an instance of non-adherence to communications protocols ,that corrective action was taken.

The extent of audit procedures applied related to this requirement will vary depending on certain risk factors to the Bulk Electric System. In general, more extensive audit procedures will be applied where risks to the Bulk Electric System are determined by the auditor to be higher for non-compliance with this requirement.

**DRAFT** NERC Reliability Standard Audit Worksheet

Based on the auditor's assessment of risk, as described above, specific audit procedures applied for this requirement may range from exclusion of this requirement from audit scope to the auditor reviewing, in accordance with the above Compliance Assessment Approach, evidence associated with the entity's responses to numerous Emergencies.

**Auditor Notes:**

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**R5 Supporting Evidence and Documentation**

- R5.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either:
- Confirm the receiver’s response if the repeated information is correct (in accordance with Requirement R6).
  - Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver.
  - Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.
- M5.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issued an oral two-party, person-to-person Operating Instruction during an Emergency, excluding oral single-party to multiple-party burst Operating Instructions, shall have evidence that the issuer either: 1) confirmed that the response from the recipient of the Operating Instruction was correct; 2) reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver; or 3) took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver. Such evidence could include, but is not limited to, dated and time-stamped voice recordings, or dated and time-stamped transcripts of voice recordings, or dated operator logs in fulfillment of Requirement R5.

**Registered Entity Response to General Compliance with this Requirement (Required):**

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

**Evidence Requested<sup>7</sup>:**

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.

Dated and time-stamped voice recordings or transcripts of such voice recordings or operator logs, as described in M5.

**Registered Entity Evidence (Required):**

The following information is recommended for all evidence submitted:  
File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description.

<sup>7</sup> Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity’s discretion.

**DRAFT NERC Reliability Standard Audit Worksheet**

Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.


**Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):**


**Compliance Assessment Approach Specific to COM-002-4, R5**

*This section to be completed by the Compliance Enforcement Authority*

Review evidence and determine for Operating Instructions issued during an Emergency the entity confirmed the receiver's response if the repeated information was correct (in accordance with Requirement R6), reissued the Operating Instruction if the repeated information was not correct or if requested by the receiver, and took alternative action to issue a new or the same Operating Instruction if the receiver did not respond.

**Note to Auditor:** Auditors can use their general knowledge of the entity's system, discussions with other Regional Entity/NERC personnel, and discussions with entity personnel to gain an awareness of Emergencies resulting potentially from non-adherence to Requirement R5. Such Emergency events can then be reviewed during an audit to determine if the evidence indicates the entity complied with Requirement R5 in issuing Operating Instructions during the Emergency.

The extent of audit procedures applied related to this requirement will vary depending on certain risk factors to the Bulk Electric System. In general, more extensive audit procedures will be applied where risks to the Bulk Electric System are determined by the auditor to be higher for non-compliance with this requirement.

Based on the auditor's assessment of risk, as described above, specific audit procedures applied for this requirement may range from exclusion of this requirement from audit scope to the auditor reviewing, in accordance with the above Compliance Assessment Approach, evidence associated with the entity's responses to numerous Operating Instructions issued during Emergencies.

**Auditor Notes:**

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**R6 Supporting Evidence and Documentation**

- R6.** Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that receives an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either:
- Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or
  - Request that the issuer reissue the Operating Instruction.
- M6.** Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that was the recipient of an oral two-party, person-to-person Operating Instruction during an Emergency, excluding oral single-party to multiple-party burst Operating Instructions, shall have evidence to show that the recipient either repeated, not necessarily verbatim, the Operating Instruction and received confirmation from the issuer that the response was correct, or requested that the issuer reissue the Operating Instruction in fulfillment of Requirement R6. Such evidence may include, but is not limited to, dated and time-stamped voice recordings, dated operator logs, an attestation from the issuer of the Operating Instruction, voice recordings (if the entity has such recordings), memos or transcripts.

**Registered Entity Response to General Compliance with this Requirement (Required):**

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

**Evidence Requested<sup>8</sup>:**

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.

Dated operator logs, voice recordings, memos, or transcripts, or other evidence (per M6) describing the entity's response to Operating Instructions received during an Emergency selected by the auditor.

**Registered Entity Evidence (Required):**

The following information is recommended for all evidence submitted:  
File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description.  
Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

<sup>8</sup> Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity's discretion.



**DRAFT NERC Reliability Standard Audit Worksheet**


**Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):**


**Compliance Assessment Approach Specific to COM-002-4, R6**

*This section to be completed by the Compliance Enforcement Authority*

	Review evidence and determine for Operating Instructions received during an Emergency entity repeated, not necessarily verbatim, the Operating Instruction and received confirmation from the issuer that the response was correct, or requested that the issuer reissue the Operating Instruction.
<b>Note to Auditor:</b> Auditors can use their general knowledge of the entity’s system, discussions with other Regional Entity/NERC personnel, and discussions with entity personnel to gain an awareness of Emergencies resulting potentially from non-adherence to Requirement R6. Such Emergency events can then be reviewed during an audit to determine if the evidence indicates the entity complied with Requirement R6 for Operating Instructions received during the Emergency.	
The extent of audit procedures applied related to this requirement will vary depending on certain risk factors to the Bulk Electric System. In general, more extensive audit procedures will be applied where risks to the Bulk Electric System are determined by the auditor to be higher for non-compliance with this requirement.	
Based on the auditor’s assessment of risk, as described above, specific audit procedures applied for this requirement may range from exclusion of this requirement from audit scope to the auditor reviewing, in accordance with the above Compliance Assessment Approach, evidence associated with the entity’s responses to numerous Operating Instructions received during Emergencies.	

**Auditor Notes:**

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**R7 Supporting Evidence and Documentation**

- R7.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency shall confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.
- M7.** Each Balancing Authority, Reliability Coordinator and Transmission Operator that issued a written or oral single or multiple-party burst Operating Instruction during an Emergency shall provide evidence that the Operating Instruction was received by at least one receiver. Such evidence may include, but is not limited to, dated and time-stamped voice recordings, dated operator logs, electronic records, voice recordings (if the entity has such recordings), memos or transcripts.

**Registered Entity Response to General Compliance with this Requirement (Required):**

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

**Evidence Requested<sup>9</sup>:**

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.

Dated operator logs, voice recordings, memos, or transcripts, as described in M5 and for Emergencies requested by the auditor.

**Registered Entity Evidence (Required):**

The following information is recommended for all evidence submitted:  
File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description.  
Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

**Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):**


<sup>9</sup> Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity's discretion.

**Compliance Assessment Approach Specific to COM-002-4, R7**

***This section to be completed by the Compliance Enforcement Authority***

Review evidence and determine entity confirmed or verified that the multiple-party burst Operating Instruction was received by at least one receiver of the Operating Instruction.
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**Note to Auditor:** Auditors can use their general knowledge of the entity’s system, discussions with other Regional Entity/NERC personnel, and discussions with entity personnel to gain an awareness of Emergencies resulting potentially from non-adherence to Requirement R7. Such Emergency events can then be reviewed during an audit to determine if the evidence indicates the entity complied with Requirement R7 when issuing written or oral burst Operating Instructions during the Emergency.

The extent of audit procedures applied related to this requirement will vary depending on certain risk factors to the Bulk Electric System. In general, more extensive audit procedures will be applied where risks to the Bulk Electric System are determined by the auditor to be higher for non-compliance with this requirement.

Based on the auditor’s assessment of risk, as described above, specific audit procedures applied for this requirement may range from exclusion of this requirement from audit scope to the auditor reviewing evidence, in accordance with the above Compliance Assessment Approach, associated with the entity’s responses to numerous burst Operating Instructions issued during Emergencies.

**Auditor Notes:**

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**Revision History**

<b>Version</b>	<b>Date</b>	<b>Reviewers</b>	<b>Revision Description</b>
1	10/2013	NERC Compliance, Standards	New Document
2	1/2/2014	NERC Compliance, Standards	Revised to reflect revisions to Reliability Standard language

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# Unofficial Comment Form

## Project 2007-02 Operating Personnel Communications Protocols COM-002-4

Please **DO NOT** use this form. Please use the [electronic comment form](#) to submit comments on the proposed draft COM-002-4 (Operating Personnel Communications Protocols) standard. Comments must be submitted by **January 31, 2014**. If you have questions please contact [Stephen Eldridge](#) by email or by telephone at 404-446-9686.

[http://www.nerc.com/pa/Stand/Pages/Op\\_Comm\\_Protocol\\_Project\\_2007-02.aspx](http://www.nerc.com/pa/Stand/Pages/Op_Comm_Protocol_Project_2007-02.aspx)

### Background Information:

Effective communication is critical for Bulk Electric System (BES) operations. Failure to successfully communicate clearly can create misunderstandings resulting in improper operations increasing the potential for failure of the BES. The eighth posting of Project 2007-02 is a continuation of the previous draft which combined COM-002-3 and COM-003-1 into one standard titled COM-002-4 that addresses communications protocols for operating personnel in Emergency, alert, and non-emergency situations.

The Standard Authorization Request (SAR) for this project was initiated on March 1, 2007 and approved by the Standards Committee on June 8, 2007. It established the scope of work for Project 2007-02 Operating Personnel Communications Protocols (OPCP). The scope described in the SAR is to establish essential elements of communications protocols and communications paths such that operators and users of the North American BES will efficiently convey information and ensure mutual understanding. The August 2003 Blackout Report, Recommendation Number 26, calls for a tightening of communications protocols. Federal Energy Regulatory Commission (FERC) Order 693 paragraph 532 reiterates this need. This proposed standard's goal is to ensure that effective communication is practiced and delivered in clear and consistent language.

The standard will be applicable to Transmission Operators, Balancing Authorities, Reliability Coordinators, Generator Operators, and Distribution Providers. These requirements ensure that communications include essential elements such that information is efficiently conveyed and mutually understood for communicating Operating Instructions.

The Purpose statement of COM-002-4 states: "To improve communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES)."

- 1) **New NERC Glossary term:** The OPCP Standards Drafting Team (SDT) revised the definition of Operating Instruction from its previous drafts. The current definition reads “A command by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. (A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.)” The Project 2007-02 SDT removed the term “Reliability Directive” in order to avoid complications that may result from the Notice of Proposed Rulemaking issued by the Federal Energy Regulatory Commission on November 21, 2013 proposing to remand the definition of “Reliability Directive.” COM-002-4 uses the defined term “Operating Instruction” to define the circumstances when documented communications protocols must be used. This term is proposed for addition to the North American Electric Reliability Corporation (NERC) Glossary to establish meaning and usage within the electricity industry.
- 2) **Project 2007-02, Posting 8 continues to combine COM-002-3 and COM-003-1 into COM-002-4.** The OPCP SDT combined COM-002-3 and COM-003-1 in posting 7 into one standard in order to simplify communications protocols for operating personnel. This construct has been maintained in the posting 8 draft. The OPCP SDT determined that one communications protocols standard that addresses Emergency, alert, and non-emergency situations will improve communications because system operators will not need to refer to a different set of protocols during an emergency situation. The OPCP SDT believes this will improve consistency of communications and mitigate confusion during stressful emergency situations. The OPCP SDT decided to combine the standards under the title COM-002-4 to further reduce confusion. The COM-002-4 title keeps the numbering of COM standards consecutive (*e.g.*, COM-001, COM-002).
- 3) **Project 2007-02, Posting 8 features 7 requirements.** The The OPCP SDT developed the requirement structure and language in posting 8 to incorporate Emergency, alert, and non-emergency communications protocols. The language in COM-002-4, Requirement R1 permits applicable entities flexibility to develop their communication protocols but requires a set of minimum elements in the communications protocols. Requirement R1 requires communications protocols to include the following elements:
  - a. **English Language:** Requirement R1, Part 1.1 – Require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
  - b. **Three-part Communication for Oral Operating Instructions:** Requirement R1, Parts 1.2 and 1.3 – Require three-part communication for issuers and receivers of oral two-party, person-to-person Operating Instructions.

- c. **One-way Burst Message Receipt Confirmation and Clarification:** Requirement R1, Part 1.4– Requires the issuer of a written or oral single-party to multiple-party burst Operating Instruction to verbally or electronically confirm receipt by at least one receiver of the Operating Instruction. **Time Identification:** Requirement R1, Part 1.5 – Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.
- d. Transmission Interface Elements and Facilities Nomenclature: Requirement R1, Part 1.6 – Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating *Instruction*.

Requirements R2 and R3 require each Balancing Authority, Reliability Coordinator, Transmission Operator, Distribution Provider and Generator Operator to conduct initial training for operating personnel who can issue and/or receive Operating Instructions . These requirements mandate that before operating personnel can issue or receive an Operating Instruction, the operating personnel in question must receive the training listed in the respective requirement.

Requirement R4 mandates a feedback loop for each Balancing Authority, Reliability Coordinator, and Transmission Operator, where the entity must assess the adherence of its operating personnel to the communication protocols the entity developed (with appropriate corrective actions) as well as assess the effectiveness of its documented communication protocols for its operating personnel that issue Operating Instructions.

Requirements R5 and R6 require the use of three part communication during Emergency conditions without exception, per the November 13, 2013 NERC Board of Trustees resolution.

Requirement R7 requires each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues a written or oral single-party to multiple-party burst Operating Instruction to confirm the receipt of that Operating Instruction by at least one receiver.

The OPCP SDT is posting the standard for industry comment for a **30-day** comment period. The OPCP SDT received a waiver of the 45-day comment period required in the NERC Standards Process Manual from the NERC Standards Committee on December 11, 2013. Accordingly, we request that you include your comments on the electronic form by **January 31, 2014**.

## Questions

1. **Do you agree that that the COM-002-4 standard addresses addresses the NERC Board of Trustees November 19<sup>th</sup>, 2013 Resolution? If not, please explain in the comment area?**

Yes

No

Comments:

2. **Do you agree that COM-002-4 addresses the August 2003 Blackout Report Recommendation number 26, and FERC Order 693? If not, please explain in the comment area.**

Yes

No

Comments:

3. **Do you agree with the VRFs and VSLs for the Requirements? If not, please explain.**

Yes

No

Comments:

4. **Do you have any additional comments? Please provide them here.**

Yes

No

Comments:



# Project 2007-02, COM-002-4 Operating Personnel Communications Protocols Rationale and Technical Justification

## Background and Justification for COM-002-4 Requirements

The purpose of the proposed COM-002-4 Reliability Standard is to improve communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES). The proposed Reliability Standard combines COM-002-3 and former draft COM-003-1 into one standard that addresses communications protocols for operating personnel in Emergency, alert and non-emergency conditions. The Operating Personnel Communications Protocols Standard Drafting Draft (OPCP SDT) believes that one communications protocols standard that addresses emergency and non-emergency situations will improve communications because operating personnel will not need to refer to a different set of protocols during the different operating conditions. A single standard will improve consistency of communications and mitigate confusion during stressful emergency situations. As a result of the combination, the standard has been numbered as COM-002-4 to maintain the consecutive numbering of the standards (e.g., COM-001, COM-002) since the combined standard will replace COM-002-2 and COM-002-3, where necessary.

In preparing COM-002-4, the OPCS SDT considered industry comments and also drew from a variety of other resources including:

- the NERC Board of Trustees' November 7<sup>th</sup>, 2013 Resolution for Operating Personnel Communication Protocols, discussed below;<sup>1</sup>
- a survey distributed to a sample of industry experts by the Director of Standards Development and the Standards Committee Chair requesting feedback on the draft standard in posting 8;
- consultation on the use of the term "Reliability Directive" in the COM-002-4 standard with the Project 2007-03 Real-time Transmission Operations Standard Drafting Team and the Project 2006-06 Reliability Coordination Standard Drafting Team; and
- a full-day "Communications in Operations" technical conference held February 14-15, 2013 to gather industry input on a consensus communications standard approach.

<sup>1</sup> *Resolution for Agenda Item 8.i: Operating Personnel Communication Protocols*, NERC Board of Trustees Meeting, Nov. 7, 2013, available at:

<http://www.nerc.com/gov/bot/Board%20of%20Trustees%20Quarterly%20Meetings/Board%20COM%20Resolution%2011.7.13%20v1%20AS%20APPROVED%20BY%20BOARD.pdf>.

### *Structure of the COM-002-4 Draft*

In response to the Board of Trustees direction to draft a combined COM-002 and COM-003 standard that addresses, at a minimum certain protocols, NERC staff prepared a “strawman” draft standard and provided it as a starting point for the standard drafting team to edit and adjust as it deemed appropriate. The structure of posting 8 of COM-002-4 reflects the minimum elements listed by the Board in its resolution (see below for detail on the Board resolution). The structure also allows for the implementation of a compliance/enforcement approach also described by the Board’s resolution that maintains the current requirement that entities should be accountable for incorrect use of communication protocols in connection with emergency communications, without exception.

In COM-002-4, the same protocols are required to be used in connection with the issuance of Operating Instructions for all operating conditions – i.e. non-emergency, alert, and Emergency communications. However, the standard uses the phrase “Operating Instruction during an Emergency” in certain Requirements (R5, R6, R7) to provide a demarcation for what is subject to a zero-tolerance compliance/enforcement approach and what it not. This is necessary to allow the creation of Violation Severity Levels for each compliance/enforcement approach. Where “Operating Instruction during an Emergency” is not used, an entity will be assessed under a non-zero tolerance compliance/enforcement approach that focuses on whether an entity met the initial training Requirement (either R2 or R3) and/or whether an entity performed the assessment and took corrective actions according to Requirement R4.

Separately listing out Requirements R5, R6, and R7 and using “Operating Instruction during an Emergency” in them does not require a different set of protocols to be used during Emergencies or mandate the identification of a communication as an “Operating Instruction during an Emergency.” The same protocols are required to be used in connection with the issuance of Operating Instructions for all operating conditions. Their use is measured for compliance/enforcement differently using the operating condition as an indicator of which compliance/enforcement approach applies.

For example, an entity should expect its operating personnel that issue and receive Operating Instructions to use the documented communication protocols for all Operating Instructions. The way that they reinforce that with its operating personnel is through training, assessing adherence by its operating personnel to the documented communication protocols and providing feedback those operating personnel on their use of the protocols. During Emergencies, operating personnel must use the communication protocol without exception, since clear communication is essential to providing swift and coordinated response to events that are directly impacting the reliability of the BES.

### *Definition of “Operating Instruction”*

The current draft of COM-002-4 does not include the term “Reliability Directive,” which was included in previous postings as a subset within the definition of “Operating Instruction.”

The proposed definition of “Operating Instruction” in COM-002-4 reads as follows:

A command by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. (A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.)

The OPCP SDT debated whether to remove the term “Reliability Directive” in response to comments suggesting it should be removed from the definition of “Operating Instruction” and in light of FERC’s issuance of the TOP/IRO NOPR, which proposes to remand the definition of “Reliability Directive.” A detailed description of the FERC action is included in the section below titled “Developments Following Posting 7.”

In order to avoid unnecessary complications, the OPCP SDT consulted on the use of the term “Reliability Directive” in the COM-002-4 standard with the Project 2007-03 Real-time Transmission Operations and the Project 2006-06 Reliability Coordination Standard Drafting Teams to ask whether they believed removal of the term would cause concerns. Both teams agreed that the COM-002-4 standard did not need to require a protocol to identify Reliability Directives as such and that the definition of Operating Instruction could be used absent the term Reliability Directive in COM-002-4 to set the protocols. The OPCP SDT ultimately voted to remove the term and incorporate the phrase “Operating Instruction during an Emergency” in the Requirements where it was needed to preserve the structure created to ensure that only an Operating Instruction issued during an Emergency is subject to a zero-tolerance compliance/enforcement approach.

A “command” as used in the definition refers to both oral and written commands by operating personnel. In the requirements of COM-002-4, the OPCP SDT has specified “oral” or “written” as needed to define which Operating Instructions are covered by the requirement. The definition continues to clarify that general discussions are not considered Operating Instructions.

### *Applicability*

In addition to Balancing Authorities, Reliability Coordinators, and Transmission Operators, the proposed standard applies to Distribution Providers and Generator Operators. The OPCP SDT added these Functional Entities in the Applicability section because they can be and are on the receiving end of some Operating Instructions. The OPCP SDT determined that it would leave a gap to not cover them in a communications standard that addresses operating personnel. The addition of Distribution Providers as an applicable entity also responds to FERC’s directive in Order No. 693 to add them as applicable entities to the communications standard.

Recognizing that Generator Operators and Distribution Providers typically only receive Operating Instructions, the OPCP SDT proposed that only Requirements R3 and R6 apply to these Functional Entities. In response to the comments and the NERC Board Resolution, the OPCP SDT revised the standard to clarify that DPs and GOPs are required to a) train their operators prior to receiving an Operating Instruction, and b) use three part communication when receiving an Operating Instruction during an Emergency. In addition, the measures have been revised to show that a DP or GOP can demonstrate compliance for use of three-part communication when receiving an Operating Instruction during an Emergency by providing an attestation from the issuer of the Operating Instruction (i.e., a voice recording is not required). If a DP or GOP never receives an Operating Instruction, no requirement in COM-002-4 would apply to them. In both Requirements R3 and R6, qualifying language that discusses the “receipt” of an Operating Instruction is included to make this point clear. This construct ensures that appropriate entities are trained and able to use three-part communication for reliability purposes, while seeking to minimize the compliance burden on DPs and GOPs.

### *Requirements in COM-002-4*

#### **Requirement R1**

Requirement R1 requires entities that can both issue and receive Operating Instructions to have documented communications protocols that include a minimum set of elements, outlined in Parts 1.1 through 1.6 of the requirement. Because Operating Instructions affect Facilities and Elements of the Bulk Electric System, the communication of those Operating Instructions must be understood by all involved parties, especially when those communications occur between Functional Entities. An EPRI study reviewed nearly 400 switching mishaps by electric utilities and found that roughly 19% of errors (generally classified as loss of load, breach of safety, or equipment damage) were due to communication failures.<sup>2</sup> This was nearly identical to another study of dispatchers from 18 utilities representing nearly 2000 years of operating experience that found that 18% of the operators’ errors were due to communication problems.<sup>3</sup> The necessary protocols include the use of the English language unless agreed to otherwise (except for internal operations), protocols for use of a written or oral single-party to multiple-party burst Operating Instruction, specification of instances that require time identification, nomenclature for Transmission interface Elements, and three-part communications (including a protocol for taking an alternate action if a response is not received or if the Operating Instruction was not understood by the receiver).

The OPCP SDT drafted Requirement R1 to ensure consistency among communications protocols while also allowing flexibility for entities to develop additional communications protocols. The OPCP SDT determined that the inclusion of the elements in Parts 1.1 through 1.6 are necessary to improve communications protocols but are not overly prescriptive. The OPCP SDT determined that this

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<sup>2</sup> Beare, A., Taylor, J. *Field Operation Power Switching Safety*, WO2944-10, Electric Power Research Institute.

<sup>3</sup> Bilke, T., *Cause and prevention of human error in electric utility operations*, Colorado State University, 1998.

approach is the best way to promote effective communications while maintaining flexibility for entities to include additional communications protocols based on its own operating environment.

It should be noted that requiring the use of alphanumeric clarifiers has been removed in this posting. Several entities have provided the comment that it is unnecessary to include them in a requirement, and pointed to the fact that the lack of use has not been shown to contribute to any investigated event. The drafting team agreed to remove the term, and NERC will continue to monitor events to determine if these clarifiers should be added in a future modification to the standard.

The term *documented communication protocols* in R1 refers to a set of required protocols specific to the Functional Entity and the Functional Entities they must communicate with. An entity should include as much detail as it believes necessary in their documented protocols, but they must address all of the applicable parts of Requirement R1. Where an entity does not already have a set of documented protocols that meet the parts of Requirement R1, the entity must develop the necessary communications protocols. Entities may also adopt the documented protocols of another entity as its own communications protocols, but the entity must maintain its own set of documented communications protocols to meet Requirement R1.

On September 19, 2012, the NERC Operating Committee issued a Reliability Guideline entitled: “System Operator Verbal Communications – Current Industry Practices.” As stated on page one, the purpose of the Reliability Guideline “. . . is to document and share current verbal BES communications practices and procedures from across the industry that have been found to enhance the effectiveness of system operator communications programs.” This guideline serves as an additional source of information on best practices that entities can draw on in creating the documented communications protocols.

Each part of Requirement R1 is discussed below:

*1.1. Require its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.*

The OPCP SDT has included this part to carry forward the same use of English language included in COM-001-1.1, Requirement R4. Retirement of this Requirement in COM-001-1.1 was specifically referred to this Project 2007-02. The requirement continues to permit the issuer and receiver to use an agreed to alternate language. This has been retained since use of an alternate language on a case-by-case basis may serve to better facilitate effective communications where the use of English language may create additional opportunities for miscommunications. Part 1.1 requires the use of English language when issuing oral or written (e.g. switching orders) Operating Instructions. This creates a standard language (unless agreed to otherwise) for use when issuing commands that could change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. It also clarifies that an alternate language can be used internally

within the organization. The phrase has been modified slightly from the language in COM-001-1.1, Requirement R4 to incorporate the term “Operating Instruction,” which defines the communications that require the use of the documented communications protocols.

*1.2. Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions:*

- *Confirm the receiver’s response if the repeated information is correct.*
- *Reissue the Operating Instruction if the repeated information is incorrect, if the receiver does not issue a response, or if requested by the receiver.*
- *Take an alternative if a response is not received or if the Operating Instruction was not understood by the receiver.*

*1.3. Require the receiver of an oral two-party, person-to-person Operating Instruction to take one of the following actions:*

- *Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct.*
- *Request that the issuer reissue the Operating Instruction.*

The OPCP SDT has included part 1.2 to require communications protocols for the use of three-part communications for oral two-party, person-to-person Operating Instructions *by the issuer*. The OPCP SDT has included part 1.3 to require communications protocols for the use of three-part communications for oral two-party, person-to-person Operating Instructions *by the receiver*. This carries forward the requirement to use three-part communications in COM-002-2 and COM-002-3 and also adds an option in part 1.2 for the issuer to take an alternative action to resolve the issue if the receiver does not respond or understand the Operating Instruction. The addition of this third bullet serves to clarify in the requirement language itself that the issuing entity can take alternate action in lieu of reissuance if necessary.

The reliability benefits of using three-part communication (Requirement R1, parts 1.2 and 1.3) are threefold:

1. The removal of any doubt that use of the documented communication protocols is required when issuing or receiving Operation Instructions. This will reduce the opportunity for confusion and misunderstanding during all operating conditions.
2. There will be no mental “transition” between protocols when operating conditions shift from non-emergency to Emergency. The documented communication protocols for the operating personnel will remain the same during transitions through all conditions.
3. The formal requirement for three-part communication will create a heightened sense of awareness in operating personnel that the task they are about to execute is critical, and

recognize the risk to the reliable operation of the BES is increased if the communication is misunderstood.

*1.4. Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.*

The OPCP SDT has included this part to require communications protocols for an issuer for the use of a one-way burst messaging system. The drafting team has included this because the use of three-part communications is not practical when utilizing this type of communication. Therefore, it is necessary to include a different set of protocols for these situations. In addition, many entities expressed concern that if one-way burst messaging systems were not addressed, it would imply that three part communication would be required for all participants. For this reason, the drafting team chose to address one-way burst messaging systems.

*1.5. Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.*

The OPCP SDT has included this part to add necessary clarity to Operating Instructions to reduce the risk of mistakes. Clarifying time and time zone (where necessary) contributes to reducing misunderstandings and reduces the risk of a grave error during BES operations, especially when communicating across time zones or specifying an action that will take place at a future time. Note that an action that is to occur immediately would not be required to have time identification, unless the entity specified that requirement in its communication protocols.

*1.6. Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.*

Project 2007-03 chose to eliminate TOP-002-2a, Requirement R18 when it developed TOP-002-3. This Requirement stated “Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network.” COM-002-4, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This ensures that both parties are readily familiar with each other’s interface Elements and Facilities, eliminating hesitation and confusion when referring to equipment for the Operating Instruction. This shortens response time and improves situational awareness. It also permits entities to jointly develop the nomenclature for their interface.

### **Requirements R2 and R3**

Requirement R2 requires the entities listed in Requirement R1 (i.e. each Balancing Authority, Reliability Coordinator, and Transmission Operator) to conduct initial training for each of their operating personnel responsible for the Real-time operation of the Bulk Electric System on the entity's documented communication protocols.

Requirement R3 requires Distribution Providers and Generator Operators to conduct initial training on three part communication for each of their operating personnel who can who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction. Distribution Providers and Generator Operators would have to train their operating personnel prior to placing them in a position to receive an oral two-party, person-to-person Operating Instruction. Operating Personnel that would never be in a position to receive an oral two-party, person-to-person Operating Instruction, therefore, would not need initial training unless their circumstance changes. The purpose of the language in Requirement R3, is to minimize the training burden, and demonstration of compliance, to only those operating personnel that can receive an oral two-party, person-to-person Operating Instruction.

The OPCP SDT has included an initial training requirement in the standard in response to the NERC Board of Trustees resolution, which directs that a training requirement be included in the COM-002-4 standard. Additionally, requiring entities who issue and or receive Operating Instructions to conduct initial training with their operating personnel will ensure that all applicable operators will be trained in three-part communication. The OPCP SDT believes this training will reduce the possibility of a miscommunication, which could eventually lead to action or inaction harmful to the reliability of the Bulk Electric System. Ongoing training would fall under an entities training program in PER-005 or could be listed as a type of corrective action under Requirement R4.

#### **Requirement R4**

Requirement R4 requires Balancing Authorities, Reliability Coordinators, and Transmission Operators to, at least once every 12 months, assess adherence by its operating personnel to the documented communication protocols in Requirement R1 and to provide feedback to its operating personnel on their performance. This also includes any corrective action taken, as appropriate, to address deviations from the documented protocols. It also requires the aforementioned entities to assess the effectiveness of their documented communications protocols and make changes, as necessary, to improve the effectiveness of the protocols. An entity may determine that corrective action beyond identification of the misuse of the documented communications protocols to the operating personnel is not necessary, therefore, the phrase "as appropriate" is included in the Requirement R4 language to indicate that whether to take additional corrective action is determined by the entity and not dictated by the Requirement for all instances of a misuse of a documented communication protocol.

Requiring entities to assess, identify and provide feedback to its operating personnel, was also included in the November 7, 2013 NERC Board of Trustees resolution as an element to include in the standard. Further, the OPCP SDT believes that it is good operating practice for an entity to periodically



evaluate the effectiveness of their protocols and improve them when possible. Most entities currently engage in some type of assessment activity for their operating personnel. Additionally, the OPCP SDT also believes it is good operating practice to provide operators with performance feedback on their adherence to the entity's documented protocols. Doing so, provides entities an opportunity to evaluate the performance of their operating personnel and take corrective actions where necessary, which could prevent a miscommunication from occurring and thus possibly prevent an event which could be harmful to the reliability of the Bulk Electric System.

The associated Measure M4 for Requirement R4 lists the types of evidence that an entity can provide to demonstrate compliance and also explains when an entity should show the corrective actions taken. Of particular interest is any corrective action taken where the miscommunication is the sole or partial cause of an Emergency and the entity has opted to take a corrective action. While the Measure lists out this particular set of circumstances to highlight the importance, the Measure does not modify the Requirement to require corrective action. Again, to reiterate, whether a corrective action is necessary is best determined by the entity based on the facts and circumstances of the particular communication.

### **Requirements R5 and R6**

Requirement R5 requires entities that issue oral two-party, person-to-person Operating Instructions during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, to use three-part communication or take an alternate action if the receiver does not respond or if the Operating Instruction was not understood by the receiver. The language of Requirement R5 specifically excludes written or oral single-party to multiple-party burst Operating Instructions to make clear that three-part communication is not required when issuing Operating Instructions in this manner. Requirement R5 applies to each Balancing Authority, Reliability Coordinator, and Transmission Operator since these are the entities that would be in a position to *issue* oral two-party, person-to-person Operating Instructions during an Emergency.

Requirement R6 requires entities that receive an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, to repeat (not necessarily verbatim) the Operating Instruction and receive confirmation from the issuer that the response was correct or request that the issuer reissue the Operating Instruction. Requirement R6 includes the same clarifying language as Requirement R5 for the exclusion of single-party to multiple-party burst Operating Instructions. Requirement R6 applies to each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator since these are the entities that would be in a position to *receive* oral two-party, person-to-person Operating Instructions during an Emergency

The use of three-part communication when issuing and receiving Operating Instructions is always important because a miscommunication could create an Emergency. An entity should expect its operating personnel that issue and receive Operating Instructions to use the documented communication

protocols for all Operating Instructions. The way that they reinforce that with its operating personnel is through training, assessing adherence by its operating personnel to the documented communication protocols and providing feedback those operating personnel on their use of the protocols. However, the use of three-part communication is critically important if an Emergency condition already exists, as further action or inaction could cause exponentially increase the harmful effects to the BES. Clear communication is essential to providing swift and coordinated response to events that are directly impacting the reliability of the BES.

### **Requirement R7**

Requirement R7 requires that when a Balancing Authority, Reliability Coordinator, or Transmission Operator issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency, it must confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. Because written or oral single-party to multiple-party burst Operating Instruction during an Emergency are excluded from Requirements R5 and R6, this separate Requirement is necessary to specify the standard an entity must meet to demonstrate clear communication for the use of written or oral single-party to multiple-party burst Operating Instructions during an Emergency. This prevents leaving a gap in the types of communications used during an Emergency.

The OPCP SDT believes this requirement is necessary because without confirmation from at least one receiver, the issuer has no way of confirming if the Operating Instruction was transmitted and received by any of the recipients. Therefore, the issuer cannot know whether to resend the Operating Instruction, wait for the recipient to take an action, or take an alternate action because the recipient cannot perform the action. As a best practice, an entity can opt to confirm receipt from more than one recipient, which is why the requirement states “at least one.”

## **NERC Board’s Resolution**

At its November meeting, the Board passed a resolution that directs the Standards Committee and the standard drafting team “to continue development of a combined COM-002 and COM-003 standard that addresses, at a minimum, the following:

- Draws on the Operating Committee Guideline for good communication practice;
- Includes an essential set of communications protocols to be used by all entities that would be included in an entity’s overall communications protocol approach;
  - The protocol should at a minimum require the use of three-part communications for

- (i) emergency and alert communications (“Emergency Communications”) and (ii) non-emergency communications that change or preserve the state, status, output, or input of the Bulk Electric System (“Non-Emergency Communications”);
- Requires training and periodic review of communications subject to the communications protocols; and
- Requires each entity to (i) periodically self assess its effectiveness in implementing the communications protocols, (ii) self identify any necessary changes to the entity’s protocols based upon experience and the results of periodic review, and (iii) provide feedback to its operators regarding their adherence to the protocols.”

The resolution further directs the standard drafting team to “consider the following compliance/enforcement approach:

- Maintain the current requirement that entities should be accountable for incorrect use of communication protocols in connection with Emergency Communications, without exception.
- For all other use of communication protocols in connection with Non-Emergency Communications, the standard should provide that compliance with the standard should only entail assessing whether an entity has: (i) adopted a communications protocol consistent with the foregoing; (ii) implemented training and periodic review of communications subject to the protocols; and (iii) implemented a process to (x) periodically self assess its effectiveness in implementing the communications protocols, (y) self identify any necessary changes to the entity’s protocols based upon experience and the results of periodic review, and (z) provide feedback to its operators regarding their adherence to the protocols.”

# Project 2007-02: Operating Personnel Communication Protocols

Mapping Document

## COM-001-1.1 to COM-002-4

Board Approved Standard	Proposed Replacement Requirement(s)
<p><b>COM-001-1.1</b></p> <p>R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.</p>	<p><b>COM-002-4</b></p> <p>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented communications protocols. The protocols shall, at a minimum: <i>[Violation Risk Factor: Low][Time Horizon: Long-term Planning]</i></p> <p>1.1. Require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations</p>
<p><b>Notes:</b> Moved COM-001-1 R4 into COM-002-4 Requirement R1 Part 1.1 and modified language to include the defined term “Operating Instruction.”</p>	

## COM-002-2 to COM-002-3

Board Approved Standard	Proposed Replacement Requirement(s)
<p>COM-002-2</p> <p>R1. Each Transmission Operator, Balancing Authority, and Generator Operator shall have communications (voice and data links) with appropriate Reliability Coordinators, Balancing Authorities, and Transmission Operators. Such communications shall be staffed and available for addressing a real-time emergency condition. <i>[Violation Risk Factor: High]</i></p> <p>R1.1 Each Balancing Authority and Transmission Operator shall notify its Reliability Coordinator, and all other potentially affected Balancing Authorities and Transmission Operators through predetermined communication paths of any condition that could threaten the reliability of its area or when firm load shedding is anticipated. <i>[Violation Risk Factor: High]</i></p>	<p>The Project 2006-06 SDT proposed retiring COM-002-2, R1 and R1.1 during the development of proposed standard COM-002-3. The following rationale was provided by that drafting team in the Implementation Plan for Draft 6 of Project 2006-06. The same rationale continues to apply for the current version of COM-002-4:</p> <p>“The communications requirements of R1 are addressed in existing COM-001-1.1 as well as the proposed COM-001-2 requirements. Additionally, IRO-010-1a addresses data provisions.</p> <p>The Project 2006-06 SDT contends that COM-002-2, R1.1 is a low level facilitating requirement that is more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards. Examples include:</p> <ul style="list-style-type: none"> <li>• EOP-002-1, R3 – outlines BA to RC communications. IRO-001-1, R3 requires adequate telecommunication for the Reliability Coordinator to direct actions of multiple entities, including TOPs and BAs.</li> <li>• TOP-001-1, R3 requires adequate telecommunications facilities for the TOP, BA, and GOP to be able to receive directives from the RC.</li> <li>• TOP-001-1, R5 requires communications between TOPs and RCs for emergency situations.</li> </ul>

Board Approved Standard	Proposed Replacement Requirement(s)
	<ul style="list-style-type: none"> <li>• TOP-005-1, R1 and R3 require adequate telecommunications for BAs and TOPs to provide each other with operating data as well as providing data to the RC.</li> <li>• TOP-006-1, R1 requires adequate telecommunications for the GOP to inform the BA and TOP of resources. The BA and TOP will then inform the RC, other TOP and BAs of all transmission and generation available for use.</li> <li>• PER-001-1, R1 and PER-004-1, R1 set forth the staffing requirements.”</li> </ul>
<p><b>Notes:</b> None. The rationale provided above is available at the following hyperlink: <a href="#">Project 2006-06 Draft 6 Implementation Plan</a></p>	
<p>COM-002-2</p> <p>R2. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall issue directives in a clear, concise, and definitive manner; shall ensure the recipient of the directive repeats the information back correctly; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. <i>[Violation Risk Factor: Medium]</i></p>	<p>COM-002-3</p> <p>The Project 2006-06 expanded COM-002-2 R2 into three requirements in COM-002-3:</p> <p><b>R1.</b> When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p><b>R2.</b> Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive, shall repeat, restate, rephrase or recapitulate the Reliability Directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p>

Board Approved Standard	Proposed Replacement Requirement(s)
	<p><b>R3.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall either:  <i>[Violation Risk Factor: High] [Time Horizon: Real-Time]</i></p> <ul style="list-style-type: none"> <li>• Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or</li> <li>• Reissue the Reliability Directive to resolve any misunderstandings.</li> </ul>
<p><b>Notes:</b> The Project 2006-06 expanded the list of responsible entities to include the DP and GOP and subdivided the requirement to improve clarity.</p>	

## COM-002-3 to COM-002-4

Board Approved Standard	Proposed Replacement Requirement(s)
<p>COM-002-3</p> <p>R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p>	<p>COM-002-4</p> <p>None</p>
<p><b>Notes:</b> The Project 2007-02 SDT removed the term “Reliability Directive” in order to avoid complications that may result from the Notice of Proposed Rulemaking issued by the Federal Energy Regulatory Commission on November 21, 2014 proposing to remand the</p>	

Board Approved Standard	Proposed Replacement Requirement(s)
<p>definition of “Reliability Directive”. COM-002-4 uses the defined term Operating Instruction to define the circumstances when documented communications protocols must be used, and uses the phrase “Operating Instruction during an Emergency” to designate Operating Instructions that would have qualified as Reliability Directives. The Project 2007-02 SDT coordinated with the Project 2009-02 Real time Operations team and Project 2006-06 SDT and all parties agreed that requirement for an issuer to identify a command as a Reliability Directive is not a communication protocol, and will be considered by each team for future modifications.</p>	
<p>R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive, shall repeat, restate, rephrase or recapitulate the Reliability Directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i></p> <p>R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall either: <i>[Violation Risk Factor: High] [Time Horizon: Real-Time]</i></p> <ul style="list-style-type: none"> <li>• Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or</li> </ul> <p>Reissue the Reliability Directive to resolve any misunderstandings.</p>	<p>R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum: <i>[Violation Risk Factor: Low][Time Horizon: Long-term Planning]</i></p> <p>1.1 Require its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.</p> <p>1.2. Require the issuer of an oral two-party, person-to-person Operating Instruction to wait for a response from the receiver. Once a response is received, or if no response is received, require the issuer to take one of the following actions:</p> <ul style="list-style-type: none"> <li>• Confirm the receiver’s response if the repeated information is correct.</li> <li>• Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver.</li> </ul>



Board Approved Standard	Proposed Replacement Requirement(s)
	<ul style="list-style-type: none"> <li>• Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.</li> </ul> <p>1.3 Require its operating personnel that receive an oral two party, person-to-person Operating Instruction to take one of the following actions:</p> <ul style="list-style-type: none"> <li>• Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct.</li> <li>• Request that the issuer reissue the Operating Instruction.</li> </ul> <p>1.4 Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.</p> <p>1.5 Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.</p> <p>1.6 Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.</p> <p>R2. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall conduct initial training for each of its operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System on the</p>

Board Approved Standard	Proposed Replacement Requirement(s)
	<p>documented communications protocols developed in Requirement R1 prior to that individual operator issuing an Operating Instruction. <i>[Violation Risk Factor: Low][Time Horizon: Long-term Planning]</i></p> <p>R3. Each Distribution Provider and Generator Operator shall conduct initial training for each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction to either: <i>[Violation Risk Factor: Low][Time Horizon: Long-term Planning]</i></p> <ul style="list-style-type: none"> <li>• Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or</li> <li>• Request that the issuer reissue the Operating Instruction.</li> </ul> <p>R4. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall at least once every twelve (12) calendar months: <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning]</i></p> <p style="padding-left: 40px;">4.1. Assess adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, provide feedback to those operating personnel and take corrective action, as deemed appropriate by the entity, to address deviations from the documented protocols.</p>

Board Approved Standard	Proposed Replacement Requirement(s)
	<p>4.2. Assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modify its documented communication protocols, as necessary.</p> <p>R5. Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <ul style="list-style-type: none"> <li>• Confirm the receiver’s response if the repeated information is correct (in accordance with Requirement R6).</li> <li>• Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver, or</li> <li>• Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.</li> </ul> <p>R6. Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that receives an oral two-party, person-to-person Operating Instruction during an</p>

Board Approved Standard	Proposed Replacement Requirement(s)
	<p>Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p> <ul style="list-style-type: none"> <li>• Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or</li> <li>• Request that the issuer reissue the Operating Instruction.</li> </ul> <p>R7. Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency shall confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i></p>
<p><b>Notes:</b> COM-002-3 Requirements R2 and R3 were moved into COM-002-4. The Project 2007-02 SDT has developed COM-002-4 to provide more stringent communication requirements during Emergencies and Alerts as well as establish communication protocols for non-Emergency/non-alert communications that occur between entities.</p>	

## Project 2007-02 – Operating Personnel Communications Protocol

### **VRF and VSL Justifications**

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in COM-002-4 Operating Personnel Communications Protocols.

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Operations Personnel Communications Protocol Standard Drafting Team applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSLs for the requirements under this project:

### **NERC Criteria - Violation Risk Factors**

#### **High Risk Requirement**

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

### **Medium Risk Requirement**

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

### **Lower Risk Requirement**

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

## **FERC Violation Risk Factor Guidelines**

### **Guideline (1) – Consistency with the Conclusions of the Final Blackout Report**

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:

- Emergency operations
- Vegetation management

- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief

#### **Guideline (2) — Consistency within a Reliability Standard**

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

#### **Guideline (3) — Consistency among Reliability Standards**

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

#### **Guideline (4) — Consistency with NERC's Definition of the Violation Risk Factor Level**

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC's definition of that risk level.

#### **Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation**

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

**NERC Criteria - Violation Severity Levels**

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
<p>Missing a minor element (or a small percentage) of the required performance</p> <p>The performance or product measured has significant value as it almost meets the full intent of the requirement.</p>	<p>Missing at least one significant element (or a moderate percentage) of the required performance.</p> <p>The performance or product measured still has significant value in meeting the intent of the requirement.</p>	<p>Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component.</p> <p>The performance or product has limited value in meeting the intent of the requirement.</p>	<p>Missing most or all of the significant elements (or a significant percentage) of the required performance.</p> <p>The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.</p>

**FERC Order on Violation Severity Levels**

In its June 19, 2008 Order on Violation Severity Levels, FERC indicated it would use the following four guidelines for determining whether to approve VSLs:

**Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance**



Compare the VSLs to any prior Levels of Non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when Levels of Non-compliance were used.

### **Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties**

Guideline 2a: A violation of a “binary” type requirement must be a “Severe” VSL.

Guideline 2b: Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

### **Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement**

VSLs should not expand on what is required in the requirement.

### **Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations**

. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

### **VRFs for COM-002-4**

The following discussion addresses how the SDT considered FERC’s VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC’s Reliability Standards and implies that these requirements should be assigned a “High” VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs and the SDT, therefore, concentrated its approach on the reliability impact of the requirements.

There are seven requirements in COM-002-4. Requirements R1, R2, and R3 are assigned a "Low" VRF. Requirement R4 is assigned a "Medium" VRF. Requirement R5, R6 and R7 are each assigned a "High" VRF.

- R1 reads: *" Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum:"*
- R2 reads: *" Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall conduct initial training for each of its operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System on the documented communications protocols developed in Requirement R1 prior to that individual operator issuing an Operating Instruction."*
- R3 reads: *" Each Distribution Provider and Generator Operator shall conduct initial training for each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction to either:"*

R4 reads: *" Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall at least once every twelve (12) calendar months:"* This Requirement warrants a VRF of "Medium" because R4 is a requirement in an operations planning time frame that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, a violation of this requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. "

R5 now reads: *" Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either:"*

R6 is a new requirement which reads “Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that receives an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either:”

R7 is a new requirement which reads *“Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency shall confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.”* Requirements R5, R6, and R7 warrant VRFs of “High” because failure to use the communications protocols during an emergency could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures.

VRF and VSL Justifications – COM-002-4, R1	
<b>Proposed VRF</b>	Low
NERC VRF Discussion	R1 is a requirement in a Long-term Planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system. The VRF for this requirement is “Low,” which is consistent with NERC guidelines.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R1 establishes communications protocols, which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard:</b> The requirement has sub-parts that similarly address communication protocols; only one VRF was assigned so there is no conflict. There are no other requirements in COM-002-4 that address specific protocols.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> There are no other standards which address documented communications protocols.

VRF and VSL Justifications – COM-002-4, R1			
FERC VRF G4 Discussion	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b>                      Failure to utilize communication protocols properly could result in actions that directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures since R1 strictly deals with documenting clear, formal and universally applied communication protocols. The VRF for this requirement is “Low,” which is consistent with NERC guidelines for similar requirements.</p>		
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>                      COM-002-4 Requirement R1 contains only one objective which is to document clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of the bulk electric system. Since the requirement has only one objective, only one VRF was assigned.</p>		
Proposed VSL			
Lower	Moderate	High	Severe
The responsible entity did not specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification, as required in Requirement R1, Part 1.5	The responsible entity did not require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise, as required in Requirement R1, Part 1.1. An alternate language may be used for internal operations.	The responsible entity did not include Requirement R1, Part 1.4 in its documented communication protocols.	The responsible entity did not include Requirement R1, Part 1.2 in its documented communications protocols  OR The responsible entity did not include Requirement R1, Part 1.3

VRF and VSL Justifications – COM-002-4, R1

<p>OR</p> <p>The responsible entity did not specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction, as required in Requirement R1, Part 1.6.</p>			<p>in its documented communications protocols</p> <p>OR</p> <p>The responsible entity did not develop any documented communications protocols as required in Requirement R1.</p>
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**VRF and VSL Justifications – COM-002-4, R1**

<b>VRF and VSL Justifications – COM-002-4, R1</b>	
<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed four VSLs based on misapplication or absence of common communication protocols, with varied VSLs. The SDT determined how the protocols should be divided in the VSLs by judging the severity of the potential risk to the bulk electric system if the protocols ultimately are not used. If the severity is greater, then not having the protocol documented should carry a higher severity level and similarly for protocols where the severity is lesser. If no communication protocols were addressed at all then the VSL is Severe.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The SDT has intentionally not structured the VSL assignment for R1 as binary in order to reflect the relative severity of each protocol should the protocol not ultimately be employed.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>

**VRF and VSL Justifications – COM-002-4, R1**

<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement. In addition, the VSLs are consistent with Requirement R1.</p>
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations.</p>
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	<p>The requirement does not address cyber security protection.</p>

VRF and VSL Justifications – COM-002-4, R1

<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	<p>The requirement does not address cyber security protection.</p>
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VRF and VSL Justifications – COM-002-4, R2

Proposed VRF	Low
<p>NERC VRF Discussion</p>	<p>R2 is a requirement in a Long-term Planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system. The VRF for this requirement is “Low,” which is consistent with NERC guidelines.</p>
<p>FERC VRF G1 Discussion</p>	<p><b>Guideline 1- Consistency w/ Blackout Report:</b> R2 establishes that entities who issue and receive Operating Instructions shall conduct initial training with their operating personnel to ensure that all applicable operators will be trained on their documented communication protocols established in Requirement R1. This training reduces the possibility of a miscommunication, which could eventually lead to action or inaction harmful to the reliability of the Bulk Electric System, which is consistent with FERC guideline G1.</p>
<p>FERC VRF G2 Discussion</p>	<p><b>Guideline 2- Consistency within a Reliability Standard :</b> Only one VRF is assigned for this requirement.</p>



VRF and VSL Justifications – COM-002-4, R2			
FERC VRF G3 Discussion	<p><b>Guideline 3- Consistency among Reliability Standards:</b>                      This requirement establishes that each Balancing Authority, Reliability Coordinator and Transmission Operator conduct initial training with each of its operating personnel responsible for the Real-time operation of the BES on documented communication protocols to reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of the bulk electric system. This VRF is consistent with other training requirements within the body of NERC Reliability Standards, including CIP-004-5.1 Requirements R1 and R2.</p>		
FERC VRF G4 Discussion	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b>                      Violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Low,” which is consistent with NERC guidelines for similar requirements.</p>		
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>                      COM-002-4 Requirement R2 contains only one objective which is to conduct initial training for each of its operating personnel responsible for the Real-time operation of the BES. Since the requirement has only one objective, only one VRF was assigned.</p>		
Proposed VSL			
Lower	Moderate	High	Severe
N/A	N/A	An individual operator responsible for the Real-time operation of the interconnected Bulk Electric System at the responsible entity issued an Operating Instruction, prior to being trained on the	An individual operator responsible for the Real-time operation of the interconnected Bulk Electric System at the responsible entity issued an Operating Instruction during an Emergency prior to

**VRF and VSL Justifications – COM-002-4, R2**

		<p>documented communications protocols developed in Requirement R1.</p>	<p>being trained on the documented communications protocols developed in Requirement R1.</p>
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## VRF and VSL Justifications – COM-002-4, R2

**FERC VSL G1**

Violation Severity Level  
Assignments Should Not Have  
the Unintended Consequence  
of Lowering the Current Level  
of Compliance

Based on the VSL Guidance, the SDT developed two VSLs for R2. These VSLs were determined based on the potential consequences of an operator issuing an Operating Instruction without having first received training on the communication protocols. An operator who is not trained on the communication protocols could miscommunicate an Operating Instruction, which could put the BES in an undesirable state. This warrants a High VSL. An operator who is not trained on the communication protocols could miscommunicate an Operating Instruction *during an Emergency*, which could directly put the BES in an undesirable state. This warrants a Severe VSL.

Since training requirements were not in prior versions of COM-002, the introduction of this training requirement will not have the unintended consequence of lowering the current level of compliance.

**VRF and VSL Justifications – COM-002-4, R2**

<p><b>FERC VSL G2</b>          Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties          Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent          Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:          The VSL assignment is not binary. The VSL accounts for two different operating conditions to differentiate two levels of severity based on which condition, Emergency or other condition, is present when the miscommunication occurs.</p> <p>Guideline 2b:          The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b>          Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement. In addition, the VSLs are consistent with Requirement R3.</p>
<p><b>FERC VSL G4</b>          Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations.</p>

VRF and VSL Justifications – COM-002-4, R2	
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	The requirement does not address cyber security protection.
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	The requirement does not address cyber security protection.

VRF and VSL Justifications – COM 002-4, R3	
<b>Proposed VRF</b>	Low
NERC VRF Discussion	R3 is a requirement in a Long-term Planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system. The VRF for this requirement is “Low,” which is consistent with NERC guidelines.

VRF and VSL Justifications – COM 002-4, R3	
FERC VRF G1 Discussion	<p><b>Guideline 1- Consistency w/ Blackout Report:</b>                      R3 establishes that entities who only receive Operating Instructions shall conduct initial training with their operating personnel to ensure that all applicable operators will be trained in three part communication. This training reduces the possibility of a miscommunication, which could eventually lead to action or inaction harmful to the reliability of the Bulk Electric System, which is consistent with FERC guideline G1.</p>
FERC VRF G2 Discussion	<p><b>Guideline 2- Consistency within a Reliability Standard :</b>                      The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.</p>
FERC VRF G3 Discussion	<p><b>Guideline 3- Consistency among Reliability Standards:</b>                      This requirement establishes that Distribution Providers and Generator Operators conduct initial training with each of its operating personnel responsible for the Real-time operation of the BES on three part communication to reduce the possibility of miscommunication which could eventually lead to action or inaction harmful to the reliability of the bulk electric system. This VRF is consistent the VSL assignment for COM-002-4 R2 and other training requirements within the body of NERC Reliability Standards, including CIP-004-5.1 Requirements R1 and R2.</p>
FERC VRF G4 Discussion	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b>                      Failure to conduct initial training for individual operators on three part communication could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Low,” which is consistent with NERC guidelines for similar requirements.</p>
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>                      COM-002-4 Requirement R3 contains only one objective which to conduct initial training with individual system operators on three part communication. Since the requirement has only one objective, only one VRF was assigned.</p>

**VRF and VSL Justifications – COM 002-4, R3**

**Proposed VSL**

<b>Lower</b>	<b>Moderate</b>	<b>High</b>	<b>Severe</b>
N/A	N/A	An individual operator at the responsible entity received an Operating Instruction prior to being trained.	An individual operator at the responsible entity received an Operating Instruction during an Emergency prior to being trained.

VRF and VSL Justifications – COM 002-4, R3

<p><b>FERC VSL G1</b> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</p>	<p>Based on the VSL Guidance, the SDT developed two VSLs. These VSLs were determined based on the potential consequences of an operator receiving an Operating Instruction without having first received training on the communication protocols. An operator who is not trained on three part communication could miscommunicate an Operating Instruction, which could put the BES in an undesirable state. This warrants a High VSL. An operator who is not trained on three part communication could miscommunicate an Operating Instruction <i>during an Emergency</i>, which could directly put the BES in an undesirable state. This warrants a Severe VSL.</p> <p>Since training requirements were not in prior versions of COM-002, the introduction of this training requirement will not have the unintended consequence of lowering the current level of compliance.</p>
<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R3 is not binary. The VSL accounts for two different operating conditions to differentiate two levels of severity based on which condition, Emergency or other condition, is present when the miscommunication occurs.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>



**VRF and VSL Justifications – COM 002-4, R3**

<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	<p>The requirement does not address cyber security protection.</p>

VRF and VSL Justifications – COM 002-4, R3

<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	<p>The requirement does not address cyber security protection.</p>
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VRF and VSL Justifications – COM 002-4, R4

<p><b>Proposed VRF</b></p>	<p>Medium</p>
<p>NERC VRF Discussion</p>	<p>R4 is a requirement in an Operations planning requirement time frame that, if violated, could directly affect the ability to effectively monitor and control the bulk electric system. However, a violation of this requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium,” which is consistent with NERC guidelines.</p>
<p>FERC VRF G1 Discussion</p>	<p><b>Guideline 1- Consistency w/ Blackout Report:</b> This requirement establishes that responsible entities from R1 to periodically assess their operator’s adherence to the entity’s documented communication protocols and provide feedback to those operators. It also requires entities to assess the effectiveness of these protocols and modify them where necessary. The requirement addresses Recommendation 26 of the Blackout Report. The VRF for this requirement is “Medium,” which is consistent with FERC guideline G1.</p>
<p>FERC VRF G2 Discussion</p>	<p><b>Guideline 2- Consistency within a Reliability Standard :</b></p>

VRF and VSL Justifications – COM 002-4, R4			
	The requirement has no sub-requirements. Only one VRF was assigned to the requirement and its sub-parts, so there is no conflict.		
FERC VRF G3 Discussion	<p><b>Guideline 3- Consistency among Reliability Standards:</b>            This requirement calls for responsible entities from R1 to periodically assess their operator’s adherence to the entity’s documented communication protocols and provide feedback to those operators. It also requires entities to assess the effectiveness of these protocols and modify them where necessary. This VRF is consistent with similar requirements within the body of NERC Reliability Standards, including PER-005-1 Requirements R1 and R2.</p>		
FERC VRF G4 Discussion	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b>            R4 is a requirement in an Operations planning requirement time frame that, if violated, could directly affect the ability to effectively monitor and control the bulk electric system. However, a violation of this requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. The VRF for this requirement is “Medium,” which is consistent with NERC guidelines.</p>		
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>            COM-002-4 Requirement R4 contains only one objective which is to implement clear, formal and universally applied communication protocols that reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of the bulk electric system. Since the requirement has only one objective, only one VRF was assigned.</p>		
Proposed VSL			
Lower	Moderate	High	Severe
The responsible entity implemented a method to evaluate the documented communications protocols developed in Requirement R1,	The responsible entity implemented a method for evaluating its communications protocols as specified in Requirement R4 and assessed	The responsible entity implemented a method for evaluating its communications protocols as specified in Requirement R4 but did not assess	The responsible entity did not assess adherence to the documented communications protocols in Requirements R1 by

VRF and VSL Justifications – COM 002-4, R4

<p>but exceeded twelve (12) calendar months between evaluations.</p>	<p>adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions but did not provide feedback to those operating personnel OR The responsible entity implemented a method for evaluating its communications protocols as specified in Requirement R4 and assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions and provided feedback to those operating personnel but did not take corrective action, as appropriate OR</p>	<p>adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions OR The responsible entity implemented a method for evaluating its communications protocols as specified in Requirement R4 but did not assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions.</p>	<p>its operating personnel that issue and receive Operating Instructions AND The responsible entity did not assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions.</p>
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VRF and VSL Justifications – COM 002-4, R4

	<p>The responsible entity implemented a method for evaluating its communications protocols as specified in Requirement R4 and assessed the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions but did not modify its documented communication protocols, as necessary.</p>		
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VRF and VSL Justifications – COM 002-4, R4

**FERC VSL G1**

Violation Severity Level  
 Assignments Should Not Have  
 the Unintended Consequence  
 of Lowering the Current Level  
 of Compliance

Based on the VSL Guidance, the SDT developed four VSLs to establish the severity of an entity not assessing their operator’s adherence to the entity’s communications protocols and/or not assessing the effectiveness of those protocols at least once every 12 calendar months. If an entity implemented a method to evaluate the documented communications protocols developed in Requirement R1, but exceeded twelve (12) calendar months between evaluations then it is a “Low” VSL, since the performance or product measured has significant value as it almost meets the full intent of the requirement.

If an entity implemented a method for evaluating its communications protocols as specified in Requirement R4 and assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions but did not provide feedback to those operating personnel it is a “Medium” VSL. If an entity implemented a method for evaluating its communications protocols and assessed adherence to the communications protocols by its operating personnel and provided feedback to those personnel but did not take corrective action, as appropriate It is also a “Medium” VSL. If an entity implemented a method for evaluating its communications protocols and assessed the effectiveness of its protocols for its operating personnel but did not modify its documented communication protocols, as necessary, it is also a “Medium” VSL. The value of “Medium” is justified based one significant element (or a moderate percentage) of the required performance is missing but the performance or product measured still has significant value in meeting the intent of the requirement.

If an entity implemented a method for evaluating its communications protocols but did not assess adherence to them by its operating personnel then it is a “High” VSL. If an entity implemented a method for evaluating its communications protocols as specified in Requirement R4 but did not assess the effectiveness of its protocols in for its operating personnel it is a “High” VSL. The value of “High” is justified because the entity is missing more than one significant element (or is missing a high percentage) of the required performance.

## VRF and VSL Justifications – COM 002-4, R4

	If an entity did not assess adherence to the documented communications protocols by its operating personnel and it did not assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel, then it is a “Severe” VSL. The value of “Severe” is justified because the performance measured does not meet the intent of the requirement.
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**VRF and VSL Justifications – COM 002-4, R4**

<p><b>FERC VSL G2</b>          Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties          Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent          Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:          The VSL assignment for R4 is not binary. The VSL accounts for two different operating conditions to differentiate two levels of severity based on which condition, Emergency or other condition, is present when the miscommunication occurs.</p> <p>Guideline 2b:          The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b>          Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</p>
<p><b>FERC VSL G4</b>          Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>

VRF and VSL Justifications – COM 002-4, R4	
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	<p>The requirement does not address cyber security protection.</p>
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	<p>The requirement does not address cyber security protection.</p>

VRF and VSL Justifications – COM 002-4, R5	
<p><b>Proposed VRF</b></p>	<p>High</p>
<p>NERC VRF Discussion</p>	<p>R5 is a requirement in a Real-time Operations time frame that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability,</p>

VRF and VSL Justifications – COM 002-4, R5	
	separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.
FERC VRF G1 Discussion	<b>Guideline 1- Consistency w/ Blackout Report:</b> R5 requires entities who issue an Operating Instruction during an Emergency to use three part communication or take an alternative action if the receiver does not respond. The requirement addresses Recommendation 26 of the Blackout Report. The VRF for this requirement is “High,” which is consistent with FERC guideline G1.
FERC VRF G2 Discussion	<b>Guideline 2- Consistency within a Reliability Standard :</b> The requirement has no sub-requirements and only one VRF was assigned therefore, there is no conflict.
FERC VRF G3 Discussion	<b>Guideline 3- Consistency among Reliability Standards:</b> There are no other standards which address documented communications protocols.
FERC VRF G4 Discussion	<b>Guideline 4- Consistency with NERC Definitions of VRFs:</b> R5 is a requirement in an Operations Planning time frame that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures. The VRF for this requirement is “High,” which is consistent with NERC guidelines.
FERC VRF G5 Discussion	<b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b> COM-002-4 Requirement R5 contains only one objective which is for entities that issue Operating Instructions to use three part communication or take an alternative action if the receiver does not respond to reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of the bulk electric system. Since the requirement has only one objective, only one VRF was assigned.

VRF and VSL Justifications – COM 002-4, R5			
Proposed VSL			
Lower	Moderate	High	Severe
N/A	<p>The responsible entity that issued an Operating Instruction during an Emergency did not take one of the following actions:</p> <ul style="list-style-type: none"> <li>Confirmed the receiver’s response if the repeated information was correct (in accordance with Requirement R6).</li> <li>Reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver.</li> <li>Took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver.</li> </ul>	N/A	<p>The responsible entity that issued an Operating Instruction during an Emergency did not take one of the following actions:</p> <ul style="list-style-type: none"> <li>Confirmed the receiver’s response if the repeated information was correct (in accordance with Requirement R6).</li> <li>Reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver.</li> <li>Took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver.</li> </ul> <p>AND</p>

## VRF and VSL Justifications – COM 002-4, R5

			Instability, uncontrolled separation, or cascading failures occurred as a result.
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VRF and VSL Justifications – COM 002-4, R5

**FERC VSL G1**

Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Based on the VSL Guidance, the SDT developed two VSLs based on the failure to use three part communication when issuing an Operating Instruction during an Emergency.

If an entity, when issuing an Operating Instruction during an Emergency, did not use three part communication or take an alternative action if the receiver does not respond, yet instability, uncontrolled separation, or cascading failures did not occur as a result, the entity violated the Requirement with a “Medium” VSL. The value of “Medium” is justified based one significant element (or a moderate percentage) of the required performance is missing but the performance or product measured still has significant value in meeting the intent of the requirement, which is to avoid action or inaction that is harmful to the reliability of the Bulk Electric System.

If an entity, when issuing an Operating Instruction during an Emergency, did not use three part communication or take an alternative action if the receiver does not respond, and instability, uncontrolled separation, or cascading failures occurred as a result, the entity violated the Requirement with a “Severe” VSL. The value of “Severe” is justified because the performance outcome does not meet the intent of the requirement.

**VRF and VSL Justifications – COM 002-4, R5**

<p><b>FERC VSL G2</b>          Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties          Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent          Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:          The VSL assignment for R5 is not binary. See explanation in G1 above.</p> <p>Guideline 2b:          The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b>          Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>
<p><b>FERC VSL G4</b>          Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>

VRF and VSL Justifications – COM 002-4, R5	
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	The requirement does not address cyber security protection.
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	The requirement does not address cyber security protection.

VRF and VSL Justifications – COM 002-4, R6	
<b>Proposed VRF</b>	High
NERC VRF Discussion	R6 is a requirement in a Real-time Operations time frame that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability,



VRF and VSL Justifications – COM 002-4, R6	
	separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.
FERC VRF G1 Discussion	<p><b>Guideline 1- Consistency w/ Blackout Report:</b>            R6 requires entities who receive an Operating Instruction during an Emergency to repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction. The requirement addresses Recommendation 26 of the Blackout Report. The VRF for this requirement is “High,” which is consistent with FERC guideline G1.</p>
FERC VRF G2 Discussion	<p><b>Guideline 2- Consistency within a Reliability Standard :</b>            The requirement has no sub-requirements. and only one VRF was assigned therefore, there is no conflict.</p>
FERC VRF G3 Discussion	<p><b>Guideline 3- Consistency among Reliability Standards:</b>            There are no other standards which address documented communications protocols</p>
FERC VRF G4 Discussion	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b>            R6 is a requirement in an Operations Planning time frame that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures. The VRF for this requirement is “High,” which is consistent with NERC guidelines.</p>
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>            COM-002-4 Requirement R6 contains only one objective which is for entities that receive Operating Instructions during an Emergency to repeat, not necessarily verbatim, the Operating Instruction in order to reduce the possibility of miscommunication which could lead to action or inaction harmful to the reliability of the bulk electric system. Since the requirement has only one objective, only one VRF was assigned.</p>

VRF and VSL Justifications – COM 002-4, R6			
Proposed VSL			
Lower	Moderate	High	Severe
N/A	The responsible entity did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction.	N/A	The responsible entity did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction  AND Instability, uncontrolled separation, or cascading failures occurred as a result.

**VRF and VSL Justifications – COM 002-4, R6**

**FERC VSL G1**

Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Based on the VSL Guidance, the SDT developed two VSLs based on the failure of the recipient of an Operating Instruction to use three part communication after receiving an Operating Instruction during an Emergency.

If an entity, when receiving an Operating Instruction during an Emergency, did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction, yet instability, uncontrolled separation, or cascading failures did not occur as a result, the entity violated the Requirement with a “Medium” VSL. The value of “Medium” is justified based one significant element (or a moderate percentage) of the required performance is missing but the performance or product measured still has significant value in meeting the intent of the requirement, which is to avoid action or inaction that is harmful to the reliability of the Bulk Electric System.

If an entity, when receiving an Operating Instruction during an Emergency, did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction, and instability, uncontrolled separation, or cascading failures occurred as a result, the entity violated the Requirement with a “Severe” VSL. The value of “Severe” is justified because the performance outcome does not meet the intent of the requirement.

**VRF and VSL Justifications – COM 002-4, R6**

<p><b>FERC VSL G2</b> Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a: The VSL assignment for R6 is not binary. The VSL accounts for two different operating conditions to differentiate two levels of severity based on which condition, Emergency or other condition, is present when the miscommunication occurs.</p> <p>Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b> Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>
<p><b>FERC VSL G4</b> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>

VRF and VSL Justifications – COM 002-4, R6	
<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	The requirement does not address cyber security protection.
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	The requirement does not address cyber security protection.

VRF and VSL Justifications – COM 002-4, R7	
<b>Proposed VRF</b>	High
NERC VRF Discussion	R7 is a requirement in a Real-time Operations time frame that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative

VRF and VSL Justifications – COM 002-4, R7	
	conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.
FERC VRF G1 Discussion	<p><b>Guideline 1- Consistency w/ Blackout Report:</b>            R7 requires entities that issue a written or oral single-party to multiple-party burst Operating Instruction during an Emergency to confirm or verify that the Operating Instruction was received by at least one receiver. The requirement addresses Recommendation 26 of the Blackout Report. The VRF for this requirement is “High,” which is consistent with FERC guideline G1.</p>
FERC VRF G2 Discussion	<p><b>Guideline 2- Consistency within a Reliability Standard :</b>            The requirement has no sub-requirements and only one VRF was assigned therefore, there is no conflict.</p>
FERC VRF G3 Discussion	<p><b>Guideline 3- Consistency among Reliability Standards:</b>            There are no other standards which address documented communications protocols</p>
FERC VRF G4 Discussion	<p><b>Guideline 4- Consistency with NERC Definitions of VRFs:</b>            R7 is a requirement in a Real-time Operations time frame that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures. The VRF for this requirement is “High,” which is consistent with NERC guidelines.</p>
FERC VRF G5 Discussion	<p><b>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</b>            COM-002-4 Requirement R7 contains only one objective which requires entities that issue a written or oral single-party to multiple-party burst Operating Instruction during an Emergency confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. Since the requirement has only one objective, only one VRF was assigned.</p>

VRF and VSL Justifications – COM 002-4, R7			
Proposed VSL			
Lower	Moderate	High	Severe
N/A	The responsible entity that that issued a written or oral single-party to multiple-party burst Operating Instruction during an Emergency did not confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.	N/A	The responsible entity that that issued a written or oral single-party to multiple-party burst Operating Instruction during an Emergency did not confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction  AND  Instability, uncontrolled separation, or cascading failures occurred as a result.

**VRF and VSL Justifications – COM 002-4, R7**

**FERC VSL G1**

Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Based on the VSL Guidance, the SDT developed two VSLs based on the failure of the issuer of a written or oral single-party to multiple-party burst Operating Instruction during an Emergency to confirm or verify that the Operating Instruction was received by at least one receiver.

If an entity, when issuing a written or oral single-party to multiple-party burst Operating Instruction during an Emergency, did not confirm or verify that the Operating Instruction was received by at least one receiver, yet instability, uncontrolled separation, or cascading failures did not occur as a result, the entity violated the Requirement with a “Medium” VSL. The value of “Medium” is justified based one significant element (or a moderate percentage) of the required performance is missing but the performance or product measured still has significant value in meeting the intent of the requirement, which is to avoid action or inaction that is harmful to the reliability of the Bulk Electric System.

If an entity, when issuing a written or oral single-party to multiple-party burst Operating Instruction during an Emergency, did not confirm or verify that the Operating Instruction was received by at least one receiver, and instability, uncontrolled separation, or cascading failures occurred as a result, the entity violated the Requirement with a “Severe” VSL. The value of “Severe” is justified because the performance outcome does not meet the intent of the requirement.



**VRF and VSL Justifications – COM 002-4, R7**

<p><b>FERC VSL G2</b>          Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties          Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent          Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</p>	<p>Guideline 2a:          The VSL assignment for R7 is not binary. The VSL accounts for two different operating conditions to differentiate two levels of severity based on which condition, Emergency or other condition, is present when the miscommunication occurs.</p> <p>Guideline 2b:          The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</p>
<p><b>FERC VSL G3</b>          Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</p>	<p>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement</p>
<p><b>FERC VSL G4</b>          Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</p>	<p>The VSL is based on a single violation and not cumulative violations</p>

**VRF and VSL Justifications – COM 002-4, R7**

<p><b>FERC VSL G5</b> Requirements where a single lapse in protection can compromise computer network security, i.e., the ‘weakest link’ characteristic, should apply binary VSLs</p>	<p>The requirement does not address cyber security protection.</p>
<p><b>FERC VSL G6</b> VSLs for cyber security requirements containing interdependent tasks of documentation and implementation should account for their interdependence</p>	<p>The requirement does not address cyber security protection.</p>

VRF and VSL Justifications – COM 002-4, R7

for their interdependence	
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## Table of Issues and Directives

Project 2007-02

Operating Personnel Communications Protocols

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
FERC Order No. 693, P 512 and 540 (Part 1)	512. The Commission finds that, during both normal and emergency operations, it is essential that the transmission operator, balancing authority and reliability coordinator have communications with distribution providers. In response to APPA, as discussed above, any distribution provider that is not a user, owner or operator of the Bulk-Power System would not be required to comply with COM-002-2, even though the Commission is requiring the ERO to modify the Reliability Standard to include distribution providers as applicable entities. APPA's concern that 2,000 public power systems would have to be added to the compliance registry is misplaced, since, as we explain in our Applicability discussion above, we are approving NERC's registry process, including the registry criteria. Therefore, we adopt our proposal to require	Distribution Providers have been included as applicable entities in COM-002-4	Applicability 4.1.2 Requirements R3 and R6

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
	<p>the ERO to modify COM-002-2 to apply to distribution providers through its Reliability Standards development process.</p> <p>540. ... In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to COM-002-2 through the Reliability Standards development process that: (1) expands the applicability to include distribution providers as applicable entities; (2) includes a new Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area view of a transmission operator or balancing authority and (3) requires tightened communications protocols, especially for communications during alerts and emergencies. Alternatively, with respect to this final issue, the ERO may develop a new Reliability Standard that responds to Blackout Report Recommendation No. 26 in the manner described above. Finally, we direct the ERO to include APPA's</p>		

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
	<p>suggestions to complete the Measures and Levels of Non-Compliance in its modification of COM-002-2 through the Reliability Standards development process.</p>		
<p>FERC Order No. 693, P 531, 534, 535, 540 (Part 3)</p>	<p>531. We adopt our proposal to require the ERO to establish tightened communication protocols, especially for communications during alerts and emergencies, either as part of COM-002-2 or as a new Reliability Standard. We note that the ERO’s response to the Staff Preliminary Assessment supports the need to develop additional Reliability Standards addressing consistent communications protocols among personnel responsible for the reliability of the Bulk-Power System.</p> <p>534. In response to MISO’s contention that Blackout Report Recommendation No. 26 has been fully implemented, we note that Recommendation No. 26 addressed two matters. We believe MISO is referring to the second part of the recommendation requiring NERC to “[u]pgrade communication system</p>	<p>COM-002-4 improves communications protocols for the issuance of Operating Instructions, in order to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System.</p>	<p>Definition of Operating Instruction Requirements R1, R2, R3, R4, R5, R6 and R7</p>

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
	<p>hardware where appropriate” instead of tightening communications protocols. While we commend the ERO for taking appropriate action in upgrading its NERCNet, we remind the industry to continue their efforts in addressing the first part of Blackout Recommendation No. 26. (Emphasis added)</p> <p>535. Accordingly, we direct the ERO to either modify COM-002-2 or develop a new Reliability Standard that requires tightened communications protocols, especially for communications during alerts and emergencies.</p>		
<p>FERC Order No. 693, P 532</p>	<p>532. While we agree with EEI that EOP-001-0, Requirement R4.1 requires communications protocols to be used during emergencies, we believe, and the ERO agrees, that the communications protocols need to be tightened to ensure Reliable Operation of the Bulk-Power System. We also believe an integral component in tightening the protocols is to establish communication uniformity as much as</p>	<p>Reliability Standard EOP-001-2.1b — Emergency Operations Planning (successor standard to EOP-001-0) requires that the emergency plans for each Transmission Operator and Balancing Authority include: communications protocols to be used during emergencies (Requirement R3.1). This requirement is compatible with COM-002-4, which establishes the documented</p>	<p>Requirements R1, R5, R6, R7</p>

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
	<p>practical on a continent-wide basis. This will eliminate possible ambiguities in communications during normal, alert and emergency conditions. This is important because the Bulk- Power System is so tightly interconnected that system impacts often cross several operating entities' areas.</p> <p>533. Regarding APPA's suggestion that it may be beneficial to include communication protocols in the relevant Reliability Standard that governs those types of emergencies, we direct that it be addressed in the Reliability Standards development process.</p>	<p>communications protocols and requires their use.</p> <p>COM-002-4 requires a set of protocols be used by all applicable entities, establishing communication uniformity as much as practical on a continent-wide basis</p>	
<p>FERC Order No. 693, P 514, 515</p>	<p>514. APPA notes that the Levels of Non-Compliance for COM-002-2 are inadequate in two respects: (1) reliability coordinators are not included in any Level of Non-Compliance and (2) the Levels of Non-Compliance for transmission operators and balancing authorities in Compliance D.2 do not reference Requirements R1 and R2. Therefore, APPA would support approval of COM-002-2 as a</p>	<p>COM-002-4 includes Measures, VRFs and VSLs for each requirement.</p>	<p>Section C, Measures Section D, Compliance</p>



Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
	<p>mandatory Reliability Standard, but would not support levying penalties for violating incomplete portions of the Reliability Standard.</p> <p>515. As stated in the Common Issues section, a Reliability Standard is enforceable even if it does not contain Levels of Non-Compliance. However, the Commission agrees with APPA that this Reliability Standard could be improved by incorporating the changes proposed by APPA. Therefore, when reviewing the Reliability Standard through the Reliability Standards development process, the ERO should consider APPA’s concerns.</p>		
<p>2003 Blackout Report Recommendation No. 26</p>	<p>NERC should work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations, and ensure that all key parties, including state and local officials, receive timely and accurate information. NERC should task the regional councils to work</p>	<p>The requirements in COM-002-4 require the use of predefined communications protocols in order to reduce the possibility of a miscommunication(s) that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES).</p>	<p>Requirements R1, R2, R3, R4, R5, R6, and R7</p>

Table of Issues and Directives Associated with COM-002-4

Source	Directive Language	Disposition	Section and/or Requirement(s)
	together to develop communications protocols by December 31, 2004, and to assess and report on the adequacy of emergency communications systems within their regions against the protocols by that date.		

## **Waiver for Project 2007-02 Operating Personnel Communications Protocols**

### **Action**

Authorize a waiver of the Standard Processes Manual to shorten the comment period for Project 2007-02 from 45 days to 30 days, with a ballot conducted during the last 10 days of the comment period; and, also require NERC Staff to post a notice of the waiver on the project page and work with the Chair of the Standards Committee to notify the NERC Board of Trustees Standards Oversight and Technology Committee of the waiver.

### **Background**

On November 7, 2013 the NERC Board of Trustees (Board) passed a resolution that, among other things, directed the Standards Committee and relevant Standards Drafting Team (SDT) to develop a combined COM-002 and COM-003 Standard and requested "that the Standards Committee direct the standard drafting team to work toward providing an industry approved combined standard, as contemplated by the foregoing resolutions, for Board approval as quickly as possible, but in no event later than the Board's February 2014 meeting." The Project 2007-02 SDT has been working to draft a COM Standard that is responsive to the Board's resolution.

The defined term "Reliability Directive" is currently being considered by the Project 2007-02 SDT in proposed Reliability Standard COM-002-4. The same term is used in revised TOP and IRO Standards pending with the Federal Energy Regulatory Commission (FERC). On November 21, 2013, FERC issued a Notice of Proposed Rulemaking (NOPR) proposing to remand the TOP and IRO Standards including the definition of "Reliability Directive." As a result of the NOPR, the Project 2007-02 SDT is also considering alternatives to using the term Reliability Directive. The SDT needs additional time to conduct outreach to the IRO and TOP SDTs to obtain feedback on the options currently under consideration for COM-002-4 with respect to the definition of "Reliability Directive."

Currently, to meet the Board deadline, the SDT would likely need to post on or about December 4, 2013 for a full 45-day comment and ballot period. In order to provide the Project 2007-02 SDT time to coordinate with the IRO and TOP SDTs and meet the February Board deadline, a reduction in the comment and ballot period is needed from 45 days to 30 days.

As required by Section 16 of the NERC Standard Processes Manual, NERC provided stakeholders with notice of this request on December 3, 2013 (see attached).

# Notice of Request to Waive the Standard Process

## Project 2007-02 Operating Personnel Communications Protocols COM-002 and COM-003

### Notice of Request to Waive the Standard Process

As required by Section 16 of the Standards Processes Manual, this is official notice to stakeholders that the Chair of the Standards Committee is requesting that the Standards Committee consider a waiver of the Standard Processes Manual to shorten the formal comment and ballot period, from 45 days to 30 days to meet a NERC Board of Trustees (“Board”) requested deadline to “work toward providing an industry approved combined standard, as contemplated by the foregoing resolutions, for Board approval as quickly as possible, but in no event later than the Board’s February 2014 meeting.”

To comply with the five day business day notice requirement, the Standards Committee will meet to consider this waiver request on December 11, 2013. Notice of the Standards Committee’s meeting has been announced and posted on the NERC website. Additional details about the waiver request are included below, and should a waiver be granted by the Standards Committee, it will be posted on the [project page](#).

### Authority

Pursuant to Section 16 of the NERC Standard Processes Manual, the Standards Committee may reduce the days for formal comment and ballot for good cause shown and to meet a Board’s deadline.

### Justification for Waiver Request

On November 7, 2013 the Board passed a resolution that, among other things, directed the Standards Committee and relevant Standards Drafting Team (SDT) to develop a combined COM-002 and COM-003 Standard and requested “that the Standards Committee direct the standard drafting team to work toward providing an industry approved combined standard, as contemplated by the foregoing resolutions, for Board approval as quickly as possible, but in no event later than the Board’s February 2014 meeting.” The Project 2007-02 SDT has been working to draft a COM Standard that is responsive to the Board’s resolution.

The defined term “Reliability Directive” is currently being considered by the Project 2007-02 SDT in proposed Reliability Standard COM-002-4. The same term is used in revised TOP and IRO Standards pending with the Federal Energy Regulatory Commission (FERC). On November 21, 2013, FERC issued a Notice of Proposed Rulemaking (NPR) proposing to remand the TOP and IRO Standards including the definition of “Reliability Directive.” As a result of the NPR, the Project 2007-02 SDT is also considering alternatives to using the term “Reliability Directive.” The SDT needs additional time to conduct outreach to the IRO and TOP SDTs to obtain feedback on the options currently under consideration for COM-002-4 with respect to the definition of “Reliability Directive.”

Currently, to meet the Board deadline, the SDT would likely need to post on or about December 4, 2013 for a full 45-day comment and ballot period. In order to provide the Project 2007-02 SDT time to coordinate with the IRO and TOP SDTs and meet the February Board deadline, a reduction in the comment and ballot period is needed from 45 days to 30 days.

*For more information or assistance, please contact [Howard Gugel](#),  
Director of Standards Development, or by phone at 404-446-2560.*

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# Project 2007-02 Posting 8

## Frequently Asked Questions Guide

### General Questions

#### 1. What were the inputs that drove the development of posting 8 of Project 2007-02?

- The NERC Board of Trustees' November 7<sup>th</sup>, 2013 Resolution for Operating Personnel Communication Protocols, discussed below;
- Two separate surveys distributed to a sample of industry experts by the Director of Standards Development and the Standards Committee Chair requesting feedback on the draft standard; and
- Consultation on the use of the term "Reliability Directive" in the COM-002-4 standard with the Project 2007-03 Real-time Transmission Operations Standard Drafting Team and the Project 2006-06 Reliability Coordination Standard Drafting Team.
- Industry stakeholder comments from previous drafts of Project 2007-02.

#### 2. Why was the term "Reliability Directive" removed from the definition of Operating Instruction?

The OPCP SDT debated whether to remove the term "Reliability Directive" in response to comments suggesting it should be removed from the definition of "Operating Instruction" and in light of FERC's issuance of the TOP/IRO Notice of Proposed Rulemaking (NOPR), which proposes to remand the definition of "Reliability Directive" along with the proposed TOP and IRO standards. To avoid unnecessary complications with the timing of the NOPR and posting 8, the OPCP SDT consulted with the Project 2007-03 Real-time Transmission Operations and the Project 2006-06 Reliability Coordination Standard Drafting Teams to ask whether they believed removal of the term "Reliability Directive" in the COM-002-4 standard would cause concerns. Both teams agreed that the COM-002-4 standard did not need to require a protocol to identify Reliability Directives as such and that the definition of Operating Instruction could be used absent the term Reliability Directive in COM-002-4 to set the protocols. The OPCP SDT ultimately voted to remove the term. The OPCP SDT also decided to incorporate the phrase "Operating Instruction during an Emergency" in certain Requirements, where needed, to identify Requirements that are subject to a zero-tolerance compliance/enforcement approach.

#### 3. Why does this standard apply to Generator Operators and Distribution Providers?

The OPCP SDT included these Functional Entities in the Applicability section because they can be and are on the receiving end of some Operating Instructions. The OPCP SDT determined that it would leave a gap

to not cover them in a standard that addresses communications protocols for operating personnel. The inclusion of Distribution Providers as an applicable entity also responds to FERC's directive in Order No. 693 to add them as applicable entities to the communications standard. The inclusion of Distribution Providers and Generator Operators is also consistent with the currently approved COM-002-3 standard, which the Board directed be combined with COM-003-1.

Recognizing that Generator Operators and Distribution Providers typically only receive Operating Instructions, the OPCP SDT proposed that only Requirements R3 and R6 apply to these Functional Entities.

#### 4. What does the term *documented communications protocols* refer to?

The term *documented communication protocols* in R1 refers to a set of required protocols specific to the Functional Entity and the Functional Entities they must communicate with. An entity should include as much detail as it believes necessary in their documented protocols, but they must address all of the applicable parts of Requirement R1. Where an entity does not already have a set of documented protocols that meet the parts of Requirement R1, the entity must develop the necessary communications protocols. Entities may also adopt the documented protocols of another entity as its own communications protocols, but the entity must maintain its own set of documented communications protocols to meet Requirement R1.

#### 5. Is this a “zero tolerance” standard

The standard uses the phrase “Operating Instruction during an Emergency” in certain Requirements (R5, R6, R7) to provide a demarcation for what is subject to a “zero tolerance” compliance/enforcement approach and what is not. This is necessary to allow the creation of Violation Severity Levels for each compliance/enforcement approach. **Where “Operating Instruction during an Emergency” is not used, an entity will be assessed under a compliance/enforcement approach that focuses on whether or not an entity met the initial training Requirement (either R2 or R3) and whether or not an entity performed the assessment and took corrective action according to Requirement R4.** The proposed COM-002-4 does not contain a Requirement to adhere to all documented communications protocols during non-Emergency conditions. Under COM-002-4, the assessment and training documentation will provide auditors assurance that responsible entities are using their documented communications protocols and taking corrective actions, as necessary.

Separately listing out Requirements R5, R6, and R7 and using “Operating Instruction during an Emergency” in them does not require a different set of protocols to be used during Emergencies or mandate the identification of a communication as an “Operating Instruction during an Emergency.” The same protocols are required to be used in connection with the issuance of Operating Instructions for all operating conditions. Compliance/enforcement is measured differently using the operating condition as an indicator of which compliance/enforcement approach applies.

**6. Do any of the proposed requirements require the use of three-part communication when issuing or receiving an Operating Instruction outside of an Emergency?**

Compliance with the standard during non-Emergencies is based on whether or not an entity met the initial training Requirement (either R2 or R3) and whether or not an entity performed the assessment and took corrective action according to Requirement R4. An instance of an Operating Instruction outside of an Emergency not using three-part communication, or any of the other protocols in Requirement R1, is not in and of itself a violation of any requirement of COM-002-4. However, an entity will need be using three-part communication when issuing or receiving an Operating Instruction outside of an Emergency in order to complete the assessment of adherence to the entities' documented communications protocols.

**7. Why are entities required to assess the adherence of its operating personnel to the documented communication protocols the entity developed and provide feedback?**

Requiring entities to assess and provide feedback to its operating personnel, was also included in the November 7, 2013 NERC Board of Trustees' resolution as an element to include in the standard. Further, the OPCP SDT believes that it is good operating practice for an entity to periodically evaluate the effectiveness of their protocols and improve them when possible. Most entities currently engage in this type of assessment activity for their operating personnel. This assessment and feedback activity by the entity improves reliability as it provides a shorter evaluation and correction cycle than a traditional audit cycle, while reducing the associated compliance burden as well.

Additionally, the OPCP SDT believes it is good operating practice to provide operators with performance feedback on their adherence to the entity's documented protocols. Doing so, provides entities an opportunity to evaluate the performance of their operating personnel and take corrective actions where necessary, which could prevent a miscommunication from occurring and thus possibly prevent an event which could be harmful to the reliability of the Bulk Electric System.

**8. Should the BA, RC, and TOP provide their protocols to the GOPs and DPs and each other?**

While an entity may choose to provide their protocols to entities to which they communicate, there is not a mandatory and enforceable requirement that they do so.

**9. Why is the standard not applicable to Transmission Owners?**

Please refer to the Functional Model, found at <http://www.nerc.com/pa/Stand/Pages/FunctionalModel.aspx>. In the document, the following is provided for the Transmission Operator:



*The Transmission Operator operates or directs the operation of transmission facilities, and maintains local-area reliability, that is, the reliability of the system and area for which the Transmission Operator has responsibility. The Transmission Operator achieves this by operating the transmission system within its purview in a manner that maintains proper voltage profiles and System Operating Limits, and honors transmission equipment limits established by the Transmission Owner. The Transmission Operator is under the Reliability Coordinator's direction respecting wide-area reliability considerations, that is, considerations beyond those of the system and area for which the Transmission Operator has responsibility and that include the systems and areas of neighboring Reliability Coordinators. The Transmission Operator, in coordination with the Reliability Coordinator, can take action, such as implementing voltage reductions, to help mitigate an Energy Emergency, and can take action in system restoration.*

The following is provided for the Transmission Owner:

*The Transmission Owner owns its transmission facilities and provides for the maintenance of those facilities. It also specifies equipment operating limits, and supplies this information to the Transmission Operator, Reliability Coordinator, and Transmission Planner and Planning Coordinator. In many cases, the Transmission Owner has contracts or interconnection agreements with generators or other transmission customers that would detail the terms of the interconnection between the owner and customer.*

While the Transmission Owner owns the facilities, the Transmission Operator operates the facilities, and as such is subject to this standard. In the case where a Transmission Owner operates facilities, that Transmission Owner is bundled with a Reliability Coordinator or Transmission Operator, and as such would be covered by the standard.

**10. If an entity cannot complete a task included in an Operating Instruction, are they non-compliant?**

COM-002-4 deals with communication protocols, not actions taken by any entity. If an entity does not take action on an Operating Instruction, it may be a violation of another standard, but is not a violation of COM-002-4.

**11. A GOP contacts its TOP and notifies the TOP that a generator is about to trip due to a tube leak. Is this considered an Operating Instruction?**

No. This is not a command; it is simply relaying information about the generator to the Transmission Operator.

**12. If a Distribution Provider cannot operate a BES Element, would this standard apply to them?**

Distribution Providers are applicable entities for this standard. However, if they never receive an Operating Instruction due to their particular circumstance, they would not need to prove compliance with Requirements R3 and R6.

**Requirement R1 and Measure M1**

**13. Pursuant to R1, is it correct that an oral two-party, person-to-person Operating Instruction requires three part communication, but a single-party to multiple-party burst Operating Instruction message only requires two part communication?**

Yes. Since the use of three-part communications is not practical when issuing a single-party to multiple-party burst Operating Instruction, it is necessary to include a different set of protocols for these situations.

**14. Can you provide some examples of what is meant by written Operating Instructions as contemplated in Requirement R1 Parts 1.1 and 1.4 - 1.6?**

One example of a written Operating Instruction is a written switching order. Another example is an Operating Instruction issued by using a text message.

**15. Please explain how the current draft does not conflict with TOP-002 R18 (uniform line identifiers)?**

Project 2007-03 chose to eliminate TOP-002-2a, Requirement R18 when it developed TOP-002-3. This Requirement stated "Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network." COM-002-4, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations) for Operating Instructions. This supports both parties being familiar with each other's interface Elements and Facilities, minimizing hesitation and confusion when referring to equipment for the Operating Instruction.

**16. Can you explain what "specify when time identification required"? Is this just for entities in multiple time zones?**

The OPCP SDT has included this part to add necessary clarity to Operating Instructions to reduce the risk of miscommunications. The inclusion of "specify when time identification required" allows for an entity to evaluate its particular circumstances and communications to determine when it may be appropriate to use time identification in its Operating Instructions. The drafting recognized from comments the need to provide this flexibility while still requiring an entity to address this part in its documented communication protocols. Clarifying time and time zone (where necessary) contributes to reducing misunderstandings and reduces the risk of a grave error during BES operations. This is not exclusively for entities in multiple

time zones, but Operating Instructions between entities in multiple time zones is one example of instances that may need time identification when issuing and receiving Operating Instructions.

**17. Why did the drafting team remove the protocol requiring alphanumeric clarifiers?**

Based on feedback from industry and consideration of the NERC Board resolution, the drafting team chose to remove alphanumeric clarifiers as a required protocol. Entities are free to include it in their documented communication protocols.

**18. Why is there a requirement for the use of the English language?**

The drafting team included this part to carry forward the same use of English language included in COM-001-1, Requirement R4 and to retire this requirement from COM-001. The requirement continues to permit the issuer and receiver to use an agreed to alternate language. This has been retained since use of an alternate language on a case-by-case basis may serve to better facilitate effective communications where the use of English language may create additional opportunities for miscommunications. Part 1.1 requires the use of English language when issuing oral or written (e.g. switching orders) Operating Instructions. This creates a standard language (unless agreed to otherwise) for use when issuing commands that could change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. It also clarifies that an alternate language can be used internally within the organization. The phrase has been modified slightly from the language in COM-001-1, Requirement R4 to incorporate the term "Operating Instruction," which defines the communications that require the use of the documented communications protocols.

**Requirements R2 and R3 and Measures M2 and M3**

**19. Is there an obligation on the part of the entity issuing an Operating Instruction to ensure the receiving operator is trained to receive it?**

No. It is the responsibility of the receiving entity to ensure that their operator has received training prior to receiving an Operating Instruction.

**20. Why is there a requirement to conduct initial training?**

The OPCP SDT has included an initial training requirement in the standard in response to the NERC Board of Trustees' resolution, which directs that a training requirement be included in the COM-002-4 standard. Additionally, requiring entities that issue and/or receive Operating Instructions to conduct initial training with their operating personnel will ensure that all applicable operators will be trained in three-part communication. The OPCP SDT believes this training will reduce the possibility of a miscommunication, which could eventually lead to action or inaction harmful to the reliability of the Bulk Electric System. Ongoing training would fall under an entity's training program in PER-005 or could be listed as a type of corrective action under Requirement R4. As such, this requirement is not in conflict with PER-005, but complements it.

**21. Current operating personnel issue and receive Operating Instructions now and thus it is not possible to train them on documented protocols \*prior\* to their issuing or receiving their first Operating Instruction. If training takes place before the enforcement date for COM-002-4, would an entity meet the expectations of Requirement R2 and/or R3?**

Yes.

#### **Requirement R4 and Measure M4**

**22. Would you please provide more specificity as to how the R.4.1 and 4.2 assessments may be performed?**

An entity could perform an assessment by listening to random samplings of each of their operating personnel issuing and/or receiving Operating Instructions. If there were instances where an Operator deviated from the entity's protocols, the entity would provide feedback to the operator in question in any method it sees as appropriate. An example would be counseling or retraining the operator on the protocols.

An entity could assess the effectiveness of its protocols by reviewing instances where operators deviated from those protocols and determining if whether the deviations were caused by operator error or by flaws in the protocols that need to be changed.

**23. Doesn't Measure M4 extend beyond the scope of the requirement when it addresses communications which deviated from the protocol and contributed to an emergency?**

The purpose of COM-002-4 is "To improve communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES)." If the deviation from the protocol contributed to an emergency, the purpose of this standard was not met. The entity must determine what caused that deviation and address any necessary corrective actions.

#### **Requirements R5 and R6 and Measures M5 and M6**

**24. What is defined as an Emergency and who is responsible for declaring when an Emergency begins and ends?**

The NERC Glossary of Terms defines Emergency as "Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System." It is expected that these are abnormal and rare circumstances. There is not an expectation that an Emergency be declared. For further information, please refer to Question 15.

**25. Is it a violation of R5 if three-part communication is not used, but an alternative action is taken?**

If an operator issues an Operating Instruction during an Emergency and, based on the response from the receiver, or lack thereof, chooses to take an alternative action, that operator has satisfied Requirement R5 and is not in violation.

**26. How does the SDT envision operators differentiating, during Real-time, between Emergency Operating Instructions and non-emergency Operating Instructions? Are the operators to explicitly say "this is an Emergency Operating Instruction"?**

Separately listing out Requirements R5, R6, and R7 and using "Operating Instruction during an Emergency" in them does not require a different set of protocols to be used during Emergencies or mandate the identification of a communication as an "Operating Instruction during an Emergency." The same protocols are required to be used in connection with the issuance of Operating Instructions for all operating conditions. Their use is measured for compliance/enforcement differently using the operating condition as an indicator of which compliance/enforcement approach applies. In other words, it is not the drafting team's expectation that the operator must differentiate between Emergency and non-Emergency Operating Instructions.

**27. Does this standard require TOPs to provide evidence of another parties' compliance in Measure M6?**

No. The Measures provide various options that the drafting team considered as ways to demonstrate compliance for Requirement R6. It is not an exhaustive list, and in no way places an expectation on any entity that they must provide evidence of another party's compliance. It simply provides a few options to consider.

**28. Can you provide an example of an alternative action being taken?**

The following scenario is provided as an example of an alternative action:

A Transmission Operator (TOP) calls a Generator Operator (GOP) to reduce generation due to an Emergency. The GOP does not respond verbally. At that point the TOP could:

- Ask if the GOP understood the Operating Instruction (alternative action).
- Hang up and redial the GOP, assuming that the communication line was dead (alternative action),
- Request a different generator that is effective to reduce (alternative action);
- or
- Call a different contact at the GOP (alternative action)

**29. Must the receiver repeat the Operating Instruction back verbatim?**

No. The Operating Instruction does not have to be repeated verbatim. The issuer must confirm that the receiver's response of the Operating Instruction was correct.

# Standards Announcement **Reminder**

## Project 2007-02 Operating Personnel Communication Protocols

**Additional Ballot and Non-binding Poll Now Open through January 31, 2014**

### [Now Available](#)

An additional ballot for **COM-002-4 – Operating Personnel Communication Protocols** and non-binding poll of the associated Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs) are open through **8 p.m. Eastern on Friday, January 31, 2014.**

Background information for this project can be found on the [project page](#).

### **Instructions for Balloting**

Members of the ballot pools associated with this project may log in and submit their vote for the definition by clicking [here](#).

### **Next Steps**

The ballot results will be announced and posted on the project page. The drafting team will consider all comments received during the formal comment period and, if needed, make revisions to the standard. If the comments do not show the need for significant revisions, the standard will proceed to a final ballot.

### **Standards Development Process**

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

For more information or assistance, please contact [Wendy Muller](#),  
Standards Development Administrator at 404-446-2560.

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## Standards Announcement- Update

Project 2007-02 – Operating Personnel Communications Protocols  
Formal Comment Period and RSAW Posted for Industry Comments: January 2 –  
31, 2014  
Additional Ballot and Non-binding Poll: January 22 – 31, 2014

### Now Available

A **30-day** formal comment period for **COM-002-4 – Operating Personnel Communication Protocols** is open through **8 p.m. Eastern on Friday, January 31, 2014**. An additional ballot of COM-002-4 and a non-binding poll of the associated VRFs and VSLs will be conducted beginning on **Wednesday, January 22, 2014 through 8 p.m. Eastern on Friday, January 31, 2014**.

**On December 11, 2013, the NERC Standards Committee authorized a waiver of the standard process, in accordance with Section 16 of the Standard Processes Manual, to shorten this comment period from 45 days to 30 days with a ballot during the last 10 days of the comment period to meet the NERC Board of Trustees requested deadline. A link to the waiver request is available on the project page.**

In response to comments received during the last comment period for COM-002-4 and other input, the drafting team has created a new communications standard, which requires the use of standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time.

Background information for this project can be found on the [project page](#).

### **Instructions for Commenting**

A formal comment period on the draft standard is open through **8 p.m. Eastern on Friday, January 31, 2014**. Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact [Arielle Cunningham](#). An off-line, unofficial copy of the comment form is posted on the [project page](#).

**A comment period on the draft RSAW is open through 8 p.m. Eastern on Friday, January 31, 2014. The draft RSAW is posted on the [project page](#). Please submit comments on the draft RSAW using the RSAW comment form to [RSAWfeedback@nerc.net](mailto:RSAWfeedback@nerc.net).**

For more information or assistance, please contact [Arielle Cunningham](#),  
Standards Development Administrator at 404-446-2560.

North American Electric Reliability Corporation  
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## Standards Announcement- **Update**

Project 2007-02 – Operating Personnel Communications Protocols  
Formal Comment Period and RSAW Posted for Industry Comments: January 2 –  
31, 2014  
Additional Ballot and Non-binding Poll: January 22 – 31, 2014

### Now Available

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## Standards Announcement

### Project 2007-02 Operating Personnel Communications Protocols COM-002-4

#### Additional Ballot and Non-Binding Poll Results

#### [Now Available](#)

An additional ballot of **COM-002-4 – Operating Personnel Communications Protocols** and non-binding poll of the associated Violation Risk Factors and Violation Severity Levels concluded at **8 p.m. Eastern on Tuesday, February 4, 2014.**

The standard achieved a quorum and received sufficient affirmative votes for approval. Voting statistics are listed below, and the [Ballot Results](#) page provides a link to the detailed results for the ballots.

Approval	Non-Binding Poll Results
Quorum: 76.03%	Quorum: 77.19%
Approval: 71.86%	Supportive Opinions: 66.81%

Background information for this project can be found on the [project page](#).

#### Next Steps

The drafting team will consider all comments received during the formal comment period and, if needed, make revisions to the standard. If the comments do not show the need for significant revisions, the standard will proceed to a final ballot.

#### Standards Development Process

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact [Wendy Muller](#) (via email),  
Standards Development Administrator, or at 404-446-2560.*

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- Ballot Pools
- Current Ballots
- Ballot Results
- Registered Ballot Body
- Proxy Voters

Home Page

Ballot Results	
<b>Ballot Name:</b>	Project 2007-02 COM-002-4
<b>Ballot Period:</b>	1/22/2014 - 2/4/2014
<b>Ballot Type:</b>	<b>Additional Ballot</b>
<b>Total # Votes:</b>	314
<b>Total Ballot Pool:</b>	413
<b>Quorum:</b>	<b>76.03 % The Quorum has been reached</b>
<b>Weighted Segment Vote:</b>	71.86 %
<b>Ballot Results:</b>	<b>The Ballot has Closed</b>

Summary of Ballot Results										
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Negative Vote without a Comment	Abstain	No Vote	
			# Votes	Fraction	# Votes	Fraction				
1 - Segment 1	107	1	51	0.622	31	0.378	0	5	20	
2 - Segment 2	11	0.9	8	0.8	1	0.1	0	1	1	
3 - Segment 3	97	1	42	0.636	24	0.364	0	3	28	
4 - Segment 4	39	1	18	0.692	8	0.308	0	0	13	
5 - Segment 5	88	1	42	0.677	20	0.323	0	5	21	
6 - Segment 6	50	1	27	0.675	13	0.325	0	2	8	
7 - Segment 7	0	0	0	0	0	0	0	0	0	
8 - Segment 8	7	0.3	2	0.2	1	0.1	0	0	4	
9 - Segment 9	5	0.1	1	0.1	0	0	0	0	4	

10 - Segment 10	9	0.8	7	0.7	1	0.1	0	1	0
<b>Totals</b>	<b>413</b>	<b>7.1</b>	<b>198</b>	<b>5.102</b>	<b>99</b>	<b>1.998</b>	<b>0</b>	<b>17</b>	<b>99</b>

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	NERC Notes
1	Ameren Services	Kirit Shah	Negative	COMMENT RECEIVED - SERC OC
1	American Electric Power	Paul B Johnson	Negative	SUPPORTS THIRD PARTY COMMENTS - (thomas foltz - AEP)
1	American Transmission Company, LLC	Andrew Z Puszta	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	ATCO Electric	Glen Sutton	Affirmative	
1	Austin Energy	James Armke	Affirmative	
1	Avista Corp.	Scott J Kinney	Abstain	
1	Balancing Authority of Northern California	Kevin Smith	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Affirmative	
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	
1	Beaches Energy Services	Joseph S Stonecipher		
1	Black Hills Corp	Eric Egge	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES Power Marketing and NRECA)
1	Bryan Texas Utilities	John C Fontenot	Affirmative	
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Affirmative	
1	Central Electric Power Cooperative	Michael B Bax	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	City of Pasadena	Marco A Sustaita		
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City Utilities of Springfield, Missouri	Jeff Knottek	Negative	SUPPORTS THIRD PARTY COMMENTS - (SPP)
1	City Water, Light & Power of Springfield	Shaun Anders		
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Negative	SUPPORTS THIRD PARTY COMMENTS - (See SPP Comments)
1	Colorado Springs Utilities	Paul Morland		
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	Consumers Power Inc.	Stuart Sloan		
1	CPS Energy	Richard Castrejana	Affirmative	
1	Dairyland Power Coop.	Robert W. Roddy	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash	Affirmative	
1	Deseret Power	James Tucker		
1	Dominion Virginia Power	Michael S Crowley	Negative	SUPPORTS THIRD PARTY COMMENTS - (I support Dominion's previously

				submitted comments)
1	Duke Energy Carolina	Doug E Hils	Negative	SUPPORTS THIRD PARTY COMMENTS - (Duke Energy)
1	Empire District Electric Co.	Ralph F Meyer	Negative	COMMENT RECEIVED
1	Entergy Services, Inc.	Edward J Davis	Negative	COMMENT RECEIVED
1	FirstEnergy Corp.	William J Smith	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative	
1	Florida Power & Light Co.	Mike O'Neil	Affirmative	
1	Gainesville Regional Utilities	Richard Bachmeier	Affirmative	
1	Georgia Transmission Corporation	Jason Snodgrass	Negative	COMMENT RECEIVED
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon		
1	Hydro One Networks, Inc.	Ajay Garg	Affirmative	
1	Hydro-Quebec TransEnergie	Bernard Pelletier		
1	Idaho Power Company	Molly Devine	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Abstain	
1	JEA	Ted Hobson	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	Kansas City Power & Light Co.	Michael Gammon	Negative	COMMENT RECEIVED
1	Keys Energy Services	Stanley T Rzad		
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca		
1	LG&E Energy Transmission Services	Bradley C. Young		
1	Long Island Power Authority	Robert Ganley	Affirmative	
1	Los Angeles Department of Water & Power	John Burnett	Affirmative	
1	Lower Colorado River Authority	Martyn Turner	Abstain	
1	M & A Electric Power Cooperative	William Price	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	Manitoba Hydro	Joe D Petaski	Affirmative	
1	MEAG Power	Danny Dees	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	
1	Minnesota Power, Inc.	Randi K. Nyholm	Affirmative	
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	National Grid USA	Michael Jones	Affirmative	
1	Nebraska Public Power District	Cole C Brodine	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPPD)
1	New York Power Authority	Bruce Metruck	Affirmative	
1	New York State Electric & Gas Corp.	Raymond P Kinney		
1	Northeast Missouri Electric Power Cooperative	Kevin White	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	Northeast Utilities	David Boguslawski	Affirmative	
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Abstain	
1	Ohio Valley Electric Corp.	Robert Matthey		
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Negative	SUPPORTS THIRD PARTY COMMENTS - SPP Std Review Team
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
				COMMENT

1	Oncor Electric Delivery	Jen Fiegel	Negative	RECEIVED
1	Orlando Utilities Commission	Brad Chase		
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan		
1	PECO Energy	Ronald Schloendorn		
1	Platte River Power Authority	John C. Collins	Negative	COMMENT RECEIVED
1	Portland General Electric Co.	John T Walker	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Abstain	
1	Public Service Company of New Mexico	Laurie Williams	Affirmative	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative	
1	Public Utility District No. 2 of Grant County, Washington	Rod Noteboom		
1	Puget Sound Energy, Inc.	Denise M Lietz	Affirmative	
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell	Negative	COMMENT RECEIVED
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Sho-Me Power Electric Cooperative	Denise Stevens	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	Sierra Pacific Power Co.	Rich Salgo		
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	
1	South California Edison Company	Steven Mavis	Affirmative	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Negative	COMMENT RECEIVED
1	Southern Illinois Power Coop.	William Hutchison	Negative	SUPPORTS THIRD PARTY COMMENTS - (NRECA and ACES)
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Tampa Electric Co.	Beth Young		
1	Tennessee Valley Authority	Larry G Akens	Negative	COMMENT RECEIVED
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Negative	COMMENT RECEIVED
1	Tucson Electric Power Co.	John Tolo	Affirmative	
1	United Illuminating Co.	Jonathan Appelbaum	Negative	COMMENT RECEIVED
1	Westar Energy	Allen Klassen	Affirmative	
1	Western Area Power Administration	Brandy A Dunn		
1	Xcel Energy, Inc.	Gregory L Pieper	Negative	SUPPORTS THIRD PARTY COMMENTS - (Alice Ireland, Xcel Energy)
2	Alberta Electric System Operator	Mark B Thompson	Affirmative	
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
2	California ISO	Rich Vine	Affirmative	
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Affirmative	
2	Independent Electricity System Operator	Barbara Constantinescu	Affirmative	
2	ISO New England, Inc.	Kathleen Goodman	Abstain	
2	Midwest ISO, Inc.	Marie Knox	Negative	COMMENT RECEIVED
2	New Brunswick System Operator	Alden Briggs		
2	New York Independent System Operator	Gregory Campoli	Affirmative	
2	PJM Interconnection, L.L.C.	stephanie monzon	Affirmative	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Affirmative	
				COMMENT



3	Alabama Power Company	Richard J. Mandes	Negative	RECEIVED
3	Alameda Municipal Power	Douglas Draeger		
3	Ameren Services	Mark Peters	Negative	COMMENT RECEIVED
3	APS	Steven Norris	Affirmative	
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
3	Atlantic City Electric Company	NICOLE BUCKMAN	Affirmative	
3	Avista Corp.	Robert Lafferty	Abstain	
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blachly-Lane Electric Co-op	Bud Tracy		
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham		
3	Central Electric Power Cooperative	Adam M Weber	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
3	Central Lincoln PUD	Steve Alexanderson	Affirmative	
3	City of Austin dba Austin Energy	Andrew Gallo	Affirmative	
3	City of Bartow, Florida	Matt Culverhouse	Affirmative	
3	City of Clewiston	Lynne Mila		
3	City of Farmington	Linda R Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoeinghaus		
3	City of Green Cove Springs	Gregg R Griffin		
3	City of Lodi, California	Elizabeth Kirkley		
3	City of Palo Alto	Eric R Scott		
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey		
3	City Water, Light & Power of Springfield	Roger Powers		
3	Clearwater Power Co.	Dave Hagen		
3	Cleco Corporation	Michelle A Corley	Negative	SUPPORTS THIRD PARTY COMMENTS - (See SPP Comments)
3	Colorado Springs Utilities	Charles Morgan	Negative	SUPPORTS THIRD PARTY COMMENTS - (Colorado Springs Utilities group comments)
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy	Richard Blumenstock	Affirmative	
3	Consumers Power Inc.	Roman Gillen		
3	Coos-Curry Electric Cooperative, Inc	Roger Meader		
3	Cowlitz County PUD	Russell A Noble	Affirmative	
3	CPS Energy	Jose Escamilla	Affirmative	
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Dominion Resources, Inc.	Connie B Lowe	Negative	SUPPORTS THIRD PARTY COMMENTS - (See Dominion's submitted comments)
3	Entergy	Joel T Plessinger		
3	Fall River Rural Electric Cooperative	Bryan Case		
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Affirmative	
3	Florida Power Corporation	Lee Schuster	Negative	SUPPORTS THIRD PARTY COMMENTS - (Duke Energy)
3	Georgia System Operations Corporation	Scott McGough	Negative	COMMENT RECEIVED

3	Great River Energy	Brian Glover	Affirmative	
3	Hydro One Networks, Inc.	David Kiguel	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
3	Kansas City Power & Light Co.	Charles Locke		
3	Kissimmee Utility Authority	Gregory D Woessner	Affirmative	
3	Lakeland Electric	Mace D Hunter		
3	Lane Electric Cooperative, Inc.	Rick Crinklaw		
3	Lincoln Electric System	Jason Fortik	Affirmative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Louisville Gas and Electric Co.	Charles A. Freibert	Abstain	
3	M & A Electric Power Cooperative	Stephen D Pogue	Negative	SUPPORTS THIRD PARTY COMMENTS - (Associated Electric Cooperative)
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Modesto Irrigation District	Jack W Savage		
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Affirmative	
3	Nebraska Public Power District	Tony Eddleman	Negative	SUPPORTS THIRD PARTY COMMENTS - (Nebraska Public Power District (NPPD) comments)
3	New York Power Authority	David R Rivera	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby		
3	NW Electric Power Cooperative, Inc.	David McDowell	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
3	Omaha Public Power District	Blaine R. Dinwiddie		
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative	
3	Owensboro Municipal Utilities	Thomas T Lyons	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC OC's Comment)
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	Pacific Northwest Generating Cooperative	Rick Paschall		
3	Platte River Power Authority	Terry L Baker	Negative	COMMENT RECEIVED
3	PNM Resources	Michael Mertz		
3	Portland General Electric Co.	Thomas G Ward	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Affirmative	
3	Puget Sound Energy, Inc.	Erin Apperson	Affirmative	
3	Raft River Rural Electric Cooperative	Heber Carpenter		
3	Rutherford EMC	Thomas Haire	Negative	COMMENT RECEIVED
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salmon River Electric Cooperative	Ken Dizes		
3	Salt River Project	John T. Underhill	Affirmative	
3	Santee Cooper	James M Poston	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC)
3	Seattle City Light	Dana Wheelock	Affirmative	
				SUPPORTS

3	Seminole Electric Cooperative, Inc.	James R Frauen	Negative	THIRD PARTY COMMENTS - (NRECA)
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
3	South Carolina Electric & Gas Co.	Hubert C Young	Abstain	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L. Donahey		
3	Tennessee Valley Authority	Ian S Grant	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC OC)
3	Tri-County Electric Cooperative, Inc.	Mike Swearingen		
3	Tri-State G & T Association, Inc.	Janelle Marriott	Negative	COMMENT RECEIVED
3	Umatilla Electric Cooperative	Steve Eldrige		
3	Westar Energy	Bo Jones	Affirmative	
3	Wisconsin Electric Power Marketing	James R Keller	Negative	SUPPORTS THIRD PARTY COMMENTS - (Matt Belfuss)
3	Xcel Energy, Inc.	Michael Ibold	Negative	SUPPORTS THIRD PARTY COMMENTS - (Xcel Energy)
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini		
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache		
4	City of Austin dba Austin Energy	Reza Ebrahimian	Affirmative	
4	City of Clewiston	Kevin McCarthy		
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle		
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Negative	SUPPORTS THIRD PARTY COMMENTS - (SPP and NRECA)
4	Consumers Energy	David Frank Ronk	Affirmative	
4	Cowlitz County PUD	Rick Syring	Affirmative	
4	Detroit Edison Company	Daniel Herring	Affirmative	
4	Flathead Electric Cooperative	Russ Schneider	Negative	COMMENT RECEIVED
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Cairo Vanegas	Affirmative	
4	Georgia System Operations Corporation	Guy Andrews	Negative	SUPPORTS THIRD PARTY COMMENTS - (Scott McGough's comments)
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative	
4	Imperial Irrigation District	Diana U Torres		
4	Indiana Municipal Power Agency	Jack Alvey	Negative	COMMENT RECEIVED
4	LaGen	Richard Comeaux		
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	
4	Modesto Irrigation District	Spencer Tacke		
4	Northern California Power Agency	Tracy R Bibb		
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Oklahoma Municipal Power Authority	Ashley Stringer	Negative	SUPPORTS THIRD PARTY COMMENTS - (Southwest Power Pool)
4	Old Dominion Electric Coop.	Mark Ringhausen	Negative	SUPPORTS THIRD PARTY COMMENTS - (NRECA)
4	Pacific Northwest Generating Cooperative	Aleka K Scott		

4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Negative	SUPPORTS THIRD PARTY COMMENTS - (Comments of NRECA)
4	South Mississippi Electric Power Association	Steven McElhaney		
4	Southern Minnesota Municipal Power Agency	Richard L Koch		
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Utility Services, Inc.	Brian Evans-Mongeon	Affirmative	
4	West Oregon Electric Cooperative, Inc.	Marc M Farmer		
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative	SUPPORTS THIRD PARTY COMMENTS - (Matt Beilfuss, We Energies)
4	WPPI Energy	Todd Komplin		
5	AEP Service Corp.	Brock Ondayko		
5	AES Corporation	Leo Bernier		
5	Amerenue	Sam Dwyer	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC OC comments)
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Negative	SUPPORTS THIRD PARTY COMMENTS - (Aeci)
5	Avista Corp.	Edward F. Groce	Abstain	
5	BC Hydro and Power Authority	Clement Ma	Affirmative	
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	Affirmative	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
5	Calpine Corporation	Phillip Porter		
5	City and County of San Francisco	Daniel Mason		
5	City of Austin dba Austin Energy	Jeanie Doty	Affirmative	
5	City of Redding	Paul A. Cummings	Affirmative	
5	City of Tallahassee	Karen Webb	Affirmative	
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative	
5	Cleco Power	Stephanie Huffman	Negative	SUPPORTS THIRD PARTY COMMENTS - (See SPP Comments)
5	Cogentrix Energy, Inc.	Mike D Hirst	Affirmative	
5	Colorado Springs Utilities	Jennifer Eckels	Negative	COMMENT RECEIVED
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Affirmative	
5	Consumers Energy Company	David C Greyerbiehl	Affirmative	
5	Cowlitz County PUD	Bob Essex	Affirmative	
5	Dairyland Power Coop.	Tommy Drea	Affirmative	
5	Deseret Power	Philip B Tice Jr		
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Negative	SUPPORTS THIRD PARTY COMMENTS - (Dominion)
5	Duke Energy	Dale Q Goodwine	Negative	SUPPORTS THIRD PARTY COMMENTS - (Duke Energy)
				SUPPORTS

5	Dynegy Inc.	Dan Roethemeyer	Negative	THIRD PARTY COMMENTS - (SERC OC)
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain	
5	Electric Power Supply Association	John R Cashin		
5	Essential Power, LLC	Patrick Brown		
5	Exelon Nuclear	Michael Korchynsky	Affirmative	
5	ExxonMobil Research and Engineering	Martin Kaufman		
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	
5	Great River Energy	Preston L Walsh	Affirmative	
5	Hydro-Québec Production	Roger Dufresne	Affirmative	
5	Imperial Irrigation District	Marcela Y Caballero		
5	JEA	John J Babik	Affirmative	
5	Kansas City Power & Light Co.	Brett Holland	Negative	COMMENT RECEIVED
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Affirmative	
5	Liberty Electric Power LLC	Daniel Duff	Negative	COMMENT RECEIVED
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative	
5	Luminant Generation Company LLC	Mike Laney		
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Negative	COMMENT RECEIVED
5	New York Power Authority	Wayne Sipperly	Affirmative	
5	NextEra Energy	Allen D Schriver	Affirmative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES, SERC OC, and NRECA)
5	Northern Indiana Public Service Co.	William O. Thompson		
5	Occidental Chemical	Michelle R DAntuono		
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard K Kinas		
5	Pacific Gas and Electric Company	Richard J. Padilla		
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Roland Thiel		
5	Portland General Electric Co.	Matt E. Jastram	Affirmative	
5	PowerSouth Energy Cooperative	Tim Hattaway	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC OC Review Group)
5	PPL Generation LLC	Annette M Bannon	Abstain	
5	PSEG Fossil LLC	Tim Kucey	Affirmative	
5	Public Utility District No. 1 of Lewis County	Steven Grega		
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Affirmative	
5	Puget Sound Energy, Inc.	Tom Flynn	Affirmative	
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative	
5	Salt River Project	William Alkema	Affirmative	
5	Santee Cooper	Lewis P Pierce	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC)
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Negative	SUPPORTS THIRD PARTY COMMENTS - (Endorses NRECA comments)

5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	South Carolina Electric & Gas Co.	Edward Magic		
5	Southeastern Power Administration	Douglas Spencer		
5	Southern California Edison Co.	Denise Yaffe		
5	Southern Company Generation	William D Shultz	Negative	SUPPORTS THIRD PARTY COMMENTS - (Southern Company)
5	Tacoma Power	Chris Mattson	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Affirmative	
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Negative	COMMENT RECEIVED
5	U.S. Army Corps of Engineers	Melissa Kurtz	Negative	SUPPORTS THIRD PARTY COMMENTS - (MRO NSRF)
5	U.S. Bureau of Reclamation	Martin Bauer		
5	Westar Energy	Bryan Taggart	Affirmative	
5	Wisconsin Electric Power Co.	Linda Horn	Negative	SUPPORTS THIRD PARTY COMMENTS - (Matt Beilfuss)
5	WPPI Energy	Steven Leovy		
5	Xcel Energy, Inc.	Liam Noailles	Negative	COMMENT RECEIVED
6	AEP Marketing	Edward P. Cox	Negative	SUPPORTS THIRD PARTY COMMENTS - (Tom Foltz - AEP)
6	Ameren Energy Marketing Co.	Jennifer Richardson	Negative	SUPPORTS THIRD PARTY COMMENTS - SERC OC
6	APS	Randy A. Young		
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa Martin	Affirmative	
6	City of Redding	Marvin Briggs	Affirmative	
6	Cleco Power LLC	Robert Hirchak	Negative	SUPPORTS THIRD PARTY COMMENTS - (See SPP Comments)
6	Colorado Springs Utilities	Lisa C Rosintoski	Negative	COMMENT RECEIVED
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative	
6	Constellation Energy Commodities Group	Donald Schopp	Affirmative	
6	Discount Power, Inc.	David Feldman		
6	Dominion Resources, Inc.	Louis S. Slade	Abstain	
6	Duke Energy	Greg Cecil	Negative	SUPPORTS THIRD PARTY COMMENTS - (Duke Energy)
6	Entergy Services, Inc.	Terri F Benoit		
6	FirstEnergy Solutions	Kevin Query	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	
6	Florida Power & Light Co.	Silvia P Mitchell	Affirmative	
6	Great River Energy	Donna Stephenson	Affirmative	
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	COMMENT RECEIVED
6	Lakeland Electric	Paul Shipps	Affirmative	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Los Angeles Department of Water & Power	Brad Packer	Affirmative	
6	Luminant Energy	Brad Jones	Affirmative	

6	Manitoba Hydro	Daniel Prowse	Affirmative	
6	Modesto Irrigation District	James McFall		
6	Muscatine Power & Water	John Stolley	Affirmative	
6	New York Power Authority	Saul Rojas	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	NRG Energy, Inc.	Alan Johnson		
6	Omaha Public Power District	David Ried		
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Negative	COMMENT RECEIVED
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative	
6	Public Utility District No. 1 of Chelan County	Hugh A. Owen	Abstain	
6	Sacramento Municipal Utility District	Diane Enderby	Affirmative	
6	Salt River Project	Steven J Hulet	Affirmative	
6	Santee Cooper	Michael Brown	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC)
6	Seattle City Light	Dennis Sismaet		
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Negative	SUPPORTS THIRD PARTY COMMENTS - (NRECA's comments)
6	Snohomish County PUD No. 1	William T Moojen	Affirmative	
6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Southern Company Generation and Energy Marketing	John J. Ciza	Negative	COMMENT RECEIVED
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Negative	COMMENT RECEIVED
6	Westar Energy	Grant L Wilkerson	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F Lemmons	Negative	COMMENT RECEIVED - Alice Ireland
8		Roger C Zaklukiewicz	Affirmative	
8		James A Maenner		
8		Edward C Stein		
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Pacific Northwest Generating Cooperative	Margaret Ryan		
8	Utility System Efecencies, Inc. (USE)	Robert L Dintelman		
8	Volkman Consulting, Inc.	Terry Volkman	Negative	SUPPORTS THIRD PARTY COMMENTS - (MRO NSRF)
9	California Energy Commission	William M Chamberlain		
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J. Barney		
9	Oregon Public Utility Commission	Jerome Murray		
9	Public Utilities Commission of Ohio	Klaus Lambeck		
10	Florida Reliability Coordinating Council	Linda Campbell	Abstain	
10	Midwest Reliability Organization	William S Smith	Affirmative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Negative	COMMENT RECEIVED
10	SERC Reliability Corporation	Carter B Edge	Affirmative	
10	Southwest Power Pool RE	Emily Pennel	Affirmative	
10	Texas Reliability Entity, Inc.	Donald G Jones	Affirmative	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Affirmative	



# Non-Binding Poll Results

## Project 2007-02 COM-002-4

Non-Binding Results	
<b>Non-Binding Poll Name:</b>	Project 2007-02 COM-002-4
<b>Poll Period:</b>	1/22/2014 - 2/4/2014
<b>Total # Opinions:</b>	291
<b>Total Ballot Pool:</b>	377
<b>Ballot Results:</b>	77.19% of those who registered to participate provided an opinion or an abstention; 66.81% of those who provided an opinion indicated support for the VRFs and VSLs.

Individual Ballot Pool Results				
Segment	Organization	Member	Opinions	Comments
1	Ameren Services	Kirit Shah	Negative	COMMENT RECEIVED - SERC OC
1	American Electric Power	Paul B Johnson	Abstain	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	ATCO Electric	Glen Sutton	Affirmative	
1	Austin Energy	James Armke	Affirmative	
1	Avista Corp.	Scott J Kinney	Abstain	
1	Balancing Authority of Northern California	Kevin Smith	Abstain	
1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher		
1	Black Hills Corp	Eric Egge	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES Power Marketing and NRECA)
1	Bryan Texas Utilities	John C Fontenot	Affirmative	
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Abstain	
1	Central Electric Power Cooperative	Michael B Bax	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)



1	City of Pasadena	Marco A Sustaita		
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City Utilities of Springfield, Missouri	Jeff Knottek	Negative	SUPPORTS THIRD PARTY COMMENTS - (spp)
1	City Water, Light & Power of Springfield	Shaun Anders		
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Negative	SUPPORTS THIRD PARTY COMMENTS - (See SPP Comments)
1	Colorado Springs Utilities	Paul Morland		
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	CPS Energy	Richard Castrejana	Affirmative	
1	Dairyland Power Coop.	Robert W. Roddy	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash	Affirmative	
1	Deseret Power	James Tucker		
1	Dominion Virginia Power	Michael S Crowley	Abstain	
1	Duke Energy Carolina	Doug E Hils	Negative	SUPPORTS THIRD PARTY COMMENTS - (Duke Energy)
1	Empire District Electric Co.	Ralph F Meyer	Negative	COMMENT RECEIVED
1	Entergy Services, Inc.	Edward J Davis	Negative	COMMENT RECEIVED
1	FirstEnergy Corp.	William J Smith	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative	
1	Florida Power & Light Co.	Mike O'Neil	Affirmative	
1	Gainesville Regional Utilities	Richard Bachmeier	Affirmative	
1	Georgia Transmission Corporation	Jason Snodgrass	Negative	COMMENT RECEIVED
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon		
1	Hydro One Networks, Inc.	Ajay Garg	Affirmative	
1	Hydro-Quebec TransEnergie	Bernard Pelletier		
1	Idaho Power Company	Molly Devine	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Abstain	
1	JEA	Ted Hobson	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)

1	Kansas City Power & Light Co.	Michael Gammon	Negative	COMMENT RECEIVED
1	Keys Energy Services	Stanley T Rzad		
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca		
1	LG&E Energy Transmission Services	Bradley C. Young		
1	Long Island Power Authority	Robert Ganley	Affirmative	
1	Los Angeles Department of Water & Power	John Burnett	Affirmative	
1	Lower Colorado River Authority	Martyn Turner	Abstain	
1	M & A Electric Power Cooperative	William Price	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	Manitoba Hydro	Joe D Petaski	Affirmative	
1	MEAG Power	Danny Dees	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	National Grid USA	Michael Jones	Affirmative	
1	Nebraska Public Power District	Cole C Brodine	Negative	SUPPORTS THIRD PARTY COMMENTS - (SPP)
1	New York Power Authority	Bruce Metruck	Affirmative	
1	New York State Electric & Gas Corp.	Raymond P Kinney		
1	Northeast Missouri Electric Power Cooperative	Kevin White	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	Northeast Utilities	David Boguslawski	Affirmative	
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Negative	COMMENT RECEIVED
1	Ohio Valley Electric Corp.	Robert Matthey		
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Negative	SUPPORTS THIRD PARTY COMMENTS - SPP Stnd Review Team
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Jen Fiegel	Negative	COMMENT RECEIVED
1	Orlando Utilities Commission	Brad Chase		
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan		
1	PECO Energy	Ronald Schloendorn		
1	Platte River Power Authority	John C. Collins	Abstain	
1	Portland General Electric Co.	John T Walker	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Abstain	

1	Public Service Company of New Mexico	Laurie Williams	Affirmative	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Abstain	
1	Public Utility District No. 2 of Grant County, Washington	Rod Noteboom		
1	Puget Sound Energy, Inc.	Denise M Lietz	Affirmative	
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Abstain	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell	Negative	COMMENT RECEIVED
1	Seattle City Light	Pawel Krupa	Abstain	
1	Sho-Me Power Electric Cooperative	Denise Stevens	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	
1	South California Edison Company	Steven Mavis	Affirmative	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Negative	COMMENT RECEIVED
1	Southern Illinois Power Coop.	William Hutchison	Negative	SUPPORTS THIRD PARTY COMMENTS - (NRECA and ACES)
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Tampa Electric Co.	Beth Young		
1	Tennessee Valley Authority	Larry G Akens	Abstain	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Negative	COMMENT RECEIVED
1	Tucson Electric Power Co.	John Tolo	Affirmative	
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Affirmative	
1	Western Area Power Administration	Brandy A Dunn		
1	Xcel Energy, Inc.	Gregory L Pieper		
2	Alberta Electric System Operator	Mark B Thompson		
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Rich Vine	Affirmative	
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Affirmative	
2	Independent Electricity System Operator	Barbara Constantinescu	Negative	COMMENT RECEIVED
2	ISO New England, Inc.	Kathleen Goodman		

2	Midwest ISO, Inc.	Marie Knox	Negative	COMMENT RECEIVED
2	New Brunswick System Operator	Alden Briggs		
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	stephanie monzon	Affirmative	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Affirmative	
3	Alabama Power Company	Richard J. Mandes	Negative	COMMENT RECEIVED
3	Alameda Municipal Power	Douglas Draeger		
3	Ameren Services	Mark Peters	Negative	COMMENT RECEIVED
3	APS	Steven Norris	Affirmative	
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
3	Avista Corp.	Robert Lafferty	Abstain	
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Bonneville Power Administration	Rebecca Berdahl		
3	Central Electric Power Cooperative	Adam M Weber	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
3	Central Lincoln PUD	Steve Alexanderson	Abstain	
3	City of Austin dba Austin Energy	Andrew Gallo	Affirmative	
3	City of Bartow, Florida	Matt Culverhouse	Affirmative	
3	City of Clewiston	Lynne Mila		
3	City of Farmington	Linda R Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoeinghaus		
3	City of Green Cove Springs	Gregg R Griffin		
3	City of Lodi, California	Elizabeth Kirkley		
3	City of Palo Alto	Eric R Scott		
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey		
3	Cleco Corporation	Michelle A Corley	Negative	SUPPORTS THIRD PARTY COMMENTS - (See SPP Comments)
3	Colorado Springs Utilities	Charles Morgan	Negative	SUPPORTS THIRD PARTY COMMENTS - (Colorado Springs Utilities group comments)
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy	Richard Blumenstock	Affirmative	
3	Cowlitz County PUD	Russell A Noble	Affirmative	

3	CPS Energy	Jose Escamilla	Affirmative	
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Entergy	Joel T Plessinger		
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Affirmative	
3	Florida Power Corporation	Lee Schuster	Negative	SUPPORTS THIRD PARTY COMMENTS - (Duke Energy)
3	Georgia System Operations Corporation	Scott McGough	Negative	COMMENT RECEIVED
3	Great River Energy	Brian Glover	Affirmative	
3	Hydro One Networks, Inc.	David Kiguel	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Negative	SUPPORTS THIRD PARTY COMMENTS - (aeci)
3	Kansas City Power & Light Co.	Charles Locke		
3	Kissimmee Utility Authority	Gregory D Woessner	Affirmative	
3	Lakeland Electric	Mace D Hunter		
3	Lincoln Electric System	Jason Fortik	Affirmative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Louisville Gas and Electric Co.	Charles A. Freibert		
3	M & A Electric Power Cooperative	Stephen D Pogue	Negative	SUPPORTS THIRD PARTY COMMENTS - (Associated Electric Cooperative)
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Modesto Irrigation District	Jack W Savage		
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Abstain	
3	Nebraska Public Power District	Tony Eddleman	Negative	SUPPORTS THIRD PARTY COMMENTS - (Southwest Power Pool (SPP) comments)
3	New York Power Authority	David R Rivera	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	NW Electric Power Cooperative, Inc.	David McDowell	Negative	SUPPORTS THIRD PARTY

				COMMENTS - (AECI)
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Owensboro Municipal Utilities	Thomas T Lyons	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC OC's Comments)
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	Platte River Power Authority	Terry L Baker	Abstain	
3	PNM Resources	Michael Mertz		
3	Portland General Electric Co.	Thomas G Ward	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Abstain	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Abstain	
3	Puget Sound Energy, Inc.	Erin Apperson	Affirmative	
3	Rutherford EMC	Thomas Haire	Negative	SUPPORTS THIRD PARTY COMMENTS - (NRECA)
3	Sacramento Municipal Utility District	James Leigh-Kendall	Abstain	
3	Salmon River Electric Cooperative	Ken Dizes		
3	Salt River Project	John T. Underhill	Affirmative	
3	Santee Cooper	James M Poston	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC)
3	Seattle City Light	Dana Wheelock	Abstain	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Negative	SUPPORTS THIRD PARTY COMMENTS - (NRECA)
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Negative	SUPPORTS THIRD PARTY COMMENTS - (AECI)
3	South Carolina Electric & Gas Co.	Hubert C Young	Abstain	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L. Donahey		
3	Tennessee Valley Authority	Ian S Grant	Abstain	
3	Tri-County Electric Cooperative, Inc.	Mike Swearingen		
3	Tri-State G & T Association, Inc.	Janelle Marriott	Negative	COMMENT RECEIVED
3	Westar Energy	Bo Jones	Affirmative	
3	Wisconsin Electric Power Marketing	James R Keller		
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini		
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache		
4	City of Austin dba Austin Energy	Reza Ebrahimian	Affirmative	

4	City of Clewiston	Kevin McCarthy		
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle		
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Negative	SUPPORTS THIRD PARTY COMMENTS - (SPP)
4	Consumers Energy	David Frank Ronk	Affirmative	
4	Cowlitz County PUD	Rick Syring	Affirmative	
4	Detroit Edison Company	Daniel Herring	Affirmative	
4	Flathead Electric Cooperative	Russ Schneider	Negative	COMMENT RECEIVED
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Cairo Vanegas	Abstain	
4	Georgia System Operations Corporation	Guy Andrews	Negative	SUPPORTS THIRD PARTY COMMENTS - (Scott McGough's comments)
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Imperial Irrigation District	Diana U Torres		
4	Indiana Municipal Power Agency	Jack Alvey	Abstain	
4	LaGen	Richard Comeaux		
4	Madison Gas and Electric Co.	Joseph DePoorter	Abstain	
4	Modesto Irrigation District	Spencer Tacke		
4	Northern California Power Agency	Tracy R Bibb		
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Oklahoma Municipal Power Authority	Ashley Stringer	Abstain	
4	Old Dominion Electric Coop.	Mark Ringhausen	Negative	SUPPORTS THIRD PARTY COMMENTS - (NRECA)
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	
4	Sacramento Municipal Utility District	Mike Ramirez	Abstain	
4	Seattle City Light	Hao Li	Abstain	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Negative	SUPPORTS THIRD PARTY COMMENTS - (Comments of NRECA)
4	South Mississippi Electric Power Association	Steven McElhane		
4	Tacoma Public Utilities	Keith Morissette	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative	SUPPORTS THIRD PARTY COMMENTS -

				(Matt Beilfuss, We Energies)
4	WPPI Energy	Todd Komplin		
5	AEP Service Corp.	Brock Ondayko		
5	AES Corporation	Leo Bernier		
5	Amerenue	Sam Dwyer	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC OC comments)
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Negative	SUPPORTS THIRD PARTY COMMENTS - (Aeci)
5	Avista Corp.	Edward F. Groce	Abstain	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	Affirmative	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
5	Calpine Corporation	Phillip Porter		
5	City and County of San Francisco	Daniel Mason	Negative	COMMENT RECEIVED
5	City of Austin dba Austin Energy	Jeanie Doty	Affirmative	
5	City of Redding	Paul A. Cummings	Affirmative	
5	City of Tallahassee	Karen Webb	Affirmative	
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative	
5	Cleco Power	Stephanie Huffman	Negative	SUPPORTS THIRD PARTY COMMENTS - (See SPP Comments)
5	Cogentrix Energy, Inc.	Mike D Hirst	Affirmative	
5	Colorado Springs Utilities	Jennifer Eckels	Negative	COMMENT RECEIVED
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Affirmative	
5	Consumers Energy Company	David C Greyerbiehl	Affirmative	
5	Cowlitz County PUD	Bob Essex	Affirmative	
5	Dairyland Power Coop.	Tommy Drea	Affirmative	
5	Deseret Power	Philip B Tice Jr		
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Abstain	
5	Duke Energy	Dale Q Goodwine	Negative	SUPPORTS THIRD PARTY COMMENTS - (Duke Energy)



5	Dynegy Inc.	Dan Roethemeyer	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC OC)
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain	
5	Electric Power Supply Association	John R Cashin		
5	Essential Power, LLC	Patrick Brown		
5	Exelon Nuclear	Michael Korchynsky	Affirmative	
5	ExxonMobil Research and Engineering	Martin Kaufman		
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	
5	Great River Energy	Preston L Walsh	Affirmative	
5	Hydro-Québec Production	Roger Dufresne	Affirmative	
5	Imperial Irrigation District	Marcela Y Caballero		
5	JEA	John J Babik	Affirmative	
5	Kansas City Power & Light Co.	Brett Holland	Negative	COMMENT RECEIVED
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Affirmative	
5	Liberty Electric Power LLC	Daniel Duff	Negative	COMMENT RECEIVED
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative	
5	Luminant Generation Company LLC	Mike Laney		
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Negative	SUPPORTS THIRD PARTY COMMENTS - (SPP)
5	New York Power Authority	Wayne Sipperly	Affirmative	
5	NextEra Energy	Allen D Schriver	Affirmative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES, SERC OC, and NRECA)
5	Northern Indiana Public Service Co.	William O. Thompson		
5	Occidental Chemical	Michelle R DAntuono	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard K Kinan		
5	Pacific Gas and Electric Company	Richard J. Padilla		
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Roland Thiel		

5	Portland General Electric Co.	Matt E. Jastram	Affirmative	
5	PowerSouth Energy Cooperative	Tim Hattaway		
5	PPL Generation LLC	Annette M Bannon	Abstain	
5	PSEG Fossil LLC	Tim Kucey	Abstain	
5	Public Utility District No. 1 of Lewis County	Steven Grega		
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Affirmative	
5	Puget Sound Energy, Inc.	Tom Flynn	Affirmative	
5	Sacramento Municipal Utility District	Bethany Hunter	Abstain	
5	Salt River Project	William Alkema	Affirmative	
5	Santee Cooper	Lewis P Pierce	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC)
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Negative	SUPPORTS THIRD PARTY COMMENTS - (Endorses NRECA comments)
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	South Carolina Electric & Gas Co.	Edward Magic		
5	Southeastern Power Administration	Douglas Spencer		
5	Southern California Edison Co.	Denise Yaffe		
5	Southern Company Generation	William D Shultz	Negative	SUPPORTS THIRD PARTY COMMENTS - (Southern Company)
5	Tacoma Power	Chris Mattson	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Affirmative	
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Abstain	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Negative	SUPPORTS THIRD PARTY COMMENTS - (MRO NSRF)
5	U.S. Bureau of Reclamation	Martin Bauer		
5	Wisconsin Electric Power Co.	Linda Horn		
5	WPPI Energy	Steven Leovy		
5	Xcel Energy, Inc.	Liam Noailles	Negative	
6	AEP Marketing	Edward P. Cox	Abstain	
6	Ameren Energy Marketing Co.	Jennifer Richardson	Negative	SUPPORTS THIRD PARTY COMMENTS - SERC OC
6	APS	Randy A. Young		
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa Martin	Affirmative	

6	City of Redding	Marvin Briggs	Affirmative	
6	Cleco Power LLC	Robert Hirschak	Negative	SUPPORTS THIRD PARTY COMMENTS - (See SPP Comments)
6	Colorado Springs Utilities	Lisa C Rosintoski	Negative	COMMENT RECEIVED
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative	
6	Duke Energy	Greg Cecil	Negative	SUPPORTS THIRD PARTY COMMENTS - (Duke Energy)
6	Entergy Services, Inc.	Terri F Benoit		
6	FirstEnergy Solutions	Kevin Querry	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	
6	Florida Power & Light Co.	Silvia P Mitchell	Affirmative	
6	Great River Energy	Donna Stephenson	Affirmative	
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	COMMENT RECEIVED
6	Lakeland Electric	Paul Shipps	Affirmative	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Los Angeles Department of Water & Power	Brad Packer	Affirmative	
6	Luminant Energy	Brad Jones	Affirmative	
6	Manitoba Hydro	Daniel Prowse		
6	Modesto Irrigation District	James McFall		
6	Muscatine Power & Water	John Stolley	Affirmative	
6	New York Power Authority	Saul Rojas	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	NRG Energy, Inc.	Alan Johnson		
6	Omaha Public Power District	David Ried		
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Abstain	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Abstain	
6	Sacramento Municipal Utility District	Diane Enderby	Abstain	
6	Salt River Project	Steven J Hulet	Affirmative	
6	Santee Cooper	Michael Brown	Negative	SUPPORTS THIRD PARTY COMMENTS - (SERC)
6	Seattle City Light	Dennis Sismaet		
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Negative	SUPPORTS THIRD PARTY COMMENTS - (NRECA's comments)
6	Snohomish County PUD No. 1	William T Moojen	Affirmative	
6	South California Edison Company	Lujuanna Medina	Affirmative	

6	Southern Company Generation and Energy Marketing	John J. Ciza	Negative	COMMENT RECEIVED
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Abstain	
6	Westar Energy	Grant L Wilkerson		
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
8		Edward C Stein		
8		James A Maenner		
8		Roger C Zaklukiewicz	Affirmative	
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Utility Services, Inc.	Brian Evans-Mongeon		
8	Utility System Efeciencias, Inc. (USE)	Robert L Dintelman		
8	Volkman Consulting, Inc.	Terry Volkman	Negative	SUPPORTS THIRD PARTY COMMENTS - (MRO NSRF)
9	California Energy Commission	William M Chamberlain		
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative	
9	Public Utilities Commission of Ohio	Klaus Lambeck		
10	Florida Reliability Coordinating Council	Linda Campbell	Abstain	
10	Midwest Reliability Organization	William S Smith	Affirmative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Negative	COMMENT RECEIVED
10	SERC Reliability Corporation	Carter B Edge	Affirmative	
10	Southwest Power Pool RE	Emily Pennel	Affirmative	
10	Texas Reliability Entity, Inc.	Donald G Jones	Affirmative	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Abstain	

**Individual or group. (71 Responses)**

**Name (48 Responses)**

**Organization (48 Responses)**

**Group Name (23 Responses)**

**Lead Contact (23 Responses)**

**IF YOU WISH TO EXPRESS SUPPORT FOR ANOTHER ENTITY'S COMMENTS WITHOUT ENTERING ANY ADDITIONAL COMMENTS, YOU MAY DO SO HERE. (18 Responses)**

**Comments (71 Responses)**

**Question 1 (35 Responses)**

**Question 1 Comments (53 Responses)**

**Question 2 (37 Responses)**

**Question 2 Comments (53 Responses)**

**Question 3 (38 Responses)**

**Question 3 Comments (53 Responses)**

**Question 4 (53 Responses)**

**Question 4 Comments (53 Responses)**

Individual
Molly Devine
Idaho Power Company
Yes
Yes
Yes
No
Group
SERC OC Review Group
Stuart Goza
No
The SERC OC Review Group appreciates the efforts that the SDT has made on this draft standard and the flexibility demonstrated to address the constantly evolving feedback received. We do not believe the proposed requirements and measures clearly delineate the differences in the actions required to be taken by the issuer and recipient depending upon

whether or not the Operating Instruction is being given to alleviate or avoid an Emergency.

Applicability Section: 4.1.2 Distribution Provider: We understand that it would be difficult to remove the Distribution Provider from the applicability of COM-002-4 per FERC's directives. Therefore, we are respectfully recommending an alternative that parallels the recently FERC approved CIP-003-5 that we believe accurately captures those DPs that receive Operating Instructions associated with the reliability of the BES. The following alternative to clarify those Distribution Providers that have an impact on the BES is recommended: 4.1.2 Distribution Provider that:

4.1.2.1 Has capability to shed 300 MW or more of load in a single manually initiated operation.

4.1.2.2 Has switching obligations related to Any Cranking Path and group of Elements meeting the initial switching requirements from a Blackstart Resource up to and including the first interconnection point of the starting station service of the next generation unit(s) to be started.

General Requirement Comment: The SDT is respectfully requested to review the Requirements to ensure that it is clear that "during an Emergency" is only applicable to the entities involved.

Requirement 1: The proposed standard still contains requirements that mandate the use of, and training to include, 3 part communications during issuance of all Operating Instructions, including those issued during non-Emergency situations. While we agree that the SDT has stated in its Rationale and Technical Justification document that the proposed measures don't specifically require that auditors verify compliance of this for the requirements (and associated measures), a strict read leads to a different conclusion. We are concerned that, absent a requirement that the issuer make a definitive statement as to whether an Operating Instruction is being issued to alleviate or avoid an Emergency, neither the recipient (during) nor an auditor (after) would be able to make such determination. We respectfully recommend modifying requirement 1 so that it applies to all Operating Instructions but requires that those being issued to alleviate or avoid an Emergency be specifically identified as such and that the issuer explicitly request recipient confirm their understanding through use of 3 part communication. To accomplish this we propose a new R1.1. The current R1.1 through R1.6 would be renumbered R1.2 through R1.7

Current R1 language: R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum: [Violation Risk Factor: Low][Time Horizon: Long-term Planning]

1.1. Require its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.

Proposed R1 language: R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum: [Violation Risk Factor: Low][Time Horizon: Long-term Planning]

Proposed R1.1: ADD: Require that its operating personnel identify, at the time of issuance, when the Operating Instruction is being issued to alleviate or avoid an Emergency

R1.2: Based on the SDT comments and zero tolerance for Emergency communications we propose a new bullet be added to R1.2.

Current R1.2 language: Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions:

- Confirm the receiver's response if the repeated information is

correct. • Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver. • Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver. Proposed R1.2: Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions: • Confirm the receiver's response if the repeated information is correct. • Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver. • Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver. • ADD: Request recipient use 3 part communication when the Operating Instruction is being issued to alleviate or avoid an Emergency R1.3: We respectfully recommend a word change (correct to understood) in 1.3, bullet 1. Current 1.3 sub-bullet 1 follows: Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct. Proposed 1.3, sub-bullet 1: Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was understood. Requirement R2: This group feels that R2 should be eliminated as redundant with the systematic approach to training requirements of PER-005 (Operations Personnel Training) which are applicable to all BAs, RCs & TOPs. Communications protocols must be included in each company's specific reliability-related task list. Inherent in systematic approach is initial training on all reliability-related tasks, since each task must be analyzed as to its Difficulty, Importance & Frequency (DIF analysis). As a result of the DIF analysis, systematic approach would require that communications protocols have both initial and continuing training. Requirement R3: We agree with the SDT concern that Operating Personnel should not be placed in a position to receive an oral two-party, person-to-person Operating Instruction prior to being trained. This Group understands that OPCP SDT included an initial training requirement in the standard in response to the NERC Board of Trustees' resolution, which directs that a training requirement be included in the COM-002-4 standard. We would like to recommend that the term "initial" be removed so not to give the impression that training is a one-time effort. Current R3 language: Each Distribution Provider and Generator Operator shall conduct initial training for each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction to either: [Violation Risk Factor: Low][Time Horizon: Long-term Planning] Proposed R3 language: Each Distribution Provider and Generator Operator shall conduct training for each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction to either: [Violation Risk Factor: Low][Time Horizon: Long-term Planning] Requirements R5, R6, and R7: This Group feels that the relationship between R1, R5, R6, and R7 requires further clarification to remove possible opportunities for different interpretations which could result in uncertainty as to whether the Operating Instruction is being issued to alleviate or avoid an Emergency. The concern centers on the absence of a requirement that the issuer make a definitive statement as to whether an Operating Instruction is being issued to alleviate or avoid an Emergency, neither the recipient (during) nor an auditor (after) would be able to make such determination. This is the reason for the

R1 modifications. If the recommended R1 modifications are accepted then R5, R6, and R7 should be considered for deletion (incorporating specific items deemed necessary by the SDT as bullets or sub-requirements of R1). Measures: Measure 1: Base on the Group's recommendations above we propose for consideration the following modification to Measure 1: Current M1 language: Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1. Proposed M1 language: Revised M1: Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1. For each Operating Instruction issued to alleviate or avoid an Emergency; entity shall provide evidence that it identified such at time Operating instruction was issued (R1.1) and requested recipient use of 3 part communication (R1.2). Measure 2,5,6,and 7: If our recommendations are accepted then Measures 2, 5, 6, and 7 should be deleted incorporating specific items deemed necessary by the SDT as bullets or sub-requirements of R1 Measure 3: To align M3 with our R3 recommendation we propose deleting the word "initial". Current M3 language: Each Distribution Provider and Generator Operator shall provide its initial training records for its operating personnel such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R3. Proposed M3 language: Each Distribution Provider and Generator Operator shall provide its training records for its operating personnel such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R3.

We are concerned that this draft goes further than mentioned in the blackout recommendation that NERC should work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations. This group feels that the modifications recommended will add further clarity in communications and work towards the goal identified in the Black Report recommendation number 26.

We believe that the VRFs/VSLs should be modified to better reflect the stated intent of the NERC Board of Trustees November 19th, 2013 Resolution, which is to enforce 'zero tolerance' only for failure to use 3 part communications by the issuer or recipient of an Operating Instruction when it is issued to alleviate or avoid an Emergency. VSL for R1: Modify Severe to include any instance where entity either (1) failed to identify, at the time of issuance, that the Operating Instruction is being issued to alleviate or avoid an Emergency or (2) failed to request recipient use 3 part communication when the Operating Instruction was issued to alleviate or avoid an Emergency Current VSL for R1 language: The responsible entity did not include Requirement R1, Part 1.2 in its documented communications protocols OR The responsible entity did not include Requirement R1, Part 1.3 in its documented communications protocols OR The responsible entity did not develop any documented communications protocols as required in Requirement R1. Proposed VSL for R1 language: Moderate - The responsible entity did not require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise, as required in Requirement R1, Part 1.2. An alternate language may be used for internal operations. Severe - The responsible entity did not include Requirement R1, Part 1.1, in its



documented communications protocols OR Requirement R1, Part 1.3 in its documented communications protocols OR The responsible entity did not include Requirement R1, Part 1.4 in its documented communications protocols OR The responsible entity did not develop any documented communications protocols as required in Requirement R1 OR the responsible entity either (1) failed to identify, at the time of issuance, that the Operating Instruction is being issued to alleviate or avoid an Emergency or (2) failed to request recipient use 3 part communication when the Operating Instruction was issued to alleviate or avoid an Emergency. VSL for R3: This Group recommends that the “High VSL for R3” be deleted. The reason for the High VSL deletion is to align with the concept that the standard should provide that compliance with the standard should only entail assessing whether an entity has utilized their documented communications for Operating Instructions that are not issued during an Emergency. VSL for R2, R5, R6, and R7: If the SDT modifies the requirements based on this Group’s recommendation VSL for R2, R5, R6, and R7 can be deleted except for any sections that are applicable in revised requirements.

Yes

The SERC OC Review Group understands the position that the SDT is working in and greatly appreciates the patience and dedication shown in developing this draft standard. Thank you. The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Review Group only and should not be construed as the position of the SERC Reliability Corporation, or its board or its officers.

Group

North American Generator Forum - Standards Review Team (NAGF-SRT)

Allen Schriver

Yes

Yes

1) R1.3 and R3 should also allow the receiver of an Operating Instruction to respond by explaining that a requested action cannot be performed (e.g., due to safety, equipment, regulatory, or statutory requirements as described in TOP-001 R3 and IRO-001 R8). The requirement to either repeat or request that the instruction be reissued does not account for the realistic situation that an entity may not be able to perform an Operating Instruction. 2) Specific to R.6, consideration should be given to revise the verbiage from, “during an Emergency” to “identified by the sender as constituting an Emergency directive.” The rationale for the recommendation is offered to provide clarity to the Requirement, as it is anticipated that there will be cases when it is not clear the Operating Instruction is associated with an Emergency. Additionally, the definition of “Emergency” in the NERC Glossary is broad and consequently it may be difficult, at times, to determine which inputs are subject to COM-002-4 requirements, especially if the TO or TOP calls a plant operator

directly rather than going through the respective dispatchers. Note: On the 1/17/14 COM-002-4 SDT webinar the question was asked, how a DP or GOP would know that an Operating Instruction occurred during an Emergency. The drafting team stated that after every Operating Instruction the DP should call its TOP to determine if the Operating Instruction occurred during an Emergency. The NAGF-SRT once again reiterates that it would be more efficient and the industry would benefit as a whole, if the sender of the Operational Instruction, states the instruction is associated with an Emergency. 3) Specific to Measures M5 and M6, which contain language associated with the issuer and the recipient both maintaining evidence of two-party communication respectively. It is recommended that M5 be revised such that the all associated evidence is maintained by the issuer and M6 be deleted in its entirety. Consolidating the evidence requirements would benefit the industry by reducing duplication of efforts, associated with maintaining evidence by different entities, in support of the same requirement.

Individual

Colin Jack

Dixie Power

Agree

NRECA

Individual

Paul Titus

Northern Wasco County PUD

Agree

NRECA

Group

Associated Electric Cooperative, Inc. - JRO00088

David Dockery

Agree

NRECA and SERC OC Review Group

Group

Salt River Project

Joshua Andersen

Yes

Yes

Yes

No

Individual
Kenn Backholm
Public Utility District No.1 of Snohomish County
Yes
Yes
Yes
Yes
While the Public Utility District No.1 of Snohomish County supports this draft of COM-002-4, we see an issue with R2 and R3 of this standard. These requirements both deal with entities conducting training for its personnel, and feel it would be more appropriate if they were addressed in the PER family of standards. The Public Utility District No.1 of Snohomish County also supports the comments submitted by the SERC OC Review Group. Thank you very much.
Individual
Jonathan Appelbaum
The United Illuminating Company
No
No
Yes
PER-005-2 introduced the concept of a Transmission Owner local control center that issues and receives instructions independent of a TOP, RC or BA. COM-002-4 should apply to Transmission Owners.
Individual
Daniel Duff
Liberty Electric Power LLC
Yes
Yes

No
The "Moderate" VSL for R6 should be modified in the same manner as the "Severe" VSL. In addition to repeating the Directive, the RE needs to fail to take action as directed. Suggest the following language: "AND the RE failed to take action as requested by the issuer of the Operating Instruction".
Yes
COM-002 remains a zero defect standard, and there is no FERC directive to provide a zero defect standard in response to either blackout recommendation 26 or Paragraph 535 of Order 693. Further, there is no requirement for the issuer of an Operating Instruction in an Emergency to indicate the Emergency status. The webinar response to queries over the lack of Emergency Status Indication was to suggest the RE "call and inquire" if the OI was in fact a Directive. This adds to the regulatory burden while offering zero benefit. Identification of an Emergency has positive effects far beyond three part communications. The realization of risk to the BES should create a heightened sense of urgency among all parties. The standard must require announcement of Emergency status in order to penalize RE's for actions which are not violations in a non-Emergency situation.
Group
Northeast Power Coordinating Council
Guy Zito
No
The proposed Requirements and Measures do not clearly delineate the differences in the actions required to be taken by the issuer and recipient depending upon whether or not the Operating Instruction is being given to alleviate or avoid an Emergency.
No
We do not agree that the blackout recommendation calls for the use of 3 part communication for every Operating Instruction and note that neither the NERC Board nor the SDT has provided any evidence that indicates a direct correlation between errors due to communication problems and events that adversely impact the BES. The justification for reliability standard Requirements that require 3 part communication for every Operating Instruction, and having to enforce compliance with the same, is not supported.
No
Regarding Requirement R4, the LOW VSL suggests that an entity is assigned a LOW VSL if assessments are conducted more than 12 months apart. There is no maximum or "cap" to the delayed assessment, and hence an entity may be 18, 19 or more months late in conducting the next assessment. In other standards this could well be assessed a MEDIUM or HIGH or even a SEVERE violation, depending on the time period that an entity failed the 12 month update requirement. Absent this "cap", or staggered caps, the proposed HIGH and SEVERE VSLs can only be assessed based on whether or not there was ever an assessment, even if the last assessment was done 3 or 4 years prior to an audit. This is inconsistent with the general guideline for VSLs. Regarding Requirement R5, the MEDIUM VSL and SEVERE VSL

are identical, except the latter has a condition that is associated with the impact of the violation. This is inconsistent with the intent of the VSL, which is to assess the “extent to which” the requirement was violated, not the impact of the violation which should be captured by the VRF. This is also inconsistent with the VSL principle and guideline. Suggest removing the MEDIUM VSL, and the condition under the proposed SEVERE VSL be: “AND instability, uncontrolled separation, or cascading failures occurred as a result.” The same comments apply for Requirements R6 and R7. We believe that the VRFs/VSLs should be modified to better reflect the stated intent of the NERC Board of Trustees November 19, 2013 Resolution, which is to enforce ‘zero tolerance’ only for failure to use 3 part communications by the issuer or recipient of an Operating Instruction when it is issued to alleviate or avoid an Emergency.

Yes

Regarding Part 1.4, it must be considered that some ISOs issue multiple-party burst Operating Instruction to Generator Operators through electronic means. Regarding Part 1.6, the requirement is vague and needs to be clarified for Registered Entities to know how to comply. How would one “specify the nomenclature” system wide? Regarding Requirements R2 and R3, those “training” requirements aren’t necessary. Responsible Entities must adhere to the Requirements of NERC Standards and how they accomplish this should not be dictated by a standard’s requirement. Under RAI principles, NERC and Regions can determine what type of monitoring is appropriate for Responsible Entities’ compliance with the new COM Standard based on the quality of their Training programs. This would further support reliability by changing the requirement from a one-time audit (i.e., initial training) to an ongoing assessment. The proposed standard still contains requirements that mandate the use of, and training to include 3 part communications during issuance of all Operating Instructions, including those issued during non-Emergency situations. As stated in the Rationale and Technical Justification document the proposed Measures and RSAW don’t specifically require that auditors verify compliance of this for the Requirements (and associated Measures), however a strict read leads us to a different conclusion. Under the RSAW for R1 it states that the entity shall provide its documented communications protocols developed for this requirement and the auditor shall review the documented communications protocols provided by the entity and ensure they address the Parts of R1 (including the use of 3 part communications). The RSAW contains similar actions relative to Requirements R2 and R3 in that the entity is to provide evidence consisting of agendas, learning objectives, or course materials that it provides pursuant to these requirements. Given this, an auditor can enforce to a ‘zero defect tolerance’ if the auditor chooses to do so, and in fact would argue that an audit would be deficient if it failed to validate whether the learning objective included ensuring that 3 part communication was used during issuance or receipt of each Operating Instruction. Suggest that the training requirements contained with R2 and R3 be removed and placed within the PER-005 Operations Personnel Training standard. PER-005 should be the home of all system operator related training requirements. There are no clear and concise differences between Requirements R1, R5 and R6. This creates uncertainty as to whether the Operating Instruction is being issued to alleviate or avoid an Emergency. Absent a Requirement that the issuer make a definitive statement as to

whether an Operating Instruction is being issued to alleviate or avoid an Emergency, neither the recipient (during) nor an auditor (after) would be able to make such determination. Suggest revising Requirement R1 so that it applies to all Operating Instructions, but requires that those being issued to alleviate or avoid an Emergency be specifically identified as such and that the issuer explicitly request that the recipient confirm their understanding through use of 3 part communication. Remove Requirements R5, R6 and R7 (incorporating items deemed necessary by the SDT as bullets or Parts of R1). Suggested rewording for Part 1.1: 1.1. Require that its operating personnel identify, at the time of issuance, that the Operating Instruction is being issued to alleviate or avoid an Emergency. • Request recipient use 3 part communication when the Operating Instruction is being issued to alleviate or avoid an Emergency. Revise M1, VRF/VSLs and RSAW so that strict compliance with use of 3 part communication is only applied when an Operating Instruction is issued to alleviate or avoid an Emergency as identified by the issuer at the time of issuance. Suggested revisions to M1: M1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1. For each Operating Instruction issued to alleviate or avoid an Emergency; entity shall provide evidence that it identified such at time Operating instruction was issued (R1.1) and requested recipient use of 3 part communication (R1.2). VSL for R1 – modify Severe to include any instance where entity either (1) failed to identify, at the time of issuance, that the Operating Instruction is being issued to alleviate or avoid an Emergency or (2) failed to request recipient use 3 part communication when the Operating Instruction was issued to alleviate or avoid an Emergency Measure M4 requires compliance demonstration beyond Requirement R4. Specifically, entities must provide evidence that appropriate corrective action was taken for all instances where an operating personnel’s non-adherence to the protocols developed in Requirement R1 is the sole or partial cause of an Emergency. The format of the standard should be changed to conform with the current NERC direction—the measures get listed with the associated requirement, and the rationale get included in the standard, not a separate document.

Individual
Matthew P Beilfuss
Wisconsin Electric Power Company
Yes
Yes
Yes
Yes
The proscribed training requirements embedded in R2 and R3 should be removed. The existence and usage of protocols should be the primary focus of the standard and regulatory

review, creating a training requirement within the standard shifts focus to training content and administration. Additionally, PER-005-1 requires the Balancing Authority, Reliability Coordinator, and Transmission Operator to have a systematic approach to training (SAT). The adoption and management of a SAT would presumably include communications protocols as a task for potential training. The current draft version of PER-005-2 includes a similar requirement for a SAT applicable to the Generator Operator. The annual assessment and corrective action process defined in R4 should be made applicable to Operating Instructions during an Emergency. Although the NERC Glossary of terms provides a definition of Emergency, two reasonable people looking at a situation can disagree as to when an Operating Instruction is issued during an Emergency. Creating a zero defect standard applicable to inherently ambiguous situations shifts focus from the adoption of communication protocols to discussion of when an Operating Instruction is issued during an Emergency. During an entities annual assessment process, the focus would be on classification of an Emergency instead of process improvement for communications. An alternate approach would be to draft the standard so as to require the explicit identification of an Operating Instruction and/or Emergencies so as to remove the ambiguity. Finally, the definition of Operating Instruction references a command issued by operating personnel, without sufficiently defining operating personnel.

Individual

Thomas Borowiak

Citizens Electric Corporation

Agree

National Rural Electric Cooperative Association(NRECA)

Individual

Patricia Metro

NRECA

No

NRECA appreciates the efforts of the drafting team in working to address the FERC directives and NERC BOT Resolution November 2013, but does not believe that COM-002-4 accurately reflects the proper applicability for entities that have an impact on the operations of the Bulk Electric System in normal and emergency conditions. NRECA understands that the inclusion of Distribution Providers to this standard stems from various FERC directives, but because of the relationship of Distribution Providers with Transmission Operators as identified in NERC's functional model in being only a receiver of instructions to implement voltage reduction or to shed load to prevent the failure of the BES, or related to restoration activities as coordinated with the Transmission Operator; the TOP is ultimately responsible for the proper execution of the instructions, continues to recommend that Distribution Providers be removed from the applicability of COM-002-4. Knowing that it will be difficult to remove the Distribution Provider from the applicability of COM-002-4 per FERC's directives, NRECA is recommending an alternative that parallels the recently FERC approved CIP-003-5 that we

believe accurately captures those DPs that receive Operating Instructions associated with the reliability of the BES. The following alternative to clarify those Distribution Providers that have an impact on the BES is recommended: 4.1.2 Distribution Provider that: 4.1.2.1 Has capability to shed 300 MW or more of load in a single manually initiated operation. 4.1.2.2 Has switching obligations related to Any Cranking Path and group of Elements meeting the initial switching requirements from a Blackstart Resource up to and including the first interconnection point of the starting station service of the next generation unit(s) to be started. NRECA proposes to recommend an “affirmative” ballot to its members if the applicability is modified in the next posting as provided.

No

See response to Question 1

No

Will need to be modified dependent on applicability modifications.

Yes

NRECA suggests that the “assess adherence and assess effectiveness” language in R4 be removed from COM-002-4. This language is similar to the “Identify, Assess and Correct (IAC)” language that was included in the CIP V5 standards. The removal or modification of this language was included in the Final Rule on NERC CIP V5 Standards (Order No. 791). FERC stated that IAC language and concepts would be best addressed in the NERC compliance processes, such as through the NERC Reliability Assurance Initiative (RAI), rather than standards requirements.

Individual

Howard Hughes

SLEMCO

Agree

NRECA

Individual

Michelle R D'Antuono

Ingleside Cogeneration LP

Yes

Ingleside Cogeneration LP ("ICLP") believes that the requirements that govern directives issued during the course of an Emergency remain consistent with those in-place today. In addition, the latest draft of COM-002-4 allows oversight of all other Operating Instructions – although to a lesser degree. This is a good combination of compliance strategies that retains focus on the important communications while adding attention on daily discussions which may have impact on the BES if improperly transacted.

Yes

COM-002-4 adds requirements that call for protocols that add precision to operations communications as called for in both documents. However, in the latest draft, ICLP believes



the compliance approach has been modified in a manner that ensures that routine Operating Communications are conducted using a common protocol – but do not involve significant tracking resources. In addition, the use of operator training and regular review of its effectiveness is consistent with other NERC standards related to operator capabilities. As it is written now, CIP-002-4 introduces new expectations related to routine communications, but only puts incremental pressures on existing processes and equipment necessary to address them.

Yes

Yes

ICLP would like to see the innovative approach that the drafting team used to develop COM-002-4 applied to other standards as well. The issue that continues to arise is not so much whether mandatory requirements are based upon sound reliability principles, but how they can be reasonably enforced. In this case, it is clear that many entities do not have the tools or resources to examine every Operating Instruction in detail in order to assure 100% compliance with a rigorous communication protocol. Conversely, training and retention programs are common – and have proven to be an effective means to drive consistent Operator performance.

Individual

Jack Stamper

Clark Public Utilities

Yes

Yes

Yes

Yes

For the purposes of Requirements 5 and 6, Clark believes it should be an obligation of the issuer of Operating Instruction given during an emergency to identify it as an Emergency Operating Instruction. It should not an obligation of the reciever to determine after-the-fact whether an Operating Instruction is an Emergency or not. All Operating Instructions issued by a BA, RC, or TOP should be regarded with importance but a specification by the issuer that the instruction is in response to an Emergency will alert the receiver that a particular Operating Instruction action requirement has a role in the overall reliability of the BES resulting in a higher level of BES reliability.

Individual

Josh Dellinger

Glacier Electric Cooperative

Agree
NRECA
Individual
russ schneider
flathead co-op
Agree
Flathead supports the comments submitted by NRECA
Individual
Oliver Burke
Entergy Transmission
Agree
SERC OC Review Group
Individual
Donald E Nelson
Commonwealth of Massachusetts Department of Public Utilities
Agree
Northeast Power Coordinating Council (NPCC)
Individual
Thomas M. Haire
Rutherford EMC
Agree
NRECA
Individual
Venona Greaff
Occidental Chemical Corporation
Agree
Ingleside Cogeneration LP
Group
NERC Standards Review Forum
Russel Mountjoy
Yes
No
As it has been stated in previous comments, Recommendation 26 from the 2003 Blackout report is about situational awareness and who and what entities need to be contacted during emergencies. It is not about what System Operators should say in their conversations.
No

R1, The NSRF does not understand why there is a Severe VSL for normal everyday Operating Instructions. This Severe VSL is imposing the “zero defect” language that the industry is trying to move away from. We understand if there were no protocols as in “The responsible entity did not develop any documented communications protocols as required in Requirement R1”, but not the sub requirements of R1.2 and R1.3. The highest VSL should be High. Save the Severe VSL for R5, R6, and R7.

Yes

1. Per section one of this document, the SDT states: The Project 2007-02 SDT removed the term “Reliability Directive” in order to avoid complications that may result from the Notice of Proposed Rulemaking issued by the Federal Energy Regulatory Commission on November 21, 2013 proposing to remand the definition of “Reliability Directive.” But within the latest Implementation Plan, there still is the prerequisite of approving the term “Reliability Directive”. Please update whichever documentation that should be corrected in order to provide the industry with accurate information so that we can determine if this Standard supports the reliability of the BES.

Individual

William H. Chambliss

Virginia State Corporation Commission, Member OC

Yes

Yes

Yes

No

Group

Colorado Springs Utilities

Kaleb Brimhall

Southwest Power Pool

No

We do not agree with the following VSLs: 1) R4: The LOW VSL suggests that an entity is assigned a LOW VSL if assessments are conducted more than 12 months apart. There is no max or “cap” to the delayed assessment and hence an entity may be 18, 19 or more months late in conducting the next assessment. In other standards, this could well be assessed a MEDIUM or HIGH or even a SEVERE violation, depending on the time period that an entity failed the 12 month update requirement. Absent this “cap”, or staggered caps, the proposed

HIGH and SEVERE VSLs can only be assessed based on whether or not there was ever an assessment, even the last assessment was done 3 or 4 years prior to an audit. This is inconsistent with the general guideline for VSLs. 2) R5: The MEDIUM VSL and SEVERE VSL are identical, except the latter has a condition that is associated with the impact of the violation. This is inconsistent with the intent of the VSL, which is to assess the “extent to which” the requirement was violated, not the impact of the violation which should be captured by the VRF. This is also inconsistent with the VSL principle and guideline. We suggest removing the MEDIUM VSL, and the condition under the proposed SEVERE VSL that: “AND Instability, uncontrolled separation, or cascading failures occurred as a result.” 3) R6: Same comments as in R5. 4) R7: Same comments as in R5.

Yes

Comments: 1. R1.4. – [Documented communications protocols for its operating personnel that issue and receive Operating Instructions shall, at a minimum] Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. • Some ISO’s issues multiple-party burst Operating Instruction to Generator Operators through electronic means Associated real-time requirement: R7. Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency shall confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. Comment: The SRC does not believe this requirement is necessary for reliability. Moreover, the Standard Drafting Team has not provided any , nor have we been made aware of the substantiated rationale for keeping this Requirement except that the SDT believes is it necessary. 2. R1.6. – [Documented communications protocols for its operating personnel that issue and receive Operating Instructions shall, at a minimum] Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction. Comment: This requirement is vague and needs to be clarified for Registered Entities to know how to comply with it; how would one “specify nomenclature” system-wide? Comment: This requirement was dropped from TOP-002-2a, requirement 18. Communication on transmission equipment must be equipment specific. Nomenclature should not be used, rather entities should always be correctly communicating using the unique and specific equipment identifiers. Adding nomenclature will reduce not improve reliability. 3. R2. and R3. – ...”shall conduct initial training for each of its operating personnel ...” Comment: The SRC does not believe a training Requirement is necessary; Responsible Entities must adhere to the Requirements of NERC Standards and how they accomplish this should not be dictated by a Standard Requirement. Under RAI principles, NERC and Regions can determine what type of monitoring is appropriate of Responsible Entities’ compliance with the new COM Standard based on the quality of their Training programs. This would further support reliability by changing the requirement from a one-time audit (i.e., initial training) to an ongoing assessment.

Individual

Shirley Mayadewi
Manitoba Hydro
Yes
Yes
Yes
Although Manitoba Hydro agrees with the VRFs and VSLs for the Requirements, we have the following comments: 1) VSLs, R2 – the term ‘individual operator’ is used in this VSL where throughout the standard operating personnel is used. 2) VSLs, R5 – text of VSLs refer to Requirement R6 instead of R5. 3) VSLs, R6 – inconsistent drafting as the words ‘that received an oral, .....’ is not included here, but does appear in the VSL for R7. 4) VSLs, R5, R6, R7 – the final criteria for a Severe VSL is for a specific outcome of non-compliance which does not seem appropriate when measuring compliance. Depending on the outcome of the circumstances, the VSL may be High or Severe. The outcome itself is not something that is related to the entity’s compliance with the standard. The entity may take the same action and comply to the same degree and by virtue of the outcome alone they are moved from a High to a Severe VSL.
Yes
1) The protocols at minimum should require full name identification. 2) R2 – the description of the applicable operating personnel (i.e. that are responsible for Real-Time operation of the interconnected BES) is different in this part than others (that state it’s for operating personnel that issue and receive certain Operating Instructions). Is that purposeful? 3) R5, R6, R7 and R8 - the numbering seems to be mixed up. 4) M2 and M3 – are not drafted consistently given the consistency in drafting of requirements R2 and R3. M3 refers to ‘its initial’ training records while M2 does not and M3 refers to training records ‘for its operating personnel’ while M2 does not. 5) M4 – contains a section of text that is not reflective of the requirement itself and has no basis for appearing in the measure. The requirement states only that the entity need only take corrective action to address deviations. The extra text that discusses instances where non adherence is the sole or partial cause of an Emergency should be deleted. 6) M6, M7 – the words ‘if the entity has such recordings’ seem unnecessary. This qualifying language isn’t attached to any other type of evidence that is listed as a possibility; presumably all of those are subject to the same qualifier and would only be presented as evidence if the entity had them.
Individual
Jason Snodgrass
Georgia Transmission Corporation

No

Comments: GTC recognizes FERC Order 693 directs the revision of COM-002 to include the DP and specifically states how essential it is that the TOP, BA and RC have communications with DPs. Additionally, GTC observes Order 693 also identifies the need for tightened communications protocols, especially for communications during alerts and emergencies and that such protocols shall be established with uniformity as much as practical on a continent wide basis to eliminate possible ambiguities in communications during emergency conditions. If the Standard requires the use of 3 part communications by the issuers of Operating Instructions, then it would seem sensible that receivers of Operating Instructions be trained for awareness and proper participation of such protocols. GTC sees parallels of this approach in other Standards such as restoration training of DPs identified in the TOPs restoration plan as required in EOP-005-2. GTC believes the current proposal of COM-002-4 still contains ambiguities that should be addressed before GTC can provide an affirmative ballot. GTC is offering 3 alternatives such that if any of them is adopted by the SDT, GTC would modify our position to cast an affirmative vote in the next recirculation. Alternative 1 (Modify the DP applicability): Applicability Section: 4.1.2 Distribution Provider: GTC is recommending an alternative that parallels the recently FERC approved CIP-003-5 that we believe accurately captures those DPs that receive Operating Instructions associated with the reliability of the BES when in an Emergency. The following alternative to clarify those Distribution Providers that have an impact on the BES is recommended: 4.1.2 Distribution Provider that: 4.1.2.1 Has capability to shed 300 MW or more of load in a single manually initiated operation. 4.1.2.2 Has switching obligations related to Any Cranking Path and group of Elements meeting the initial switching requirements from a Blackstart Resource up to and including the first interconnection point of the starting station service of the next generation unit(s) to be started. Alternative 2 (Modify the DP applicability per above, modify R3; Eliminate R6): Alternative 2 is an extension of alternative 1 for additional clarities. Requirement 3: Revise R3 to insert the words [during an Emergency] within the sentence "...who can receive an oral two-party, person-to-person Operating Instruction [during an Emergency] prior to that individual operator...". Additionally, replace the word "receive" with the word "request" in the first bullet of R3. The word "receive" is ambiguous and the word "request" is consistent with the receiver using his words to request a confirmation. GTC maintains that R3 is sufficient to satisfy FERC Order 693 for the DP applicability during emergencies, and would ensure uniformity on a continent wide basis to eliminate possible ambiguities in communications during emergency conditions. GTC prefers the elimination of R6. GTC does not believe that a receiver of an Operating Instruction in the field performing field switching activities should be required to document evidence of following the oral communication practices. Issuers of Operating Instructions are already recording the Operating Instruction communications and have the capability to do so. Issuers are also required to ensure the receiver responds accordingly per R5. Issuers are required to confirm the receiver's response is correct or else reissue if incorrect; issuers can also take an alternative action. Having the receiver document the implementation of these practices for compliance is redundant and duplicative to the issuer's requirements. This is an unnecessary, administrative requirement that introduces a double jeopardy situation that does not

enhance the reliability of the BES. The SDT should recognize that all reliability bases are covered with the training requirements of the issuers in R1, the training requirement of the receivers in R3, and the performance of these are monitored via the issuers recording capabilities in R5 and R7. With this approach, issuers can be satisfied that receivers are prepared to receive instructions in accordance with their training, and the options the issuers have per R5 in a live scenario. The receivers could not expose or cause a non-compliance situation to the issuers. However, the issuers could expose the receivers to a non-compliance situation if a recording is lost or damaged and the receiver was on his cell phone in the field taking orders and performing switching, hence the double jeopardy and GTC's plea to remove this requirement 6. Alternative 3 (Modify the DP applicability above, Modify R3 above, Modify R6, create separate DP requirement): Requirement 6: If the SDT decides that R6 must remain, then GTC requires the following changes to modify our negative vote to affirmative. GTC appreciates the drafting team making concessions to eliminate the need for DPs and GOPs being required to have documented communication protocols. Additionally, GTC appreciates the drafting team's willingness to limit the scope of performing the 3 part communications to those Operating Instructions received during an Emergency. These drafting team concessions are a testament to the team, along with industry, of understanding that the DP will typically have a very limited role in receiving Operating Instructions from the BA or TOP to protect the BES during an Emergency. This role is typically limited to operating non-BES equipment (load serving stations) to shed load or reduce voltage to prevent the failure of transmission facilities or generation supply that could adversely affect the reliability of the BES. GTC would submit that the TOP would further limit the DPs role to "manual" load shed type situations when the "automatic" load shed schemes misoperate or malfunction as designed. This is highlighted in the NERC functional model which identifies this real time function of the DP "Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority". During an Emergency, which NERC defines as any abnormal condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the BES, the aforementioned function is what the DP will be called upon to implement. The ambiguity that arises is captured within the various types of utility registrations with NERC, and GTC believes the SDT can accommodate two distinct types of DPs which GTC believes to be critical to pass this Standard. GTC observed there are 298 entities in the NERC registry that are true DP function only. Most of these are DP/LSE and would not own BES assets, but they would be directly connected to the BES, hence registration. These entities own load serving substations and implementing voltage reduction or shedding load in an Emergency would not be ambiguous. However, GTC observed there are 242 entities in the NERC registry that are registered DPs, and also registered TOs that own BES assets. To these integrated entities, the scope of communications during an Emergency would be more ambiguous, as these entities may perform actions at transmission stations on a routine basis that the other DP only type entities would not have to consider. With the addition of R6 as written, these entities have an amplified burden of compliance risk associated with their TO registration even though R6 applies to them as a DP. This burden is the separation of those Operating Instructions performed at transmission stations

which occurs more often than the Emergency event which requires a manual operation for reduction of voltage or load shed at load serving stations. GTC believes this ambiguity is significant enough to justify the separation of the DP from R6 to provide a standalone requirement commensurate to the DPs function as documented in the NERC functional model. Proposed R6 language: Remove Distribution Provider from R6. Create a separate standalone requirement for the DP. R#. Each Distribution Provider that receives an oral two-party, person-to-person Operating Instruction to implement voltage reduction or shed load during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: \* Repeat, not necessarily verbatim, the Operating Instruction and request confirmation from the issuer that the response was correct, or \* Request that the issuer reissue the Operating Instruction.

No

modify in accordance with selected alternative drafted above.

Yes

Comments: GTC suggests that the “assess adherence and assess effectiveness” language in R4 be removed from COM-002-4. This language is similar to the “Identify, Assess and Correct (IAC)” language that was included in the CIP V5 standards which FERC directed the removal of. The removal or modification of this language was included in the Final Rule of NERC CIP V5 (Order No. 791). FERC stated that IAC language was “overly-vague, lacking definition and guidance is needed” and that these control concepts would be best addressed in the NERC compliance processes, such as through the NERC Reliability Assurance Initiative (RAI), rather than standards requirements. Lastly, GTC recommends a revision to the NERC Glossary term Emergency. GTC recommends the removal of the terms “or limit” within this definition. One could argue that every single Operating Instruction is utilized to limit failures of transmission facilities. Emergency should be more appropriately defined without this ambiguity:  
Proposed: Emergency or BES Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

Individual

Andrew Z. Pusztai

American Transmission Company, LLC

Yes

Yes

Yes

ATC recommends changing the language in Requirement 4 to read as follows: “Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall at least once every calendar year, and no more than every 15 months: “ ..... This would be consistent



with the NERC's annual requirement assessment made in NERC's Compliance Application Notice (CAN)- 0010 issued on November 16, 2011. In doing so, it should drive consistency among the CEA on how it is enforced.

Group

Southern Company; Southern Company Services, Inc; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation and Energy Marketing

Marcus Pelt

Yes

Yes

No

R3 VSL is listed as high and severe; The concern is that if an operator receives instruction and performs accurately using 3-part, but can't show initial training for Operating Instruction and Operating instruction during an Emergency, would this warrant a high or severe VSL. While there is the potential of risk if Operating Instructions are received prior to being trained, this should not somehow imply that incorrect operations were performed as a result of no training. The severe category should be reserved only for those instances in which Operating Instructions were received prior to being trained \*and\* which resulted in an emergency operation or reliability issue. As a result, we suggest "demoting" each existing VSL to a lower level, and editing the High and Severe VSL and limit it to only those instances that resulted in an emergency operation or reliability issue (suggestions provided below). Low – An individual operator at the responsible entity receiving an Operating Instruction prior to being trained. Moderate – An individual operator at the responsible entity received an Operating Instruction during an Emergency prior to being trained. High – An individual operator at the responsible entity received an Operating Instruction prior to being trained \*and\* resulting in an emergency operation or reliability issue. Severe - An individual operator at the responsible entity received an Operating Instruction during an Emergency prior to being trained \*and\* resulting in an emergency operation or reliability issue.

No

R1.2: Correct the formatting of the third bullet to match the first two so that it is clear that there are three options permitted not just two with a sub bullet to number two. R3: Is worded a little confusing. Suggestion would be to add the text below. Each Distribution Provider and Generator Operator shall conduct initial training for each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction that requires them to either: [Violation Risk Factor: Low][Time Horizon: Long-term Planning] • Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or • Request that the issuer

reissue the Operating Instruction. R4 - In NERC's own Q&A document for RAI prepared by the Risk-Based Reliability Compliance Working Group (RBRCWG), the following statements are made: "An entity can voluntarily establish internal controls designed to reduce its control risk, which could have a positive influence on the scoping of compliance monitoring by the Regional Entity. Conversely, the entity can voluntarily elect to not establish internal controls or share them with the Regional Entity." This is inconsistent with the direction of the proposed Standard COM-002-4, R4. This not only requires an internal control, but also requires that the control be shared with the Regional Entity (during audits). Also, consider that an entity can develop and implement a robust communication protocol consistent with COM-002-4 requirements and flawlessly follow its communication protocol, yet be found in violation of COM-002-4 by failing to demonstrate that it has adequate (subjective) management (internal) controls in place. This is inconsistent with the RAI guidance provided by NERC regarding the voluntary nature of internal controls. So, in principle, internal controls should not be dictated in a reliability standard. This goes against the principle of "Results-Based" standards. The intended result is effective communications. This can be attained with Requirements 1 through 3. No one will argue that internal controls won't help ensure that the desired results are achieved. However, Requirement 4 is not absolutely necessary for the results to be achieved, and therefore, should not be included in the standard and should be removed.

**Definition of Operating Instruction:** The term "command" in the definition of Operating Instruction implies authority, and Southern believes it should be made clear that Operating Instructions (for purposes of this standard) are commands issued by those functional entities that are expressly granted the responsibility and authority by the NERC Reliability Standards to take actions or direct the actions of others to ensure the reliability of the BES. These are the Balancing Authority, Reliability Coordinator and Transmission Operator only. No other functions are expressly authorized in the NERC Reliability Standards to issue a command. Our proposed definition Operating Instruction should be: Operating Instruction — A command originated by a Balancing Authority, Transmission Operator or Reliability Coordinator responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. (A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.)

**Measures: M4:** The inclusion of Emergency here is inappropriate due to the non-inclusion of Emergency in R4. Also change the RSAW to reflect this change as well. Suggested rewording: "Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence of its assessments, including spreadsheets, logs or other evidence of feedback, findings of effectiveness and any changes made to its documented communications protocols developed for Requirement R1 in fulfillment of Requirement R4. The entity shall provide evidence that it took appropriate corrective actions as part of its assessment for all identified instances where operating personnel did not adhere to the protocols developed in Requirement R1"

**Definition of Emergency** Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric

System. If read literally, EVERY breaker operation on the system IS an EMERGENCY. This causes a great deal of concern. From a DP and GOP standpoint, the RSAW and technical justification wording states that an attestation that no emergency had been called requiring a three part response would suffice for evidence. The rationale and technical justification document has some very good explanations of the INTENT of the drafting team and how they want the industry to view the standard requirements. If the standard and the subsequent audits adhered ONLY to what was in the justification document, then there should be little or no concerns. Unfortunately, the justification document carries no statutory weight and the standard as written does.

Individual

Michael Falvo

Independent Electricity System Operator

Yes

No

We do not agree with the following VSLs: i) R4: The LOW VSL suggests that an entity is assigned a LOW VSL if assessments are conducted more than 12 months apart. There is no max or “cap” to the delayed assessment and hence an entity may be 18, 19 or more months late in conducting the next assessment. In other standards, this could well be assessed a MEDIUM or HIGH or even a SEVERE violation, depending on the time period that an entity failed the 12 month update requirement. Absent this “cap”, or staggered caps, the proposed HIGH and SEVERE VSLs can only be assessed based on whether or not there was ever an assessment, even the last assessment was done 3 or 4 years prior to an audit. This is inconsistent with the general guideline for VSLs. ii) R5: The MEDIUM VSL and SEVERE VSL are identical, except the latter has a condition that is associated with the impact of the violation. This is inconsistent with the intent of the VSL, which is to assess the “extent to which” the requirement was violated, not the impact of the violation that should have been reflected by the VRF. This is also inconsistent with the VSL principle and guideline. We suggest removing the MEDIUM VSL, and the condition under the proposed SEVERE VSL that: “AND Instability, uncontrolled separation, or cascading failures occurred as a result.” iii) R6: Same comments as in R5. iv) R7: Same comments as in R5.

Yes

Recently, FERC directed NERC to eliminate the ambiguity with language “identify, assess, and correct” deficiencies for the CIP standards. Although it supported NERC’s move away from a “zero tolerance” approach to compliance, FERC wanted NERC provide more guidance regarding enforceability with the self-identify/assess/correct approach to compliance. NERC may want to consider that FERC may raise the same concerns with this proposed standard. According to the draft standard, if DPs and GOPs receive an Operating Instruction, they can provide an attestation from the issuer of the Operating Instruction to demonstrate

compliance – they do not need to develop documented communications protocols. The lighter compliance burden on DPs and GOPs may result in a higher administrative burden for the RC/BA/TOP to provide attestations.

Individual

David Thorne

Pepco Holdings Inc.

Yes

Please provide the rationale as to why the standard is not applicable to TOs.

Individual

Thomas Foltz

American Electric Power

No

The AND qualifier provided for R5 which qualifies that Instability, uncontrolled separation, or cascading failures occurred, should also be used for R3.

Yes

AEP believes the most recent changes represent a major step back in regards to clarity (as compared to the draft proposed in October 2013), and has driven us to change our voting position from affirmative to negative. We are concerned by the removal of Reliability Directive, and instead, now basing requirements on whether or not the communications are made during an Emergency. Who determines whether or not an Emergency state exists, and in addition, how would that be communicated? AEP recommends returning to the fundamentals and approach taken in the previous draft. If the phrase “Reliability Directive” is to be remanded, we encourage the drafting team to pursue alternative language which would not require the need to know whether or not the communications are being made during an “Emergency”. For example, perhaps the drafting team could change R1 (as taken from the October 2013 draft) to state something like the following: “Require the issuer to identify the action as a directive or instruction...”. R4.2: Though M4 specifies the kinds of evidence needed to meet R4, we believe it would be too subjective in determining whether or not the entity’s efforts properly assessed the effectiveness of the documented communications protocols.

Individual

Brian Evans-Mongeon

Utility Services, Inc

Yes
Smaller DPs and GOPs will have a significant problems demonstrating compliance with Requirement 6 as written. 1. As there is no requirement to notify these entities that an Operating Instruction is being issued during an Emergency, they will not be aware of which communications will be subject to compliance review. 2. Since these entities typically do not record phone conversations they would have to rely on other forms of evidence. Log book enties will not document if three part communication was used and since the entities are not made aware of Emergency conditions, they will not know to maintain a higher level of documentation to demonstrate compliance. 3. Approaching the issuer for confirmation of OIs during Emergency conditions and seeking Attestations from these entities will create a significant administrative burden not only for the small entities, but for the Issuer of the OI as well. 4. Any additional tasks that must be performed during Emergency situations runs contrary to the intent of the standard, which is to normalize communication protocols during all situations, and not have separate procedures during normal and Emergency conditions.
Individual
Christopher Wood
Platte River Power Authority
Yes
Yes
Yes
Yes
Platte River takes exception to the requirement for alpha-numeric clarifiers for communications.
Individual
Don Schmit
Nebraska Public Power District
No
Recommendation 26 calls for work to be done to improve the effectiveness of communications in emergency situations. The purpose of the standard is to improve communications. However, the focus of the standard is primarily 3-part communications.

There is no supporting documentation or data that 3-part communications improves the effectiveness of communications. Focusing on 3-part communications provides an easy target from a compliance perspective but all it teaches us is to mechanically repeat back what we have been instructed to do. We're focusing on the 'how' and 'what' rather than the 'why'. Keeping the 'why' in mind improves communications and the reliability of the BES. Keeping the 'why' in mind also leads to improved situational awareness. Improving effective communications is difficult to quantify in a standard and even more difficult to measure. We may be better off focusing on the principles contained in the OC's Reliability Guideline System Operator Verbal Communications – Current Industry Practices.

Yes

1) Applicability for Distribution Providers (DP's) should be qualified similar to qualification used for DP applicability in version 5 of CIP-003. Applicability needs to be focused on DP employees that may receive instructions relative to the BES. 2) R1: Since Requirements R5, R6 and R7 are zero tolerance, R1 protocols should state that when there is an emergency condition on the system that those issuing Operating Instructions during an emergency shall state that "this is an emergency". Reason Number 1, there needs to be a triggering mechanism that tells both the issuer and receiver that 3 part communication is zero tolerance and in effect during an emergency; Reason Number 2, there is question in the industry as to when the "emergency" begins and ends; and Reason Number 3 the RSAW for R5, R6 and R7 are telling the auditor (in the auditors note) to predetermine before an audit what are emergencies on an entities system, which could potentially create an issue of what is a determined emergency between the auditor and the entity. By inserting a triggering mechanism as suggested will create a demarcation for operating instructions during emergencies. 3) R2 and R3 are already provided for in PER-005 and therefore are redundant in this standard. If there is a need to include a training requirement in this standard, that requirement could consist of a statement to include protocol training in the entity's reliability task list. 4) R4 as written puts a huge administrative burden on entities to administer assessments of 'each' of its operating personnel that issue and/or receive Operating Instructions. As in previous drafts of this Standard, entities should determine and document their own assessments to the Standard and so that adherence and effectiveness fits their program. In addition, the 12-month requirement in the Standard now provides for an administrative burden and compliance trap in order to remain compliant to the 12-month requirement. We're a TOP and do many switching orders a day with operating personnel throughout the state. R4 requires us to assess adherence to communications protocols by our operating personnel (see FAQ #22 says "each" issuer/reciever) that receive these operating instructions and provide feedback to the operating personnel, and take corrective actions when appropriate. Currently, we have over 800 switch personnel, and some of these are not NPPD employees. We utilize personnel from some of our public power partners, such as rural power districts and municipalities. The 12 calendar month clock will be different for each person. So, day-to-day will be a challenge to ensure we capture compliance documentation on each person that changes the state of a BES element. The drafting team

should revert back language similar to R5 of posting #7 (with exception to the “implement” language) so that entities can manage their own compliance controls and can develop assessments that fit their program. NPPD would suggest the following for Requirement 4: R4. Each BA, RC and TOP shall have a documented method to evaluate the communication protocols developed in R1 that: 4.1 Assess adherence to the communications protocols developed in R1; 4.2 Assess the effectiveness of the communications protocols in R1; 4.3 Provide feedback to issuers and receivers of Operating Instructions; and 4.4 Modify communication protocols as necessary as a result evaluated communication protocols in this R4.

Group

Florida Municipal Power Agency

Frank Gaffney

Yes

Yes

Yes

Yes

FMPA is voting “affirmative” on this standard, yet we have concerns with the RSAW language and lack of criteria on how an entity will be assessed and audited. There is language in the RSAW “Notes to Auditor” for multiple requirements (R4-R7) that is of concern. (See example below) The RSAW language is not clear regarding the nature and extent of audit procedures that will be applied because there is reference to scoping the audit based on “certain risk factors to the Bulk Electric System”. It is not clear what “risk factors” will be used. As an example in R5 auditing “can range from exclusion of a requirement from audit scope to the auditor reviewing, in accordance with the above Compliance Assessment Approach, evidence associated with the entity’s responses to numerous Operating Instructions issued during Emergencies.” This is essentially a zero tolerance approach, yet, also appears to be an attempt to apply Reliability Assurance Initiative (RAI) concepts, that have not been finalized and communicated to the industry. It is uncertain whether these concepts have been fully developed yet; and therefore, this leaves too much auditor discretion, without providing the industry information or criteria on how “risk” will be assessed. Stakeholders continue to await the details of these RAI concepts that are being utilized in RSAWS. Clarity is needed around how an entity’s risk to the BES will be assessed due to compliance or non-compliance with this standard. This would also be beneficial for an entity to know, so that they can lessen that risk, as appropriate. Example language from RSAW: “The extent of audit procedures applied related to this requirement will vary depending on certain risk factors to the Bulk Electric System. In general, more extensive audit procedures will be applied where risks to the Bulk Electric System are determined by the auditor to be higher for non-compliance with

this requirement. Based on the auditor’s assessment of risk, as described above, specific audit procedures applied for this requirement may range from exclusion of this requirement from audit scope to the auditor reviewing, in accordance with the above Compliance Assessment Approach, evidence associated with the entity’s responses to numerous Operating Instructions issued during Emergencies. “

Group

Arizona Public Service Co.

Janet Smith

Yes

Yes

Yes

No

Group

PPL NERC Registered Affiliates

Brent Ingebrigtsen

Yes

These comments are submitted on behalf of the following PPL NERC Registered Affiliates: Louisville Gas and Electric Company and Kentucky Utilities Company; PPL EnergyPlus, LLC; PPL Electric Utilities Corporation; and PPL Generation, LLC, on behalf of its NERC registered entities. The PPL NERC Registered Affiliates are registered in six regions (MRO, NPCC, RFC, SERC, SPP, and WECC) for one or more of the following NERC functions: BA, DP, GO, GOP, IA, LSE, PA, PSE, RP, TO, TOP, TP, and TSP. Each of the PPL NERC Registered Affiliates recognize the need for and support the use of three part communications for Operating Instructions. However, we are abstaining from voting on this standard because we believe that the current version of COM-002-4 requires change to ensure consistency with the SDT’s intent. If these clarifications are made, the PPL NERC Registered Affiliates would support the proposed standard. First, the PPL NERC Registered Affiliates request that the SDT revise Measure M.4 to specifically state that sampling is allowed in performing the assessments required by Requirements R.4.1 and R.4.2. This is consistent with the SDT’s oral statements during the January 17, 2014 webinar and the FAQ (“An entity could perform an assessment by listening to random samplings of each of their operating personnel issuing and/or receiving Operating



Instructions....”). Additionally, for consistency and to avoid ambiguity, the SDT should also conform the wording in Measure M.4 to Measures M.5-M.7 (i.e., “Such evidence may include, but is not limited to,...”). Therefore, we recommend that the SDT revise Measure M.4 as follows: M4. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence of its assessments. Such evidence may include, but is not limited to, sampling results, spreadsheets, logs or other evidence of feedback, findings of effectiveness and any changes made to its documented communications protocols developed for Requirement R1 in fulfillment of Requirement R4.... Second, the PPL NERC Registered Affiliates request that the SDT clarify in the proposed standard that only a failure to use three-part communications during an Emergency is a violation of COM-002-4. Therefore, we recommend that the standard’s requirements be further revised to indicate that if an entity does not adhere to its documented communications protocols developed in accordance with Requirement R.1 during a non-Emergency, such action shall not be considered a noncompliance event under Requirement R.1.

Individual

John Brockhan

CenterPoint Energy Houston Electric LLC

Yes

CenterPoint Energy agrees that the COM-002-4 standard addresses the NERC Board of Trustees 2013 Resolution.

Yes

CenterPoint Energy agrees that the COM-002-4 standard addresses both the August 2003 Blackout Report Recommendation 26 and FERC Order 693.

No

CenterPoint Energy does not agree with the Severe VSL for Requirement R1. The Company strongly believes that the focus of any Reliability Standard should be on enhancing the reliable operation of the BES and not on documents. Simply failing to document a procedure should never warrant a Severe VSL as long as the entity is operating according to the Standard.

Yes

CenterPoint Energy would like to thank the COM-002-4 Standard Drafting Team and appreciates the SDT’s time and effort dedicated in the development of this standard, in engaging the industry, and incorporating industry feedback into the standard. The removal of the requirement to identify an Operating Instruction in an emergency or a Reliability Directive to the receiver is viewed as a positive change. CenterPoint Energy believes that operating personnel’s focus should always be on monitoring and controlling the reliability of the BES rather than a compliance burden of correctly identifying and aligning company specific communication protocols to normal versus emergency operations. Overall, CenterPoint Energy agrees with the standard, but still has general concerns. The Company believes the prescriptiveness of the requirements: particularly R1.1 thru R1.6 exceeds the

necessary components needed in establishing communication protocols for tightened reliable communications.

Individual

David Jendras

Ameren

Agree

Ameren agrees with and supports the SERC OC comments on COM-002-4.

Group

Duke Energy

Michael Lowman

No

(1)Duke Energy believes that Operating Instruction during an Emergency is unclear, vague, and subject to interpretation. By using the NERC defined term of Emergency, certain tasks that Duke Energy believes is a non-emergency action would now be considered an Emergency and subject to zero tolerance. Duke submits, for consideration by the SDT, a revised definition of Emergency in an attempt to remove this ambiguity. Emergency – Any abnormal system condition that requires automatic or immediate manual action to prevent the failure of transmission facilities or generation supply that would adversely affect the reliability of the Bulk Electric System.

No

(1)Based on our comments to Question 1, Duke Energy does not believe that the SDT has addressed Recommendation 26 of the August 2003 Blackout report. The intent of the 2003 Blackout recommendation was to provide tighter communication during normal and emergency situations. Due to the ambiguity that exists between Operating Instruction and Operating Instruction during an Emergency, we believe that this recommendation was not addressed.

Yes

(1)Duke Energy suggests rewording R1.6 as follows: “Specify the nomenclature to be used for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction to neighboring entities.” While the Technical Justification document suggests that R1.6 applies to communication with neighboring entities, it is unclear that this requirement, as worded in the current draft of COM-002-4, is specifically discussing communication with neighboring entities. (2)M2 should include “initial training” and be reworded as follows in order to maintain consistency with the requirement: “Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide initial training records related to its documented communications protocols developed for Requirement R1 such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R2.”

Individual
Marie Knox
MISO
Yes
Yes
Yes
Yes
We recommend the drafting team: (1) Remove the attestation for another provision (2) Restrict the zero-defect component of the standard to those operating instructions directly related to the emergency (e.g. redistpach instructions for IROLs, committment instructions during EEAs, synchronizing during restoration, etc.) (3) Maintain Reliability Directives in the toolkit as the clear indicator of an Operating Instruction that is directly applicable to the emergency. We believe that DPs and LSEs don't need stringent requirements. They just need to follow Directives or explain why they cannot. We understand that the drafting team is trying to meet a deadline, however we'd support the drafting team addressing all of the industry comments even if it requires more time to get this standard right.
Group
DTE Electric
Kathleen Black
Yes
Yes
No
The evidence needed to avoid violation is not clear. The VSL for R2 is not reasonable and an auditing nightmare. It should state an operator did not receive training on the documented communication protocol. Adding "prior to issuing an operating instruction" cannot be determined without excessive investigation. A check that all operators received training is appropriate. Same issue with R3 as listed for R2.
No
None
Individual
Catherine Wesley
PJM Interconnection

Yes
Yes
Yes
Yes
PJM supports the draft standard as it strikes a good balance between the industry and the NERC BOT November, 2013 resolutions. The standard provides the industry some flexibility regarding how communication protocols are developed. It also makes it cleaner and easier for operators to use the same protocol for all Operating Instructions, whether in an emergency or not, while not burdening System Operators with issues around how compliance will be measured. PJM does not support the addition of a new training requirement under R1. PJM recommends that all training requirements be included in one standard and not spread throughout families of standards. Consolidation of all training requirements under a single training standard will help in development of a clear, more organized training process.
Group
SPP Standards Review Group
Robert Rhodes
No
Our understanding of Recommendation 26 is that it deals strictly with communications during emergencies which COM-002-3 had already addressed. The addition of non-emergency communications, which are not mentioned in Recommendation 26 at all, has expanded the scope of the standard beyond that called for by the recommendation. The addition of non-emergency communications has added additional compliance burden for the responsible entities without clearly improving the reliability of the BES.
No
We suggest changing the Moderate VSLs for R5, R6 and R7 to Lower. If the failure to completely follow through with the protocols contained in R1 had no adverse impact on the situation, then this VSL is purely administrative and is not deserving of being Moderate. The Lower and Moderate VSLs for R1 contain specific details regarding each of the Parts referenced in each of the VSLs. In the High and Severe VSLs for R1 only reference is made to the Parts while the details contained in the Parts is not included in the VSLs. Either the details should be removed from the Lower and Moderate VSLs or the details need to be included in the High and Severe VSLs.
Yes

The removal of Reliability Directive from the definition of Operating Instruction has removed clarity from a compliance viewpoint. Without this clarity, which could also be provided by requiring a statement which identifies the Emergency situation as an Emergency, the operator does not know that he is in an Emergency situation. Although the operator's response may be the same as it is in a non-emergency, the compliance hook of zero tolerance is there. We need a mechanism in place that we can use to identify when we are in an Emergency situation which prevents Monday-morning quarterbacking during an audit regarding whether an Emergency actually occurred or not. Reliability Directive gave us that indication. We recommend requiring an Operating Instruction that is issued during an Emergency situation be identified as 'This is an Emergency.' Recommendation 26 calls for work to be done to improve the effectiveness of communications in emergency situations. The purpose of the standard is to improve communications. However, the focus of the standard is primarily 3-part communications. There is no supporting documentation or data to support the position that 3-part communications improves the effectiveness of communications. Focusing on 3-part communications provides an easy target from a compliance perspective but all it teaches us is to mechanically repeat back what we have been instructed to do. We're focusing on the 'how' and 'what' rather than the 'why'. Keeping the 'why' in mind improves communications and the reliability of the BES. Keeping the 'why' in mind also leads to improved situational awareness. Improving effective communications is difficult to quantify in a standard and even more difficult to measure. We may be better off focusing on the principles contained in the OC's Reliability Guideline System Operator Verbal Communications – Current Industry Practices. We suggest that R2 and R3 are already provided for in PER-005 and therefore are redundant in this standard. If there is a need to include a training requirement in this standard, that requirement could consist of a statement to include protocol training in the entity's reliability task list. Measure 4 adds an additional requirement regarding the failure to follow protocols which in turn leads to an Emergency. The Measure basically requires the responsible entity to assess those particular situations even though they are not specifically called out in the requirement. We recommend adding the following sentence at the end of R4.1: 'Such assessment shall include, at a minimum, any instance that is an Emergency.' We recommend that the drafting team consider moving R4 back to language similar to that contained in R5 of Posting 7. This language is much clearer and eliminates Paragraph 81 concerns of administrative burden associated with the required 12-month assessments and removes the ambiguity of 'corrective actions' and 'as appropriate'. In the last line of the Evidence Requested table in the R2 section of the RSAW, the following evidence is requested: 'Organization chart or similar artifact identifying the operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System and the date such personnel began operating the Real-time Bulk Electric System.' This implies that an entity will be found non-compliant if operating personnel operate the Real-time BES prior to receiving training on issuing Operating Instructions. This is not what is stated in the requirement. This entry should be reworded to the following: 'Organization chart or similar artifact identifying the operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System and the date such personnel began issuing Operating Instructions.' Similarly, this change

needs to be made in the Compliance Assessment Approach Specific to COM-002-4, R2 table. That entry should read: 'Verify applicable operating personnel, or a sample thereof, received the required training prior to the date they began issuing Operating Instructions by agreeing selected personnel names to training records.'

Group

Bureau of Reclamation

Erika Doot

Yes

Reclamation requests that R5 include a bullet requiring the issuer of an Operating Instruction during an Emergency to identify the situation as an Emergency. This is important because R6 requires recipients of Operating Instructions to repeat the instructions during Emergencies, but it may not be clear to the recipient that an Emergency is occurring. Reclamation reiterates that R1.3 and R3 should also allow the receiver of an Operating Instruction to respond by explaining that a requested action cannot be performed (e.g., due to safety, equipment, regulatory, or statutory requirements as described in TOP-001 R3 and IRO-001 R8). The requirement to either repeat or request that the instruction be reissued does not account for the realistic situation that an entity may not be able to perform an Operating Instruction. The drafting team could choose to address this point with a footnote explaining that the requirement to repeat the instruction does not obligate the recipient to perform the action if he repeats the instruction, but then explains that he cannot perform the action because doing so would violate safety, equipment, regulatory, or statutory requirements.

Individual

Brett Holland

Kansas City Power & Light

Agree

SPP - Robert Rhodes

Group

Dominion

Louis Slade

Agree

SERC OC Standards Review group

Group

Dominion

Louis Slade

No

We do not believe the proposed requirements and measures clearly delineate the differences in the actions required to be taken by the issuer and recipient depending upon whether or not the Operating Instruction is being given to alleviate or avoid an Emergency.

No

We do not agree that the blackout recommendation calls for the use of 3 part communication for every Operating Instruction and note that neither the NERC Board nor the SDT has provided any evidence that indicates a direct correlation between errors due to communication problems and events that adversely impacted the BES. Therefore we find it difficult to support reliability standard requirements that require 3 part communication for every Operating Instruction and enforce compliance with same.

No

We believe that the VRFs/VSLs should be modified to better reflect the stated intent of the NERC Board of Trustees November 19th, 2013 Resolution, which is to enforce 'zero tolerance' only for failure to use 3 part communications by the issuer or recipient of an Operating Instruction when it is issued to alleviate or avoid an Emergency.

Yes

The proposed standard still contains requirements that mandate the use of, and training to include, 3 part communications during issuance of all Operating Instructions, including those issued during non-Emergency situations. While Dominion agrees that the SDT has stated in its Rationale and Technical Justification document that the proposed measures and RSAW don't specifically require that auditors verify compliance of this for the requirements (and associated measures), a strict read leads us to a different conclusion. Under the RSAW for R1 it states that the entity shall provide its documented communications protocols developed for this requirement and the auditor shall review the documented communications protocols provided by entity and ensure they address the Parts of R1 (including the use of 3 part communications). The RSAW contains similar actions relative to R2 and R3 in that the entity is to provide evidence consisting of agendas, learning objectives, or course materials that it provides pursuant to these requirements. Given this, Dominion believes an auditor can enforce to a 'zero defect tolerance' if it chooses to do so and in fact would argue that an audit would be deficient if it failed to validate whether the learning objective included insuring that 3 part communication was used during issuance or receipt of each Operating Instruction. Dominion also finds there are not clear and concise differences between requirements 1, 5 and 6 resulting in uncertainty as to whether the Operating Instruction is being issued to alleviate or avoid an Emergency. Dominion is concerned that, absent a requirement that the issuer make a definitive statement as to whether an Operating Instruction is being issued to alleviate or avoid an Emergency, neither the recipient (during) nor an auditor (after) would be able to make such determination. Having said this, we could support the standard if it were revised in a fashion similar to that described below. 1. Modify requirement 1 so that it applies to all Operating Instructions but requires that those being issued to alleviate or avoid an Emergency be specifically identified as such and that the issuer explicitly request recipient confirm their understanding through use of 3 part

communication. 2. Remove requirements 5, 6 & 7 (incorporating specific items deemed necessary by the SDT as bullets or sub-requirements of R1). 3. Revise measures, VRFs/VSLs and RSAW so that strict compliance with use of 3 part communication is only applied when an Operating Instruction is issued to alleviate or avoid an Emergency as identified by the issuer at the time of issuance. 4. Measure M4 requires compliance demonstration beyond Requirement R4. Specifically, entities must provide evidence that appropriate corrective action was taken for all instances where an operating personnel's non-adherence to the protocols developed in Requirement R1 is the sole or partial cause of an Emergency..., Examples of suggested changes R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum: [Violation Risk Factor: Low][Time Horizon: Long-term Planning] 1.1. Require that its operating personnel identify, at the time of issuance, when the Operating Instruction is being issued to alleviate or avoid an Emergency 1.2. Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions: • Confirm the receiver's response if the repeated information is correct. • Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver. • Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver. • Request recipient use 3 part communication when the Operating Instruction is being issued to alleviate or avoid an Emergency 1.3 Require its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations. 1.4. Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. 1.5. Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification. 1.6. Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction. M1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1. For each Operating Instruction issued to alleviate or avoid an Emergency; entity shall provide evidence that it identified such at time Operating instruction was issued (R1.1) and requested recipient use of 3 part communication (R1.2). • VSL for R1 – modify Severe to include any instance where entity either (1) failed to identify, at the time of issuance, that the Operating Instruction is being issued to alleviate or avoid an Emergency or (2) failed to request recipient use 3 part communication when the Operating Instruction was issued to alleviate or avoid an Emergency

Group

ACES Standards Collaborators

Ben Engelby



No

(1) We disagree that the current draft addresses the NERC Board resolution because the Board charged the drafting team with developing an “essential set of communications protocols” for reliable operation of the BES. The proposed standard conflicts with other existing reliability standards, which would subject entities to double jeopardy. Therefore, the standard includes more than an “essential set” of requirements as stated in the NERC Board Resolution. (2) For example, the “nomenclature” protocol in Requirement R1 is duplicative with TOP-002 R18. Since FERC issued a NOPR proposing to remand the TOP standards, the requirement of using “uniform line identifiers” will remain as an enforceable standard. Having a nomenclature requirement in COM-002-4 will subject entities to double jeopardy and is not an “essential set of communication protocols.” (3) Another example of a redundant requirement is training. Communications that impact the BES will be covered in a reliability related task as part of the systematic approach to training. This will also subject entities to double jeopardy with PER-005 R1 and is not an “essential set of communication protocols.” (4) We appreciate the efforts of the drafting team in working to address the FERC directives and NERC November 2013 BOT Resolution, but we do not believe that COM-002-4 accurately reflects the proper applicability for entities that have an impact on the operations of the Bulk Electric System in normal and emergency conditions. We understand that the inclusion of Distribution Providers to this standard stems from various FERC directives, but because of the relationship of Distribution Providers with Transmission Operators as identified in NERC's functional model in being only a receiver of instructions to implement voltage reduction or to shed load to prevent the failure of the BES, or related to restoration activities as coordinated with the Transmission Operator; the TOP is ultimately responsible for the proper execution of the instructions. Thus, we continue to recommend that Distribution Providers be removed from the applicability of COM-002-4. (5) Knowing that it will be difficult to remove the Distribution Provider from the applicability of COM-002-4 per FERC's directives, we recommend an alternative that parallels the recently FERC approved CIP-003-5 applicability section 4.1.2, which we believe accurately captures those DPs that receive Operating Instructions associated with the reliability of the BES. The following alternative can be used as technical justification to clarify those Distribution Providers that have an impact on the BES is recommended: “4.1.2 Distribution Provider that: 4.1.2.1 Has capability to shed 300 MW or more of load in a single manually initiated operation. 4.1.2.2 Has switching obligations related to any Cranking Path and group of Elements meeting the initial switching requirements from a Blackstart Resource up to and including the first interconnection point of the starting station service of the next generation unit(s) to be started.”

No

(1) We believe recommendation number 26 of the 2003 Blackout Report continues to be misinterpreted. The recommendation is focused on how the ERO should communicate with governmental agencies. It states, “Standing hotline networks, or a functional equivalent, should be established for use in alerts and emergencies (as opposed to one-on-one phone calls) to ensure that all key parties, [including state and local officials] are able to give and

receive timely and accurate information.” The recommendation does not state anywhere to utilize three-part communication. COM-002-4 does not address the development of hotline networks or “upgrading communication system hardware where appropriate” for contacting governmental agencies, including state and local officials.

No

(1) We disagree with some of the requirements of including training and several aspects of the communication protocols. Since we disagree with the underlying requirements, we also disagree with the corresponding VSLs and VRFs.

Yes

(1) We disagree with training requirements as they are redundant with PER-005. Similar to a FERC directive, the drafting team should be able to provide the BOT with technical justification that other alternatives exist to developing a new requirement such as pointing to an existing requirement. Training is already included in the PER requirements. The drafting team should provide the feedback from industry and show that there is an already existing enforceable standard that covers this issue of training and there are no gaps in reliability. (2) We do not think the Distribution Provider should be an applicable function. Most Distribution Providers simply do not have a materially impact on BES reliability. We suggest an alternative to have the standard apply to those DP that may impact the BES. According to the FERC-approved CIP version 5 standards, a Distribution Provider is subject to the standards if the DP has UFLS/UVLS systems that have the capability of shedding 300 MW or more of load. We ask the drafting team to consider revising the applicability section to mirror the CIP standards. There was technical justification provided during the development of those standards, NERC and FERC both approved those standards, and therefore, a precedent exists for this reasonable approach to focusing on entities that pose an impact, however minimal, to the BES. (3) Many DPs have no practical way to demonstrate compliance with “repeat backs.” Many DPs do not have recording systems for the telephonic communications. This puts the DP in a position to request the voice recordings or attestations from the issuer. The issuer is not obligated to provide the data and, in fact, history has shown that many registered entities will not provide this type of data to a third party for fear of compliance issues being identified with the issuer. Thus, from a practical perspective the standard puts the DP in the position of having to use weak evidence to demonstrate compliance. This is an unreasonable burden on the DP. (4) We recommend that the drafting team remove references to “taking alternative actions.” This is ambiguous and could potentially tie in actions that should be taken in accordance to directives in IRO-001 and TOP-001. COM-002 is related only to communications, so taking alternative actions must be limited to alternative communications. (5) We suggest that the “assess adherence and assess effectiveness” language in R4 be removed from COM-002-4. This language is similar to the “Identify, Assess and Correct (IAC)” language that was included in the CIP V5 standards. The removal or modification of this language was included in the Final Rule on NERC CIP V5 Standards (Order No. 791). FERC stated that IAC language and concepts would be best addressed in the NERC compliance processes, such as through the NERC Reliability Assurance

Initiative (RAI), rather than standards requirements. (6) Thank you for the opportunity to comment.

Group

Tennessee Valley Authority

Brandy Spraker

Agree

SERC Operating Committee Review Team

Individual

Scott McGough

Georgia System Operations Corporation

Yes

No

GSOC recommends modifying R1 so that it applies to all Operating Instructions but requires that those being issued to alleviate or avoid an Emergency be specifically identified as such and that the issuer explicitly request recipient confirm understanding through use of 3 part communication. This would require a revised R1.1 Proposed R1: ADD: Require that its operating personnel identify, at the time of issuance, when the Operating Instruction is being issued to alleviate or avoid an Emergency. Proposed R1.2: ADD: Request recipient use 3 part communication when the Operating Instruction is being issued to alleviate or avoid an Emergency. Proposed R1.3: change the word "correct" to "understood" Requirement 2: GSOC believes R2 should be eliminated as redundant with the systematic approach to training requirements of PER-005-2(Operating Personnel Training) which are applicable to all Bas, RCs and TOPs. Communication protocols must be included in each company's specific reliability-related task list. GSOC believes the current proposal of COM-002-4 still contains ambiguities that can be resolved with the following alternative. GSOC recognizes the following alternative in that it parallels the recently FERC approved CIP-003-5. GSOC believes this alternative more accurately captures those DPs that receive Operating Instructions associated with the reliability of the BES. 4.1.2 Distribution Provider that: 4.1.2.1 Has capability to shed 300 MW or more of load in a single manually initiated operation. 4.1.2.2 Has switching obligations related to Any Cranking Path and group of Elements meeting the initial switching requirements from a Blackstart Resource up to and including the first interconnection point of the starting station service of the next generation unit(s) to be started.

No

R1 – GSOC requests that there not be applied a Severe VSL for normal everyday Operating Instructions.

Yes

With consideration that an Emergency may not be initially recognized by system operators for several minutes, GSOC requests Requirements R5 thru R7 include the word “recognized” precede the work “Emergency”. GSOC cites the newly effective EOP-004-2, R2 currently affords this consideration. It requires reporting “within 24 hours of recognition of meeting an event type threshold”. In addition, GSOC recommends R5 thru R7 replace the words “during an Emergency” with “addressing a recognized Emergency” so as to avoid confusion should there be Operating Instructions issued during an Emergency that may have nothing to do with an Emergency. GSOC suggests that the “assess adherence and assess effectiveness” language in R4 be removed from COM-002-4. This language is similar to the “Identify, Assess and Correct (IAC)” language that was included in the CIP V5 standards. The removal or modification of this language was included in the Final Rule on NERC CIP V5 Standards (Order No. 791). FERC stated that IAC language and concepts would be best addressed in the NERC compliance processes, such as through the NERC Reliability Assurance Initiative (RAI), rather than standards requirements

Individual

Cheryl Moseley

Electric Reliability Council of Texas, Inc.

No

This standard is not responsive to the Blackout Recommendation #26. The prevention of miscommunication is the current focus of this standard, while nothing in the Blackout Report commented on an instruction not being followed due to miscommunication. Rather, the Blackout Report focused on a lack of situational awareness based on one entity not understanding what the other entity was describing because different entities used different terminology. Flow of communications or “who” should be notified was also lacking in addition to “what” needed to be communicated. The report highlighted that effective communication was based on communication of important and prioritized information to each other in a timely way. In essence, this focuses on communication protocols to prevent miscommunications while Recommendation #26 focused on effective communication protocols that improve situational awareness, where the former is process and the latter is substantive. That being said, and regardless of whether COM-002-4 addresses the August 2003 Blackout Report Recommendation number 26 or not, ERCOT ISO can support the COM-002-4 standard. However, ERCOT ISO believes the draft standard could be improved and offers suggestions in Question 4 below, for the SDT’s consideration.

No

R2 and R3 VSLs should not have the “during an Emergency” distinction between a high and severe VSL. VSL’s grade the severity or “how bad” did an entity violate a requirement. The risk and situation of non-compliance is included in the VRF and not the VSL. ERCOT ISO would recommend percentage indicator across the severity levels as detailed in the VSL guideline document. R5-R7 VSLs should remove “Instability, uncontrolled separation, or cascading failures occurred as a result.” as that stipulation is not appropriate in the VSLs. The resulting

impact of non-compliance is addressed in the enforcement process and not in how severe an entity did not comply with a requirement. ERCOT ISO suggests a binary or severe only VSL to coincide with the VSL Guideline document. Additionally, ERCOT ISO would recommend adding “at least” in the R5 VSL to better clarify that a minimum of one of the three actions is required and not all three. The responsible entity that issued an Operating Instruction during an Emergency did not take ‘at least’ one of the following actions:

Yes

ERCOT ISO believes the draft standard could be improved and offers the following suggestions for the SDT’s consideration.

**Definition of Operating Instruction** The definition of Operating Instruction could be improved by making the following changes: 1) Delete the word “interconnected” before BES in the first sentence. It is not used instances where BES is used. Unless there is a substantive reason for using interconnected in some BES references and not others, the standard should be consistent to mitigate ambiguity; 2) “Potential Options” in the parenthetical is redundant – delete “potential”. Also, “option” and “alternatives” in the parenthetical are also redundant – delete one of them; 3) The parenthetical doesn’t need to be a parenthetical – make it the last sentence in the definition. As revised, the definition would read as follows: Operating Instruction — A command by operating personnel responsible for the Real-time operation of the Bulk Electric System (BES) to change or preserve the state, status, output, or input of an Element of the BES or Facility of the BES. A discussion of general information to resolve BES operating concerns is not a command and is not considered an Operating Instruction.

**Purpose Section** The purpose statement could be improved by making the following changes: 1) Delete “the issuance of” in the first sentence. It is inherent that a communication is “issued”. Therefore, this language is superfluous and should be deleted to mitigate any potential ambiguity; 2) Delete “predefined” in the first sentence. This adjective is not needed - the existence of communication protocols means they are predefined. Therefore, this is superfluous language and should be deleted to mitigate potential ambiguity. As revised, the purpose section would read as follows: Purpose: To improve communications for Operating Instructions with communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES).

**Requirements Section R1** 1) ERCOT ISO disagrees with changing “have” to “develop” in the first sentence. The point of this requirement is to have protocols that meet the minimum requirements. Obviously, in order to have the protocols an entity would need to develop them, but that is not the focus – as noted, having the protocols is the intent; 2) Change “and” to “or” in the following - “...for its operating personnel that issue or receive Operating Instructions...” The intent is to make the obligation to have protocols applicable to all operating personnel of the relevant functions. It may be that some functions only issue or only receive operating instructions. In those cases this requirement would not apply to those entities because the requirement is conjunctive – issue and receive. By making it disjunctive by using “or” the requirement applies to all circumstances – i.e. issue and receive or just issue or just receive; 3) The change suggested in (2) above should be made in R1.1 as well; 4) Also in R1.1, the triggering condition for using another language besides English - i.e. “unless otherwise agreed to” – is unclear in terms of how that would work. How do you demonstrate that such

an agreement is in place? Also, practically speaking, the ability to reach such an agreement assumes that all operators are capable of speaking the alternative language. It seems way too complicated because it would depend on the languages spoken by the different operators at different entities, and their schedules would have to be coordinated. These issues are less of a concern for allowing alternative languages for internal communications because the entity's personnel know one another and are located in the same place/organization. ERCOT ISO appreciates the intent of allowing for this exception, but it is difficult to see how it would work in practice, and even assuming it could work, the requirement is unclear as to what sort of agreement would be required;

5) R1.2 – Change “repeated information” to “response”. First, this change promotes consistency in terminology. Second, it is more consistent with the intent that the receiver is not required to repeat the directive verbatim – response contemplates flexibility as long as intent is there, while repeated information seems to require a verbatim reply;

6) The last bullet in R1.2 requires the issuer to take an alternative action if a response is not received or if the instruction is not understood. It is unclear what this means. Is the obligation related to trying to re-issue the instruction, or does it require the issuer take an alternative operating action? This is a communications standard, not an operations standard. Accordingly, the intent of this bullet should be clarified, and if it requires the issuer to take an alternative operating action, ERCOT ISO questions whether that obligation should be in a COM standard. Operational requirements are already covered in other standards, and if entities act under those other standards then the relevant communications protocols would apply to those “alternative” operating actions. ERCOT ISO believes that the “alternative action” described in the third bullet of R1.2 and R5 should be limited only to communications and not operating actions. ERCOT ISO would recommend replacing R1.2 and R5 third bullet with the following: Attempt an alternative means to communicate the Operating Instruction if a response is not received or if the Operating Instruction was not understood by the receiver, if deemed necessary by the issuer. ERCOT ISO also recommends including “or receiving” to capture that the training should be prior to that individual operator issuing ‘or receiving’ an Operating Instruction to address the subparts of R1 that deal with receiving Operating Instructions.

7) R1.4 – Delete “single-party”. It is clear that an issuer is one entity without having to add “single-party”. Accordingly, this is superfluous language and should be deleted to mitigate ambiguity. If this deletion is made, “operating instruction” would have to be moved to where “single-party” was in the sentence;

8) R1.4 requires the issuer to “confirm” or “verify” that the instruction was received by at least one entity. They are the same thing – delete one of them for clarity and to mitigate ambiguity;

9) R1.5 requires the communication protocols to specify the instances where time identification is required and to specify the format for time identification. As written, this appears to require the protocols to specifically list all relevant instances and, where relevant, requires the use of a specific time ID format. The SDT should consider revising this so the requirement imposes a general obligation for the protocols to time ID instructions when necessary, but not require the establishment of an exclusive list. This will accomplish the goal of time stamping and provide the entity with flexibility to implement the requirement, which will also mitigate the need to revise protocols if an entity determines prospectively that time ID is not needed in some instances on the list and is

needed in other instances that are not on the list. Similarly, the protocols should not require a specific format. Providing flexibility with respect to format will mitigate the potential for form over substance violations of the protocols – time ID is the point, not the format; 10) R1.6 requires the protocols to establish nomenclature for transmission elements. It is unclear how this will facilitate clearer communications unless all entities that are issuers or recipients of instructions use the same nomenclature. As drafted, it appears that it is an independent obligation that applies to each entity. If that is the case, each entity could use different nomenclature, which arguably could have a negative impact on communications. R4 1) ERCOT ISO understands the inclusion of R4 as a means to make normal operations Operating Instructions not subject to zero tolerance enforcement. However, ERCOT ISO has reservations concerning potential subjectivity surrounding who determines “appropriate” and “as necessary”. As a general comment, these types of “internal controls” requirements are better handled through the RAI initiative and subsequent CMEP processes. However, if the language remains, ERCOT ISO believes the clarity and effectiveness of the standard will benefit by clarifying that the entity who is conducting the assessments determine the appropriateness and necessity, and that the role of the ERO is simply to review if such activities were performed. ERCOT ISO recommends modifications as below. 4.1. Assess adherence by its operating personnel that issue or receive Operating Instructions to the documented communications protocols ‘required’ in ‘by the subparts’ of Requirement R1, , provide feedback to those operating personnel and take corrective action, as ‘deemed’ appropriate ‘by the entity’ to address deviations from the documented protocols. 4.2. Assess the effectiveness of its documented communications protocols ‘required’ in ‘by the subparts of’ Requirement R1, for its operating personnel that issue or receive Operating Instructions and modify its documented communication protocols, as ‘deemed’ necessary ‘by the entity’. Additionally, ERCOT ISO recommends including language to specify that R4 only be required to apply to those communication protocols that are identified in the subparts of R1, and not to other practices that an entity may choose to employ or improve upon. This clarification will mitigate creating a “fill in the blank” type standard approach for future potential changes to the R1 documented communication protocols. R5 1) How does the term “Emergency” in this requirement align with/relate to the term “Reliability Directive” in other standards, both in terms of meaning and scope of related responsibilities – is there overlap that could create ambiguity or unnecessary redundancy? There is a concern regarding the use of “Operating Instruction during an Emergency”. While ERCOT ISO understands the rationale behind replacing Reliability Directive with the new terminology based on the FERC NOPR potentially remanding the term, to avoid overlap/redundancy/confusion if this is retained, any potential conflicts must be addressed through other projects. Use of Reliability Directive up until this draft created clear synergy between COM-003/002 and the IRO/TOP revisions. If the term is not remanded, ERCOT ISO would support a more uniform approach by including Reliability Directive; 2) Change “repeated information” to “response” in first two bullets. See comment 5 in R1 comments above for rationale for this suggested change; 3) Third bullet – see comment 6 under R1 comments – same comment for the third bullet under R5; R7 1) Delete “single party” and delete either “confirm” or “verify” – see comments 7 and 8 under R1 for rationale for these suggested revisions. Measures M4 is too prescriptive and inappropriately

imposes requirements on the entity. This measure should align with previous comments concerning R4. M4 should be modified to reflect appropriate measures or types of evidence that should be provided without being overly prescriptive with respect to the level of quality of evidence. Additionally each part should be included and reflect the requirements without imposing additional requirements. M5-M7 should not identify attestations from the issuer or include “dated and time stamped” as part of the measure. Compliance should be demonstrated by the relevant entity – third parties should not be required either directly or indirectly to support the compliance activities of another entity by providing attestations. “Dated and time stamped” goes to the quality of evidence and is not appropriate for a measure. ERCOT ISO comments that inclusion of attestations, documented observations, procedures, or other equivalent evidence would improve M5-M7.

Individual

Michael Landry

DEMCO

Agree

NRECA

Group

ISO/RTO Council Standards Review Committee

Greg Campoli

No

We do not agree with the following VSLs: i) R4: The LOW VSL suggests that an entity is assigned a LOW VSL if assessments are conducted more than 12 months apart. There is no max or “cap” to the delayed assessment and hence an entity may be 18, 19 or more months late in conducting the next assessment. In other standards, this could well be assessed a MEDIUM or HIGH or even a SEVERE violation, depending on the time period that an entity failed the 12 month update requirement. Absent this “cap”, or staggered caps, the proposed HIGH and SEVERE VSLs can only be assessed based on whether or not there was ever an assessment, even the last assessment was done 3 or 4 years prior to an audit. This is inconsistent with the general guideline for VSLs. ii) R5: The MEDIUM VSL and SEVERE VSL are identical, except the latter has a condition that is associated with the impact of the violation. This is inconsistent with the intent of the VSL, which is to assess the “extent to which” the requirement was violated, not the impact of the violation which should be captured by the VRF. This is also inconsistent with the VSL principle and guideline. We suggest removing the MEDIUM VSL, and the condition under the proposed SEVERE VSL that: “AND Instability, uncontrolled separation, or cascading failures occurred as a result.” iii) R6: Same comments as in R5. iv) R7: Same comments as in R5.

Yes



1. R1.4. – [Documented communications protocols for its operating personnel that issue and receive Operating Instructions shall, at a minimum] Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. • Some ISO's issues multiple-party burst Operating Instruction to Generator Operators through electronic means Associated real-time requirement: R7. Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency shall confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. NOTE – ERCOT does not support the following Comment: The SRC members (excluding ERCOT) do not believe this requirement is necessary for reliability. Moreover, the Standard Drafting Team has not provided any, nor have we been made aware of the substantiated rationale for keeping this Requirement except that the SDT believes is it necessary.

2. R1.6. – [Documented communications protocols for its operating personnel that issue and receive Operating Instructions shall, at a minimum] Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction. Comment: This Requirement is vague and needs to be clarified for Registered Entities to know how to comply with it; how would one "specify nomenclature" system-wide? Even though the posted "Rationale and Technical Justification" (RTJ) document notes that R1.6 is limited in scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations), this RTJ document should define these terms and substantiate to what registered entities this needs to apply. For example, if the intent is to apply this requirement to Inter-Area tie-lines, then it should probably be limited to Reliability Coordinator-to-Reliability Coordinator communications. If the intent is to apply this requirement to every type of transmission – say generation interconnection facilities – it should be clear so that Registered Entities can clearly understand the burdens associated with this new Requirement.

3. R2. and R3. – ..."shall conduct initial training for each of its operating personnel ..." Note – ERCOT and IESO do not support the following Comment: The SRC members, (excluding ERCOT and IESO) do not believe a training Requirement is necessary; Responsible Entities must adhere to the Requirements of NERC Standards and how they accomplish this should not be dictated by a Standard Requirement. Additionally, to the extent that the SDT concludes that training on 3-part communication is necessary to ensure an adequate level of reliability, then any training requirements should this would already be covered under the PER Standard, which requiring training on job tasks. To the extent training requirements should be imposed on GOP/DP personnel, the PER Standard could be slightly modified to include them. Overall, if NERC is going to add additional training requirements, they should be located in PER to avoid complexity in the organization of NERC Standards. Finally, under RAI principles, NERC and Regions can determine what type of monitoring is appropriate of Responsible Entities' compliance with the new COM Standard based on the quality of their Training programs. This would further support reliability by changing the requirement from a one-time audit (i.e., initial training) to an ongoing assessment. In conclusion, even though the BOT resolved that there should be training associated with the COM requirements, it would be beneficial to

address the BOT's concern through existing Standards (PER). Basic principles of drafting regulation should strive to avoid making the organization and relationship among NERC Standards more complex than need to be. 4. Measurement 6. Measurement 6 needs to be revised so that it is consistent with NERC Enforcement policies. Specifically, the last sentence needs to be rewritten so that "Such evidence may include, but is not limited to, dated and time-stamped voice recordings[,] dated operator logs, an attestation from the issuer of the Operating Instruction, voice recordings (if the entity has such recordings), memos and transcripts." NERC has repeatedly affirmed that a Registered Entity may provide an attestation that it has complied with a Standard. See NERC Compliance Process Bulletin#2011-001 ("Data Retention Requirements") (May 20, 2011), at p 3 (in the context of explaining that the CMEP requires a registered entity to demonstrate that it was compliant through the entire audit period, NERC stated that some examples of evidence may include "An attestation of any employee who has participated in the activity on a regular basis throughout the audit period, supported by other corroborating evidence (such as schedules, emails and other applicable documentation). Recipients of oral Operating Instructions during an Emergency have ample means of maintaining records, providing corroborating material, etc... demonstrating that they adhered to the emergency Operating Instruction. To establish an expectation that other Registered Entities may be maintaining audit evidence for the Registered Entity to which the Requirement applies is inconsistent with NERC's enforcement rules and establishes a flawed practice and expectation with regard to recordkeeping requirements and "audit trails."

Individual

Scott Berry

Indiana Municipal Power Agency

Yes

Requirement R3 is not clear in defining if it covers all Operating Instructions received by a Distribution Provider and Generator Operator. Distribution Providers and Generator Operators can receive Operating Instructions from outside parties (Balancing Authority, Reliability Coordinator, and Transmission Operator) and from internal parties (its own Market Operations). The current word in Requirement 3 requires Distribution Providers and Generator Operators to repeat back both outside and internal parties Operating Instructions. IMPA does not believe this was the intent of the SDT since there are no requirements that cover Distribution Providers or Generator Operators issuing Operating Instructions (the Generator Operator's Market Operations issuing an Operating Instruction to its generating power plant; Generator Operators cannot issue Operating Instructions to any Registered Entities such as the Balancing Authority or Reliability Coordinator). IMPA also believes that operating personnel need to know at the time an instruction is given if it is an Operating Instruction or a Directive. This clarification needs to come from the entity giving the

instruction and reviewing the call afterwards to make that determination is very problematic.
Individual
Gregory Campoli
New York Independent System Operator
Yes
The NYISO would like to request confirmation that Operating Instructions are limited to verbal or written communications and that electronic dispatch signals are not in scope for this standard. The NYISO would also note that we support comments submitted by both the IRC/SRC and NPCC/RSC.
Individual
Bill Temple
Northeast Utilities
Yes
Yes
Yes
Yes
Comment 1 Systematic Approach to Training is already covered in PER-005-1 and including a requirement for training would seem to be redundant. Comment 2 The applicability of Distribution Provider (DP) functional responsibility presents potential for confusion. New England LCC's (Transmission Operators) operate at the direction of ISO-NE the Regional Transmission Operator (RTO) and enforcing the communication protocols to distribution companies/distribution providers may present challenges, identifying, documenting and implementing COM-002-4 to the DP. Comment 3 The language used in Requirement 1.6 is vague and needs to be clarified for Registered Entities to know how to comply with it. How would one "specify nomenclature" system-wide?
Individual
Jen Fiegel
Oncor Electric Delivery Company LLC
No

The Operating Instruction during an Emergency is unclear, vague, and subject to interpretation. By using the NERC defined term of Emergency, certain tasks that are a non-emergency action would now be considered an Emergency. Oncor supports GTC's recommendation of the removal of the terms "or limit" within this definition. One could argue that every single Operating Instruction is utilized to limit failures of transmission facilities. Emergency should be more appropriately defined without this ambiguity. We submit, for the SDT's consideration, a revised definition of Emergency in an attempt to remove this ambiguity. Emergency – Any abnormal system condition that requires automatic or immediate manual action to prevent the failure of transmission facilities or generation supply that would adversely affect the reliability of the Bulk Electric System. Oncor does not believe that COM-002-4 accurately reflects the proper applicability for entities that have an impact on the operations of the Bulk Electric System in normal and emergency conditions. Oncor understands that the inclusion of Distribution Providers to this standard stems from various FERC directives, but because of the relationship of Distribution Providers with Transmission Operators as identified in NERC's functional model in being only a receiver of instructions to implement voltage reduction or to shed load to prevent the failure of the BES, or related to restoration activities as coordinated with the Transmission Operator; the TOP is ultimately responsible for the proper execution of the instructions, continues to recommend that Distribution Providers be removed from the applicability of COM-002-4. Knowing that it will be difficult to remove the Distribution Provider from the applicability of COM-002-4 per FERC's directives, Oncor supports the alternatives recommended by GTC as an opportunity to address this. In addition, the COM-002-4 does not align with the evaluation and findings of the NERC Reliability Issues Steering Committee (RISC) and Operating Committee (OC) which supports the importance of clear communications but found no evidence that non-emergency communications represent a reliability gap.

No

COM-002-4 goes beyond the August 2003 Blackout Report Recommendation number 26, FERC Order 693 for neither identify requirements for normal operations. EOP-001-2, R3.1 and COM-002-2, R2 already address the requirements of the Blackout Report and FERC Order 693. The intent of the 2003 Blackout recommendation was to provide tighter communication during emergency situations. Due to the ambiguity that exists between Operating Instruction and Operating Instruction during an Emergency, we believe that this recommendation was not addressed. In addition, the NERC BOT directed the NERC Operating Committee (OC) to evaluate the COM standards (previously COM-003) and responses from the Reliability Issues Steering Committee (RISC), the Independent Experts Review and NERC Management. Their report issued September 23, 2013 to the NERC BOT Chairman identifies the importance of clear communications but found no evidence including the NERC event analysis process nor recent events which supports that non-emergency communications represents a reliability gap. The OC created a guideline for verbal communications which provides industry best practices and recommended utilizing the guideline to promote continuous improvement versus implementing a mandatory standard.

Yes

Yes

Oncor recommends Requirement 4 and Measurement 4 be removed. The “assess adherence and assess effectiveness” language mirrors the same concepts as the “Identify, Assess and Correct (IAC)” language that was included in the CIP V5 standards which FERC directed the removal of. The removal or modification of this language was included in the Final Rule of NERC CIP V5 (Order No. 791). FERC stated that IAC language was “overly-vague, lacking definition and guidance is needed” and that these control concepts would be best addressed in the NERC compliance processes, such as through the NERC Reliability Assurance Initiative (RAI), rather than standards requirements. Reliability Standards must be revised to focus on strategic and critical reliability objectives incorporating requirements for meeting and sustaining reliability of the BES. The current state of Standards must transition from a prescriptive zero tolerance approach to results-based requirements which assure the reliability and security of the critical infrastructure. A reliability results-based approach should not be an additive to the Reliability Standards; hence, controls requirements should not be incorporated within the Standards, rather controls should be considered at the Program level. Reliability Standards should define the results (“what”) Entities are mandated to meet and maintain and the “how” should be handled by each Entity for there is not a “one size fits all”. Incorporating detective controls as requirements and prescriptive measurements can lead to unintended consequences and again, an additive versus a process that helps provide a registered entity with reasonable assurance they comply with the Standard(s) or the operating function(s) and processes that the Standard(s) require. Rewording of R1.6 as follows: “Specify the nomenclature to be used for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction to Neighboring Entities.” While the Technical Justification document suggests that R1.6 applies to communication with neighboring entities, it is unclear that this requirement, as worded in the current draft of COM-002-4, is specifically discussing communication with neighboring entities. M2 should include “initial training” and be reworded as follows in order to maintain consistency with the requirement: “Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide initial training records related to its documented communications protocols developed for Requirement R1 such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R2.”

Individual

Maggy Powell

Exelon Corp and its affiliated business units

No

Revision 8 addresses the Board Resolution, but it goes beyond the resolution by including GOP’s and DP’s as applicable entities thereby creating redundant and unnecessary compliance obligations for many of those entities. See comments below in response #4. Furthermore, while the new approach in this draft is an improvement, it does not achieve the desired goal to move away from a zero tolerance focus on the use of three part

communication within this standard. If time is allowed for further work on this standard, we offer potential adjustments below in response #4. A couple points of potential confusion: - Question 1 and the link to the Board Resolution on the Project page cites a November 19, 2013 Resolution; however, the link takes readers to a November 7, 2013 Resolution. We assume the November 7, 2013 Resolution is the correct reference. - The first bullet of the November 7, 2013 Board Resolution refers to the Operating Committee Guidelines for good communication practice. This OC document does not appear to be linked to the Project page. It is unlikely that many stakeholders would have found and/or reviewed the document relative to the proposed COM-002-4 draft.

No

2003 Blackout Report Recommendation No. 26 reads: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate (footnote omitted). NERC should work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations, and ensure that all key parties, including state and local officials, receive timely and accurate information. NERC should task the regional councils to work together to develop communications protocols by December 31, 2004, and to assess and report on the adequacy of emergency communications systems within their regions against the protocols by that date." While Exelon believes that COM-002-4 goes beyond the Recommendation and includes the requirement to implement communication protocols for operating BES elements in non-emergency and other non-critical situations, Exelon also recognizes that the NERC Board believes that the words "especially for" in the recommendation are the reason to include a standard for normal communications. We also understand that in paragraph 540 of Order No. 693, FERC directed the ERO to expand the applicability of the communication standard to distribution providers (DP's) but that directive tied back to communications protocols "especially for communications during alerts and emergencies." Although Recommendation 26 addresses "key parties" and FERC directive addresses DP's in the context of Blackout Recommendation No. 26, we don't believe that either was intended to include DP's and GOP's for non-emergency /Operating Instructions communications.

Yes

- A "qualified" application of COM-002-4 for a DP that performs voltage reduction or load shedding as directed by an RC, BA or TOP could clarify the standard and place the emphasis on the functional entities that matter most.
- Remove R6 and M6. The BA, RC or TOP, as issuers, record Operating Instructions (OI). R1.2 requires an entity issuing an OI to confirm the receiver's response, reissue if necessary and take alternate action if the receiver does not confirm or understand the OI. Similarly, per R5, issuers of an OI are required to confirm the receiver's response, reissue if necessary and take alternate action if the receiver does not confirm or understand the OI. There is little reliability benefit in requiring the DP and GOP receiver documenting their role in this exchange. The training requirement for receivers of OI's in R3 is sufficient.
- If R6 and M6 are not removed. R6. To clarify, suggest that the word

“Operating Instruction” be inserted after “excluding written” so it is clear it is applicable to both conditions. M6. Need a comma after “voice recordings” so as to separate it from dated operator logs. “Voice recordings” is repeated twice in M6. M7. “Voice recordings” is repeated twice in M7. • R6 / M6. Exelon is concerned that demonstrating compliance with R6 may prove difficult for some entities. A generator operator may not have voice recording available at the entity’s facility and it may not be possible to procure voice recording or attestations from the issuer of an Operating Instruction. The measurement says dated operator logs are acceptable evidence. The RSAW further discusses auditor discretion and risk assessment respecting this requirement and measure. If audited per the measurement and RSAW guidance, log entries would be acceptable evidence but we are concerned that an auditor may find otherwise. • Should this proposal fail to pass ballot, we encourage the drafting team to build on the positive work done in this version and address the compliance concerns that remain. All stakeholders would be best served if this standard could incent improvement in communication through effective self-assessment and applied lessons learned. This iteration presents an opportunity to truly step away from placing the compliance burden that judges operators for their use of three-part communication and to focus on programmatic measures to promote effective communication. Specifically, replacing R5, R6 and R7 with meaningful assessment criteria to include in entity review programs could increase the qualitative components of the program, focus on efforts to improve effective communication and remove the zero tolerance compliance approach that currently exists. • While it’s been difficult to keep “starting over” with new standard language approaches, we believe that this version sets solid groundwork to address the hurdles and conflicts of previous approaches. Should more time be allowed to continue development of this most recent proposal, we would welcome the chance to discuss our ideas further.

Individual

Alice Ireland

Xcel Energy

Yes

Xcel Energy is voting negative because the standard no longer contains clarity for all parties on when they have entered an emergency state and therefore 3-part communication would be required. Since the requirements to conduct 3-part communication on emergency operating instructions will remain zero tolerance, it is important that the line of when the entity entered an emergency state be clear to the registered entities involved as well as ERO compliance and enforcement personnel. We think incorporating some of the mechanics from COM-002-3 could easily remedy our concerns. Alternatively, please consider requiring an Operating Instruction that is issued during an Emergency situation be identified as ‘This is an Emergency.’.

Individual
RoLynda Shumpert
South Carolina Electric and Gas
Agree
SERC OC
Group
Bonneville Power Administration
Jamison Dye
Yes
Yes
Yes
No
Individual
Anthony Jablonski
ReliabilityFirst
No
ReliabilityFirst submits the following comments related to the VSL for the SDTs consideration: 1. Requirement R4 VSL - For the Lower VSL, ReliabilityFirst recommends gradating the number of months an entity is late in assessing adherence and effectiveness of the documented communications protocols. For example, there is a big difference if an entity is late by one month or 12 months. As drafted, there is a big difference if an entity is late by one month or 12 months. As drafted, an entity that is late by 12 months would still fall under the Lower VSL. ReliabilityFirst recommends gradating the VSLs in three month intervals. For example, the last "AND" text for the Lower VSL would read: "The responsible entity exceeded twelve (12) but less than or equal to fifteen (15) calendar months between assessments." The Moderate VSL would read; "The responsible entity exceeded fifteen (15) but less than or equal to eighteen (18) calendar months between assessments." The High and Severe VSLs would follow the same rationale. 2. Requirement R5 VSL - Requirement R5 does not speak to instability, uncontrolled, separation, or cascading failures occurring as a result of correctly issuing an oral two-party, person-to-person Operating Instruction. To be consistent with the requirement, ReliabilityFirst recommends deleting the text after the AND qualifier and deleting the Moderate VSL. Hence, there will



only be one Severe VSL for this requirement. 3. Requirement R6 VSL - Similar comment as the Requirement R5 VSL 4. Requirement R7 VSL - Similar comment as the Requirement R5 VSL

Yes

ReliabilityFirst submits the following comments for consideration: 1. Requirements R1, R2, R3 and R4 - The term “operating personnel” is used throughout the draft standard. This term is undefined and it is unclear to which individuals the communications protocol applies. ReliabilityFirst recommends defining this term to eliminate any confusion and remove any questions around who encompasses “operating personnel”. ReliabilityFirst suggests replacing the term “operating personnel” with the draft PER-005-2 definition of “System Operator” (e.g., “An individual at a Control Center of a Balancing Authority, Transmission Operator, or Reliability Coordinator, who operates or directs the operation of the Bulk Electric System in Real-time.”). ReliabilityFirst believes it is the intent of the standard to apply to individuals who operate or direct the operation of the Bulk Electric System in Real-time, and not personnel that may be involved in supporting roles. 2. Requirement R4 a. The intent of Requirement R4 a. R4.1 appears to limit possible violations for deviations to the context of emergency operations, while only requiring that Responsible Entities to assess and correct deviations “as appropriate” in the non-Emergency setting. ReliabilityFirst is concerned that the qualifier “as appropriate” is vague and creates concerns similar to those expressed by the Commission in Order 791. In Order 791, the Commission supported the RAI’s goal to develop a framework for the ERO Enterprise’s use of discretion in the compliance monitoring and enforcement space, but rejected the codification of “identify, assess, and correct” language within the CIP Version 5 Reliability Standards because it is vague. ReliabilityFirst is also concerned that the qualifier “as appropriate” codifies discretion within COM-002-4. ReliabilityFirst believes that neither discretion nor controls should be codified in Reliability Standards. Rather, the ERO Enterprise should utilize discretion in the compliance monitoring and enforcement space when determining the relevant scope of audits and whether to decline to pursue a noncompliance as a violation. With the RAI, the ERO Enterprise is developing a singular and uniform framework to inform the ERO Enterprise’s use of discretion in the compliance monitoring and enforcement space. Therefore, ReliabilityFirst recommends removing the qualifier “as appropriate” from R4.1 and allowing the ongoing RAI effort to create a meaningful and unambiguous framework that the ERO Enterprise will utilize to inform its use of discretion in the compliance monitoring and enforcement of all Reliability Standards. ReliabilityFirst cautions that codifying discretion in some Reliability Standards may create confusion once the ERO Enterprise begins to implement RAI discretion in its compliance monitoring and enforcement work. For example, there may be confusion of whether discretion codified in certain Requirements of Reliability Standards precludes the ERO Enterprise’s use of RAI discretion for those Requirements where discretion is not codified. b. Flowing from 2.a. above, ReliabilityFirst recommends that Measure 4 be modified to remove discretion, and should read as follows: M4. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence of its assessments, including spreadsheets, logs or other evidence of feedback, findings of effectiveness and any changes made to its documented communications protocols developed for Requirement R1 in

fulfillment of Requirement R4. The entity shall also provide evidence that it took appropriate corrective actions as part of its assessment for all instances of operating personnel's nonadherence to the protocols developed in Requirement R1.

Individual

Richard Vine

California ISO

Yes

1. Requirement R4 is an administrative task, not a reliability-related task. The ISO does not see the value added or where BES reliability is enhanced by R4. 2. The ISO uses an Automated Dispatch System (ADS) to direct dispatch levels of generation in the ISO Balancing Authority Area. Though different ADS instructions are sent to multiple parties (different Generators) each individual instruction is an electronic communication that is "resource specific" (i.e. – we send one resource an electronic communication to position its unit at a specific level and another resource a different electronic communication to position its resource at a different level, etc.) In this respect the ISO considers the ADS to be a "single-party to single-party" communication rather than a "single-party to multiple-party burst" communication. The ISO requests standards drafting team confirmation that it does not interpret R1.4 (or R7 which contains similar language in the Emergency context) to apply to resource-specific ADS dispatch instructions.

Individual

Sergio Banuelos

Tri-State Generation and Transmission Association Inc.

Yes

Yes

Yes

Yes

Tri-State G&T disagrees with removing the term reliability directive. The proposed definition for Reliability Directive should be modified to provide technical justification, as requested in the November 21, 2013 FERC NOPR, and require Reliability Coordinators to use Reliability Directives to issue instructions to maintain reliable operations. As addressed in the NOPR, Reliability Directives from an entity responsible for the reliable operation of the BES should be mandatory at all times, not just during emergencies. Owners, Operators and others

responsible for reliability of the BES have used the term reliability directive effectively for many years. Removing this term does not enhance the reliability of the BES and places a burden on industry to adjust to accommodate a new method to accomplish what is done today with reliability directives. Our proposal is to make Reliability Directives applicable to RC, TOP and BA's to ensure reliable operation the BES. The term Operating Instructions should be applicable to Operators who issue commands to control elements essential to the reliable operation of the BES. We do not believe the term, as currently defined, should apply to Reliability Coordinators. According to the NERC Functional Model, Reliability Coordinators are not real time operators and are not operating personnel. Reliability Coordinators oversee the reliability of the BES and direct real time operations as needed to assure reliability of the BES. TSGT requests clarification of the term operating personnel, which positions is this term referring to? As previously stated, if operating personnel are the personnel that operate BES elements, then operating personnel should not include Reliability Coordinators since that is not the role they currently provide. TSGT requests clarification on the proposed multiple-party burst communication. This method of communication is not widely used and we are concerned that the use of this type of communication may create additional reliability issues. TSGT requests a clarification of time identification in R1.5.

Group

Luminant

Brenda Hampton

Yes

No

Recoomendation 26 of the August 2003 Blackout Report was to "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." Technology is now available and already in use in some places that allow receiptants of an All-Call/Burst Message type Operating Instruction to press a button on the phone keypad to acknowledge understanding of the Operating Instruction. This allows the issuer a quick and easy way to confirm the understanding of all recieptants of the Operating Instruction. Allowing the issuer of an Operating Instruction to seek confirmation from only one recipient in R7 ignores the recommendation from the Black Out Report to use new technology.

Yes

Yes

1). R1.3 and R3 should also allow the receiver of an Operating Instruction to respond by explaining that a requested action cannot be performed (e.g., due to safety, equipment, regulatory, or statutory requirements as described in TOP-001 R3 and IRO-001 R8). The requirement to either repeat or request that the instruction be reissued does not account for the realistic situation that an entity may not be able to perform an Operating Instruction. 2).

Specific to R.6, consideration should be given to revise the verbiage from, “during an Emergency” to “identified by the sender as constituting an Emergency directive.” The rationale for the recommendation is offered to provide clarity to the Requirement, as it is anticipated that there will be cases when it is not clear the Operating Instruction is associated with an Emergency. Additionally, the definition of “Emergency” in the NERC Glossary is broad and consequently it may be difficult, at times, to determine which inputs are subject to COM-002-4 requirements, especially if the TO or TOP calls a plant operator directly rather than going through the respective dispatchers. Note: On the 1/17/14 COM-002-4 SDT webinar the question was asked, how a DP or GOP would know that an Operating Instruction occurred during an Emergency. The drafting team stated that after every Operating Instruction the DP should call its TOP to determine if the Operating Instruction occurred during an Emergency. Luminant once again reiterates that it would be more efficient and the industry would benefit as a whole, if the sender of the Operational Instruction, states the instruction is associated with an Emergency.

Group
Santee Cooper
S. Tom Abrams
Agree
We agree with the comments submitted by SERC.
Individual
Ralph Meyer
The Empire District Electric Company
Yes
Yes
Yes
Yes
I feel that the requirement to an assessment to communication protocols is somewhat excessive and should be left as a part of the audit process or following NERCs RAI directive be left up to the internal compliance department of the company rather than having this as a requirement in the standard.
Individual
daniel mason
HHWP
no comment

no comment
no comment
Yes
I appreciate the work done on this Standard by the SDT. The current version of the draft is much improved. I propose one change before supporting this proposed standard. That change is in Requirement 4 where I believe the standard would be improved by replacing the "at least once every twelve (12) calendar months" language with "at least annually, with no more than X months between reviews." Such a change to the language of Requirement 4 would allow each entity to determine the best cycle for its review of adherence to and effectiveness of its communications protocols per CAN-0010. If that language is used, I believe that 15 months is an appropriate value for 'X'.

Additional comments received from Marcus Pelt, Southern Company

**Definition of Emergency**

Southern does not agree with replacing Reliability Directive with Emergency as it is currently used in Draft 8. In the NERC Glossary, the term Emergency is defined as follows:

Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

This definition is very broad and, if read literally, every breaker operation on the system would be considered an Emergency. This causes a great deal of concern. If this is the case and absent any compliance guidance to state otherwise, it would require Operating Entities to add additional staff to listen to all voice recordings to review adherence to the strict 100% compliance requirement for communications issued/received during Emergencies. These requirements/measures create an undue burden for Operating Entities and would likely not garner support from the industry.

We suggest that the SDT modify this approach to scope down actions that could be considered "Emergencies" by allowing entities to define and make it very clear that the expectation is not for Operating Entities to have to review all voice recordings (could be millions in a single year) to ensure compliance, but only a representative sample of voice recordings for both non-emergency and emergency communications.

From a DP and GOP standpoint, the RSAW and technical justification wording states that an attestation that no emergency had been called requiring a three part response would suffice for evidence. The rationale and technical justification document has some very good

explanations of the INTENT of the drafting team and how they want the industry to view the standard requirements. If the standard and the subsequent audits adhered ONLY to what was in the justification document, then there should be little or no concerns. Unfortunately, the justification document carries no statutory weight and the standard as written does.

# Consideration of Comments

## Project 2007-02 Operating Personnel Communications Protocols

The Project 2007-02 Drafting Team thanks all commenters who submitted comments on the proposed draft COM-002-4 (Operating Personnel Communications Protocols) standard. These standards were posted for a 30-day public comment period from January 2, 2014 through January 31, 2014.

Stakeholders were asked to provide feedback on the standards and associated documents through a special electronic comment form. There were 70 sets of comments, including comments from approximately 185 different people from approximately 125 companies representing all 10 Industry Segments as shown in the table on the following pages.

As a result of select industry stakeholder comments, the Operating Personnel Communications Protocols Standards Drafting Team (OPCP SDT) made minor, non-substantive changes to COM-002-4 after the most recent comment and ballot period in order to clarify the OPCP SDT's intent and better align the language in the measures with the requirements. Requirement R4.1 was altered from "as appropriate" to "as deemed appropriate by the entity" in order to highlight the OPCP SDT's intent. In Measure M2 the words "its initial" were added to the sentence "shall provide its initial training records . . ." in order to align the language in Measure M2 with the language in Requirement R2. Measure M4 was altered to include the phrase "as part of its assessment" and "of any corrective actions taken" within the sentence "The entity shall provide, as part of its assessment, evidence of any corrective actions taken." Lastly, Measure M6 and M7 were changed to add the parenthetical "(if an entity has such recordings)" after the words "time-stamped recordings," and the second entry for "time-stamped recordings" was removed due to redundancy.

All comments submitted may be reviewed in their original format on the standard's [project page](#).

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Mark Lauby, at 404-446-2560 or at [mark.lauby@nerc.net](mailto:mark.lauby@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

<sup>1</sup> The appeals process is in the Standard Processes Manual: [http://www.nerc.com/comm/SC/Documents/Appendix\\_3A\\_StandardsProcessesManual.pdf](http://www.nerc.com/comm/SC/Documents/Appendix_3A_StandardsProcessesManual.pdf)

## **Index to Questions, Comments, and Responses**

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**The Industry Segments are:**

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

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24. Wayne Sipperly	New York Power Authority	NPCC	5												
25. Ben Wu	Orange and Rockland Utilities Inc.	NPCC	1												
26. Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3												
6.	Group	Russel Mountjoy	NERC Standards Review Forum	X	X	X	X	X	X						
	<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>											
1.	Alice Ireland	Xcel Energy	MRO	1, 3, 5, 6											
2.	Chuck Wicklund	Otter Tail Power	MRO	1, 3, 5											
3.	Dan Inman	Minnkota Power Coop	MRO	1, 3, 5, 6											
4.	Dave Rudolph	Basin Electric	MRO	1, 3, 5, 6											
5.	Kayleigh Wilkerson	Lincoln Electric	MRO	1, 3, 5, 6											
6.	Jodi Jensen	WAPA	MRO	6											
7.	Joseph Depoorter	Madison Gas & Electric	MRO	3, 4, 5, 6											
8.	Ken Goldsmith	Alliant Energy	MRO	4											
9.	Mahmood Safi	Omaha Public Power District	MRO	1, 3, 5, 6											
10.	Marie Knox	MISO	MRO	2											
11.	Mike Brytowski	Great River Energy	MRO	1, 3, 5, 6											
12.	Randi Nyholm	Minnesota Power	MRO	1, 5											
13.	Scott Bos	Muscatine Power & Water	MRO	1, 3, 5, 6											
14.	Scott Nickels	Rochester Public Utilities	MRO	4											
15.	Terry Harbour	MidAmerican Energy	MRO	1, 3, 5, 6											
16.	Tom Breene	Wisconsin Public Service	MRO	3, 4, 5, 6											

Group/Individual		Commenter	Organization	Registered Ballot Body Segment																																																	
				1	2	3	4	5	6	7	8	9	10																																								
17. Tony Eddleman		Nebraska Public Power District	MRO	1, 3, 5																																																	
7.	Group	Kaleb Brimhall	Colorado Springs Utilities	X		X		X	X																																												
No Additional Responses																																																					
8.	Group	Marcus Pelt	Southern Company; Southern Company Services, Inc; Alabama Power Company; Georgia power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation and Energy Marketing	X		X		X	X																																												
No Additional Responses																																																					
9.	Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X																																												
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9. Mark Schultz	Green Cove Springs	FRCC	3																																																		
10.	Group	Janet Smith	Arizona Public Service Co.	X		X		X	X																																												
No Additional Responses																																																					
11.	Group	Brent Ingebrigtsen	PPL NERC Registered Affiliates	X		X		X	X																																												
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4.		PPL Susquehanna, LLC	RFC	5																
5.		PPL Montana, LLC	WECC	5																
6.	Elizabeth Davis	PPL EnergyPlus, LLC	MRO	6																
7.			NPCC	6																
8.			RFC	6																
9.			SERC	6																
10.			SPP	6																
11.			WECC	6																
12.	Group	Michael Lowman	Duke Energy		X		X		X	X										
<b>Additional Member</b>				<b>Additional Organization</b>	<b>Region</b>	<b>Segment</b>	<b>Selection</b>													
1.	Doug Hils		RFC	1																
2.	Lee Schuster		FRCC	3																
3.	Dale Goodwine		SERC	5																
4.	Greg Cecil		RFC	6																
13.	Group	Kathleen Black	DTE Electric				X	X	X											
<b>Additional Member</b>				<b>Additional Organization</b>	<b>Region</b>	<b>Segment</b>	<b>Selection</b>													
1.	Kent Kujala	NERC Compliance	RFC	3																
2.	Daniel Herring	NERC Training & Standards Development	RFC	4																
3.	Mark Stefaniak	Regulated Marketing	NPCC	5																
4.	Jeffrey DePriest	NERC Compliance	RFC																	
5.	Barbara Holland		RFC																	
14.	Group	Robert Rhodes	SPP Standards Review Group			X														
<b>Additional Member</b>				<b>Additional Organization</b>	<b>Region</b>	<b>Segment</b>	<b>Selection</b>													
1.	John Allen	City Utilities of Springfield	SPP	1, 4																
2.	Ron Gunderson	Nebraska Public Power District	MRO	1, 3, 5																
3.	John Hare	Oklahoma Gas & Electric	SPP	1, 3, 5																
4.	Don Hargrove	Oklahoma Gas & Electric	SPP	1, 3, 5																
5.	Stephanie Johnson	Westar Energy	SPP	1, 3, 5, 6																
6.	Bo Jones	Westar Energy	SPP	1, 3, 5, 6																

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7.	Allen Klassen	Westar Energy	SPP	1, 3, 5, 6																																																																	
8.	Tiffany Lake	Westar Energy	SPP	1, 3, 5, 6																																																																	
9.	Greg McAuley	Oklahoma Gas & Electric	SPP	1, 3, 5																																																																	
10.	Shannon Mickens	Southwest Power Pool	SPP	2																																																																	
11.	James Nail	City of Independence, MO	SPP	3																																																																	
12.	Kevin Nincehelsler	Westar Energy	SPP	1, 3, 5, 6																																																																	
13.	Terri Pyle	Oklahoma Gas & Electric	SPP	1, 3, 5																																																																	
14.	Randy Root	Grand River Dam Authority	SPP	1																																																																	
15.	Ashley Stringer	Oklahoma Municipal Power Authority	SPP	4																																																																	
16.	Bryan Taggart	Westar Energy	SPP	1, 3, 5, 6																																																																	
17.	Sing Tay	Oklahoma Gas & Electric	SPP	1, 3, 5																																																																	
18.	Scott Williams	City Utilities of Springfield	SPP	1, 4																																																																	
15.	Group	Erika Doot	Bureau of Reclamation		X					X																																																											
No Additional Responses																																																																					
16.	Group	Louis Slade	Dominion		X		X		X	X																																																											
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9.	Mike Garton		NPCC	5, 6																																																																	
10.	Connie Lowe		RFC	5, 6																																																																	
17.	Group	Ben Engelby	ACES Standards Collaborators							X																																																											
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Group/Individual	Commenter	Organization	Registered Ballot Body Segment											
			1	2	3	4	5	6	7	8	9	10		
2. Kevin Lyons	Central Iowa Power Cooperative	MRO												
3. Scott Brame	North Carolina Electric Membership Corporation	SERC	1, 3, 4, 5											
4. Mark Ringhausen	Old Dominion Electric Cooperative	SERC	3, 4											
5. Ginger Mercier	Prairie Power, Inc.	SERC	3											
6. Ellen Watkins	Sunflower Electric Power Corporation	SPP	1											
7. Bob Solomon	Hoosier Energy Rural Electric Cooperative, Inc.	RFC	1											
8. Bill Hutchison	Southern Illinois Power Cooperative	SERC	1											
18. Group	Brandy Spraker	Tennessee Valley Authority		X		X		X	X					
<b>Additional Member Additional Organization Region Segment Selection</b>														
1. Marjorie Parsons		SERC	6											
2. David Thompson		SERC	5											
3. DeWayne Scott		SERC	1											
4. Ian Grant		SERC	3											
5. Stuart Goza		SERC	1											
6. Paul Palmer		SERC	5											
19. Group	Greg Campoli	ISO/RTO Council Standards Review Committee			X									
<b>Additional Member Additional Organization Region Segment Selection</b>														
1. Ali Merimadi	CAISO	WECC	2											
2. Cheryl Mosley	ERCOT	ERCOT	2											
3. Ben Li	IESO	NPCC	2											
4. Kathleen Goodman	ISO New England	NPCC	2											
5. Terry Bilke	MISO	RFC	2											
6. Charles Yeung	SPP	SPP	2											
20. Group	Jamison Dye	Bonneville Power Administration		X		X		X	X					
<b>Additional Member Additional Organization Region Segment Selection</b>														
1. Richard Ellison	Transmission Dispatch	WECC	1											
2. Tim Loepker	Transmission Dispatch	WECC	1											
21. Group	Brenda Hampton	Luminant							X					

Group/Individual	Commenter	Organization	Registered Ballot Body Segment											
			1	2	3	4	5	6	7	8	9	10		
<b>Additional Member Additional Organization Region Segment Selection</b> 1. Rick Terrill Luminant Generation Company LLC ERCOT 5														
22.	Group	S. Tom Abrams	Santee Cooper	X		X		X	X					
<b>Additional Member Additional Organization Region Segment Selection</b> 1. Rene Free Santee Cooper SERC 1, 3, 5, 6 2. Tom Abrams Santee Cooper SERC 1, 3, 5, 6														
23.	Individual	Molly Devine	Idaho Power Company	X										
24.	Individual	Colin Jack	Dixie Power			X								
25.	Individual	Paul Titus	Northern Wasco County PUD	X		X								
26.	Individual	Kenn Backholm	Public Utility District No.1 of Snohomish County	X		X	X	X	X				X	
27.	Individual	Jonathan Appelbaum	The United Illuminating Company	X										
28.	Individual	Daniel Duff	Liberty Electric Power LLC					X						
29.	Individual	Matthew P Beilfuss	Wisconsin Electric Power Company			X	X	X						
30.	Individual	Thomas Borowiak	Citizens Electric Corporation	X										
31.	Individual	Patricia Metro	NRECA	X		X	X							
32.	Individual	Howard Hughes	SLEMCO			X								
33.	Individual	Michelle R D'Antuono	Ingleside Cogeneration LP					X						
34.	Individual	Jack Stamper	Clark Public Utilities	X										
35.	Individual	Josh Dellinger	Glacier Electric Cooperative	X		X								
36.	Individual	russ schneider	flathead co-op			X	X							
37.	Individual	Oliver Burke	Energy Transmission	X										
38.	Individual	Donald E Nelson	Commonwealth of Massachusetts Department of Public Utilities										X	
39.	Individual	Thomas M. Haire	Rutherford EMC			X								
40.	Individual	Venona Greaff	Occidental Chemical Corporation								X			



Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
41.	Individual	William H. Chambliss	Virginia State Corporation Commission, Member OC										
42.	Individual	Shirley Mayadewi	Manitoba Hydro	X		X		X	X				
43.	Individual	Jason Snodgrass	Georgia Transmission Corporation	X									
44.	Individual	Andrew Z. Puzstai	American Transmission Company, LLC	X									
45.	Individual	Michael Falvo	Independent Electricity System Operator		X								
46.	Individual	David Thorne	Pepco Holdings Inc.	X		X							
47.	Individual	Thomas Foltz	American Electric Power	X		X		X	X				
48.	Individual	Brian Evans-Mongeon	Utility Services, Inc								X		
49.	Individual	Christopher Wood	Platte River Power Authority	X		X		X				X	
50.	Individual	Don Schmit	Nebraska Public Power District	X		X		X					
51.	Individual	John Brockhan	CenterPoint Energy Houston Electric LLC	X									
52.	Individual	David Jendras	Ameren	X		X		X	X				
53.	Individual	Marie Knox	MISO		X								
54.	Individual	Catherine Wesley	PJM Interconnection		X								
55.	Individual	Brett Holland	Kansas City Power & Light	X		X		X	X				
56.	Individual	Scott McGough	Georgia System Operations Corporation			X							
57.	Individual	Cheryl Moseley	Electric Reliability Council of Texas, Inc.		X								
58.	Individual	Michael Landry	DEMCO			X							
59.	Individual	Scott Berry	Indiana Municipal Power Agency				X						
60.	Individual	Gregory Campoli	New York Independent System Operator		X								
61.	Individual	Bill Temple	Northeast Utilities	X									
62.	Individual	Jen Fiegel	Oncor Electric Delivery Company LLC	X									
63.	Individual	Maggy Powell	Exelon Corp and its affiliated business units	X		X	X	X	X				
64.	Individual	Alice Ireland	Xcel Energy	X		X		X	X				
65.	Individual	RoLynda Shumpert	South Carolina Electric and Gas	X		X		X	X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment										
				1	2	3	4	5	6	7	8	9	10	
66.	Individual	Anthony Jablonski	ReliabilityFirst											X
67.	Individual	Richard Vine	California ISO		X									
68.	Individual	Sergio Banuelos	Tri-State Generation and Transmission Association Inc.	X		X		X						
69.	Individual	Ralph Meyer	The Empire District Electric Company	X										
70.	Individual	daniel mason	HHWP	X				X						

If you support the comments submitted by another entity and would like to indicate you agree with their comments, please select "agree" below and enter the entity's name in the comment section (please provide the name of the organization, trade association, group, or committee, rather than the name of the individual submitter).

Organization	Agree	Supporting Comments of "Entity Name"
Associated Electric Cooperative, Inc. - JRO00088	Agree	NRECA and SERC OC Review Group
Dominion	Agree	SERC OC Standards Review group
Tennessee Valley Authority	Agree	SERC Operating Committee Review Team
Santee Cooper	Agree	We agree with the comments submitted by SERC.
Dixie Power	Agree	NRECA
Northern Wasco County PUD	Agree	NRECA
Citizens Electric Corporation	Agree	National Rural Electric Cooperative Association(NRECA)
SLEMCO	Agree	NRECA
Glacier Electric Cooperative	Agree	NRECA
flathead co-op	Agree	Flathead supports the comments submitted by NRECA
Entergy Transmission	Agree	SERC OC Review Group

Organization	Agree	Supporting Comments of "Entity Name"
Commonwealth of Massachusetts Department of Public Utilities	Agree	Northeast Power Coordinating Council (NPCC)
Rutherford EMC	Agree	NRECA
Occidental Chemical Corporation	Agree	Ingleside Cogeneration LP
Ameren	Agree	Ameren agrees with and supports the SERC OC comments on COM-002-4.
Kansas City Power & Light	Agree	SPP - Robert Rhodes
DEMCO	Agree	NRECA
South Carolina Electric and Gas	Agree	SERC OC

1. **Do you agree that the COM-002-4 standard addresses the NERC Board of Trustees November 19, 2013 Resolution? If not, please explain in the comment area.**

**Summary Consideration:** The OPCP SDT would like to thank all parties who took the time to submit comments. The NERC Board of Trustees Resolution directed the OPCP SDT to continue development of a combined COM-002- and COM-003 standard that, among other things, requires the use of the three-part communication for both Emergency Communications and non-emergency communications that change or preserve the state, status, output, or input of the Bulk Electric System; requires training and periodic review of communications subject to the communications protocols; and requires entities to assess the effectiveness of their communications protocols as well as their operators adherence to the protocols. Additionally, the Resolution directed that entities must use three-part communication when issuing and/or receiving Operating Instructions during Emergency Communications without exception. The following is provided as a summary response to the comments on Question 1. Any necessary additional responses are provided to individual commenters below.

Several commenters, including SERC OC Review Group, Georgia Transmission Company, and NRECA, commented that Distribution Providers should not be included as an applicable entity to COM-002-4 or that, if included, the applicability be limited to Distribution Providers who “shed 300 MW or more of load in a single manually initiated operation or have switching obligations related to Any Cranking Path and group of Elements meeting the initial switching requirements from a Blackstart Resource . . .”

The OPCP SDT chose to include Distribution Providers in the Applicability section because they can be and are on the receiving end of some Operating Instructions. The OPCP SDT could not determine a technical basis to support a threshold to exclude certain Distribution Providers. The OPCP SDT continues to believe that the language in COM-002-4, R6 that limits the application of R6 to only a Distribution Provider “that receives an oral two-party, person-to-person Operating Instruction during an Emergency” properly excludes Distribution Providers that do not receive Operating Instructions from the requirement. The inclusion of Distribution Providers is also responsive to the FERC directive to include Distribution Providers as an applicable entity under the standard.

Other commenters noted that the requirements do not differentiate clearly between the actions operators must take during non-Emergency and Emergency situations. In COM-002-4, the same protocols are to be used for Operating Instructions in all operating conditions, i.e., non-emergency, alert, and Emergency communications. The OPCP SDT believes that one set of communication protocols should be used at all times by operators in order to improve consistency and minimize confusion. The standard uses the phrase “Operating Instruction during an Emergency” in certain Requirements (R5, R6, and R7) to provide a demarcation for what is subject to a zero-tolerance compliance/enforcement approach. Where “Operating Instruction during an Emergency” is not used, an entity will be assessed based on the language of the other requirements, which focus on whether an entity met the initial training requirement (either R2 or R3) and/or whether an entity performed the assessment and took corrective actions according to

Requirement R4. Separately listing out Requirements R5, R6, and R7 and using “Operating Instruction during an Emergency” in them does not require a different set of protocols to be used during Emergencies or mandate the identification of a communication as an “Operating Instruction during an Emergency.” The same protocols are required to be used in connection with the issuance of Operating Instructions for all operating conditions.

Several commenters also stated they believe the issuer of an Operating Instruction during an Emergency should be required to indicate to the recipient that the instruction being issued is for the purpose of preventing or alleviating an Emergency. The OPCP SDT has considered these comments but asserts that such a requirement could distract operators, causing them to focus on determining whether or not a situation meets the definition of an Emergency, rather than resolving the issue at hand. Because the protocols do not differ based on the operating condition, the OPCP SDT determined that it was not necessary to require such indication in the protocols mandated by the standard. The OPCP SDT notes that the standard does not preclude entities from adding its own protocols to do so.

Some parties expressed a concern that the definition of “Emergency” was unclear, vague, and subject to interpretation. Commenters also expressed concern about the auditor’s ability to make a distinct determination as to what Operating Instructions were in response to an Emergency and at what point the actual Emergency began, as Emergency communications triggers the zero-tolerance compliance approach. The NERC Glossary of Terms defines Emergency as “Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.” It is expected that these are abnormal and rare circumstances, and that there will be no confusion about the state. The term is an established NERC Glossary term that has been successfully used in other standards. Additionally, redefining the NERC Glossary term “Emergency” has implications in other reliability standards beyond COM-002-4.

It was also suggested by several individuals and entities that the inclusion of a training requirement was not necessary and/or would be better suited for inclusion in PER-005. The OPCP SDT consulted with the PER-005 Standard Drafting Team and was advised that while training on communications protocols would fall into an entity’s systematic approach to training, the requirements do not explicitly mandate training on communications protocols. The OPCP SDT asserts it is essential for all operators to have a common level of understanding and be trained in three-part communication. Because PER-005 would not meet the NERC Board of Trustees November 7, 2013 Resolution to mandate training, the OPCP SDT included a requirement to conduct initial training in order to ensure that a baseline of training is complete before an individual is placed in a position to use the communications protocols. The OPCP SDT further asserts requiring initial training is not overly burdensome to an entity and any subsequent training can be covered in PER-005 or through the operator feedback loop as determined by the entity.

Other entities have commented that the requirements in COM-002-4 subject entities to double jeopardy as a result of the currently effective TOP and IRO requirements. The OPCP SDT disagrees with this assertion, as COM-002-4 only deals with communications and communication protocols, whereas the TOP and IRO family of standards govern the actions which an entity must perform.

Some parties asked how an entity would specify system wide nomenclature in their protocols, or stated they believed this was not necessary since Project 2007-03 chose to eliminate TOP-002-2a, Requirement R18 when it developed TOP-002-3. This requirement stated “Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network.” The standard drafting team addressed this issue in the FAQ document posted on the project page. The following response was provided: “COM-002-4, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations) for Operating Instructions. This supports both parties being familiar with each other’s interface Elements and Facilities, minimizing hesitation and confusion when referring to equipment for the Operating Instruction.” The nomenclature is not specified as “system wide.” Requirement R1 Part 1.6 only requires entities to specify what, if any, nomenclature must be used for Transmission interface Elements or Transmission interface Facilities (e.g., tie lines and tie substations). The OPCP SDT did not want to be overly prescriptive in instructing an entity on how it should identify its nomenclature.

Lastly, some commenters noted that they felt the “assess adherence and assess effectiveness” contained within Requirement R4, the associated Measure, and VRFs/VSLs was similar to the “identify assess and correct” (IAC) language contained in certain CIP Version 5 requirements, which FERC directed NERC to remove or clarify. However, the OPCP SDT asserts that there is a difference in the language, and that the ambiguity FERC identified in the IAC language is not an issue in the COM-002-4 standard. The OPCP SDT added clarifying language in the requirements to specify the actions that an entity is expected to take.

Organization	Yes or No	Question 1 Comment
SERC OC Review Group	No	<p>The SERC OC Review Group appreciates the efforts that the OPCP SDT has made on this draft standard and the flexibility demonstrated to address the constantly evolving feedback received. We do not believe the proposed requirements and measures clearly delineate the differences in the actions required to be taken by the issuer and recipient depending upon whether or not the Operating Instruction is being given to alleviate or avoid an Emergency.</p> <p>Applicability Section:4.1.2 Distribution Provider: We understand that it would be difficult to remove the Distribution Provider from the applicability of COM-002-4 per FERC's directives. Therefore, we are respectfully recommending an alternative that parallels the recently FERC approved CIP-003-5 that we believe accurately captures those DPs that receive Operating Instructions associated with the reliability of the BES. The following alternative to clarify those Distribution Providers that have an impact on the BES is recommended:4.1.2 Distribution Provider that: 4.1.2.1 Has capability to shed 300 MW or more of load in a single</p>

Organization	Yes or No	Question 1 Comment
		<p>manually initiated operation.4.1.2.2 Has switching obligations related to Any Cranking Path and group of Elements meeting the initial switching requirements from a Blackstart Resource up to and including the first interconnection point of the starting station service of the next generation unit(s) to be started.</p> <p>General Requirement Comment: The OPCP SDT is respectfully requested to review the Requirements to ensure that it is clear that “during an Emergency” is only applicable to the entities involved.</p> <p>Requirement 1: The proposed standard still contains requirements that mandate the use of, and training to include, 3 part communications during issuance of all Operating Instructions, including those issued during non-Emergency situations. While we agree that the OPCP SDT has stated in its Rationale and Technical Justification document that the proposed measures don’t specifically require that auditors verify compliance of this for the requirements (and associated measures), a strict read leads to a different conclusion. We are concerned that, absent a requirement that the issuer make a definitive statement as to whether an Operating Instruction is being issued to alleviate or avoid an Emergency, neither the recipient (during) nor an auditor (after) would be able to make such determination. We respectfully recommend modifying requirement 1 so that it applies to all Operating Instructions but requires that those being issued to alleviate or avoid an Emergency be specifically identified as such and that the issuer explicitly request recipient confirm their understanding through use of 3 part communication. To accomplish this we propose a new R1.1. The current R1.1 through R1.6 would be renumbered R1.2 through R1.7Current R1 language: R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum: [Violation Risk Factor: Low][Time Horizon: Long-term Planning] 1.1.Require its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations. Proposed R1 language: R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum: [Violation Risk Factor: Low][Time</p>



Organization	Yes or No	Question 1 Comment
		<p>Horizon: Long-term Planning]Proposed R1.1: ADD: Require that its operating personnel identify, at the time of issuance, when the Operating Instruction is being issued to alleviate or avoid an Emergency R1.2: Based on the OPCP SDT comments and zero tolerance for Emergency communications we propose a new bullet be added to R1.2. Current R1.2 language: Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions: o Confirm the receiver’s response if the repeated information is correct. o Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver. o Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver. Proposed R1.2: Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions: o Confirm the receiver’s response if the repeated information is correct. o Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver. o Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver. o ADD: Request recipient use 3 part communication when the Operating Instruction is being issued to alleviate or avoid an EmergencyR1.3: We respectfully recommend a word change (correct to understood) in 1.3, bullet 1. Current 1.3 sub-bullet 1 follows: Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct. Proposed 1.3, sub-bullet 1: Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was understood.</p> <p>Requirement R2: This group feels that R2 should be eliminated as redundant with the systematic approach to training requirements of PER-005 (Operations Personnel Training) which are applicable to all BAs, RCs &amp; TOPs. Communications protocols must be included in each company’s specific reliability-related task list. Inherent in systematic approach is initial training on all reliability-related tasks, since each task must be analyzed as to its Difficulty, Importance &amp; Frequency (DIF analysis). As a result of the DIF analysis, systematic approach would require that communications protocols have both initial and continuing training.</p> <p>Requirement R3: We agree with the OPCP SDT concern that Operating Personnel should not be placed in a position to receive an oral two-party, person-to-person Operating Instruction</p>

Organization	Yes or No	Question 1 Comment
		<p>prior to being trained. This Group understands that OPCP SDT included an initial training requirement in the standard in response to the NERC Board of Trustees’ resolution, which directs that a training requirement be included in the COM-002-4 standard. We would like to recommend that the term “initial” be removed so not to give the impression that training is a one-time effort. Current R3 language: Each Distribution Provider and Generator Operator shall conduct initial training for each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction to either: [Violation Risk Factor: Low][Time Horizon: Long-term Planning] Proposed R3 language: Each Distribution Provider and Generator Operator shall conduct training for each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction to either: [Violation Risk Factor: Low][Time Horizon: Long-term Planning]</p> <p>Requirements R5, R6, and R7: This Group feels that the relationship between R1, R5, R6, and R7 requires further clarification to remove possible opportunities for different interpretations which could result in uncertainty as to whether the Operating Instruction is being issued to alleviate or avoid an Emergency. The concern centers on the absence of a requirement that the issuer make a definitive statement as to whether an Operating Instruction is being issued to alleviate or avoid an Emergency, neither the recipient (during) nor an auditor (after) would be able to make such determination. This is the reason for the R1 modifications. If the recommended R1 modifications are accepted then R5, R6, and R7 should be considered for deletion (incorporating specific items deemed necessary by the OPCP SDT as bullets or sub-requirements of R1).</p> <p>Measures: Measure 1: Base on the Group’s recommendations above we propose for consideration the following modification to Measure 1: Current M1 language: Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1. Proposed M1 language: Revised M1: Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1. For each Operating Instruction issued to alleviate or avoid an Emergency; entity shall provide evidence</p>

Organization	Yes or No	Question 1 Comment
		<p>that it identified such at time Operating instruction was issued (R1.1) and requested recipient use of 3 part communication (R1.2).</p> <p><b>Response: Requirement R1 states “Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum:” The Measure and, therefore, evidence, is proof of the developed protocols.</b></p> <p>Measure 2,5,6, and 7: If our recommendations are accepted then Measures 2, 5, 6, and 7 should be deleted incorporating specific items deemed necessary by the OPCP SDT as bullets or sub-requirements of R1 Measure 3: To align M3 with our R3 recommendation we propose deleting the word “initial”. Current M3 language: Each Distribution Provider and Generator Operator shall provide its initial training records for its operating personnel such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R3. Proposed M3 language: Each Distribution Provider and Generator Operator shall provide its training records for its operating personnel such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R3.</p> <p><b>Response: The OPCP SDT considered your suggestion but asserts that the existing language provides sufficient clarity.</b></p>
Northeast Power Coordinating Council	No	The proposed Requirements and Measures do not clearly delineate the differences in the actions required to be taken by the issuer and recipient depending upon whether or not the Operating Instruction is being given to alleviate or avoid an Emergency.
Duke Energy	No	(1)Duke Energy believes that Operating Instruction during an Emergency is unclear, vague, and subject to interpretation. By using the NERC defined term of Emergency, certain tasks that Duke Energy believes is a non-emergency action would now be considered an Emergency and subject to zero tolerance. Duke submits, for consideration by the OPCP SDT,

Organization	Yes or No	Question 1 Comment
		<p>a revised definition of Emergency in an attempt to remove this ambiguity. Emergency - Any abnormal system condition that requires automatic or immediate manual action to prevent the failure of transmission facilities or generation supply that would adversely affect the reliability of the Bulk Electric System.</p>
<p>Dominion</p>	<p>No</p>	<p>We do not believe the proposed requirements and measures clearly delineate the differences in the actions required to be taken by the issuer and recipient depending upon whether or not the Operating Instruction is being given to alleviate or avoid an Emergency.</p>
<p>ACES Standards Collaborators</p>	<p>No</p>	<p>(1) We disagree that the current draft addresses the NERC Board resolution because the Board charged the drafting team with developing an “essential set of communications protocols” for reliable operation of the BES. The proposed standard conflicts with other existing reliability standards, which would subject entities to double jeopardy. Therefore, the standard includes more than an “essential set” of requirements as stated in the NERC Board Resolution.</p> <p>(2) For example, the “nomenclature” protocol in Requirement R1 is duplicative with TOP-002 R18. Since FERC issued a NOPR proposing to remand the TOP standards, the requirement of using “uniform line identifiers” will remain as an enforceable standard. Having a nomenclature requirement in COM-002-4 will subject entities to double jeopardy and is not an “essential set of communication protocols.”</p> <p>(3) Another example of a redundant requirement is training. Communications that impact the BES will be covered in a reliability related task as part of the systematic approach to training. This will also subject entities to double jeopardy with PER-005 R1 and is not an “essential set of communication protocols.”</p> <p>(4) We appreciate the efforts of the drafting team in working to address the FERC directives and NERC November 2013 BOT Resolution, but we do not believe that COM-002-4 accurately</p>

Organization	Yes or No	Question 1 Comment
		<p>reflects the proper applicability for entities that have an impact on the operations of the Bulk Electric System in normal and emergency conditions. We understand that the inclusion of Distribution Providers to this standard stems from various FERC directives, but because of the relationship of Distribution Providers with Transmission Operators as identified in NERC's functional model in being only a receiver of instructions to implement voltage reduction or to shed load to prevent the failure of the BES, or related to restoration activities as coordinated with the Transmission Operator; the TOP is ultimately responsible for the proper execution of the instructions. Thus, we continue to recommend that Distribution Providers be removed from the applicability of COM-002-4.</p> <p>(5) Knowing that it will be difficult to remove the Distribution Provider from the applicability of COM-002-4 per FERC's directives, we recommend an alternative that parallels the recently FERC approved CIP-003-5 applicability section 4.1.2, which we believe accurately captures those DPs that receive Operating Instructions associated with the reliability of the BES. The following alternative can be used as technical justification to clarify those Distribution Providers that have an impact on the BES is recommended:"4.1.2 Distribution Provider that:            4.1.2.1 Has capability to shed 300 MW or more of load in a single manually initiated operation. 4.1.2.2 Has switching obligations related to any Cranking Path and group of Elements meeting the initial switching requirements from a Blackstart Resource up to and including the first interconnection point of the starting station service of the next generation unit(s) to be started."</p>
NRECA	No	<p>NRECA appreciates the efforts of the drafting team in working to address the FERC directives and NERC BOT Resolution November 2013, but does not believe that COM-002-4 accurately reflects the proper applicability for entities that have an impact on the operations of the Bulk Electric System in normal and emergency conditions. NRECA understands that the inclusion of Distribution Providers to this standard stems from various FERC directives, but because of the relationship of Distribution Providers with Transmission Operators as identified in NERC's functional model in being only a receiver of instructions to implement voltage reduction or to</p>

Organization	Yes or No	Question 1 Comment
		<p>shed load to prevent the failure of the BES, or related to restoration activities as coordinated with the Transmission Operator; the TOP is ultimately responsible for the proper execution of the instructions, continues to recommend that Distribution Providers be removed from the applicability of COM-002-4. Knowing that it will be difficult to remove the Distribution Provider from the applicability of COM-002-4 per FERC's directives, NRECA is recommending an alternative that parallels the recently FERC approved CIP-003-5 that we believe accurately captures those DPs that receive Operating Instructions associated with the reliability of the BES. The following alternative to clarify those Distribution Providers that have an impact on the BES is recommended: 4.1.2 Distribution Provider that: 4.1.2.1 Has capability to shed 300 MW or more of load in a single manually initiated operation. 4.1.2.2 Has switching obligations related to Any Cranking Path and group of Elements meeting the initial switching requirements from a Blackstart Resource up to and including the first interconnection point of the starting station service of the next generation unit(s) to be started. NRECA proposes to recommend an "affirmative" ballot to its members if the applicability is modified in the next posting as provided.</p>
<p>Oncor Electric Delivery Company LLC</p>	<p>No</p>	<p>The Operating Instruction during an Emergency is unclear, vague, and subject to interpretation. By using the NERC defined term of Emergency, certain tasks that are a non-emergency action would now be considered an Emergency. Oncor supports GTC's recommendation of the removal of the terms "or limit" within this definition. One could argue that every single Operating Instruction is utilized to limit failures of transmission facilities. Emergency should be more appropriately defined without this ambiguity. We submit, for the OPCP SDT's consideration, a revised definition of Emergency in an attempt to remove this ambiguity. Emergency - Any abnormal system condition that requires automatic or immediate manual action to prevent the failure of transmission facilities or generation supply that would adversely affect the reliability of the Bulk Electric System. Oncor does not believe that COM-002-4 accurately reflects the proper applicability for entities that have an impact on the operations of the Bulk Electric System in normal and emergency conditions. Oncor understands that the inclusion of Distribution Providers to this standard stems from</p>

Organization	Yes or No	Question 1 Comment
		<p>various FERC directives, but because of the relationship of Distribution Providers with Transmission Operators as identified in NERC's functional model in being only a receiver of instructions to implement voltage reduction or to shed load to prevent the failure of the BES, or related to restoration activities as coordinated with the Transmission Operator; the TOP is ultimately responsible for the proper execution of the instructions, continues to recommend that Distribution Providers be removed from the applicability of COM-002-4. Knowing that it will be difficult to remove the Distribution Provider from the applicability of COM-002-4 per FERC's directives, Oncor supports the alternatives recommended by GTC as an opportunity to address this. In addition, the COM-002-4 does not align with the evaluation and findings of the NERC Reliability Issues Steering Committee (RISC) and Operating Committee (OC) which supports the importance of clear communications but found no evidence that non-emergency communications represent a reliability gap.</p>
<p>Exelon Corp and its affiliated business units</p>	<p>No</p>	<p>Revision 8 addresses the Board Resolution, but it goes beyond the resolution by including GOP's and DP's as applicable entities thereby creating redundant and unnecessary compliance obligations for many of those entities. See comments below in response #4. Furthermore, while the new approach in this draft is an improvement, it does not achieve the desired goal to move away from a zero tolerance focus on the use of three part communication within this standard. If time is allowed for further work on this standard, we offer potential adjustments below in response #4. A couple points of potential confusion:- Question 1 and the link to the Board Resolution on the Project page cites a November 19, 2013 Resolution; however, the link takes readers to a November 7, 2013 Resolution. We assume the November 7, 2013 Resolution is the correct reference. - The first bullet of the November 7, 2013 Board Resolution refers to the Operating Committee Guidelines for good communication practice. This OC document does not appear to be linked to the Project page. It is unlikely that many stakeholders would have found and/or reviewed the document relative to the proposed COM-002-4 draft.</p> <p><b>Response: The November 7 reference is correct and has been updated.</b></p>

Organization	Yes or No	Question 1 Comment
		<p>The OC document was posted in June of 2012 on the Operating Committee Related Files page and may be found at the following location: <a href="http://www.nerc.com/comm/OC/Related%20Files%20DL/OC%20Approved_COM-002-2%20Guideline_6-24-2012_For%20Posting_w%20line%20numbers_Clean_Version%202.pdf">http://www.nerc.com/comm/OC/Related%20Files%20DL/OC%20Approved_COM-002-2%20Guideline_6-24-2012_For%20Posting_w%20line%20numbers_Clean_Version%202.pdf</a>.</p>
The United Illuminating Company	No	
Ingleside Cogeneration LP	Yes	<p>Ingleside Cogeneration LP ("ICLP") believes that the requirements that govern directives issued during the course of an Emergency remain consistent with those in-place today. In addition, the latest draft of COM-002-4 allows oversight of all other Operating Instructions - although to a lesser degree. This is a good combination of compliance strategies that retains focus on the important communications while adding attention on daily discussions which may have impact on the BES if improperly transacted.</p>
CenterPoint Energy Houston Electric LLC	Yes	<p>CenterPoint Energy agrees that the COM-002-4 standard addresses the NERC Board of Trustees 2013 Resolution.</p>
North American Generator Forum -	Yes	



Organization	Yes or No	Question 1 Comment
Standards Review Team (NAGF-SRT)		
Salt River Project	Yes	
NERC Standards Review Forum	Yes	
Southern Company; Southern Company Services, Inc; Alabama Power Company; Georgia power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation and Energy Marketing	Yes	
Florida Municipal Power Agency	Yes	
Arizona Public Service Co.	Yes	
DTE Electric	Yes	
Bonneville Power Administration	Yes	

Organization	Yes or No	Question 1 Comment
Luminant	Yes	
Idaho Power Company	Yes	
Public Utility District No.1 of Snohomish County	Yes	
Liberty Electric Power LLC	Yes	
Wisconsin Electric Power Company	Yes	
Clark Public Utilities	Yes	
Virginia State Corporation Commission, Member OC	Yes	
Manitoba Hydro	Yes	
Independent Electricity System Operator	Yes	
Platte River Power Authority	Yes	
MISO	Yes	

Organization	Yes or No	Question 1 Comment
PJM Interconnection	Yes	
Georgia System Operations Corporation	Yes	
Northeast Utilities	Yes	
Tri-State Generation and Transmission Association Inc.	Yes	
The Empire District Electric Company	Yes	

2. **Do you agree that COM-002-4 addresses the August 2003 Blackout Report Recommendation number 26, and FERC Order No. 693? If not, please explain in the comment area.**

Summary Consideration: The OPCP SDT thanks all those who took the opportunity to comment on Question 2. The August 2003 Blackout Report Recommendation number 26 called entities to tighten communications protocols especially during Emergencies and alerts. The following is provided as a summary response to the comments on Question 2. Any necessary additional responses are provided to individual commenters below.

Some commenters expressed concern that neither the August 2003 Blackout Report Recommendation number 26 nor FERC Order No. 693 recommended the use of three-part communication. FERC Order No. 693 Paragraph 531 states “We adopt our proposal to require the ERO to establish tightened communication protocols, especially for communications during alerts and emergencies, either as part of COM-002-2 or as a new Reliability Standard. We note that the ERO’s response to the Staff Preliminary Assessment supports the need to develop additional Reliability Standards addressing consistent communications protocols among personnel responsible for the reliability of the Bulk-Power System.” FERC also states that the goal is to establish communication uniformity as much as practical on a continent-wide basis to eliminate possible ambiguities in communications during normal, alert, and emergency conditions. The existing COM-002-2 includes three-part communication and the OPCP SDT determined that three-part communication is a necessary protocol.

Other commenters stated that Recommendation 26 from the 2003 Blackout report is about situational awareness and not about what System Operators should say in their conversations. The OPCP SDT asserts that situational awareness is improved by operationally sound communication protocols, which decrease the possibility of miscommunications.

Other commenters stated that Recommendation 26 of the 2003 Blackout Report continues to be misinterpreted. The recommendation is focused on how the ERO should communicate with governmental agencies. It states, “Standing hotline networks, or a functional equivalent, should be established for use in alerts and emergencies (as opposed to one-on-one phone calls) to ensure that all key parties, [including state and local officials] are able to give and receive timely and accurate information.” FERC Order No. 693 Paragraph 534 states “In response to MISO’s contention that Blackout Report Recommendation No. 26 has been fully implemented, we note that Recommendation No. 26 addressed two matters. We believe MISO is referring to the second part of the recommendation requiring NERC to “[u]pgrade communication system hardware where appropriate” instead of tightening communications protocols. While we commend the ERO for taking appropriate action in upgrading its NERCNet, we remind the industry to continue their efforts in addressing the first part of Blackout Recommendation No. 26.” In response, the OPCP SDT has not focused on hardware issues, instead focusing on communication protocols.

One commenter stated that allowing the issuer of an Operating Instruction to seek confirmation from only one recipient in Requirement R7 ignores the recommendation from the Blackout Report to use new technology. The OPCP SDT asserts that it is important that the issuer of a written or oral single-party to multiple-party burst Operating Instruction make sure that the communication channel was complete. This can be accomplished by confirming with at least one party that the communication was received. This is not limited to any particular technology that could be employed for the necessary confirmation.

Certain commenters indicated that COM-002-4 goes outside the scope of Recommendation 26 of the Blackout Report because it deals with both non-Emergency and Emergency communications. However, the OPCP SDT contends that operators are often not aware they are in an Emergency situation until after the event has ended. Therefore, in order to mitigate a potential reliability gap, it is essential that COM-002-4 require a single set of communication protocols that are always used by operators.

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	We do not agree that the blackout recommendation calls for the use of 3 part communication for every Operating Instruction and note that neither the NERC Board nor the OPCP SDT has provided any evidence that indicates a direct correlation between errors due to communication problems and events that adversely impact the BES. The justification for reliability standard Requirements that require 3 part communication for every Operating Instruction, and having to enforce compliance with the same, is not supported.
NERC Standards Review Forum	No	As it has been stated in previous comments, Recommendation 26 from the 2003 Blackout report is about situational awareness and who and what entities need to be contacted during emergencies. It is not about what System Operators should say in their conversations.

Organization	Yes or No	Question 2 Comment
Duke Energy	No	(1)Based on our comments to Question 1, Duke Energy does not believe that the OPCP SDT has addressed Recommendation 26 of the August 2003 Blackout report. The intent of the 2003 Blackout recommendation was to provide tighter communication during normal and emergency situations. Due to the ambiguity that exists between Operating Instruction and Operating Instruction during an Emergency, we believe that this recommendation was not addressed.
SPP Standards Review Group	No	Our understanding of Recommendation 26 is that it deals strictly with communications during emergencies which COM-002-3 had already addressed. The addition of non-emergency communications, which are not mentioned in Recommendation 26 at all, has expanded the scope of the standard beyond that called for by the recommendation. The addition of non-emergency communications has added additional compliance burden for the responsible entities without clearly improving the reliability of the BES.
Dominion	No	We do not agree that the blackout recommendation calls for the use of 3 part communication for every Operating Instruction and note that neither the NERC Board nor the OPCP SDT has provided any evidence that indicates a direct correlation between errors due to communication problems and events that adversely impacted the BES. Therefore we find it difficult to support reliability standard requirements that require 3 part communication for every Operating Instruction and enforce compliance with same.
ACES Standards Collaborators	No	(1) We believe recommendation number 26 of the 2003 Blackout Report continues to be misinterpreted. The recommendation is focused on how the ERO should

Organization	Yes or No	Question 2 Comment
		<p>communicate with governmental agencies. It states, "Standing hotline networks, or a functional equivalent, should be established for use in alerts and emergencies (as opposed to one-on-one phone calls) to ensure that all key parties, [including state and local officials] are able to give and receive timely and accurate information." The recommendation does not state anywhere to utilize three-part communication. COM-002-4 does not address the development of hotline networks or "upgrading communication system hardware where appropriate" for contacting governmental agencies, including state and local officials.</p>
Luminant	No	<p>Recommendation 26 of the August 2003 Blackout Report was to "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate." Technology is now available and already in use in some places that allow recipients of an All-Call/Burst Message type Operating Instruction to press a button on the phone keypad to acknowledge understanding of the Operating Instruction. This allows the issuer a quick and easy way to confirm the understanding of all recipients of the Operating Instruction. Allowing the issuer of an Operating Instruction to seek confirmation from only one recipient in R7 ignores the recommendation from the Black Out Report to use new technology.</p>
Georgia Transmission Corporation	No	<p>Comments: GTC recognizes FERC Order 693 directs the revision of COM-002 to include the DP and specifically states how essential it is that the TOP, BA and RC have communications with DPs. Additionally, GTC observes Order 693 also identifies the need for tightened communications protocols, especially for communications during alerts and emergencies and that such protocols shall be established with uniformity as much as practical on a continent wide basis to eliminate possible ambiguities in communications during emergency conditions. If the Standard requires the use of 3</p>

Organization	Yes or No	Question 2 Comment
		<p>part communications by the issuers of Operating Instructions, then it would seem sensible that receivers of Operating Instructions be trained for awareness and proper participation of such protocols. GTC sees parallels of this approach in other Standards such as restoration training of DPs identified in the TOPs restoration plan as required in EOP-005-2. GTC believes the current proposal of COM-002-4 still contains ambiguities that should be addressed before GTC can provide an affirmative ballot. GTC is offering 3 alternatives such that if any of them is adopted by the OPCP SDT, GTC would modify our position to cast an affirmative vote in the next recirculation. Alternative 1 (Modify the DP applicability): Applicability Section:4.1.2 Distribution Provider: GTC is recommending an alternative that parallels the recently FERC approved CIP-003-5 that we believe accurately captures those DPs that receive Operating Instructions associated with the reliability of the BES when in an Emergency. The following alternative to clarify those Distribution Providers that have an impact on the BES is recommended:4.1.2 Distribution Provider that:4.1.2.1 Has capability to shed 300 MW or more of load in a single manually initiated operation.4.1.2.2 Has switching obligations related to Any Cranking Path and group of Elements meeting the initial switching requirements from a Blackstart Resource up to and including the first interconnection point of the starting station service of the next generation unit(s) to be started. Alternative 2 (Modify the DP applicability per above, modify R3; Eliminate R6): Alternative 2 is an extension of alternative 1 for additional clarities. Requirement 3: Revise R3 to insert the words [during an Emergency] within the sentence "...who can receive an oral two-party, person-to-person Operating Instruction [during an Emergency] prior to that individual operator...". Additionally, replace the word "receive" with the word "request" in the first bullet of R3. The word "receive" is ambiguous and the word "request" is consistent with the receiver using his words to request a confirmation. GTC maintains that R3 is sufficient to satisfy FERC Order 693 for the DP applicability during emergencies, and would ensure uniformity on a continent wide basis to eliminate possible ambiguities in communications during emergency conditions. GTC prefers the elimination of R6. GTC does not believe that a receiver of an Operating Instruction in the field</p>



Organization	Yes or No	Question 2 Comment
		<p>performing field switching activities should be required to document evidence of following the oral communication practices. Issuers of Operating Instructions are already recording the Operating Instruction communications and have the capability to do so. Issuers are also required to ensure the receiver responds accordingly per R5. Issuers are required to confirm the receiver’s response is correct or else reissue if incorrect; issuers can also take an alternative action. Having the receiver document the implementation of these practices for compliance is redundant and duplicative to the issuer’s requirements. This is an unnecessary, administrative requirement that introduces a double jeopardy situation that does not enhance the reliability of the BES. The OPCP SDT should recognize that all reliability bases are covered with the training requirements of the issuers in R1, the training requirement of the receivers in R3, and the performance of these are monitored via the issuers recording capabilities in R5 and R7. With this approach, issuers can be satisfied that receivers are prepared to receive instructions in accordance with their training, and the options the issuers have per R5 in a live scenario. The receivers could not expose or cause a non-compliance situation to the issuers. However, the issuers could expose the receivers to a non-compliance situation if a recording is lost or damaged and the receiver was on hiscell phone in the field taking orders and performing switching, hence the double jeopardy and GTC’s plea to remove this requirement 6. Alternative 3 (Modify the DP applicability above, Modify R3 above, Modify R6, create separate DP requirement): Requirement 6: If the OPCP SDT decides that R6 must remain, then GTC requires the following changes to modify our negative vote to affirmative. GTC appreciates the drafting team making concessions to eliminate the need for DPs and GOPs being required to have documented communication protocols. Additionally, GTC appreciates the drafting team’s willingness to limit the scope of performing the 3 part communications to those Operating Instructions received during an Emergency. These drafting team concessions are a testament to the team, along with industry, of understanding that the DP will typically have a very limited role in receiving Operating Instructions from the BA or TOP to protect the BES during an Emergency. This role is typically limited to operating non-BES equipment (load serving stations) to</p>

Organization	Yes or No	Question 2 Comment
		<p>shed load or reduce voltage to prevent the failure of transmission facilities or generation supply that could adversely affect the reliability of the BES. GTC would submit that the TOP would further limit the DPs role to “manual” load shed type situations when the “automatic” load shed schemes misoperate or malfunction as designed. This is highlighted in the NERC functional model which identifies this real time function of the DP “Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority”. During an Emergency, which NERC defines as any abnormal condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the BES, the aforementioned function is what the DP will be called upon to implement. The ambiguity that arises is captured within the various types of utility registrations with NERC, and GTC believes the OPCP SDT can accommodate two distinct types of DPs which GTC believes to be critical to pass this Standard. GTC observed there are 298 entities in the NERC registry that are true DP function only. Most of these are DP/LSE and would not own BES assets, but they would be directly connected to the BES, hence registration. These entities own load serving substations and implementing voltage reduction or shedding load in an Emergency would not be ambiguous. However, GTC observed there are 242 entities in the NERC registry that are registered DPs, and also registered TOs that own BES assets. To these integrated entities, the scope of communications during an Emergency would be more ambiguous, as these entities may perform actions at transmission stations on a routine basis that the other DP only type entities would not have to consider. With the addition of R6 as written, these entities have an amplified burden of compliance risk associated with their TO registration even though R6 applies to them as a DP. This burden is the separation of those Operating Instructions performed at transmission stations which occurs more often than the Emergency event which requires a manual operation for reduction of voltage or load shed at load serving stations. GTC believes this ambiguity is significant enough to justify the separation of the DP from R6 to provide a standalone requirement commensurate to the DPs function as documented in the NERC functional model.</p>

Organization	Yes or No	Question 2 Comment
		<p>Proposed R6 language: Remove Distribution Provider from R6. Create a separate standalone requirement for the DP.R#. Each Distribution Provider that receives an oral two-party, person-to-person Operating Instruction to implement voltage reduction or shed load during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either:* Repeat, not necessarily verbatim, the Operating Instruction and request confirmation from the issuer that the response was correct, or* Request that the issuer reissue the Operating Instruction.</p> <p><b>Response: Please see the Summary Responses to Question 1 and Question 2.</b></p>
Nebraska Public Power District	No	<p>Recommendation 26 calls for work to be done to improve the effectiveness of communications in emergency situations. The purpose of the standard is to improve communications. However, the focus of the standard is primarily 3-part communications. There is no supporting documentation or data that 3-part communications improves the effectiveness of communications. Focusing on 3-part communications provides an easy target from a compliance perspective but all it teaches us is to mechanically repeat back what we have been instructed to do. We're focusing on the 'how' and 'what' rather than the 'why'. Keeping the 'why' in mind improves communications and the reliability of the BES. Keeping the 'why' in mind also leads to improved situational awareness. Improving effective communications is difficult to quantify in a standard and even more difficult to measure. We may be better off focusing on the principles contained in the OC's Reliability Guideline System Operator Verbal Communications - Current Industry Practices.</p>
Georgia System Operations Corporation	No	<p>GSOC recommends modifying R1 so that it applies to all Operating Instructions but requires that those being issued to alleviate or avoid an Emergency be specifically identified as such and that the issuer explicitly request recipient confirm</p>

Organization	Yes or No	Question 2 Comment
		<p>understanding through use of 3 part communication. This would require a revised R1.1Proposed R1: ADD: Require that its operating personnel identify, at the time of issuance, when the Operating Instruction is being issued to alleviate or avoid an Emergency. Proposed R1.2: ADD: Request recipient use 3 part communication when the Operating Instruction is being issued to alleviate or avoid an Emergency. Proposed R1.3: change the word “correct” to “understood” Requirement 2: GSOC believes R2 should be eliminated as redundant with the systematic approach to training requirements of PER-005-2(Operating Personnel Training) which are applicable to all Bas, RCs and TOPs. Communication protocols must be included in each company’s specific reliability-related task list. GSOC believes the current proposal of COM-002-4 still contains ambiguities that can be resolved with the following alternative. GSOC recognizes the following alternative in that it parallels the recently FERC approved CIP-003-5. GSOC believes this alternative more accurately captures those DPs that receive Operating Instructions associated with the reliability of the BES. 4.1.2 Distribution Provider that: 4.1.2.1 Has capability to shed 300 MW or more of load in a single manually initiated operation.4.1.2.2 Has switching obligations related to Any Cranking Path and group of Elements meeting the initial switching requirements from a Blackstart Resource up to and including the first interconnection point of the starting station service of the next generation unit(s) to be started.</p> <p><b>Response: The OPCP SDT disagrees with the suggested edits to Requirement R1. R1 currently requires entities to set protocols for use when issuing Operation Instructions. The Requirement calls for the development of protocols to cover ALL Operating Instructions. How an entity must use the protocols for Operating Instructions during Emergencies is covered by a separate requirement. Please see the Summary Response to Question 1 for responses to your comments regarding the inclusion of Distribution Providers and training.</b></p>

Organization	Yes or No	Question 2 Comment
Electric Reliability Council of Texas, Inc.	No	<p>This standard is not responsive to the Blackout Recommendation #26. The prevention of miscommunication is the current focus of this standard, while nothing in the Blackout Report commented on an instruction not being followed due to miscommunication. Rather, the Blackout Report focused on a lack of situational awareness based on one entity not understanding what the other entity was describing because different entities used different terminology. Flow of communications or “who” should be notified was also lacking in addition to “what” needed to be communicated. The report highlighted that effective communication was based on communication of important and prioritized information to each other in a timely way. In essence, this focuses on communication protocols to prevent miscommunications while Recommendation #26 focused on effective communication protocols that improve situational awareness, where the former is process and the latter is substantive. That being said, and regardless of whether COM-002-4 addresses the August 2003 Blackout Report Recommendation number 26 or not, ERCOT ISO can support the COM-002-4 standard. However, ERCOT ISO believes the draft standard could be improved and offers suggestions in Question 4 below, for the OPCP SDT’s consideration.</p>
Oncor Electric Delivery Company LLC	No	<p>COM-002-4 goes beyond the August 2003 Blackout Report Recommendation number 26, FERC Order 693 for neither identify requirements for normal operations. EOP-001-2, R3.1 and COM-002-2, R2 already address the requirements of the Blackout Report and FERC Order 693. The intent of the 2003 Blackout recommendation was to provide tighter communication during emergency situations. Due to the ambiguity that exists between Operating Instruction and Operating Instruction during an Emergency, we believe that this recommendation was not addressed. In addition, the NERC BOT directed the NERC Operating Committee (OC) to evaluate the COM standards (previously COM-003) and responses from the Reliability Issues Steering Committee (RISC), the Independent Experts Review and NERC Management. Their</p>

Organization	Yes or No	Question 2 Comment
		<p>report issued September 23, 2013 to the NERC BOT Chairman identifies the importance of clear communications but found no evidence including the NERC event analysis process nor recent events which supports that non-emergency communications represents a reliability gap. The OC created a guideline for verbal communications which provides industry best practices and recommended utilizing the guideline to promote continuous improvement versus implementing a mandatory standard.</p>
NRECA	No	See response to Question 1
Exelon Corp and its affiliated business units	No	<p>2003 Blackout Report Recommendation No. 26 reads: "Tighten communications protocols, especially for communications during alerts and emergencies. Upgrade communication system hardware where appropriate (footnote omitted). NERC should work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications during alerts, emergencies, or other critical situations, and ensure that all key parties, including state and local officials, receive timely and accurate information. NERC should task the regional councils to work together to develop communications protocols by December 31, 2004, and to assess and report on the adequacy of emergency communications systems within their regions against the protocols by that date." While Exelon believes that COM-002-4 goes beyond the Recommendation and includes the requirement to implement communication protocols for operating BES elements in non-emergency and other non-critical situations, Exelon also recognizes that the NERC Board believes that the words "especially for" in the recommendation are the reason to include a standard for normal communications. We also understand that in paragraph 540 of Order No. 693, FERC directed the ERO to expand the applicability of the communication standard to distribution providers (DP's) but that directive tied</p>

Organization	Yes or No	Question 2 Comment
		back to communications protocols “especially for communications during alerts and emergencies.” Although Recommendation 26 addresses “key parties” and FERC directive addresses DP’s in the context of Blackout Recommendation No. 26, we don’t believe that either was intended to include DP’s and GOP’s for non-emergency Operating Instructions communications.
The United Illuminating Company	No	
Ingleside Cogeneration LP	Yes	COM-002-4 adds requirements that call for protocols that add precision to operations communications as called for in both documents. However, in the latest draft, ICLP believes the compliance approach has been modified in a manner that ensures that routine Operating Communications are conducted using a common protocol - but do not involve significant tracking resources. In addition, the use of operator training and regular review of its effectiveness is consistent with other NERC standards related to operator capabilities. As it is written now, CIP-002-4 introduces new expectations related to routine communications, but only puts incremental pressures on existing processes and equipment necessary to address them.
CenterPoint Energy Houston Electric LLC	Yes	CenterPoint Energy agrees that the COM-002-4 standard addresses both the August 2003 Blackout Report Recommendation 26 and FERC Order 693.
SERC OC Review Group		We are concerned that this draft goes further than mentioned in the blackout recommendation that NERC should work with reliability coordinators and control area operators to improve the effectiveness of internal and external communications

Organization	Yes or No	Question 2 Comment
		during alerts, emergencies, or other critical situations. This group feels that the modifications recommended will add further clarity in communications and work towards the goal identified in the Black Report recommendation number 26.
Salt River Project	Yes	
Southern Company; Southern Company Services, Inc; Alabama Power Company; Georgia power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation and Energy Marketing	Yes	
Florida Municipal Power Agency	Yes	
Arizona Public Service Co.	Yes	
DTE Electric	Yes	
Bonneville Power Administration	Yes	
Idaho Power Company	Yes	
Public Utility District No.1 of Snohomish County	Yes	



Organization	Yes or No	Question 2 Comment
Liberty Electric Power LLC	Yes	
Wisconsin Electric Power Company	Yes	
Clark Public Utilities	Yes	
Virginia State Corporation Commission, Member OC	Yes	
Manitoba Hydro	Yes	
American Transmission Company, LLC	Yes	
Platte River Power Authority	Yes	
MISO	Yes	
PJM Interconnection	Yes	
Northeast Utilities	Yes	
Tri-State Generation and Transmission Association Inc.	Yes	
The Empire District Electric Company	Yes	

### 3. Do you agree with the VRFs and VSLs for the Requirements? If not, please explain.

Summary Consideration: The OPCP SDT thanks all commenters who submitted comments for Question 3. The following is provided as a summary response to the comments on Question 3. Any necessary additional responses are provided to individual commenters below. It should be noted that VSLs must be developed based on established criteria. Please refer to the “VRF/VSL Justification” document posted with the standard on the project page for additional information.

Several commenters stated that they did not feel a Severe VSL was appropriate for Requirement R1. The OPCP SDT has reviewed these comments but maintains the position that if an entity fails to include three-part communication in its communication protocols or the entity does not have any documented communication protocols, then that violation would warrant a Severe VSL as those elements represent the most significant elements of Requirement R1. Feedback received during development indicated a preference for a graduated VSL for Requirement R1 with higher importance placed on more critical protocols.

Other comments noted the Lower VSL for Requirement R4 is triggered by an entity failing to evaluate its documented communication protocols for Requirement R1 every 12 calendar months, but there is not a cap on the amount of time that may pass between evaluations and the violation results in a greater VSL. The OPCP SDT discussed the issue and determined that the requirement to perform the review is more important than penalizing an entity for the amount of time they missed the time window. The purpose of the requirement is to encourage entities to perform periodic reviews each year. The team determined that 12 months was the appropriate maximum period and that missing the 12-month time window should be the only demarcation point necessary.

Commenters also stated they felt the VSLs for Requirements R5–R7 were not appropriate because the difference between a Severe VSL and a Moderate VSL is triggered by whether or not an Emergency situation occurred. The OPCP SDT provided justification for the VSLs in the “VRF/VSL Justification” document posted on the project page. If an entity, when issuing an Operating Instruction during an Emergency, did not use three-part communication or take an alternative action if the receiver does not respond, yet instability, uncontrolled separation, or cascading failures did not occur as a result, the entity violated the requirement with a “Medium” VSL. The value of “Medium” is justified based upon a significant element (or a moderate percentage) of the required performance being missing, but the performance or product measured still has significant value in meeting the intent of the requirement, which is to avoid action or inaction that is harmful to the reliability of the Bulk Electric System. If an entity, when issuing an Operating Instruction during an Emergency, did not use three-part communication or take an alternative action if the receiver does not respond, and instability, uncontrolled separation, or cascading failures occurred as a result, the entity violated the requirement with a “Severe” VSL. The value of “Severe” is justified because the performance outcome does not meet the intent of the requirement.

In response to comments, the OPCP SDT made non-substantive clarifying changes to Measures M2, M4, M6, and M7.

Organization	Yes or No	Question 3 Comment
<p>Northeast Power Coordinating Council</p>	<p>No</p>	<p>Regarding Requirement R4, the LOW VSL suggests that an entity is assigned a LOW VSL if assessments are conducted more than 12 months apart. There is no maximum or “cap” to the delayed assessment, and hence an entity may be 18, 19 or more months late in conducting the next assessment. In other standards this could well be assessed a MEDIUM or HIGH or even a SEVERE violation, depending on the time period that an entity failed the 12 month update requirement. Absent this “cap”, or staggered caps, the proposed HIGH and SEVERE VSLs can only be assessed based on whether or not there was ever an assessment, even if the last assessment was done 3 or 4 years prior to an audit. This is inconsistent with the general guideline for VSLs. Regarding Requirement R5, the MEDIUM VSL and SEVERE VSL are identical, except the latter has a condition that is associated with the impact of the violation. This is inconsistent with the intent of the VSL, which is to assess the “extent to which” the requirement was violated, not the impact of the violation which should be captured by the VRF. This is also inconsistent with the VSL principle and guideline. Suggest removing the MEDIUM VSL, and the condition under the proposed SEVERE VSL be: “AND instability, uncontrolled separation, or cascading failures occurred as a result.” The same comments apply for Requirements R6 and R7. We believe that the VRFs/VSLs should be modified to better reflect the stated intent of the NERC Board of Trustees November 19, 2013 Resolution, which is to enforce ‘zero tolerance’ only for failure to use 3 part communications by the issuer or recipient of an Operating Instruction when it is issued to alleviate or avoid an Emergency.</p>
<p>NERC Standards Review Forum</p>	<p>No</p>	<p>R1, The NSRF does not understand why there is a Severe VSL for normal everyday Operating Instructions. This Severe VSL is imposing the “zero defect” language that</p>

Organization	Yes or No	Question 3 Comment
		the industry is trying to move away from. We understand if there were no protocols as in “The responsible entity did not develop any documented communications protocols as required in Requirement R1”, but not the sub requirements of R1.2 and R1.3. The highest VSL should be High. Save the Severe VSL for R5, R6, and R7.
Colorado Springs Utilities	No	<p>We do not agree with the following VSLs:1) R4: The LOW VSL suggests that an entity is assigned a LOW VSL if assessments are conducted more than 12 months apart. There is no max or “cap” to the delayed assessment and hence an entity may be 18, 19 or more months late in conducting the next assessment. In other standards, this could well be assessed a MEDIUM or HIGH or even a SEVERE violation, depending on the time period that an entity failed the 12 month update requirement. Absent this “cap”, or staggered caps, the proposed HIGH and SEVERE VSLs can only be assessed based on whether or not there was ever an assessment, even the last assessment was done 3 or 4 years prior to an audit. This is inconsistent with the general guideline for VSLs.2)</p> <p>R5: The MEDIUM VSL and SEVERE VSL are identical, except the latter has a condition that is associated with the impact of the violation. This is inconsistent with the intent of the VSL, which is to assess the “extent to which” the requirement was violated, not the impact of the violation which should be captured by the VRF. This is also inconsistent with the VSL principle and guideline. We suggest removing the MEDIUM VSL, and the condition under the proposed SEVERE VSL that: “AND Instability, uncontrolled separation, or cascading failures occurred as a result.”3) R6: Same comments as in R5.4) R7: Same comments as in R5.</p>
Southern Company; Southern Company Services, Inc; Alabama Power Company;	No	R3 VSL is listed as high and severe; The concern is that if an operator receives instruction and performs accurately using 3-part, but can’t show initial training for Operating Instruction and Operating instruction during an Emergency, would this

Organization	Yes or No	Question 3 Comment
<p>Georgia power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation and Energy Marketing</p>		<p>warrant a high or severe VSL. While there is the potential of risk if Operating Instructions are received prior to being trained, this should not somehow imply that incorrect operations were performed as a result of no training. The severe category should be reserved only for those instances in which Operating Instructions were received prior to being trained *and* which resulted in an emergency operation or reliability issue. As a result, we suggest “demoting” each existing VSL to a lower level, and editing the High and Severe VSL and limit it to only those instances that resulted in an emergency operation or reliability issue (suggestions provided below). Low - An individual operator at the responsible entity receiving an Operating Instruction prior to being trained. Moderate - An individual operator at the responsible entity received an Operating Instruction during an Emergency prior to being trained. High - An individual operator at the responsible entity received an Operating Instruction prior to being trained *and* resulting in an emergency operation or reliability issue. Severe - An individual operator at the responsible entity received an Operating Instruction during an Emergency prior to being trained *and* resulting in an emergency operation or reliability issue.</p>
<p>DTE Electric</p>	<p>No</p>	<p>The evidence needed to avoid violation is not clear. The VSL for R2 is not reasonable and an auditing nightmare. It should state an operator did not receive training on the documented communication protocol. Adding "prior to issuing an operating instruction" cannot be determined without excessive investigation. A check that all operators received training is appropriate. Same issue with R3 as listed for R2.</p>
<p>SPP Standards Review Group</p>	<p>No</p>	<p>We suggest changing the Moderate VSLs for R5, R6 and R7 to Lower. If the failure to completely follow through with the protocols contained in R1 had no adverse impact on the situation, then this VSL is purely administrative and is not deserving of being Moderate. The Lower and Moderate VSLs for R1 contain specific details regarding</p>

Organization	Yes or No	Question 3 Comment
		each of the Parts referenced in each of the VSLs. In the High and Severe VSLs for R1 only reference is made to the Parts while the details contained in the Parts is not included in the VSLs. Either the details should be removed from the Lower and Moderate VSLs or the details need to be included in the High and Severe VSLs.
Dominion	No	We believe that the VRFs/VSLs should be modified to better reflect the stated intent of the NERC Board of Trustees November 19th, 2013 Resolution, which is to enforce 'zero tolerance' only for failure to use 3 part communications by the issuer or recipient of an Operating Instruction when it is issued to alleviate or avoid an Emergency.
ACES Standards Collaborators	No	(1) We disagree with some of the requirements of including training and several aspects of the communication protocols. Since we disagree with the underlying requirements, we also disagree with the corresponding VSLs and VRFs.
ISO/RTO Council Standards Review Committee	No	We do not agree with the following VSLs:i) R4: The LOW VSL suggests that an entity is assigned a LOW VSL if assessments are conducted more than 12 months apart. There is no max or "cap" to the delayed assessment and hence an entity may be 18, 19 or more months late in conducting the next assessment. In other standards, this could well be assessed a MEDIUM or HIGH or even a SEVERE violation, depending on the time period that an entity failed the 12 month update requirement. Absent this "cap", or staggered caps, the proposed HIGH and SEVERE VSLs can only be assessed based on whether or not there was ever an assessment, even the last assessment was done 3 or 4 years prior to an audit. This is inconsistent with the general guideline for VSLs.ii) R5: The MEDIUM VSL and SEVERE VSL are identical, except the latter has a

Organization	Yes or No	Question 3 Comment
		condition that is associated with the impact of the violation. This is inconsistent with the intent of the VSL, which is to assess the “extent to which” the requirement was violated, not the impact of the violation which should be captured by the VRF. This is also inconsistent with the VSL principle and guideline. We suggest removing the MEDIUM VSL, and the condition under the proposed SEVERE VSL that: “AND Instability, uncontrolled separation, or cascading failures occurred as a result.”iii) R6: Same comments as in R5.iv) R7: Same comments as in R5.
Liberty Electric Power LLC	No	The "Moderate" VSL for R6 should be modified in the same manner as the "Severe" VSL. In addition to repeating the Directive, the RE needs to fail to take action as directed. Suggest the following language: "AND the RE failed to take action as requested by the issuer of the Operating Instruction".
NRECA	No	Will need to be modified dependent on applicability modifications.
Georgia Transmission Corporation	No	Modify in accordance with selected alternative drafted above.
Independent Electricity System Operator	No	We do not agree with the following VSLs:i) R4: The LOW VSL suggests that an entity is assigned a LOW VSL if assessments are conducted more than 12 months apart. There is no max or “cap” to the delayed assessment and hence an entity may be 18, 19 or more months late in conducting the next assessment. In other standards, this could well be assessed a MEDIUM or HIGH or even a SEVERE violation, depending on the

Organization	Yes or No	Question 3 Comment
		<p>time period that an entity failed the 12 month update requirement. Absent this “cap”, or staggered caps, the proposed HIGH and SEVERE VSLs can only be assessed based on whether or not there was ever an assessment, even the last assessment was done 3 or 4 years prior to an audit. This is inconsistent with the general guideline for VSLs.ii) R5: The MEDIUM VSL and SEVERE VSL are identical, except the latter has a condition that is associated with the impact of the violation. This is inconsistent with the intent of the VSL, which is to assess the “extent to which” the requirement was violated, not the impact of the violation that should have been reflected by the VRF. This is also inconsistent with the VSL principle and guideline. We suggest removing the MEDIUM VSL, and the condition under the proposed SEVERE VSL that: “AND Instability, uncontrolled separation, or cascading failures occurred as a result.”iii) R6: Same comments as in R5.iv) R7: Same comments as in R5.</p>
American Electric Power	No	The AND qualifier provided for R5 which qualifies that Instability, uncontrolled separation, or cascading failures occurred, should also be used for R3.
CenterPoint Energy Houston Electric LLC	No	CenterPoint Energy does not agree with the Severe VSL for Requirement R1. The Company strongly believes that the focus of any Reliability Standard should be on enhancing the reliable operation of the BES and not on documents. Simply failing to document a procedure should never warrant a Severe VSL as long as the entity is operating according to the Standard.
Georgia System Operations Corporation	No	R1 - GSOC requests that there not be applied a Severe VSL for normal everyday Operating Instructions.



Organization	Yes or No	Question 3 Comment
Electric Reliability Council of Texas, Inc.	No	<p>R2 and R3 VSLs should not have the “during an Emergency” distinction between a high and severe VSL. VSL’s grade the severity or “how bad” did an entity violate a requirement. The risk and situation of non-compliance is included in the VRF and not the VSL. ERCOT ISO would recommend percentage indicator across the severity levels as detailed in the VSL guideline document.R5-R7 VSLs should remove “Instability, uncontrolled separation, or cascading failures occurred as a result.” as that stipulation is not appropriate in the VSLs. The resulting impact of non-compliance is addressed in the enforcement process and not in how severe an entity did not comply with a requirement. ERCOT ISO suggests a binary or severe only VSL to coincide with the VSL Guideline document. Additionally, ERCOT ISO would recommend adding “at least” in the R5 VSL to better clarify that a minimum of one of the three actions is required and not all three.The responsible entity that issued an Operating Instruction during an Emergency did not take ‘at least’ one of the following actions:</p>
ReliabilityFirst	No	<p>ReliabilityFirst submits the following comments related to the VSL for the OPCP SDTs consideration:1. Requirement R4 VSL - For the Lower VSL, ReliabilityFirst recommends gradating the number of months an entity is late in assessing adherence and effectiveness of the documented communications protocols. For example, there is a big difference if an entity is late by one month or 12 months. As drafted, an entity that is late by 12 months would still fall under the Lower VSL. ReliabilityFirst recommends gradating the VSLs in three month intervals. For example, the last “AND” text for the Lower VSL would read: “The responsible entity exceeded twelve (12) but less than or equal to fifteen (15) calendar months between assessments.” The Moderate VSL would read; “The responsible entity exceeded fifteen (15) but less than or equal to eighteen (18) calendar months between assessments.” The High and</p>

Organization	Yes or No	Question 3 Comment
		<p>Severe VSLs would follow the same rationale.2. Requirement R5 VSL - Requirement R5 does not speak to instability, uncontrolled, separation, or cascading failures occurring as a result of correctly issuing an oral two-party, person-to-person Operating Instruction. To be consistent with the requirement, ReliabilityFirst recommends deleting the text after the AND qualifier and deleting the Moderate VSL. Hence, there will only be one Severe VSL for this requirement.3. Requirement R6 VSL - Similar comment as the Requirement R5 VSL4. Requirement R7 VSL - Similar comment as the Requirement R5 VSL</p>
Manitoba Hydro	Yes	<p>Although Manitoba Hydro agrees with the VRFs and VSLs for the Requirements, we have the following comments: 1) VSLs, R2 - the term 'individual operator' is used in this VSL where throughout the standard operating personnel is used. 2) VSLs, R5 - text of VSLs refer to Requirement R6 instead of R5.3) VSLs, R6 - inconsistent drafting as the words 'that received an oral, ....' is not included here, but does appear in the VSL for R7.4) VSLs, R5, R6, R7 - the final criteria for a Severe VSL is for a specific outcome of non-compliance which does not seem appropriate when measuring compliance. Depending on the outcome of the circumstances, the VSL may be High or Severe. The outcome itself is not something that is related to the entity's compliance with the standard. The entity may take the same action and comply to the same degree and by virtue of the outcome alone they are moved from a High to a Severe VSL.</p>
Salt River Project	Yes	
Florida Municipal Power Agency	Yes	

Organization	Yes or No	Question 3 Comment
Arizona Public Service Co.	Yes	
Bonneville Power Administration	Yes	
Luminant	Yes	
Idaho Power Company	Yes	
Public Utility District No.1 of Snohomish County	Yes	
Wisconsin Electric Power Company	Yes	
Ingleside Cogeneration LP	Yes	
Clark Public Utilities	Yes	
Virginia State Corporation Commission, Member OC	Yes	
American Transmission Company, LLC	Yes	
Platte River Power Authority	Yes	
MISO	Yes	
PJM Interconnection	Yes	

Organization	Yes or No	Question 3 Comment
Northeast Utilities	Yes	
Oncor Electric Delivery Company LLC	Yes	
Tri-State Generation and Transmission Association Inc.	Yes	
The Empire District Electric Company	Yes	
SERC OC Review Group		<p>We believe that the VRFs/VSLs should be modified to better reflect the stated intent of the NERC Board of Trustees November 19th, 2013 Resolution, which is to enforce 'zero tolerance' only for failure to use 3 part communications by the issuer or recipient of an Operating Instruction when it is issued to alleviate or avoid an Emergency. VSL for R1: Modify Severe to include any instance where entity either (1) failed to identify, at the time of issuance, that the Operating Instruction is being issued to alleviate or avoid an Emergency or (2) failed to request recipient use 3 part communication when the Operating Instruction was issued to alleviate or avoid an Emergency Current VSL for R1 language: The responsible entity did not include Requirement R1, Part 1.2 in its documented communications protocols OR The responsible entity did not include Requirement R1, Part 1.3 in its documented communications protocols OR The responsible entity did not develop any documented communications protocols as required in Requirement R1. Proposed VSL for R1 language: Moderate - The responsible entity did not require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise, as required in Requirement R1, Part 1.2. An alternate language may be used for internal operations. Severe - The responsible entity did not include Requirement R1, Part 1.1, in its documented communications protocols OR Requirement R1, Part 1.3 in its documented communications protocols OR The</p>

Organization	Yes or No	Question 3 Comment
		<p>responsible entity did not include Requirement R1, Part 1.4 in its documented communications protocols OR The responsible entity did not develop any documented communications protocols as required in Requirement R1 OR the responsible entity either (1) failed to identify, at the time of issuance, that the Operating Instruction is being issued to alleviate or avoid an Emergency or (2) failed to request recipient use 3 part communication when the Operating Instruction was issued to alleviate or avoid an Emergency. VSL for R3: This Group recommends that the “High VSL for R3” be deleted. The reason for the High VSL deletion is to align with the concept that the standard should provide that compliance with the standard should only entail assessing whether an entity has utilized their documented communications for Operating Instructions that are not issued during an Emergency.VSL for R2, R5, R6, and R7: If the OPCP SDT modifies the requirements based on this Group’s recommendation VSL for R2, R5, R6, and R7 can be deleted except for any sections that are applicable in revised requirements.</p>

4. Do you have any additional comments? Please provide them here.

**Summary Consideration:** The OPCP SDT thanks all parties who took the opportunity to comment on Question 4. The responses to comments submitted for Question 4 are provided in individual responses below. Many of the same themes carry from Question 1.

Organization	Yes or No	Question 4 Comment
Salt River Project	No	
Southern Company; Southern Company Services, Inc; Alabama Power Company; Georgia power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation and Energy Marketing	No	<p>R1.2: Correct the formatting of the third bullet to match the first two so that it is clear that there are three options permitted not just two with a sub bullet to number two.</p> <p>R3: Is worded a little confusing. Suggestion would be to add the text below. Each Distribution Provider and Generator Operator shall conduct initial training for each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction that requires them to either: [Violation Risk Factor: Low][Time Horizon: Long-term Planning] o Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or o Request that the issuer reissue the Operating Instruction.</p> <p><b>Response: The OPCP SDT considered your suggestion but asserts that the existing language provides sufficient clarity.</b></p> <p>R4 - In NERC’s own Q&amp;A document for RAI prepared by the Risk-Based Reliability Compliance Working Group (RBRCWG), the following statements are made: “An entity can voluntarily establish internal controls designed to reduce its control risk, which could have a positive influence on the scoping of compliance monitoring by the Regional Entity. Conversely, the entity can voluntarily elect to not establish internal controls or share them with the Regional Entity.” This is inconsistent with the direction</p>

Organization	Yes or No	Question 4 Comment
		<p>of the proposed Standard COM-002-4, R4. This not only requires an internal control, but also requires that the control be shared with the Regional Entity (during audits). Also, consider that an entity can develop and implement a robust communication protocol consistent with COM-002-4 requirements and flawlessly follow its communication protocol, yet be found in violation of COM-002-4 by failing to demonstrate that it has adequate (subjective) management (internal) controls in place. This is inconsistent with the RAI guidance provided by NERC regarding the voluntary nature of internal controls. So, in principle, internal controls should not be dictated in a reliability standard. This goes against the principle of “Results-Based” standards. The intended result is effective communications. This can be attained with Requirements 1 through 3. No one will argue that internal controls won’t help ensure that the desired results are achieved. However, Requirement 4 is not absolutely necessary for the results to be achieved, and therefore, should not be included in the standard and should be removed.</p> <p><b>Response: The OPCP SDT will share this comment with the NERC staff coordinating the RAI documents. It is not an accurate statement that an entity can be found to have violated COM-002-4 by failing to demonstrate that it has adequate controls in place. The entity will be measured based on the language of the requirement, which requires an assessment, feedback to operating personnel, and corrective actions as appropriate.</b></p> <p>Definition of Operating Instruction: The term “command” in the definition of Operating Instruction implies authority, and Southern believes it should be made clear that Operating Instructions (for purposes of this standard) are commands issued by those functional entities that are expressly granted the responsibility and authority by the NERC Reliability Standards to take actions or direct the actions of others to ensure the reliability of the BES. These are the Balancing Authority, Reliability Coordinator and Transmission Operator only. No other functions are expressly authorized in the NERC Reliability Standards to issue a command. Our proposed definition Operating Instruction should be: Operating Instruction - A command originated by a Balancing Authority, Transmission Operator or Reliability Coordinator responsible for the Real-</p>

Organization	Yes or No	Question 4 Comment
		<p>time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. (A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.)</p> <p><b>Response: Definitions must be written to provide flexibility to be used in other Reliability Standards. Therefore, the proper place to note the functional entities is the requirement text itself. The requirements in the standard provide the bounds that only Operating Instructions issued by BAs, TOPs, and RCs are applicable to the standard.</b></p> <p>Measures:M4: The inclusion of Emergency here is inappropriate due to the non-inclusion of Emergency in R4. Also change the RSAW to reflect this change as well. Suggested rewording:”Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence of its assessments, including spreadsheets, logs or other evidence of feedback, findings of effectiveness and any changes made to its documented communications protocols developed for Requirement R1 in fulfillment of Requirement R4. The entity shall provide evidence that it took appropriate corrective actions as part of its assessment for all identified instances where operating personnel did not adhere to the protocols developed in Requirement R1”</p> <p><b>Response: Requirement R4 is written broadly to cover assessment of Operating Instructions under all operating conditions. The measure adds some additional clarity on certain situations that are of particular interest and almost certainly would call for corrective action. However, the OPCP SDT team revisited the language of M4 and revised the language to better track the requirement language. The drafting team also addressed this issue in the FAQ document posted on the project page. The following response was provided: “The purpose of COM-002-4 is ‘To improve communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could</b></p>



Organization	Yes or No	Question 4 Comment
		<p>lead to action or inaction harmful to the reliability of the Bulk Electric System (BES).’ If the deviation from the protocol contributed to an emergency, the purpose of this standard was not met. The entity must determine what caused that deviation and address any necessary corrective actions.”</p> <p>Definition of Emergency Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System. If read literally, EVERY breaker operation on the system IS an EMERGENCY. This causes a great deal of concern. From a DP and GOP standpoint, the RSAW and technical justification wording states that an attestation that no emergency had been called requiring a three part response would suffice for evidence. The rationale and technical justification document has some very good explanations of the INTENT of the drafting team and how they want the industry to view the standard requirements. If the standard and the subsequent audits adhered ONLY to what was in the justification document, then there should be little or no concerns. Unfortunately, the justification document carries no statutory weight and the standard as written does.</p> <p><b>Response: Since an entity will be required to file a Reportable Event for damage or destruction of a Facility (damage or destruction of a Facility within its Reliability Coordinator Area, Balancing Authority Area, or Transmission Operator Area that results in actions to avoid a BES Emergency), BES Emergency requiring public appeal for load reduction, BES Emergency requiring system-wide voltage reduction, BES Emergency requiring manual firm load shedding, and BES Emergency resulting in automatic firm load shedding per EOP-004-2, entities will be aware of the Emergency. This does not include every breaker operation.</b></p>
Arizona Public Service Co.	No	
DTE Electric	No	None

Organization	Yes or No	Question 4 Comment
Bonneville Power Administration	No	
Idaho Power Company	No	
Virginia State Corporation Commission, Member OC	No	
SERC OC Review Group	Yes	<p>The SERC OC Review Group understands the position that the OPCP SDT is working in and greatly appreciates the patience and dedication shown in developing this draft standard. Thank you. The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Review Group only and should not be construed as the position of the SERC Reliability Corporation, or its board or its officers.</p> <p><b>Response: The OPCP SDT thanks you for your comments.</b></p>
North American Generator Forum - Standards Review Team (NAGF-SRT)	Yes	<p>1) R1.3 and R3 should also allow the receiver of an Operating Instruction to respond by explaining that a requested action cannot be performed (e.g., due to safety, equipment, regulatory, or statutory requirements as described in TOP-001 R3 and IRO-001 R8). The requirement to either repeat or request that the instruction be reissued does not account for the realistic situation that an entity may not be able to perform an Operating Instruction.</p> <p><b>Response: Requirement R1 only describes what should be covered in an entity’s documented communication protocols. R3 only includes the bullets to identify what an operator must be trained to do. Therefore, what action an entity may take is not relevant for these requirements. However, to address the concern, it is important that the issuer and receiver understand the Operating Instruction prior to determining whether the action can or cannot be completed.</b> 2) Specific to R.6,</p>

Organization	Yes or No	Question 4 Comment
		<p>consideration should be given to revise the verbiage from, “during an Emergency” to “identified by the sender as constituting an Emergency directive.” The rationale for the recommendation is offered to provide clarity to the Requirement, as it is anticipated that there will be cases when it is not clear the Operating Instruction is associated with an Emergency. Additionally, the definition of “Emergency” in the NERC Glossary is broad and consequently it may be difficult, at times, to determine which inputs are subject to COM-002-4 requirements, especially if the TO or TOP calls a plant operator directly rather than going through the respective dispatchers. Note: On the 1/17/14 COM-002-4 OPCP SDT webinar the question was asked, how a DP or GOP would know that an Operating Instruction occurred during an Emergency. The drafting team stated that after every Operating Instruction the DP should call its TOP to determine if the Operating Instruction occurred during an Emergency. The NAGF-SRT once again reiterates that it would be more efficient and the industry would benefit as a whole, if the sender of the Operational Instruction, states the instruction is associated with an Emergency.</p> <p><b>Response: The OPCP SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: “Separately listing out Requirements R5, R6, and R7 and using ‘Operating Instruction during an Emergency’ in them does not require a different set of protocols to be used during Emergencies or mandate the identification of a communication as an ‘Operating Instruction during an Emergency.’ The same protocols are required to be used in connection with the issuance of Operating Instructions for all operating conditions. Their use is measured for compliance/enforcement differently using the operating condition as an indicator of which compliance/enforcement approach applies. In other words, it is not the drafting team’s expectation that the operator must differentiate between Emergency and non-Emergency Operating Instructions.” In order to draft appropriate VSLs, separate requirements were needed for the different operating conditions. The protocols are the same for all operating conditions. The OPCP SDT did not intend the phrase “during an Emergency” to carry an obligation to identify the communication as one that constitutes an Emergency directive.</b></p>

Organization	Yes or No	Question 4 Comment
		<p>Please see the response to Question 1, which addresses the concern regarding the identification of an Emergency.</p> <p>3) Specific to Measures M5 and M6, which contain language associated with the issuer and the recipient both maintaining evidence of two-party communication respectively. It is recommended that M5 be revised such that the all associated evidence is maintained by the issuer and M6 be deleted in its entirety. Consolidating the evidence requirements would benefit the industry by reducing duplication of efforts, associated with maintaining evidence by different entities, in support of the same requirement.</p> <p><b>Response: Each entity must provide its evidence of compliance. No entity can be required to provide evidence for another entity’s compliance.</b></p>
<p>Northeast Power Coordinating Council</p>	<p>Yes</p>	<p>Regarding Part 1.4, it must be considered that some ISOs issue multiple-party burst Operating Instruction to Generator Operators through electronic means.</p> <p><b>Response: Requirement R1, Part 1.4 only applies to written or oral single-party to multiple-party burst Operating Instructions. An electronic signal is not covered in this standard. If the electronic communication is written, the entity must put in place the ability to ensure that the Operating Instruction was received by at least one receiver of the Operating Instruction.</b></p> <p>Regarding Part 1.6, the requirement is vague and needs to be clarified for Registered Entities to know how to comply. How would one “specify the nomenclature” system wide?</p> <p><b>Response: The OPCP SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: “COM-002-4, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie</b></p>

Organization	Yes or No	Question 4 Comment
		<p>substations) for Operating Instructions. This supports both parties being familiar with each other’s interface Elements and Facilities, minimizing hesitation and confusion when referring to equipment for the Operating Instruction.” The nomenclature is not specified “system-wide.”</p> <p>Regarding Requirements R2 and R3, those “training” requirements aren’t necessary. Responsible Entities must adhere to the Requirements of NERC Standards and how they accomplish this should not be dictated by a standard’s requirement. Under RAI principles, NERC and Regions can determine what type of monitoring is appropriate for Responsible Entities’ compliance with the new COM Standard based on the quality of their Training programs. This would further support reliability by changing the requirement from a one-time audit (i.e., initial training) to an ongoing assessment. The proposed standard still contains requirements that mandate the use of, and training to include 3 part communications during issuance of all Operating Instructions, including those issued during non-Emergency situations. As stated in the Rationale and Technical Justification document the proposed Measures and RSAW don’t specifically require that auditors verify compliance of this for the Requirements (and associated Measures), however a strict read leads us to a different conclusion. Under the RSAW for R1 it states that the entity shall provide its documented communications protocols developed for this requirement and the auditor shall review the documented communications protocols provided by the entity and ensure they address the Parts of R1 (including the use of 3 part communications). The RSAW contains similar actions relative to Requirements R2 and R3 in that the entity is to provide evidence consisting of agendas, learning objectives, or course materials that it provides pursuant to these requirements. Given this, an auditor can enforce to a ‘zero defect tolerance’ if the auditor chooses to do so, and in fact would argue that an audit would be deficient if it failed to validate whether the learning objective included ensuring that 3 part communication was used during issuance or receipt of each Operating Instruction. Suggest that the training requirements contained with R2 and R3 be removed and placed within the PER-005 Operations Personnel Training standard. PER-005 should be the home of all system operator related training requirements.</p>

Organization	Yes or No	Question 4 Comment
		<p><b>Response: Please refer to the summary response in Question 1 above.</b></p> <p>There are no clear and concise differences between Requirements R1, R5 and R6. This creates uncertainty as to whether the Operating Instruction is being issued to alleviate or avoid an Emergency. Absent a Requirement that the issuer make a definitive statement as to whether an Operating Instruction is being issued to alleviate or avoid an Emergency, neither the recipient (during) nor an auditor (after) would be able to make such determination. Suggest revising Requirement R1 so that it applies to all Operating Instructions, but requires that those being issued to alleviate or avoid an Emergency be specifically identified as such and that the issuer explicitly request that the recipient confirm their understanding through use of 3 part communication. Remove Requirements R5, R6 and R7 (incorporating items deemed necessary by the OPCP SDT as bullets or Parts of R1). Suggested rewording for Part 1.1:1.1. Require that its operating personnel identify, at the time of issuance, that the Operating Instruction is being issued to alleviate or avoid an Emergency.</p> <ul style="list-style-type: none"> <li>o Request recipient use 3 part communication when the Operating Instruction is being issued to alleviate or avoid an Emergency.</li> </ul> <p>Revise M1, VRF/VSLs and RSAW so that strict compliance with use of 3 part communication is only applied when an Operating Instruction is issued to alleviate or avoid an Emergency as identified by the issuer at the time of issuance. Suggested revisions to M1:M1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1. For each Operating Instruction issued to alleviate or avoid an Emergency; entity shall provide evidence that it identified such at time Operating instruction was issued (R1.1) and requested recipient use of 3 part communication (R1.2). VSL for R1 - modify Severe to include any instance where entity either (1) failed to identify, at the time of issuance, that the Operating Instruction is being issued to alleviate or avoid an Emergency or (2) failed to request recipient use 3 part communication when the Operating Instruction was issued to alleviate or avoid an Emergency</p> <p><b>Response: The OPCP SDT has not modified Measure M1 as suggested above because the entity's performance is limited to the development of the protocols. The OPCP</b></p>

Organization	Yes or No	Question 4 Comment
		<p>SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: “Separately listing out Requirements R5, R6, and R7 and using ‘Operating Instruction during an Emergency’ in them does not require a different set of protocols to be used during Emergencies or mandate the identification of a communication as an ‘Operating Instruction during an Emergency.’ The same protocols are required to be used in connection with the issuance of Operating Instructions for all operating conditions. Their use is measured for compliance/enforcement differently using the operating condition as an indicator of which compliance/enforcement approach applies. In other words, it is not the drafting team’s expectation that the operator must differentiate between Emergency and non-Emergency Operating Instructions.”</p> <p>Measure M4 requires compliance demonstration beyond Requirement R4. Specifically, entities must provide evidence that appropriate corrective action was taken for all instances where an operating personnel’s non-adherence to the protocols developed in Requirement R1 is the sole or partial cause of an Emergency.</p> <p><b>Response: The OPCP SDT has adjusted the language of Measure M4 to better align with the language in Requirement R4.</b></p> <p>The format of the standard should be changed to conform to the current NERC direction-the measures get listed with the associated requirement, and the rationale get included in the standard, not a separate document.</p>
NERC Standards Review Forum	Yes	<ol style="list-style-type: none"> <li>Per section one of this document, the OPCP SDT states: The Project 2007-02 OPCP SDT removed the term “Reliability Directive” in order to avoid complications that may result from the Notice of Proposed Rulemaking issued by the Federal Energy Regulatory Commission on November 21, 2013 proposing to remand the definition of “Reliability Directive.” But within the latest Implementation Plan, there still is the prerequisite of approving the term “Reliability Directive”. Please update whichever documentation that should be corrected in order to provide the</li> </ol>

Organization	Yes or No	Question 4 Comment
		<p>industry with accurate information so that we can determine if this Standard supports the reliability of the BES.</p> <p><b>Response: The OPCP SDT thanks you for your comment. However the clean version of the Implementation Plan does not contain the words “Reliability Directive.” The words do appear in the redline to the last posted version in strikethrough.</b></p>
Colorado Springs Utilities	Yes	<p>Comments: 1. R1.4. - [Documented communications protocols for its operating personnel that issue and receive Operating Instructions shall, at a minimum] Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. o Some ISO’s issues multiple-party burst Operating Instruction to Generator Operators through electronic means. Associated real-time requirement: R7. Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency shall confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. Comment: The SRC does not believe this requirement is necessary for reliability. Moreover, the Standard Drafting Team has not provided any , nor have we been made aware of the substantiated rationale for keeping this Requirement except that the OPCP SDT believes is it necessary.</p> <p><b>Response: The OPCP SDT asserts that it is important that the issuer of a written or oral single-party to multiple-party burst Operating Instruction makes sure that the communication channel was complete. This can be accomplished by confirming with at least one party that the communication was received.</b></p> <p>2. R1.6. - [Documented communications protocols for its operating personnel that issue and receive Operating Instructions shall, at a minimum] Specify the nomenclature for Transmission interface Elements and Transmission interface</p>



Organization	Yes or No	Question 4 Comment
		<p>Facilities when issuing an oral or written Operating Instruction. Comment: This requirement is vague and needs to be clarified for Registered Entities to know how to comply with it; how would one “specify nomenclature” system-wide? Comment: This requirement was dropped from TOP-002-2a, requirement 18. Communication on transmission equipment must be equipment specific. Nomenclature should not be used, rather entities should always be correctly communicating using the unique and specific equipment identifiers. Adding nomenclature will reduce not improve reliability.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>3. R2. and R3. - ...”shall conduct initial training for each of its operating personnel ...”Comment: The SRC does not believe a training Requirement is necessary; Responsible Entities must adhere to the Requirements of NERC Standards and how they accomplish this should not be dictated by a Standard Requirement. Under RAI principles, NERC and Regions can determine what type of monitoring is appropriate of Responsible Entities’ compliance with the new COM Standard based on the quality of their Training programs. This would further support reliability by changing the requirement from a one-time audit (i.e., initial training) to an ongoing assessment.</p> <p><b>Response: Please see the summary response to Question 1.</b></p>
<p>Florida Municipal Power Agency</p>	<p>Yes</p>	<p>FMPA is voting “affirmative” on this standard, yet we have concerns with the RSAW language and lack of criteria on how an entity will be assessed and audited. There is language in the RSAW “Notes to Auditor” for multiple requirements (R4-R7) that is of concern. (See example below) The RSAW language is not clear regarding the nature and extent of audit procedures that will be applied because there is reference to scoping the audit based on “certain risk factors to the Bulk Electric System”. It is not clear what “risk factors” will be used. As an example in R5 auditing “can range from exclusion of a requirement from audit scope to the auditor reviewing, in accordance</p>

Organization	Yes or No	Question 4 Comment
		<p>with the above Compliance Assessment Approach, evidence associated with the entity’s responses to numerous Operating Instructions issued during Emergencies.” This is essentially a zero tolerance approach, yet, also appears to be an attempt to apply Reliability Assurance Initiative (RAI) concepts, that have not been finalized and communicated to the industry. It is uncertain whether these concepts have been fully developed yet; and therefore, this leaves too much auditor discretion, without providing the industry information or criteria on how “risk” will be assessed. Stakeholders continue to await the details of these RAI concepts that are being utilized in RSAWS. Clarity is needed around how an entity’s risk to the BES will be assessed due to compliance or non-compliance with this standard. This would also be beneficial for an entity to know, so that they can lessen that risk, as appropriate. Example language from RSAW: “The extent of audit procedures applied related to this requirement will vary depending on certain risk factors to the Bulk Electric System. In general, more extensive audit procedures will be applied where risks to the Bulk Electric System are determined by the auditor to be higher for non-compliance with this requirement. Based on the auditor’s assessment of risk, as described above, specific audit procedures applied for this requirement may range from exclusion of this requirement from audit scope to the auditor reviewing, in accordance with the above Compliance Assessment Approach, evidence associated with the entity’s responses to numerous Operating Instructions issued during Emergencies. “</p> <p><b>Response: The OPCP SDT thanks you for your comments. We will convey the RSAW comments to the RSAW drafting team. For more information about the NERC RAI program, please refer to the February 5, 2014 agenda for the Board of Trustees Compliance Committee. An update on RAI was provided. In addition, information about RAI may be found here: <a href="http://www.nerc.com/pa/comp/Pages/Reliability-Assurance-Initiative.aspx">http://www.nerc.com/pa/comp/Pages/Reliability-Assurance-Initiative.aspx</a>.</b></p>

Organization	Yes or No	Question 4 Comment
PPL NERC Registered Affiliates	Yes	<p>These comments are submitted on behalf of the following PPL NERC Registered Affiliates: Louisville Gas and Electric Company and Kentucky Utilities Company; PPL EnergyPlus, LLC; PPL Electric Utilities Corporation; and PPL Generation, LLC, on behalf of its NERC registered entities. The PPL NERC Registered Affiliates are registered in six regions (MRO, NPCC, RFC, SERC, SPP, and WECC) for one or more of the following NERC functions: BA, DP, GO, GOP, IA, LSE, PA, PSE, RP, TO, TOP, TP, and TSP.</p> <p>Each of the PPL NERC Registered Affiliates recognize the need for and support the use of three part communications for Operating Instructions. However, we are abstaining from voting on this standard because we believe that the current version of COM-002-4 requires change to ensure consistency with the OPCP SDT’s intent. If these clarifications are made, the PPL NERC Registered Affiliates would support the proposed standard.</p> <p>First, the PPL NERC Registered Affiliates request that the OPCP SDT revise Measure M.4 to specifically state that sampling is allowed in performing the assessments required by Requirements R.4.1 and R.4.2. This is consistent with the OPCP SDT’s oral statements during the January 17, 2014 webinar and the FAQ (“An entity could perform an assessment by listening to random samplings of each of their operating personnel issuing and/or receiving Operating Instructions....”). Additionally, for consistency and to avoid ambiguity, the OPCP SDT should also conform the wording in Measure M.4 to Measures M.5-M.7 (i.e., “Such evidence may include, but is not limited to,...”). Therefore, we recommend that the OPCP SDT revise Measure M.4 as follows: M4. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence of its assessments. Such evidence may include, but is not limited to, sampling results, spreadsheets, logs or other evidence of feedback, findings of effectiveness and any changes made to its documented communications protocols developed for Requirement R1 in fulfillment of Requirement R4....</p> <p><b>Response: The OPCP SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: “An entity could perform an assessment by listening to random samplings of each of their operating personnel</b></p>

Organization	Yes or No	Question 4 Comment
		<p>issuing and/or receiving Operating Instructions. If there were instances where an Operator deviated from the entity’s protocols, the entity would provide feedback to the operator in question in any method it sees as appropriate. An example would be counseling or retraining the operator on the protocols.</p> <p>An entity could assess the effectiveness of its protocols by reviewing instances where operators deviated from those protocols and determining if whether the deviations were caused by operator error or by flaws in the protocols that need to be changed.” The OPCP SDT asserts that this, in conjunction with the RSAW, provides sufficient clarity.</p> <p>Second, the PPL NERC Registered Affiliates request that the OPCP SDT clarify in the proposed standard that only a failure to use three-part communications during an Emergency is a violation of COM-002-4. Therefore, we recommend that the standard’s requirements be further revised to indicate that if an entity does not adhere to its documented communications protocols developed in accordance with Requirement R.1 during a non-Emergency, such action shall not be considered a noncompliance event under Requirement R.1.</p> <p><b>Response:</b> The OPCP SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: “The standard uses the phrase ‘Operating Instruction during an Emergency’ in certain Requirements (R5, R6, and R7) to provide a demarcation for what is subject to a ‘zero tolerance’ compliance/enforcement approach and what is not. This is necessary to allow the creation of Violation Severity Levels for each compliance/enforcement approach. Where ‘Operating Instruction during an Emergency’ is not used, an entity will be assessed under a compliance/enforcement approach that focuses on whether or not an entity met the initial training Requirement (either R2 or R3) and whether or not an entity performed the assessment and took corrective action according to Requirement R4. The proposed COM-002-4 does not contain a Requirement to adhere to all documented communications protocols during non-Emergency conditions. Under COM-002-4, the assessment and training documentation will</p>

Organization	Yes or No	Question 4 Comment
		<p>provide auditors assurance that responsible entities are using their documented communications protocols and taking corrective actions as necessary.”</p>
<p>Duke Energy</p>	<p>Yes</p>	<p>(1)Duke Energy suggests rewording R1.6 as follows: “Specify the nomenclature to be used for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction to neighboring entities.” While the Technical Justification document suggests that R1.6 applies to communication with neighboring entities, it is unclear that this requirement, as worded in the current draft of COM-002-4, is specifically discussing communication with neighboring entities.</p> <p><b>Response: The OPCP SDT asserts that the existing language provides sufficient clarity.</b></p> <p>(2)M2 should include “initial training” and be reworded as follows in order to maintain consistency with the requirement:”Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide initial training records related to its documented communications protocols developed for Requirement R1 such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R2.”</p> <p><b>Response: The OPCP SDT considered your suggestion and made non-substantive clarifying changes to the wording of Measure M2.</b></p>

Organization	Yes or No	Question 4 Comment
SPP Standards Review Group	Yes	<p>The removal of Reliability Directive from the definition of Operating Instruction has removed clarity from a compliance viewpoint. Without this clarity, which could also be provided by requiring a statement which identifies the Emergency situation as an Emergency, the operator does not know that he is in an Emergency situation. Although the operator’s response may be the same as it is in a non-emergency, the compliance hook of zero tolerance is there. We need a mechanism in place that we can use to identify when we are in an Emergency situation which prevents Monday-morning quarterbacking during an audit regarding whether an Emergency actually occurred or not. Reliability Directive gave us that indication. We recommend requiring an Operating Instruction that is issued during an Emergency situation be identified as ‘This is an Emergency.’</p> <p><b>Response: The OPCP SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: “Separately listing out Requirements R5, R6, and R7 and using ‘Operating Instruction during an Emergency’ in them does not require a different set of protocols to be used during Emergencies or mandate the identification of a communication as an ‘Operating Instruction during an Emergency.’ The same protocols are required to be used in connection with the issuance of Operating Instructions for all operating conditions. Their use is measured for compliance/enforcement differently using the operating condition as an indicator of which compliance/enforcement approach applies. In other words, it is not the drafting team’s expectation that the operator must differentiate between Emergency and non-Emergency Operating Instructions.”</b></p> <p><b>Additionally, since an entity will be required to file a Reportable Event for damage or destruction of a Facility (damage or destruction of a Facility within its Reliability Coordinator Area, Balancing Authority Area, or Transmission Operator Area that results in actions to avoid a BES Emergency), BES Emergency requiring public appeal for load reduction, BES Emergency requiring system-wide voltage reduction, BES Emergency requiring manual firm load shedding, and BES Emergency resulting in</b></p>

Organization	Yes or No	Question 4 Comment
		<p><b>automatic firm load shedding per EOP-004-2, entities will be aware of the Emergency.</b></p> <p>Recommendation 26 calls for work to be done to improve the effectiveness of communications in emergency situations. The purpose of the standard is to improve communications. However, the focus of the standard is primarily 3-part communications. There is no supporting documentation or data to support the position that 3-part communications improves the effectiveness of communications. Focusing on 3-part communications provides an easy target from a compliance perspective but all it teaches us is to mechanically repeat back what we have been instructed to do. We're focusing on the 'how' and 'what' rather than the 'why'. Keeping the 'why' in mind improves communications and the reliability of the BES. Keeping the 'why' in mind also leads to improved situational awareness. Improving effective communications is difficult to quantify in a standard and even more difficult to measure. We may be better off focusing on the principles contained in the OC's Reliability Guideline System Operator Verbal Communications - Current Industry Practices.</p> <p><b>Response: The OPCP SDT thanks you for your comment.</b></p> <p>We suggest that R2 and R3 are already provided for in PER-005 and therefore are redundant in this standard. If there is a need to include a training requirement in this standard, that requirement could consist of a statement to include protocol training in the entity's reliability task list.</p> <p><b>Response: Please see the summary response for Question 1.</b></p> <p>Measure 4 adds an additional requirement regarding the failure to follow protocols which in turn leads to an Emergency. The Measure basically requires the responsible entity to assess those particular situations even though they are not specifically called out in the requirement. We recommend adding the following sentence at the end of R4.1: 'Such assessment shall include, at a minimum, any instance that is an Emergency.'</p>

Organization	Yes or No	Question 4 Comment
		<p><b>Response: The OPCP SDT considered the suggested edits. The OPCP SDT chose to revise Measure M4 to better align with the language in Requirement R4.</b></p> <p>We recommend that the drafting team consider moving R4 back to language similar to that contained in R5 of Posting 7. This language is much clearer and eliminates Paragraph 81 concerns of administrative burden associated with the required 12-month assessments and removes the ambiguity of ‘corrective actions’ and ‘as appropriate’.</p> <p>In the last line of the Evidence Requested table in the R2 section of the RSAW, the following evidence is requested: ‘Organization chart or similar artifact identifying the operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System and the date such personnel began operating the Real-time Bulk Electric System.’ This implies that an entity will be found non-compliant if operating personnel operate the Real-time BES prior to receiving training on issuing Operating Instructions. This is not what is stated in the requirement. This entry should be reworded to the following: ‘Organization chart or similar artifact identifying the operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System and the date such personnel began issuing Operating Instructions.’ Similarly, this change needs to be made in the Compliance Assessment Approach Specific to COM-002-4, R2 table. That entry should read: ‘Verify applicable operating personnel, or a sample thereof, received the required training prior to the date they began issuing Operating Instructions by agreeing selected personnel names to training records.’</p> <p><b>Response: The OPCP SDT has provided your comments to the RSAW team.</b></p>
Bureau of Reclamation	Yes	Reclamation requests that R5 include a bullet requiring the issuer of an Operating Instruction during an Emergency to identify the situation as an Emergency. This is important because R6 requires recipients of Operating Instructions to repeat the



Organization	Yes or No	Question 4 Comment
		<p>instructions during Emergencies, but it may not be clear to the recipient that an Emergency is occurring.</p> <p><b>Response: Please see the summary response for Question 1.</b></p> <p>Reclamation reiterates that R1.3 and R3 should also allow the receiver of an Operating Instruction to respond by explaining that a requested action cannot be performed (e.g., due to safety, equipment, regulatory, or statutory requirements as described in TOP-001 R3 and IRO-001 R8). The requirement to either repeat or request that the instruction be reissued does not account for the realistic situation that an entity may not be able to perform an Operating Instruction. The drafting team could choose to address this point with a footnote explaining that the requirement to repeat the instruction does not obligate the recipient to perform the action if he repeats the instruction, but then explains that he cannot perform the action because doing so would violate safety, equipment, regulatory, or statutory requirements.</p> <p><b>Response: Requirement R1 only describes what should be covered in an entity’s documented communication protocols. Requirement R3 only includes the bullets to identify what an operator must be trained to do. Therefore, what action an entity may take is not relevant for these requirements—actions are addressed by other standards (e.g. IRO-001 and TOP-001). However, to address the concern, it is important that the issuer and receiver understand the Operating Instruction prior to determining whether the action can or cannot be completed.</b></p>
Dominion	Yes	<p>The proposed standard still contains requirements that mandate the use of, and training to include, 3 part communications during issuance of all Operating Instructions, including those issued during non-Emergency situations. While Dominion agrees that the OPCP SDT has stated in its Rationale and Technical Justification document that the proposed measures and RSAW don’t specifically require that auditors verify compliance of this for the requirements (and associated measures), a</p>

Organization	Yes or No	Question 4 Comment
		<p>strict read leads us to a different conclusion. Under the RSAW for R1 it states that the entity shall provide its documented communications protocols developed for this requirement and the auditor shall review the documented communications protocols provided by entity and ensure they address the Parts of R1 (including the use of 3 part communications). The RSAW contains similar actions relative to R2 and R3 in that the entity is to provide evidence consisting of agendas, learning objectives, or course materials that it provides pursuant to these requirements. Given this, Dominion believes an auditor can enforce to a 'zero defect tolerance' if it chooses to do so and in fact would argue that an audit would be deficient if it failed to validate whether the learning objective included insuring that 3 part communication was used during issuance or receipt of each Operating Instruction.</p> <p><b>Response: The OPCP SDT disagrees. Requirement R1 is limited to what protocols must be included in the documented protocols of an entity. Requirements R2 and R3 require training. Requirement R4 requires an assessment of the use of the protocols.</b></p> <p>Dominion also finds there are not clear and concise differences between requirements 1, 5 and 6 resulting in uncertainty as to whether the Operating Instruction is being issued to alleviate or avoid an Emergency. Dominion is concerned that, absent a requirement that the issuer make a definitive statement as to whether an Operating Instruction is being issued to alleviate or avoid an Emergency, neither the recipient (during) nor an auditor (after) would be able to make such determination. Having said this, we could support the standard if it were revised in a fashion similar to that described below. 1. Modify requirement 1 so that it applies to all Operating Instructions but requires that those being issued to alleviate or avoid an Emergency be specifically identified as such and that the issuer explicitly request recipient confirm their understanding through use of 3 part communication.</p> <p><b>Response: The OPCP SDT reiterates that Requirement R1 only concerns what protocols must be included in the documented protocols. The drafting team</b></p>

Organization	Yes or No	Question 4 Comment
		<p><b>believes that there is sufficient clarity among Requirements R1, R5, and R6 on the performance required.</b></p> <p>2. Remove requirements 5, 6 &amp; 7 (incorporating specific items deemed necessary by the OPCP SDT as bullets or sub-requirements of R1).</p> <p><b>Response: Please refer to prior response.</b></p> <p>3. Revise measures, VRFs/VSLs and RSAW so that strict compliance with use of 3 part communication is only applied when an Operating Instruction is issued to alleviate or avoid an Emergency as identified by the issuer at the time of issuance.</p> <p><b>Response: Please refer to prior response.</b></p> <p>4. Measure M4 requires compliance demonstration beyond Requirement R4. Specifically, entities must provide evidence that appropriate corrective action was taken for all instances where an operating personnel’s non-adherence to the protocols developed in Requirement R1 is the sole or partial cause of an Emergency...,</p> <p><b>Response: The OPCP SDT has modified the language in Measure M4 to better align with the language in Requirement R4.</b></p> <p>Examples of suggested changes  R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum: [Violation Risk Factor: Low][Time Horizon: Long-term Planning]  1.1. Require that its operating personnel identify, at the time of issuance, when the Operating Instruction is being issued to alleviate or avoid an Emergency  1.2. Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions: <ul style="list-style-type: none"> <li>o Confirm the receiver’s response if the repeated information is correct.</li> <li>o Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver.</li> <li>o Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.</li> <li>o Request recipient use 3 part communication when the Operating Instruction is being issued to alleviate or avoid an Emergency</li> </ul> 1.3 Require its</p>

Organization	Yes or No	Question 4 Comment
		<p>operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.1.4. Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.1.5. Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.1.6. Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.M1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1. For each Operating Instruction issued to alleviate or avoid an Emergency; entity shall provide evidence that it identified such at time Operating instruction was issued (R1.1) and requested recipient use of 3 part communication (R1.2). o VSL for R1 - modify Severe to include any instance where entity either (1) failed to identify, at the time of issuance, that the Operating Instruction is being issued to alleviate or avoid an Emergency or (2) failed to request recipient use 3 part communication when the Operating Instruction was issued to alleviate or avoid an Emergency</p>
<p>ACES Standards Collaborators</p>	<p>Yes</p>	<p>(1) We disagree with training requirements as they are redundant with PER-005. Similar to a FERC directive, the drafting team should be able to provide the BOT with technical justification that other alternatives exist to developing a new requirement such as pointing to an existing requirement. Training is already included in the PER requirements. The drafting team should provide the feedback from industry and show that there is an already existing enforceable standard that covers this issue of training and there are no gaps in reliability.</p> <p><b>Response: Please see the summary response to Question 1.</b></p>

Organization	Yes or No	Question 4 Comment
		<p>(2) We do not think the Distribution Provider should be an applicable function. Most Distribution Providers simply do not have a materially impact on BES reliability. We suggest an alternative to have the standard apply to those DP that may impact the BES. According to the FERC-approved CIP version 5 standards, a Distribution Provider is subject to the standards if the DP has UFLS/UVLS systems that have the capability of shedding 300 MW or more of load. We ask the drafting team to consider revising the applicability section to mirror the CIP standards. There was technical justification provided during the development of those standards, NERC and FERC both approved those standards, and therefore, a precedent exists for this reasonable approach to focusing on entities that pose an impact, however minimal, to the BES.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>(3) Many DPs have no practical way to demonstrate compliance with “repeat backs.” Many DPs do not have recording systems for the telephonic communications. This puts the DP in a position to request the voice recordings or attestations from the issuer. The issuer is not obligated to provide the data and, in fact, history has shown that many registered entities will not provide this type of data to a third party for fear of compliance issues being identified with the issuer. Thus, from a practical perspective the standard puts the DP in the position of having to use weak evidence to demonstrate compliance. This is an unreasonable burden on the DP.</p> <p>(4) We recommend that the drafting team remove references to “taking alternative actions.” This is ambiguous and could potentially tie in actions that should be taken in accordance to directives in IRO-001 and TOP-001. COM-002 is related only to communications, so taking alternative actions must be limited to alternative communications.</p> <p><b>Response: The OPCP SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: “If an operator issues an Operating Instruction during an Emergency and, based on the response from the receiver, or lack thereof, chooses to take an alternative action, that operator has satisfied Requirement R5 and is not in violation.</b></p>

Organization	Yes or No	Question 4 Comment
		<p>The following scenario is provided as an example of an alternative action:  <b>A Transmission Operator (TOP) calls a Generator Operator (GOP) to reduce generation due to an Emergency. The GOP does not respond verbally. At that point the TOP could:</b></p> <ul style="list-style-type: none"> <li>• <b>Ask if the GOP understood the Operating Instruction (alternative action).</b></li> <li>• <b>Hang up and redial the GOP, assuming that the communication line was dead (alternative action),</b></li> <li>• <b>Request a different generator that is effective to reduce (alternative action); or</b></li> <li>• <b>Call a different contact at the GOP (alternative action)."</b></li> </ul> <p>(5) We suggest that the "assess adherence and assess effectiveness" language in R4 be removed from COM-002-4. This language is similar to the "Identify, Assess and Correct (IAC)" language that was included in the CIP V5 standards. The removal or modification of this language was included in the Final Rule on NERC CIP V5 Standards (Order No. 791). FERC stated that IAC language and concepts would be best addressed in the NERC compliance processes, such as through the NERC Reliability Assurance Initiative (RAI), rather than standards requirements.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>(6) Thank you for the opportunity to comment.</p>
<p>ISO/RTO Council Standards Review Committee</p>	<p>Yes</p>	<p>1. R1.4. - [Documented communications protocols for its operating personnel that issue and receive Operating Instructions shall, at a minimum] Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. o Some ISO's issues multiple-party burst Operating Instruction to Generator Operators through electronic means Associated real-time requirement: R7. Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency shall confirm or verify that the Operating</p>

Organization	Yes or No	Question 4 Comment
		<p>Instruction was received by at least one receiver of the Operating Instruction. NOTE - ERCOT does not support the following Comment: The SRC members (excluding ERCOT) do not believe this requirement is necessary for reliability. Moreover, the Standard Drafting Team has not provided any, nor have we been made aware of the substantiated rationale for keeping this Requirement except that the OPCP SDT believes is it necessary.</p> <p><b>Response: The OPCP SDT asserts that it is important that the issuer of a written or oral single-party to multiple-party burst Operating Instruction makes sure that the communication channel was complete. This can be accomplished by confirming with at least one party that the communication was received.</b></p> <p>2. R1.6. - [Documented communications protocols for its operating personnel that issue and receive Operating Instructions shall, at a minimum] Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction. Comment: This Requirement is vague and needs to be clarified for Registered Entities to know how to comply with it; how would one “specify nomenclature” system-wide? Even though the posted “Rationale and Technical Justification” (RTJ) document notes that R1.6 is limited in scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations), this RTJ document should define these terms and substantiate to what registered entities this needs to apply. For example, if the intent is to apply this requirement to Inter-Area tie-lines, then it should probably be limited to Reliability Coordinator-to-Reliability Coordinator communications. If the intent is to apply this requirement to every type of transmission - say generation interconnection facilities - it should be clear so that Registered Entities can clearly understand the burdens associated with this new Requirement.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>3. R2. and R3. - ...”shall conduct initial training for each of its operating personnel ...” Note - ERCOT and IESO do not support the following Comment: The SRC members, (excluding ERCOT and IESO) do not believe a training Requirement is necessary;</p>

Organization	Yes or No	Question 4 Comment
		<p>Responsible Entities must adhere to the Requirements of NERC Standards and how they accomplish this should not be dictated by a Standard Requirement. Additionally, to the extent that the OPCP SDT concludes that training on 3-part communication is necessary to ensure an adequate level of reliability, then any training requirements should this would already be covered under the PER Standard, which requires training on job tasks. To the extent training requirements should be imposed on GOP/DP personnel, the PER Standard could be slightly modified to include them. Overall, if NERC is going to add additional training requirements, they should be located in PER to avoid complexity in the organization of NERC Standards. Finally, under RAI principles, NERC and Regions can determine what type of monitoring is appropriate of Responsible Entities' compliance with the new COM Standard based on the quality of their Training programs. This would further support reliability by changing the requirement from a one-time audit (i.e., initial training) to an ongoing assessment. In conclusion, even though the BOT resolved that there should be training associated with the COM requirements, it would be beneficial to address the BOT's concern through existing Standards (PER). Basic principles of drafting regulation should strive to avoid making the organization and relationship among NERC Standards more complex than need to be.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>4. Measurement 6. Meaurement 6 needs to be revised so that it is consistent with NERC Enforcement policies. Specifically, the last sentence needs to be rewritten so that "Such evidence may include, but is not limited to, dated and time-stamped voice recordings[,] dated operator logs, an attestation from the issuer of the Operating Instruction, voice recordings (if the entity has such recordings), memos and transcripts." NERC has repeatedly affirmed that a Registered Entity may provide an attestation that it has complied with a Standard. See NERC Compliance Process Bulletin#2011-001 ("Data Retention Requirements") (May 20, 2011), at p 3 (in the context of explaining that the CMEP requires a registered entity to demonstrate that it was compliant through the entire audit period, NERC stated that some examples of evidence may include "An attestation of any employee who has participated in the</p>



Organization	Yes or No	Question 4 Comment
		<p>activity on a regular basis throughout the audit period, supported by other corroborating evidence (such as schedules, emails and other applicable documentation). Recipients of oral Operating Instructions during an Emergency have ample means of maintaining records, providing corroborating material, etc... demonstrating that they adhered to the emergency Operating Instruction. To establish an expectation that other Registered Entities may be maintaining audit evidence for the Registered Entity to which the Requirement applies is inconsistent with NERC's enforcement rules and establishes a flawed practice and expectation with regard to recordkeeping requirements and "audit trails."</p> <p><b>Response: The list of examples of evidence is not exhaustive. The measure simply provides examples.</b></p>
Luminant	Yes	<p>1). R1.3 and R3 should also allow the receiver of an Operating Instruction to respond by explaining that a requested action cannot be performed (e.g., due to safety, equipment, regulatory, or statutory requirements as described in TOP-001 R3 and IRO-001 R8). The requirement to either repeat or request that the instruction be reissued does not account for the realistic situation that an entity may not be able to perform an Operating Instruction.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>2). Specific to R.6, consideration should be given to revise the verbiage from, "during an Emergency" to "identified by the sender as constituting an Emergency directive." The rationale for the recommendation is offered to provide clarity to the Requirement, as it is anticipated that there will be cases when it is not clear the Operating Instruction is associated with an Emergency. Additionally, the definition of "Emergency" in the NERC Glossary is broad and consequently it may be difficult, at times, to determine which inputs are subject to COM-002-4 requirements, especially if the TO or TOP calls a plant operator directly rather than going through the respective</p>

Organization	Yes or No	Question 4 Comment
		<p>dispatchers.Note: On the 1/17/14 COM-002-4 OPCP SDT webinar the question was asked, how a DP or GOP would know that an Operating Instruction occurred during an Emergency. The drafting team stated that after every Operating Instruction the DP should call its TOP to determine if the Operating Instruction occurred during and Emergency. Luminant once again reiterates that it would be more efficient and the industry would benefit as a whole, if the sender of the Operational Instruction, states the instruction is associated with an Emergency.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p><b>As a clarifier, the OPCP SDT provided the response during the webinar that, if a receiver was unsure whether there was an Emergency or not, the receiver could ask the issuer for clarification.</b></p>
<p>Public Utility District No.1 of Snohomish County</p>	<p>Yes</p>	<p>While the Public Utility District No.1 of Snohomish County supports this draft of COM-002-4, we see an issue with R2 and R3 of this standard. These requirements both deal with entities conducting training for its personnel, and feel it would be more appropriate if they were addressed in the PER family of standards.The Public Utility District No.1 of Snohomish County also supports the comments submitted by the SERC OC Review Group.Thank you very much.</p> <p><b>Response: Please see the summary response to Question 1.</b></p>
<p>The United Illuminating Company</p>	<p>Yes</p>	<p>PER-005-2 introduced the concept of a Transmission Owner local control center that issues and receives instructions independent of a TOP, RC or BA. COM-002-4 should apply to Transmission Owners.</p> <p><b>Response: The OPCP SDT thanks you for your comment. Please refer to question 9 in the FAQ document posted on the project page for a response to your comment.</b></p>

Organization	Yes or No	Question 4 Comment
Liberty Electric Power LLC	Yes	<p>COM-002 remains a zero defect standard, and there is no FERC directive to provide a zero defect standard in response to either blackout recommendation 26 or Paragraph 535 of Order 693. Further, there is no requirement for the issuer of an Operating Instruction in an Emergency to indicate the Emergency status. The webinar response to queries over the lack of Emergency Status Indication was to suggest the RE "call and inquire" if the OI was in fact a Directive. This adds to the regulatory burden while offering zero benefit. Identification of an Emergency has positive effects far beyond three part communications. The realization of risk to the BES should create a heightened sense of urgency among all parties. The standard must require announcement of Emergency status in order to penalize RE's for actions which are not violations in a non-Emergency situation.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p><b>As a clarifier, the OPCP SDT provided the response during the webinar that, if a receiver was unsure whether there was an Emergency or not, the receiver could ask the issuer for clarification.</b></p>
Wisconsin Electric Power Company	Yes	<p>The proscribed training requirements embedded in R2 and R3 should be removed. The existence and usage of protocols should be the primary focus of the standard and regulatory review, creating a training requirement within the standard shifts focus to training content and administration. Additionally, PER-005-1 requires the Balancing Authority, Reliability Coordinator, and Transmission Operator to have a systematic approach to training (SAT). The adoption and management of a SAT would presumably include communications protocols as a task for potential training. The current draft version of PER-005-2 includes a similar requirement for a SAT applicable to the Generator Operator.</p>

Organization	Yes or No	Question 4 Comment
		<p><b>Response: Please see the summary response to Question 1.</b></p> <p>The annual assessment and corrective action process defined in R4 should be made applicable to Operating Instructions during an Emergency. Although the NERC Glossary of terms provides a definition of Emergency, two reasonable people looking at a situation can disagree as to when an Operating Instruction is issued during an Emergency. Creating a zero defect standard applicable to inherently ambiguous situations shifts focus from the adoption of communication protocols to discussion of when an Operating Instruction is issued during an Emergency. During an entities annual assessment process, the focus would be on classification of an Emergency instead of process improvement for communications. An alternate approach would be to draft the standard so as to require the explicit identification of an Operating Instruction and/or Emergencies so as to remove the ambiguity.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>Finally, the definition of Operating Instruction references a command issued by operating personnel, without sufficiently defining operating personnel.</p> <p><b>Response: The OPCP SDT considered your suggestion but asserts that the existing language provides sufficient clarity. The requirements in the standard define which operating personnel are applicable to the standard.</b></p>
NRECA	Yes	<p>NRECA suggests that the “assess adherence and assess effectiveness” language in R4 be removed from COM-002-4. This language is similar to the “Identify, Assess and Correct (IAC)” language that was included in the CIP V5 standards. The removal or modification of this language was included in the Final Rule on NERC CIP V5 Standards (Order No. 791). FERC stated that IAC language and concepts would be best addressed in the NERC compliance processes, such as through the NERC Reliability Assurance Initiative (RAI), rather than standards requirements.</p>

Organization	Yes or No	Question 4 Comment
		<p><b>Response: Please see the summary response to Question 1.</b></p>
<p>Ingleside Cogeneration LP</p>	<p>Yes</p>	<p>ICLP would like to see the innovative approach that the drafting team used to develop COM-002-4 applied to other standards as well. The issue that continues to arise is not so much whether mandatory requirements are based upon sound reliability principles, but how they can be reasonably enforced. In this case, it is clear that many entities do not have the tools or resources to examine every Operating Instruction in detail in order to assure 100% compliance with a rigorous communication protocol. Conversely, training and retention programs are common - and have proven to be an effective means to drive consistent Operator performance.</p> <p><b>Response: The OPCP SDT thanks you for your comment.</b></p>
<p>Clark Public Utilities</p>	<p>Yes</p>	<p>For the purposes of Requirements 5 and 6, Clark believes it should be an obligation of the issuer of Operating Instruction given during an emergency to identify it as an Emergency Operating Instruction. It should not an obligation of the reciever to determine after-the-fact whether an Operating Instruction is an Emergency or not. All Operating Instructions issued by a BA, RC, or TOP should be regarded with importance but a specification by the issuer that the instruction is in response to an Emergency will alert the receiver that a particular Operating Instruction action requirement has a role in the overall reliability of the BES resulting in a higher level of BES reliability.</p> <p><b>Response: Please see the summary response to Question 1.</b></p>
<p>Manitoba Hydro</p>	<p>Yes</p>	<p>1) The protocols at minimum should require full name identification.</p>

Organization	Yes or No	Question 4 Comment
		<p><b>Response: The OPCP SDT considered your suggestion but asserts that the requirement for “full name identification” does not need to be a mandated communication protocol.</b></p> <p>2) R2 - the description of the applicable operating personnel (i.e. that are responsible for Real-Time operation of the interconnected BES) is different in this part than others (that state it’s for operating personnel that issue and receive certain Operating Instructions). Is that purposeful?</p> <p><b>Response: The OPCP SDT chose that language in Requirement R2 to designate what personnel must be trained.</b></p> <p>3) R5, R6, R7 and R8 - the numbering seems to be mixed up.</p> <p><b>Response: The OPCP SDT is not sure to what you are referring. The standard has no Requirement R8.</b></p> <p>4) M2 and M3 - are not drafted consistently given the consistency in drafting of requirements R2 and R3. M3 refers to ‘its initial’ training records while M2 does not and M3 refers to training records ‘for its operating personnel’ while M2 does not.</p> <p><b>Response: The OPCP SDT considered your suggestion and made non-substantive clarifying changes to the wording of Measure M2.</b></p> <p>5) M4 - contains a section of text that is not reflective of the requirement itself and has no basis for appearing in the measure. The requirement states only that the entity need only take corrective action to address deviations. The extra text that discusses instances where non adherence is the sole or partial cause of an Emergency should be deleted.</p> <p><b>Response: The OPCP SDT clarified the language in Measure M4 to better align with the language in Requirement R4.</b></p> <p>6) M6, M7 - the words ‘if the entity has such recordings’ seem unnecessary. This qualifying language isn’t attached to any other type of evidence that is listed as a</p>

Organization	Yes or No	Question 4 Comment
		<p>possibility; presumably all of those are subject to the same qualifier and would only be presented as evidence if the entity had them.</p> <p><b>Response: The OPCP SDT considered your suggestion but asserts that the existing language provides sufficient clarity.</b></p>
<p>Georgia Transmission Corporation</p>	<p>Yes</p>	<p>Comments: GTC suggests that the “assess adherence and assess effectiveness” language in R4 be removed from COM-002-4. This language is similar to the “Identify, Assess and Correct (IAC)” language that was included in the CIP V5 standards which FERC directed the removal of. The removal or modification of this language was included in the Final Rule of NERC CIP V5 (Order No. 791). FERC stated that IAC language was “overly-vague, lacking definition and guidance is needed” and that these control concepts would be best addressed in the NERC compliance processes, such as through the NERC Reliability Assurance Initiative (RAI), rather than standards requirements.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>Lastly, GTC recommends a revision to the NERC Glossary term Emergency. GTC recommends the removal of the terms “or limit” within this definition. One could argue that every single Operating Instruction is utilized to limit failures of transmission facilities. Emergency should be more appropriately defined without this ambiguity: Proposed: Emergency or BES Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.</p> <p><b>Response: The OPCP SDT considered your suggestion but asserts that the existing definition of Emergency provides sufficient clarity.</b></p>

Organization	Yes or No	Question 4 Comment
American Transmission Company, LLC	Yes	<p>ATC recommends changing the language in Requirement 4 to read as follows:” Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall at least once every calendar year, and no more than every 15 months: “ .....This would be consistent with the NERC’s annual requirement assessment made in NERC’s Compliance Application Notice (CAN)- 0010 issued on November16, 2011. In doing so, it should drive consistency among the CEA on how it is enforced.</p> <p><b>Response: The OPCP SDT thanks you for your comments. The OPCP SDT considered your suggestion but asserts that the existing language provides sufficient clarity.</b></p>
Independent Electricity System Operator	Yes	<p>Recently, FERC directed NERC to eliminate the ambiguity with language “identify, assess, and correct” deficiencies for the CIP standards. Although it supported NERC’s move away from a “zero tolerance” approach to compliance, FERC wanted NERC provide more guidance regarding enforceability with the self-identify/assess/correct approach to compliance. NERC may want to consider that FERC may raise the same concerns with this proposed standard.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>According to the draft standard, if DPs and GOPs receive an Operating Instruction, they can provide an attestation from the issuer of the Operating Instruction to demonstrate compliance - they do not need to develop documented communications protocols. The lighter compliance burden on DPs and GOPs may result in a higher administrative burden for the RC/BA/TOP to provide attestations.</p> <p><b>Response: The OPCP SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: “The Measures provide various options that the drafting team considered as ways to demonstrate compliance for Requirement R6. It is not an exhaustive list, and in no way places an expectation on</b></p>



Organization	Yes or No	Question 4 Comment
		<p>any entity that they must provide evidence of another party's compliance. It simply provides a few options to consider.”</p>
<p>Pepco Holdings Inc.</p>	<p>Yes</p>	<p>Please provide the rational as to why the standard is not applicable to TOs.</p> <p><b>Response: The OPCP SDT thanks you for your comment. Please refer to question 9 in the FAQ document posted on the project page for a response to your comment.</b></p>
<p>American Electric Power</p>	<p>Yes</p>	<p>AEP believes the most recent changes represent a major step back in regards to clarity (as compared to the draft proposed in October 2013), and has driven us to change our voting position from affirmative to negative. We are concerned by the removal of Reliability Directive, and instead, now basing requirements on whether or not the communications are made during an Emergency. Who determines whether or not an Emergency state exists, and in addition, how would that be communicated? AEP recommends returning to the fundamentals and approach taken in the previous draft. If the phase “Reliability Directive” is to be remanded, we encourage the drafting team to pursue alternative language which would not require the need to know whether or not the communications are being made during an “Emergency”. For example, perhaps the drafting team could change R1 (as taken from the October 2013 draft) to state something like the following: “Require the issuer to identify the action as a directive or instruction...”.R4.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>2: Though M4 specifies the kinds of evidence needed to meet R4, we believe it would be too subjective in determining whether or not the entity’s efforts properly assessed the effectiveness of the documented communications protocols.</p>

Organization	Yes or No	Question 4 Comment
		<p><b>Response: The measures provide various options that the OPCP SDT considered to demonstrate compliance for Requirement R4. It is not intended to be an exhaustive list.</b></p>
<p>Utility Services, Inc</p>	<p>Yes</p>	<p>Smaller DPs and GOPs will have a significant problems demonstrating compliance with Requirement 6 as written.</p> <ol style="list-style-type: none"> <li>1. As there is no requirement to notify these entities that an Operating Instruction is being issued during an Emergency, they will not be aware of which communications will be subject to compliance review.</li> <li>2. Since these entities typically do not record phone conversations they would have to rely on other forms of evidence. Log book enties will not document if three part communication was used and since the entities are not made aware of Emergency conditions, they will not know to maintain a higher level of documentation to demonstrate compliance.</li> <li>3. Approaching the issuer for confirmation of OIs during Emergency conditions and seeking Attestations from these entities will create a significant administrative burden not only for the small entities, but for the Issuer of the OI as well.</li> <li>4. Any additional tasks that must be performed during Emergency situations runs contrary to the intent of the standard, which is to normalize communication protocols during all situations, and not have separate procedures during normal and Emergency conditions.</li> </ol> <p><b>Response: Please see the summary response to Question 1.</b></p>
<p>Platte River Power Authority</p>	<p>Yes</p>	<p>Platte River takes exception to the requirement for alpha-numeric clarifiers for communications.</p>

Organization	Yes or No	Question 4 Comment
		<p><b>Response: The OPCP SDT thanks you for your comment but notes the requirement for alpha-numeric clarifiers was from a previous draft of this standard and is no longer contained in the current version.</b></p>
<p>Nebraska Public Power District</p>	<p>Yes</p>	<p>1) Applicability for Distribution Providers (DP’s) should be qualified similar to qualification used for DP applicability in version 5 of CIP-003. Applicability needs to be focused on DP employees that may receive instructions relative to the BES.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>2) R1: Since Requirements R5, R6 and R7 are zero tolerance, R1 protocols should state that when there is an emergency condition on the system that those issuing Operating Instructions during an emergency shall state that “this is an emergency”. Reason Number 1, there needs to be a triggering mechanism that tells both the issuer and receiver that 3 part communication is zero tolerance and in effect during an emergency; Reason Number 2, there is question in the industry as to when the “emergency” begins and ends; and Reason Number 3 the RSAW for R5, R6 and R7 are telling the auditor (in the auditors note) to predetermine before an audit what are emergencies on an entities system, which could potentially create an issue of what is a determined emergency between the auditor and the entity. By inserting a triggering mechanism as suggested will create a demarcation for operating instructions during emergencies.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>3) R2 and R3 are already provided for in PER-005 and therefore are redundant in this standard. If there is a need to include a training requirement in this standard, that requirement could consist of a statement to include protocol training in the entity’s reliability task list.</p> <p><b>Response: Please see the summary response to Question 1.</b></p>

Organization	Yes or No	Question 4 Comment
		<p>4) R4 as written puts a huge administrative burden on entities to administer assessments of ‘each’ of its operating personnel that issue and/or receive Operating Instructions. As in previous drafts of this Standard, entities should determine and document their own assessments to the Standard and so that adherence and effectiveness fits their program. In addition, the 12-month requirement in the Standard now provides for an administrative burden and compliance trap in order to remain compliant to the 12-month requirement. We’re a TOP and do many switching orders a day with operating personnel throughout the state. R4 requires us to assess adherence to communications protocols by our operating personnel (see FAQ #22 says "each" issuer/reciever) that receive these operating instructions and provide feedback to the operating personnel, and take corrective actions when appropriate. Currently, we have over 800 switch personnel, and some of these are not NPPD employees. We utilize personnel from some of our public power partners, such as rural power districts and municipalities. The 12 calendar month clock will be different for each person. So, day-to-day will be a challenge to ensure we capture compliance documentation on each person that changes the state of a BES element. The drafting team should revert back language similar to R5 of posting #7 (with exception to the “implement” language) so that entities can manage their own compliance controls and can develop assessments that fit their program. NPPD would suggest the following for Requirement 4:R4. Each BA, RC and TOP shall have a documented method to evaluate the communication protocols developed in R1 that: 4.1 Assess adherence to the communications protocols developed in R1; 4.2 Assess the effectiveness of the communications protocols in R1; 4.3 Provide feedback to issuers and receivers of Operating Instructions; and 4.4 Modify communication protocols as necessary as a result evaluated communication protocols in this R4.</p> <p><b>Response: The OPCP SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: “An entity could perform an assessment by listening to random samplings of each of their operating personnel issuing and/or receiving Operating Instructions. If there were instances where an Operator deviated from the entity’s protocols, the entity would provide feedback to</b></p>

Organization	Yes or No	Question 4 Comment
		<p>the operator in question in any method it sees as appropriate. An example would be counseling or retraining the operator on the protocols.</p> <p>An entity could assess the effectiveness of its protocols by reviewing instances where operators deviated from those protocols and determining if whether the deviations were caused by operator error or by flaws in the protocols that need to be changed.”</p> <p>The posted RSAW provides additional guidance on sampling. There was never an intention that every communication of an Operating Instruction must be assessed.</p>
CenterPoint Energy Houston Electric LLC	Yes	<p>CenterPoint Energy would like to thank the COM-002-4 Standard Drafting Team and appreciates the OPCP SDT’s time and effort dedicated in the development of this standard, in engaging the industry, and incorporating industry feedback into the standard. The removal of the requirement to identify an Operating Instruction in an emergency or a Reliability Directive to the receiver is viewed as a positive change. CenterPoint Energy believes that operating personnel’s focus should always be on monitoring and controlling the reliability of the BES rather than a compliance burden of correctly identifying and aligning company specific communication protocols to normal versus emergency operations. Overall, CenterPoint Energy agrees with the standard, but still has general concerns. The Company believes the prescriptiveness of the requirements: particularly R1.1 thru R1.6 exceeds the necessary components needed in establishing communication protocols for tightened reliable communications.</p> <p><b>Response: The OPCP SDT thanks you for your comment. The OPCP SDT asserts that Requirement R1 Parts 1.1 to 1.6 are an essential set of communication protocols and are not overly prescriptive.</b></p>

Organization	Yes or No	Question 4 Comment
MISO	Yes	<p>We recommend the drafting team: (1) Remove the attestation for another provision</p> <p><b>Response: The OPCP SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: “The Measures provide various options that the drafting team considered as ways to demonstrate compliance for Requirement R6. It is not an exhaustive list, and in no way places an expectation on any entity that they must provide evidence of another party's compliance. It simply provides a few options to consider.”</b></p> <p>(2) Restrict the zero-defect component of the standard to those operating instructions directly related to the emergency (e.g. redistpach instructions for IROs, committment instructions during EEAs, synchronizing during restoration, etc.)</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>(3) Maintain Reliability Directives in the toolkit as the clear indicator of an Operating Instruction that is directly applicable to the emergency.</p> <p><b>Response: The OPCP SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: “The OPCP SDT debated whether to remove the term ‘Reliability Directive’ in response to comments suggesting it should be removed from the definition of ‘Operating Instruction’ and in light of FERC’s issuance of the TOP/IRO Notice of Proposed Rulemaking (NOPR), which proposes to remand the definition of ‘Reliability Directive’ along with the proposed TOP and IRO standards. To avoid unnecessary complications with the timing of the NOPR and posting Draft 8, the OPCP SDT consulted with the Project 2007-03 Real-time Transmission Operations and the Project 2006-06 Reliability Coordination Standard Drafting Teams to ask whether they believed removal of the term ‘Reliability Directive’ in the COM-002-4 standard would cause concerns. Both teams agreed that the COM-002-4 standard did not need to require a protocol to identify Reliability Directives as such and that the definition of Operating Instruction</b></p>

Organization	Yes or No	Question 4 Comment
		<p>could be used absent the term Reliability Directive in COM-002-4 to set the protocols. The OPCP SDT ultimately voted to remove the term. The OPCP SDT also decided to incorporate the phrase “Operating Instruction during an Emergency” in certain Requirements, where needed, to identify Requirements that are subject to a zero-tolerance compliance/enforcement approach.”</p> <p>We believe that DPs and LSEs don’t need stringent requirements.</p> <p>They just need to follow Directives or explain why they cannot. We understand that the drafting team is trying to meet a deadline, however we'd support the drafting team addressing all of the industry comments even if it requires more time to get this standard right.</p> <p><b>Response: COM-002-4 is not applicable to LSEs. DPs only have two applicable requirements.</b></p>
PJM Interconnection	Yes	<p>PJM supports the draft standard as it strikes a good balance between the industry and the NERC BOT November, 2013 resolutions. The standard provides the industry some flexibility regarding how communication protocols are developed. It also makes it cleaner and easier for operators to use the same protocol for all Operating Instructions, whether in an emergency or not, while not burdening System Operators with issues around how compliance will be measured. PJM does not support the addition of a new training requirement under R1. PJM recommends that all training requirements be included in one standard and not spread throughout families of standards. Consolidation of all training requirements under a single training standard will help in development of a clear, more organized training process.</p> <p><b>Response: Please see the summary response to Question 1.</b></p>

Organization	Yes or No	Question 4 Comment
Georgia System Operations Corporation	Yes	<p>With consideration that an Emergency may not be initially recognized by system operators for several minutes, GSOC requests Requirements R5 thru R7 include the word “recognized” precede the work “Emergency”. GSOC cites the newly effective EOP-004-2, R2 currently affords this consideration. It requires reporting “within 24 hours of recognition of meeting an event type threshold”. In addition, GSOC recommends R5 thru R7 replace the words “during an Emergency” with “addressing a recognized Emergency” so as to avoid confusion should there be Operating Instructions issued during an Emergency that may have nothing to do with an Emergency.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>GSOC suggests that the “assess adherence and assess effectiveness” language in R4 be removed from COM-002-4. This language is similar to the “Identify, Assess and Correct (IAC)” language that was included in the CIP V5 standards. The removal or modification of this language was included in the Final Rule on NERC CIP V5 Standards (Order No. 791). FERC stated that IAC language and concepts would be best addressed in the NERC compliance processes, such as through the NERC Reliability Assurance Initiative (RAI), rather than standards requirements</p> <p><b>Response: The OPCP SDT asserts that there is a substantive enough difference in the language of COM-002-4 and CIP version 5 so as not to be problematic. FERC stated concern was with the ambiguity around “identify, assess, and correct.” The OPCP SDT added clarifying language in the requirements to specify the actions that an entity is expected to take.</b></p>
Electric Reliability Council of Texas, Inc.	Yes	<p>ERCOT ISO believes the draft standard could be improved and offers the following suggestions for the OPCP SDT’s consideration.</p> <p>Definition of Operating Instruction. The definition of Operating Instruction could be improved by making the following changes:1) Delete the word “interconnected”</p>



Organization	Yes or No	Question 4 Comment
		<p>before BES in the first sentence. It is not used instances where BES is used. Unless there is a substantive reason for using interconnected in some BES references and not others, the standard should be consistent to mitigate ambiguity;2) “Potential Options” in the parenthetical is redundant - delete “potential”. Also, “option” and “alternatives” in the parenthetical are also redundant - delete one of them;3) The parenthetical doesn’t need to be a parenthetical - make it the last sentence in the definition.As revised, the definition would read as follows:Operating Instruction - A command by operating personnel responsible for the Real-time operation of the Bulk Electric System (BES) to change or preserve the state, status, output, or input of an Element of the BES or Facility of the BES. A discussion of general information to resolve BES operating concerns is not a command and is not considered an Operating Instruction.</p> <p><b>Response: The OPCP SDT considered your suggestion but asserts that the existing language provides sufficient clarity.</b></p> <p>Purpose Section: The purpose statement could be improved by making the following changes:1) Delete “the issuance of” in the first sentence. It is inherent that a communication is “issued”. Therefore, this language is superfluous and should be deleted to mitigate any potential ambiguity;2) Delete “predefined” in the first sentence. This adjective is not needed - the existence of communication protocols means they are predefined. Therefore, this is superfluous language and should be deleted to mitigate potential ambiguity. As revised, the purpose section would read as follows:Purpose: To improve communications for Operating Instructions with communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES).</p> <p><b>Response: The OPCP SDT considered your suggestion but asserts that the existing language provides sufficient clarity.</b></p> <p>Requirements SectionR1</p>

Organization	Yes or No	Question 4 Comment
		<p>1) ERCOT ISO disagrees with changing “have” to “develop” in the first sentence. The point of this requirement is to have protocols that meet the minimum requirements. Obviously, in order to have the protocols an entity would need to develop them, but that is not the focus - as noted, having the protocols is the intent;2) Change “and” to “or” in the following - “...for its operating personnel that issue or receive Operating Instructions...” The intent is to make the obligation to have protocols applicable to all operating personnel of the relevant functions. It may be that some functions only issue or only receive operating instructions. In those cases this requirement would not apply to those entities because the requirement is conjunctive - issue and receive. By making it disjunctive by using “or” the requirement applies to all circumstances - i.e. issue and receive or just issue or just receive;3) The change suggested in (2) above should be made in R1.1 as well;</p> <p><b>Response: The OPCP SDT considered your suggestion but asserts that the existing language provides sufficient clarity.</b></p> <p>4) Also in R1.1, the triggering condition for using another language besides English - i.e. “unless otherwise agreed to” - is unclear in terms of how that would work. How do you demonstrate that such an agreement is in place? Also, practically speaking, the ability to reach such an agreement assumes that all operators are capable of speaking the alternative language. It seems way too complicated because it would depend on the languages spoken by the different operators at different entities, and their schedules would have to be coordinated. These issues are less of a concern for allowing alternative languages for internal communications because the entity’s personnel know one another and are located in the same place/organization. ERCOT ISO appreciates the intent of allowing for this exception, but it is difficult to see how it would work in practice, and even assuming it could work, the requirement is unclear as to what sort of agreement would be required;</p> <p><b>Response: The OPCP SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: “The drafting team included this part to carry forward the same use of English language included in COM-001-1,</b></p>

Organization	Yes or No	Question 4 Comment
		<p>Requirement R4 and to retire this requirement from COM-001. The requirement continues to permit the issuer and receiver to use an agreed to alternate language. This has been retained since use of an alternate language on a case-by-case basis may serve to better facilitate effective communications where the use of English language may create additional opportunities for miscommunications. Part 1.1 requires the use of English language when issuing oral or written (e.g. switching orders) Operating Instructions. This creates a standard language (unless agreed to otherwise) for use when issuing commands that could change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. It also clarifies that an alternate language can be used internally within the organization. The phrase has been modified slightly from the language in COM-001-1, Requirement R4 to incorporate the term ‘Operating Instruction,’ which defines the communications that require the use of the documented communications protocols.”</p> <p>5) R1.2 - Change “repeated information” to “response”. First, this change promotes consistency in terminology. Second, it is more consistent with the intent that the receiver is not required to repeat the directive verbatim - response contemplates flexibility as long as intent is there, while repeated information seems to require a verbatim reply;</p> <p><b>Response: The OPCP SDT considered your suggestion but asserts that the existing language provides sufficient clarity.</b></p> <p>6) The last bullet in R1.2 requires the issuer to take an alternative action if a response is not received or if the instruction is not understood. It is unclear what this means. Is the obligation related to trying to re-issue the instruction, or does it require the issuer take an alternative operating action? This is a communications standard, not an operations standard. Accordingly, the intent of this bullet should be clarified, and if it requires the issuer to take an alternative operating action, ERCOT ISO questions whether that obligation should be in a COM standard. Operational requirements are already covered in other standards, and if entities act under those other standards</p>

Organization	Yes or No	Question 4 Comment
		<p>then the relevant communications protocols would apply to those “alternative” operating actions. ERCOT ISO believes that the “alternative action” described in the third bullet of R1.2 and R5 should be limited only to communications and not operating actions. ERCOT ISO would recommend replacing R1.2 and R5 third bullet with the following: Attempt an alternative means to communicate the Operating Instruction if a response is not received or if the Operating Instruction was not understood by the receiver, if deemed necessary by the issuer .ERCOT ISO also recommends including “or receiving” to capture that the training should be prior to that individual operator issuing ‘or receiving’ an Operating Instruction to address the subparts of R1 that deal with receiving Operating Instructions.</p> <p><b>Response: The OPCP SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: “If an operator issues an Operating Instruction during an Emergency and, based on the response from the receiver, or lack thereof, chooses to take an alternative action, that operator has satisfied Requirement R5 and is not in violation.” It does not require an alternate action, but it allows the operator to take an alternate action if necessary and not be in violation of the requirement for three-part communication.</b></p> <p>7) R1.4 - Delete “single-party”. It is clear that an issuer is one entity without having to add “single-party”. Accordingly, this is superfluous language and should be deleted to mitigate ambiguity. If this deletion is made, “operating instruction” would have to be moved to where “single-party” was in the sentence;8) R1.4 requires the issuer to “confirm” or “verify” that the instruction was received by at least one entity. They are the same thing - delete one of them for clarity and to mitigate ambiguity;</p> <p><b>Response: The OPCP SDT considered your suggestion but asserts that the existing language provides sufficient clarity.</b></p> <p>9) R1.5 requires the communication protocols to specify the instances where time identification is required and to specify the format for time identification. As written, this appears to require the protocols to specifically list all relevant instances and, where relevant, requires the use of a specific time ID format. The OPCP SDT should</p>

Organization	Yes or No	Question 4 Comment
		<p>consider revising this so the requirement imposes a general obligation for the protocols to time ID instructions when necessary, but not require the establishment of an exclusive list. This will accomplish the goal of time stamping and provide the entity with flexibility to implement the requirement, which will also mitigate the need to revise protocols if an entity determines prospectively that time ID is not needed in some instances on the list and is needed in other instances that are not on the list. Similarly, the protocols should not require a specific format. Providing flexibility with respect to format will mitigate the potential for form over substance violations of the protocols - time ID is the point, not the format;</p> <p><b>Response: The OPCP SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: “The OPCP SDT has included this part to add necessary clarity to Operating Instructions to reduce the risk of miscommunications. The inclusion of ‘specify when time identification required’ allows for an entity to evaluate its particular circumstances and communications to determine when it may be appropriate to use time identification in its Operating Instructions. The drafting team recognized from comments the need to provide this flexibility while still requiring an entity to address this part in its documented communication protocols. Clarifying time and time zone (where necessary) contributes to reducing misunderstandings and reduces the risk of a grave error during BES operations. This is not exclusively for entities in multiple time zones, but Operating Instructions between entities in multiple time zones is one example of instances that may need time identification when issuing and receiving Operating Instructions.”</b></p> <p>10) R1.6 requires the protocols to establish nomenclature for transmission elements. It is unclear how this will facilitate clearer communications unless all entities that are issuers or recipients of instructions use the same nomenclature. As drafted, it appears that it is an independent obligation that applies to each entity. If that is the case, each entity could use different nomenclature, which arguably could have a negative impact on communications.</p>

Organization	Yes or No	Question 4 Comment
		<p><b>Response: Please see the summary response to Question 1.</b></p> <p>R4 1) ERCOT ISO understands the inclusion of R4 as a means to make normal operations Operating Instructions not subject to zero tolerance enforcement. However, ERCOT ISO has reservations concerning potential subjectivity surrounding who determines “appropriate” and “as necessary”. As a general comment, these types of “internal controls” requirements are better handled through the RAI initiative and subsequent CMEP processes. However, if the language remains, ERCOT ISO believes the clarity and effectiveness of the standard will benefit by clarifying that the entity who is conducting the assessments determine the appropriateness and necessity, and that the role of the ERO is simply to review if such activities were performed. ERCOT ISO recommends modifications as below. 4.1. Assess adherence by its operating personnel that issue or receive Operating Instructions to the documented communications protocols ‘required’ in ‘by the subparts’ of Requirement R1, , provide feedback to those operating personnel and take corrective action, as ‘deemed’ appropriate ‘by the entity’ to address deviations from the documented protocols.4.2. Assess the effectiveness of its documented communications protocols ‘required’ in ‘by the subparts of’ Requirement R1, for its operating personnel that issue or receive Operating Instructions and modify its documented communication protocols, as ‘deemed’ necessary ‘by the entity’. Additionally, ERCOT ISO recommends including language to specify that R4 only be required to apply to those communication protocols that are identified in the subparts of R1, and not to other practices that an entity may choose to employ or improve upon. This clarification will mitigate creating a “fill in the blank” type standard approach for future potential changes to the R1 documented communication protocols.</p> <p><b>Response: The OPCP SDT considered your suggestion and made non-substantive clarifying changes to the wording of Requirement R4.</b></p> <p>R51) How does the term “Emergency” in this requirement align with/relate to the term “Reliability Directive” in other standards, both in terms of meaning and scope of related responsibilities - is there overlap that could create ambiguity or unnecessary</p>

Organization	Yes or No	Question 4 Comment
		<p>redundancy? There is a concern regarding the use of “Operating Instruction during an Emergency”. While ERCOT ISO understands the rationale behind replacing Reliability Directive with the new terminology based on the FERC NOPR potentially remanding the term, to avoid overlap/redundancy/confusion if this is retained, any potential conflicts must be addressed through other projects. Use of Reliability Directive up until this draft created clear synergy between COM-003/002 and the IRO/TOP revisions. If the term is not remanded, ERCOT ISO would support a more uniform approach by including Reliability Directive;</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>2) Change “repeated information” to “response” in first two bullets. See comment 5 in R1 comments above for rationale for this suggested change;3) Third bullet - see comment 6 under R1 comments - same comment for the third bullet under R5;</p> <p><b>Response: The OPCP SDT considered your suggestion but asserts that the existing language provides sufficient clarity.</b></p> <p>R71) Delete “single party” and delete either “confirm” or “verify” - see comments 7 and 8 under R1 for rationale for these suggested revisions.</p> <p><b>Response: The OPCP SDT considered your suggestion but asserts that the existing language provides sufficient clarity.</b></p> <p>Measures</p> <p>M4 is too prescriptive and inappropriately imposes requirements on the entity. This measure should align with previous comments concerning R4. M4 should be modified to reflect appropriate measures or types of evidence that should be provided without being overly prescriptive with respect to the level of quality of evidence. Additionally each part should be included and reflect the requirements without imposing additional requirements.</p> <p><b>Response: The OPCP SDT considered your suggestion and made non-substantive clarifying changes to the wording of Measure M4. In addition, the list of evidence is</b></p>

Organization	Yes or No	Question 4 Comment
		<p><b>not an exhaustive list and in no way places an expectation on any entity that they must provide evidence of another party's compliance. It simply provides a few options to consider.</b></p> <p>M5-M7 should not identify attestations from the issuer or include “dated and time stamped” as part of the measure. Compliance should be demonstrated by the relevant entity - third parties should not be required either directly or indirectly to support the compliance activities of another entity by providing attestations. “Dated and time stamped” goes to the quality of evidence and is not appropriate for a measure. ERCOT ISO comments that inclusion of attestations, documented observations, procedures, or other equivalent evidence would improve M5-M7.</p> <p><b>Response: The OPCP SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: “The Measures provide various options that the drafting team considered as ways to demonstrate compliance for Requirement R6. It is not an exhaustive list, and in no way places an expectation on any entity that they must provide evidence of another party's compliance. It simply provides a few options to consider.” The same comment applies to Measures M5 and M7.</b></p>
<p>Indiana Municipal Power Agency</p>	<p>Yes</p>	<p>Requirement R3 is not clear in defining if it covers all Operating Instructions received by a Distribution Provider and Generator Operator. Distribution Providers and Generator Operators can receive Operating Instructions from outside parties (Balancing Authority, Reliability Coordinator, and Transmission Operator) and from internal parties (its own Market Operations). The current word in Requirement 3 requires Distribution Providers and Generator Operators to repeat back both outside and internal parties Operating Instructions. IMPA does not believe this was the intent of the OPCP SDT since there are no requirements that cover Distribution Providers or Generator Operators issuing Operating Instructions (the Generator Operator’s Market Operations issuing an Operating Instruction to its generating power plant; Generator</p>



Organization	Yes or No	Question 4 Comment
		<p>Operators cannot issue Operating Instructions to any Registered Entities such as the Balancing Authority or Reliability Coordinator). IMPA also believes that operating personnel need to know at the time an instruction is given if it is an Operating Instruction or a Directive. This clarification needs to come from the entity giving the instruction and reviewing the call afterwards to make that determination is very problematic.</p> <p><b>Response: The OPCP SDT thanks you for your comments and has considered them. The definition of Operating Instruction is “A command by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. (A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.)” Conversations concerning market dispatch are not considered Operating Instructions. The OPCP SDT addressed the issue of identifying Emergencies in the FAQ document posted on the project page. The following response was provided: “Separately listing out Requirements R5, R6, and R7 and using ‘Operating Instruction during an Emergency’ in them does not require a different set of protocols to be used during Emergencies or mandate the identification of a communication as an ‘Operating Instruction during an Emergency.’ The same protocols are required to be used in connection with the issuance of Operating Instructions for all operating conditions. Their use is measured for compliance/enforcement differently using the operating condition as an indicator of which compliance/enforcement approach applies. In other words, it is not the drafting team’s expectation that the operator must differentiate between Emergency and non-Emergency Operating Instructions.”</b></p>

Organization	Yes or No	Question 4 Comment
New York Independent System Operator	Yes	<p>The NYISO would like to request confirmation that Operating Instructions are limited to verbal or written communications and that electronic dispatch signals are not in scope for this standard. The NYISO would also note that we support comments submitted by both the IRC/SRC and NPCC/RSC.</p> <p><b>Response: The OPCP SDT thanks you for your comments. The definition of Operating Instruction was intentionally written broadly to include many forms of communication. The requirements in COM-002-4 only apply to oral and written Operating Instructions. Electronic dispatch signals are not in the scope of COM-002-4.</b></p>
Northeast Utilities	Yes	<p>Comment 1 Systematic Approach to Training is already covered in PER-005-1 and including a requirement for training would seem to be redundant.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>Comment 2 The applicability of Distribution Provider (DP) functional responsibility presents potential for confusion. New England LCC’s (Transmission Operators) operate at the direction of ISO-NE the Regional Transmission Operator (RTO) and enforcing the communication protocols to distribution companies/distribution providers may present challenges, identifying, documenting and implementing COM-002-4 to the DP.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>Comment 3 The language used in Requirement 1.6 is vague and needs to be clarified for Registered Entities to know how to comply with it. How would one “specify nomenclature” system-wide?</p> <p><b>Response: Please see the summary response to Question 1.</b></p>

Organization	Yes or No	Question 4 Comment
Oncor Electric Delivery Company LLC	Yes	<p>Oncor recommends Requirement 4 and Measurement 4 be removed. The “assess adherence and assess effectiveness” language mirrors the same concepts as the “Identify, Assess and Correct (IAC)” language that was included in the CIP V5 standards which FERC directed the removal of. The removal or modification of this language was included in the Final Rule of NERC CIP V5 (Order No. 791). FERC stated that IAC language was “overly-vague, lacking definition and guidance is needed” and that these control concepts would be best addressed in the NERC compliance processes, such as through the NERC Reliability Assurance Initiative (RAI), rather than standards requirements. Reliability Standards must be revised to focus on strategic and critical reliability objectives incorporating requirements for meeting and sustaining reliability of the BES. The current state of Standards must transition from a prescriptive zero tolerance approach to results-based requirements which assure the reliability and security of the critical infrastructure. A reliability results-based approach should not be an additive to the Reliability Standards; hence, controls requirements should not be incorporated within the Standards, rather controls should be considered at the Program level. Reliability Standards should define the results (“what”) Entities are mandated to meet and maintain and the “how” should be handled by each Entity for there is not a “one size fits all”. Incorporating detective controls as requirements and prescriptive measurements can lead to unintended consequences and again, an additive versus a process that helps provide a registered entity with reasonable assurance they comply with the Standard(s) or the operating function(s) and processes that the Standard(s) require.</p> <p><b>Response: Please see the summary response to Question 1.</b></p> <p>Rewording of R1.6 as follows: “Specify the nomenclature to be used for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction to Neighboring Entities.” While the Technical Justification document suggests that R1.6 applies to communication with neighboring entities, it is unclear that this requirement, as worded in the current draft of COM-002-4, is specifically discussing communication with neighboring entities.</p>

Organization	Yes or No	Question 4 Comment
		<p><b>Response: Please see the summary response to Question 1.</b></p> <p>M2 should include “initial training” and be reworded as follows in order to maintain consistency with the requirement: “Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide initial training records related to its documented communications protocols developed for Requirement R1 such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R2.”</p> <p><b>Response: The OPCP SDT considered your suggestion and made non-substantive clarifying changes to the wording of Measure M2.</b></p>
<p>Exelon Corp and its affiliated business units</p>	<p>Yes</p>	<p>o A “qualified” application of COM-002-4 for a DP that performs voltage reduction or load shedding as directed by an RC, BA or TOP could clarify the standard and place the emphasis on the functional entities that matter most.</p> <p><b>Response: The OPCP SDT considered your suggestion but asserts that the existing language provides sufficient clarity.</b></p> <p>o Remove R6 and M6. The BA, RC or TOP, as issuers, record Operating Instructions (OI). R1.2 requires an entity issuing an OI to confirm the receiver’s response, reissue if necessary and take alternate action if the receiver does not confirm or understand the OI. Similarly, per R5, issuers of an OI are required to confirm the receiver’s response, reissue if necessary and take alternate action if the receiver does not confirm or understand the OI. There is little reliability benefit in requiring the DP and GOP receiver documenting their role in this exchange. The training requirement for receivers of OI’s in R3 is sufficient.</p> <p><b>Response: The OPCP SDT chose to include Distribution Providers and Generator Operators in the Applicability section because they can be on the receiving end of some Operating Instructions. The OPCP SDT determined that if Distribution Providers and Generator Operators were not included as applicable entities in this</b></p>

Organization	Yes or No	Question 4 Comment
		<p>standard, it could create a gap. Additionally, it is important that the Distribution Provider and Generator Operator perform three-part communication when receiving an “Operating Instruction during an Emergency.” That necessitates Requirement R6.</p> <p>o If R6 and M6 are not removed.R6. To clarify, suggest that the word “Operating Instruction” be inserted after “excluding written” so it is clear it is applicable to both conditions.M6. Need a comma after “voice recordings” so as to separate it from dated operator logs.</p> <p><b>Response: The OPCP SDT considered your suggestion but asserts that the existing language provides sufficient clarity.</b></p> <p>"Voice recordings" is repeated twice in M6. M7. "Voice recordings" is repeated twice in M7.</p> <p><b>Response: The OPCP SDT considered your suggestion and made non-substantive clarifying changes to the wording of Measures M6 and M7.</b></p> <p>o R6 / M6. Exelon is concerned that demonstrating compliance with R6 may prove difficult for some entities. A generator operator may not have voice recording available at the entity’s facility and it may not be possible to procure voice recording or attestations from the issuer of an Operating Instruction. The measurement says dated operator logs are acceptable evidence. The RSAW further discusses auditor discretion and risk assessment respecting this requirement and measure. If audited per the measurement and RSAW guidance, log entries would be acceptable evidence but we are concerned that an auditor may find otherwise.</p> <p><b>Response: The OPCP SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: “The Measures provide various options that the drafting team considered as ways to demonstrate compliance for Requirement R6. It is not an exhaustive list, and in no way places an expectation on any entity that they must provide evidence of another party's compliance. It simply provides a few options to consider.”</b></p>

Organization	Yes or No	Question 4 Comment
		<p>o Should this proposal fail to pass ballot, we encourage the drafting team to build on the positive work done in this version and address the compliance concerns that remain. All stakeholders would be best served if this standard could incent improvement in communication through effective self-assessment and applied lessons learned. This iteration presents an opportunity to truly step away from placing the compliance burden that judges operators for their use of three-part communication and to focus on programmatic measures to promote effective communication. Specifically, replacing R5, R6 and R7 with meaningful assessment criteria to include in entity review programs could increase the qualitative components of the program, focus on efforts to improve effective communication and remove the zero tolerance compliance approach that currently exists. o While it’s been difficult to keep “starting over” with new standard language approaches, we believe that this version sets solid groundwork to address the hurdles and conflicts of previous approaches. Should more time be allowed to continue development of this most recent proposal, we would welcome the chance to discuss our ideas further.</p>
Xcel Energy	Yes	<p>Xcel Energy is voting negative because the standard no longer contains clarity for all parties on when they have entered an emergency state and therefore 3-part communication would be required. Since the requirements to conduct 3-part communication on emergency operating instructions will remain zero tolerance, it is important that the line of when the entity entered an emergency state be clear to the registered entities involved as well as ERO compliance and enforcement personnel. We think incorporating some of the mechanics from COM-002-3 could easily remedy our concerns. Alternatively, please consider requiring an Operating Instruction that is issued during an Emergency situation be identified as ‘This is an Emergency.’.</p> <p><b>Response: Please see the summary response to Question 1.</b></p>

Organization	Yes or No	Question 4 Comment
ReliabilityFirst	Yes	<p>ReliabilityFirst submits the following comments for consideration:</p> <ol style="list-style-type: none"> <li>1. Requirements R1, R2, R3 and R4 - The term “operating personnel” is used throughout the draft standard. This term is undefined and it is unclear to which individuals the communications protocol applies. ReliabilityFirst recommends defining this term to eliminate any confusion and remove any questions around who encompasses “operating personnel”. ReliabilityFirst suggests replacing the term “operating personnel” with the draft PER-005-2 definition of “System Operator” (e.g., “An individual at a Control Center of a Balancing Authority, Transmission Operator, or Reliability Coordinator, who operates or directs the operation of the Bulk Electric System in Real-time.”). ReliabilityFirst believes it is the intent of the standard to apply to individuals who operate or direct the operation of the Bulk Electric System in Real-time, and not personnel that may be involved in supporting roles.</li> </ol> <p><b>Response: The OPCP SDT considered the use of the term “System Operator” when developing the standard. However, since the standard applies to Distribution Providers and Generator Operators, the term could not be used without altering the definition, which would impact other standards.</b></p> <ol style="list-style-type: none"> <li>2. Requirement R4a. The intent of Requirement R4             <ol style="list-style-type: none"> <li>a. R4.1 appears to limit possible violations for deviations to the context of emergency operations, while only requiring that Responsible Entities to assess and correct deviations “as appropriate” in the non-Emergency setting. ReliabilityFirst is concerned that the qualifier “as appropriate” is vague and creates concerns similar to those expressed by the Commission in Order 791. In Order 791, the Commission supported the RAI’s goal to develop a framework for the ERO Enterprise’s use of discretion in the compliance monitoring and enforcement space, but rejected the codification of “identify, assess, and correct” language within the CIP Version 5 Reliability Standards because it is vague. ReliabilityFirst is also concerned that the qualifier “as appropriate” codifies discretion within COM-002-4. ReliabilityFirst believes that neither discretion nor controls should be codified in Reliability Standards. Rather, the</li> </ol> </li> </ol>

Organization	Yes or No	Question 4 Comment
		<p>ERO Enterprise should utilize discretion in the compliance monitoring and enforcement space when determining the relevant scope of audits and whether to decline to pursue a noncompliance as a violation. With the RAI, the ERO Enterprise is developing a singular and uniform framework to inform the ERO Enterprise’s use of discretion in the compliance monitoring and enforcement space. Therefore, ReliabilityFirst recommends removing the qualifier “as appropriate” from R4.1 and allowing the ongoing RAI effort to create a meaningful and unambiguous framework that the ERO Enterprise will utilize to inform its use of discretion in the compliance monitoring and enforcement of all Reliability Standards. ReliabilityFirst cautions that codifying discretion in some Reliability Standards may create confusion once the ERO Enterprise begins to implement RAI discretion in its compliance monitoring and enforcement work. For example, there may be confusion of whether discretion codified in certain Requirements of Reliability Standards precludes the ERO Enterprise’s use of RAI discretion for those Requirements where discretion is not codified.</p> <p><b>Response: The OPCP SDT considered your suggestion and made non-substantive clarifying changes to the wording of Requirement R4. Concerning your RAI comment, please see the summary response to Question 1.</b></p> <p>b. Flowing from 2.a. above, ReliabilityFirst recommends that Measure 4 be modified to remove discretion, and should read as follows: M4. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence of its assessments, including spreadsheets, logs or other evidence of feedback, findings of effectiveness and any changes made to its documented communications protocols developed for Requirement R1 in fulfillment of Requirement R4. The entity shall also provide evidence that it took appropriate corrective actions as part of its assessment for all instances of operating personnel’s nonadherence to the protocols developed in Requirement R1.</p> <p><b>Response: The OPCP SDT clarified the language in Measure M4 to better align with the language in Requirement R4.</b></p>



Organization	Yes or No	Question 4 Comment
California ISO	Yes	<p>1. Requirement R4 is an administrative task, not a reliability-related task. The ISO does not see the value added or where BES reliability is enhanced by R4. 2. The ISO uses an Automated Dispatch System (ADS) to direct dispatch levels of generation in the ISO Balancing Authority Area. Though different ADS instructions are sent to multiple parties (different Generators) each individual instruction is an electronic communication that is “resource specific” (i.e. - we send one resource an electronic communication to position its unit at a specific level and another resource a different electronic communication to position its resource at a different level, etc.) In this respect the ISO considers the ADS to be a “single-party to single-party” communication rather than a “single-party to multiple-party burst” communication. The ISO requests standards drafting team confirmation that it does not interpret R1.4 (or R7 which contains similar language in the Emergency context) to apply to resource-specific ADS dispatch instructions.</p> <p><b>Response: The OPCP SDT thanks you for your comments. The definition of Operating Instruction was intentionally written broadly to include many forms of communication. The Requirements in COM-002-4 only apply to oral and written Operating Instructions. Electronic dispatch signals are not in the scope of COM-002-4.</b></p>
Tri-State Generation and Transmission Association Inc.	Yes	<p>Tri-State G&amp;T disagrees with removing the term reliability directive. The proposed definition for Reliability Directive should be modified to provide technical justification, as requested in the November 21, 2013 FERC NOPR, and require Reliability Coordinators to use Reliability Directives to issue instructions to maintain reliable operations. As addressed in the NOPR, Reliability Directives from an entity responsible for the reliable operation of the BES should be mandatory at all times, not just during emergencies. Owners, Operators and others responsible for reliability of the BES have</p>

Organization	Yes or No	Question 4 Comment
		<p>used the term reliability directive effectively for many years. Removing this term does not enhance the reliability of the BES and places a burden on industry to adjust to accommodate a new method to accomplish what is done today with reliability directives. Our proposal is to make Reliability Directives applicable to RC, TOP and BA's to ensure reliable operation the BES.</p> <p><b>Response: The OPCP SDT addressed this issue in the FAQ document posted on the project page. The following response was provided: "The OPCP SDT debated whether to remove the term 'Reliability Directive' in response to comments suggesting it should be removed from the definition of 'Operating Instruction' and in light of FERC's issuance of the TOP/IRO Notice of Proposed Rulemaking (NOPR), which proposes to remand the definition of 'Reliability Directive' along with the proposed TOP and IRO standards. To avoid unnecessary complications with the timing of the NOPR and posting Draft 8, the OPCP SDT consulted with the Project 2007-03 Real-time Transmission Operations and the Project 2006-06 Reliability Coordination Standard Drafting Teams to ask whether they believed removal of the term 'Reliability Directive' in the COM-002-4 standard would cause concerns. Both teams agreed that the COM-002-4 standard did not need to require a protocol to identify Reliability Directives as such and that the definition of Operating Instruction could be used absent the term Reliability Directive in COM-002-4 to set the protocols. The OPCP SDT ultimately voted to remove the term. The OPCP SDT also decided to incorporate the phrase 'Operating Instruction during an Emergency' in certain Requirements, where needed, to identify Requirements that are subject to a zero-tolerance compliance/enforcement approach."</b></p> <p>The term Operating Instructions should be applicable to Operators who issue commands to control elements essential to the reliable operation of the BES. We do not believe the term, as currently defined, should apply to Reliability Coordinators. According to the NERC Functional Model, Reliability Coordinators are not real time operators and are not operating personnel. Reliability Coordinators oversee the reliability of the BES and direct real time operations as needed to assure reliability of the BES. TSGT requests clarification of the term operating personnel, which positions is</p>

Organization	Yes or No	Question 4 Comment
		<p>this term referring to? As previously stated, if operating personnel are the personnel that operate BES elements, then operating personnel should not include Reliability Coordinators since that is not the role they currently provide.</p> <p><b>Response: Since Reliability Coordinators “direct Real-time operations as needed to assure reliability of the BES,” they can issue Operating Instructions and, as such, must be applicable entities to this standard.</b></p> <p>TSGT requests clarification on the proposed multiple-party burst communication. This method of communication is not widely used and we are concerned that the use of this type of communication may create additional reliability issues.</p> <p><b>Response: Information about multiple-party burst communication may be found in the Operating Committee “Reliability Guideline: System Operator Verbal Communications – Current Industry Practices” located at <a href="http://www.nerc.com/comm/OC/Related%20Files%20DL/OC%20Approved_COM-002-2%20Guideline_6-24-2012_For%20Posting_w%20line%20numbers_Clean_Version%202.pdf">http://www.nerc.com/comm/OC/Related%20Files%20DL/OC%20Approved_COM-002-2%20Guideline_6-24-2012_For%20Posting_w%20line%20numbers_Clean_Version%202.pdf</a>.</b></p> <p>TSGT requests a clarification of time identification in R1.5.</p> <p><b>Response: Please see the summary response to Question 1.</b></p>
The Empire District Electric Company	Yes	<p>I feel that the requirement to an assessment to communication protocols is somewhat excessive and should be left as a part of the audit process or following NERCs RAI directive be left up to the internal compliance department of the company rather than having this as a requirement in the standard.</p> <p><b>Response: Please see the summary response to Question 1.</b></p>

Organization	Yes or No	Question 4 Comment
HHWP	Yes	<p>I appreciate the work done on this Standard by the OPCP SDT. The current version of the draft is much improved. I propose one change before supporting this proposed standard. That change is in Requirement 4 where I believe the standard would be improved by replacing the "at least once every twelve (12) calendar months" language with "at least annually, with no more than X months between reviews." Such a change to the language or Requirement 4 would allow each entity to determine the best cycle for its review of adherence to and effectiveness of its communications protocols per CAN-0010. If that language is used, I believe that 15 months is an appropriate value for 'X'.</p> <p><b>Response: The OPCP SDT considered your suggestion but asserts that the existing language provides sufficient clarity.</b></p>

Additional Comments

Avista Utilities  
 Scott Kinney

Comment:

Although we believe the team made significant improvements to the standard, and support a 3-part communication standard, we are concerned that the scope of the standard and the sheer number of operating communications may overwhelm entities in terms of monitoring and evidence retention. COM-002-4 will require all communication channels to not just be recorded (which is done today) but will require a sampling of the recordings to be reviewed by compliance personal for self-monitoring purposes, provide documented feedback to operating personnel and provide samples to auditors. This standard may result in the registered entities spending more time monitoring and collecting data than the realized reliability benefits. Also, the evidence that is produced and provided to the auditors leaves much open for interpretation. We are concerned an auditor may not be able to differentiate between ‘emergency’ and ‘non emergency’ operating instructions for audit purposes.

Response: Please see the summary response to Question 1.

END OF REPORT

**Standard Development Roadmap**

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

**Development Steps Completed:**

1. The Standards Committee (SC) approved the Standard Authorization Request (SAR) for posting on March 1, 2007.
2. The SAR was posted for comment from March 19 through April 17, 2007.
3. The SC sought SAR drafting team nominations April 18 through May 2, 2007.
4. The SAR drafting team posted reply comments to industry comments received on the first posting of the SAR on June 8, 2007.
5. Standard drafting team appointed by SC Executive Committee on June 28, 2007.
6. Version 1 draft of COM-003-1 Standard posted November 2009 for Informal Comments closed January 15, 2010.
7. Version 2 draft of COM-003-1 Standard posted May 2012 for Formal Comments, Initial Ballot closed June 20, 2012.
8. Version 3 draft of COM-003-1 Standard posted August 2012 for Formal Comments, Ballot closed September 22, 2012.
9. Version 4 draft of COM-003-1 Standard posted November 2012 for Formal Comments, Ballot closed December 13, 2012.
10. Version 5 draft of COM-003-1 Standard posted March 2013 for Formal Comments, Ballot closed April 5, 2013.
11. Version 6 draft of COM-003-1 Standard posted June 2013 for Formal Comments, Ballot closed July 19, 2013.
12. COM-003-1 renumbered as COM-002-4. Posting 7, Version 1 draft of COM-002-4 Standard posted October 2013 for Formal Comment, Ballot closed November 7, 2013.
13. On December 12, 2013, the SC approved a waiver of the Standard Processes Manual to shorten the formal comment and ballot period, from 45 days to 30 days.
14. Version 2, Posting 8, draft of COM-002-4 Standard posted January 2014 for Formal Comment, Ballot closed February 4, 2014.

**Description of Current Draft:**

This is the second draft of a revised standard (eighth posting of a communications standard) requiring the use of standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The standard drafting team is posting this standard for a final 10 day ballot period.

**Future Development Plan:**

<b>Anticipated Actions</b>	<b>Anticipated Date</b>
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**COM-002-4 – Operating Personnel Communications Protocols**

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1. Board adopts standard	May 2014
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### **Definitions of Terms Used in Standard**

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

Operating Instruction -A command by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. (A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.)



## A. Introduction

1. **Title:** Operating Personnel Communications Protocols
2. **Number:** COM-002-4
3. **Purpose:** To improve communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES).
4. **Applicability:**
  - 4.1. **Functional Entities**
    - 4.1.1 Balancing Authority
    - 4.1.2 Distribution Provider
    - 4.1.3 Reliability Coordinator
    - 4.1.4 Transmission Operator
    - 4.1.5 Generator Operator
5. **Effective Date:** The standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date the standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

## B. Requirements

- R1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum: *[Violation Risk Factor: Low][Time Horizon: Long-term Planning]*
  - 1.1. Require its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
  - 1.2. Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions:
    - Confirm the receiver's response if the repeated information is correct.
    - Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver.

- Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.
- 1.3.** Require its operating personnel that receive an oral two-party, person-to-person Operating Instruction to take one of the following actions:
- Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct.
  - Request that the issuer reissue the Operating Instruction.
- 1.4.** Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.
- 1.5.** Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.
- 1.6.** Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.
- R2.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall conduct initial training for each of its operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System on the documented communications protocols developed in Requirement R1 prior to that individual operator issuing an Operating Instruction. *[Violation Risk Factor: Low][Time Horizon: Long-term Planning]*
- R3.** Each Distribution Provider and Generator Operator shall conduct initial training for each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction to either: *[Violation Risk Factor: Low][Time Horizon: Long-term Planning]*
- Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or
  - Request that the issuer reissue the Operating Instruction.
- R4.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall at least once every twelve (12) calendar months: *[Violation Risk Factor: Medium][Time Horizon: Operations Planning]*
- 4.1.** Assess adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, provide feedback to those operating personnel and take corrective action, as deemed appropriate by the entity, to address deviations from the documented protocols.
- 4.2.** Assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modify its documented communication protocols, as necessary.

- R5.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]
- Confirm the receiver's response if the repeated information is correct (in accordance with Requirement R6).
  - Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver, or
  - Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.
- R6.** Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that receives an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]
- Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or
  - Request that the issuer reissue the Operating Instruction.
- R7.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency shall confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]

### **C. Measures**

- M1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1.
- M2.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its initial training records related to its documented communications protocols developed for Requirement R1 such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R2.
- M3.** Each Distribution Provider and Generator Operator shall provide its initial training records for its operating personnel such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R3.
- M4.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence of its assessments, including spreadsheets, logs or other evidence of feedback, findings of effectiveness and any changes made to its documented communications protocols developed for Requirement R1 in fulfillment of

Requirement R4. The entity shall provide, as part of its assessment, evidence of any corrective actions taken where an operating personnel's non-adherence to the protocols developed in Requirement R1 is the sole or partial cause of an Emergency and for all other instances where the entity determined that it was appropriate to take a corrective action to address deviations from the documented protocols developed in Requirement R1.

- M5.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issued an oral two-party, person-to-person Operating Instruction during an Emergency, excluding oral single-party to multiple-party burst Operating Instructions, shall have evidence that the issuer either: 1) confirmed that the response from the recipient of the Operating Instruction was correct; 2) reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver; or 3) took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver. Such evidence could include, but is not limited to, dated and time-stamped voice recordings, or dated and time-stamped transcripts of voice recordings, or dated operator logs in fulfillment of Requirement R5.
- M6.** Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that was the recipient of an oral two-party, person-to-person Operating Instruction during an Emergency, excluding oral single-party to multiple-party burst Operating Instructions, shall have evidence to show that the recipient either repeated, not necessarily verbatim, the Operating Instruction and received confirmation from the issuer that the response was correct, or requested that the issuer reissue the Operating Instruction in fulfillment of Requirement R6. Such evidence may include, but is not limited to, dated and time-stamped voice recordings (if the entity has such recordings), dated operator logs, an attestation from the issuer of the Operating Instruction, memos or transcripts.
- M7.** Each Balancing Authority, Reliability Coordinator and Transmission Operator that issued a written or oral single or multiple-party burst Operating Instruction during an Emergency shall provide evidence that the Operating Instruction was received by at least one receiver. Such evidence may include, but is not limited to, dated and time-stamped voice recordings (if the entity has such recordings), dated operator logs, electronic records, memos or transcripts.

## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance Enforcement Authority**

As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority" means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

#### **1.2. Data Retention**

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to

provide other evidence to show that it was compliant for the full time period since the last audit.

Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, and Transmission Operator shall each keep data or evidence for each applicable Requirement for the current calendar year and one previous calendar year, with the exception of voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.

If a Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, or Transmission Operator is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

### **Compliance Monitoring and Assessment Processes**

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

### **1.3. Additional Compliance Information**

None

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	Low	<p>The responsible entity did not specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification, as required in Requirement R1, Part 1.5</p> <p>OR</p> <p>The responsible entity did not specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction, as required in Requirement R1, Part 1.6.</p>	<p>The responsible entity did not require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise, as required in Requirement R1, Part 1.1. An alternate language may be used for internal operations.</p>	<p>The responsible entity did not include Requirement R1, Part 1.4 in its documented communication protocols.</p>	<p>The responsible entity did not include Requirement R1, Part 1.2 in its documented communications protocols</p> <p>OR</p> <p>The responsible entity did not include Requirement R1, Part 1.3 in its documented communications protocols</p> <p>OR</p> <p>The responsible entity did not develop any documented communications protocols as required in Requirement R1.</p>

**COM-002-4 – Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R2</b>	Long-term Planning	Low	N/A	N/A	An individual operator responsible for the Real-time operation of the interconnected Bulk Electric System at the responsible entity issued an Operating Instruction, prior to being trained on the documented communications protocols developed in Requirement R1.	An individual operator responsible for the Real-time operation of the interconnected Bulk Electric System at the responsible entity issued an Operating Instruction during an Emergency prior to being trained on the documented communications protocols developed in Requirement R1.
<b>R3</b>	Long-term Planning	Low	N/A	N/A	An individual operator at the responsible entity received an Operating Instruction prior to being trained.	An individual operator at the responsible entity received an Operating Instruction during an Emergency prior to being trained.

**COM-002-4 – Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R4</b>	Operations Planning	Medium	<p>The responsible entity assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions and provided feedback to those operating personnel and took corrective action, as appropriate</p> <p>AND</p> <p>The responsible entity assessed the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modified its documented communication</p>	<p>The responsible entity assessed adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, but did not provide feedback to those operating personnel</p> <p>OR</p> <p>The responsible entity assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions and provided feedback to those operating personnel but did not take corrective action, as appropriate</p> <p>OR</p> <p>The responsible entity assessed the effectiveness of its documented communications protocols</p>	<p>The responsible entity did not assess adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions</p> <p>OR</p> <p>The responsible entity did not assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions.</p>	<p>The responsible entity did not assess adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions</p> <p>AND</p> <p>The responsible entity did not assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions.</p>



**COM-002-4 – Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
			<p>protocols, as necessary</p> <p>AND</p> <p>The responsible entity exceeded twelve (12) calendar months between assessments.</p>	<p>in Requirement R1 for its operating personnel that issue and receive Operating Instructions, but did not modify its documented communication protocols, as necessary.</p>		

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R5	Real-time Operations	High	N/A	<p>The responsible entity that issued an Operating Instruction during an Emergency did not take one of the following actions:</p> <ul style="list-style-type: none"> <li>Confirmed the receiver’s response if the repeated information was correct (in accordance with Requirement R6).</li> <li>Reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver.</li> <li>Took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver.</li> </ul>	N/A	<p>The responsible entity that issued an Operating Instruction during an Emergency did not take one of the following actions:</p> <ul style="list-style-type: none"> <li>Confirmed the receiver’s response if the repeated information was correct (in accordance with Requirement R6).</li> <li>Reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver.</li> <li>Took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver.</li> </ul> <p>AND</p> <p>Instability, uncontrolled separation, or cascading failures occurred as a result.</p>

**COM-002-4 – Operating Personnel Communications Protocols**

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R6</b>	Real-time Operations	High	N/A	The responsible entity did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction.	N/A	The responsible entity did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction  AND  Instability, uncontrolled separation, or cascading failures occurred as a result.
<b>R7</b>	Real-time Operations	High	N/A	The responsible entity that that issued a written or oral single-party to multiple-party burst Operating Instruction during an Emergency did not confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.	N/A	The responsible entity that that issued a written or oral single-party to multiple-party burst Operating Instruction during an Emergency did not confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction  AND  Instability, uncontrolled separation, or cascading failures occurred as a result.

**E. Regional Variances**

None

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	February 7, 2006	Adopted by Board of Trustees	Added measures and compliance elements
2	November 1, 2006	Adopted by Board of Trustees	Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Retired R1, R1.1, M1, M2 and updated the compliance monitoring information. Replaced R2 with new R1, R2 and R3.
2a	February 9, 2012	Interpretation of R2 adopted by Board of Trustees	Project 2009-22
3	November 7, 2012	Adopted by Board of Trustees	

## Standard Development Roadmap

*This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.*

### Development Steps Completed:

1. The Standards Committee (SC) approved the Standard Authorization Request (SAR) for posting on March 1, 2007.
2. The SAR was posted for comment from March 19 through April 17, 2007.
3. The SC sought SAR drafting team nominations April 18 through May 2, 2007.
4. The SAR drafting team posted reply comments to industry comments received on the first posting of the SAR on June 8, 2007.
5. Standard drafting team appointed by SC Executive Committee on June 28, 2007.
6. Version 1 draft of COM-003-1 Standard posted November 2009 for Informal Comments closed January 15, 2010.
7. Version 2 draft of COM-003-1 Standard posted May 2012 for Formal Comments, Initial Ballot closed June 20, 2012.
8. Version 3 draft of COM-003-1 Standard posted August 2012 for Formal Comments, Ballot closed September 22, 2012.
9. Version 4 draft of COM-003-1 Standard posted November 2012 for Formal Comments, Ballot closed December 13, 2012.
10. Version 5 draft of COM-003-1 Standard posted March 2013 for Formal Comments, Ballot closed April 5, 2013.
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### Description of Current Draft:

This is the second draft of a revised standard (eighth posting of a communications standard) requiring the use of standardized communication protocols during normal and emergency operations to improve situational awareness and shorten response time. The standard drafting team is posting this standard for a ~~shortened 30-day formal Comment and 10-day Ballot period per the Standards Committee wavier~~ final 10 day ballot period.

### Future Development Plan:

**COM-002-4    Operating Personnel Communications Protocols**

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<b>Anticipated Actions</b>	<b>Anticipated Date</b>
<del>1. Additional ballot of Standard</del>	January 2014
<del>2. Final ballot of Standard</del>	<del>February</del> <u>March</u> 2014
<del>3.1.</del> Board adopts standard	<del>TBD</del> <u>May</u> 2014

### Definitions of Terms Used in Standard

*This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.*

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## A. Introduction

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2. **Number:** COM-002-4
3. **Purpose:** To improve communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES).
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  - 4.1. **Functional Entities**
    - 4.1.1 Balancing Authority
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    - 4.1.3 Reliability Coordinator
    - 4.1.4 Transmission Operator
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5. **(Proposed)-Effective Date:** The standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date the standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

## B. Requirements

- R1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum: [*Violation Risk Factor: Low*][*Time Horizon: Long-term Planning*]
  - 1.1. Require its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
  - 1.2. Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions:
    - Confirm the receiver's response if the repeated information is correct.
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- Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.
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- Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct.
  - Request that the issuer reissue the Operating Instruction.
- 1.4. Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.
- 1.5. Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.
- 1.6. Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.
- R2.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall conduct initial training for each of its operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System on the documented communications protocols developed in Requirement R1 prior to that individual operator issuing an Operating Instruction. *[Violation Risk Factor: Low][Time Horizon: Long-term Planning]*
- R3.** Each Distribution Provider and Generator Operator shall conduct initial training for each of its operating personnel who can receive an oral two-party, person-to-person Operating Instruction prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction to either: *[Violation Risk Factor: Low][Time Horizon: Long-term Planning]*
- Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or
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- R4.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall at least once every twelve (12) calendar months: *[Violation Risk Factor: Medium][Time Horizon: Operations Planning]*
- 4.1. Assess adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, provide feedback to those operating personnel and take corrective action, as deemed appropriate by the entity, to address deviations from the documented protocols.
- 4.2. Assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modify its documented communication protocols, as necessary.

- R5.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: *[Violation Risk Factor: High][Time Horizon: Real-time Operations]*
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### C. Measures

- M1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1.
- M2.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its initial training records related to its documented communications protocols developed for Requirement R1 such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R2.
- M3.** Each Distribution Provider and Generator Operator shall provide its initial training records for its operating personnel such as attendance logs, agendas, learning objectives, or course materials in fulfillment of Requirement R3.
- M4.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence of its assessments, including spreadsheets, logs or other evidence of feedback, findings of effectiveness and any changes made to its documented communications protocols developed for Requirement R1 in fulfillment of

Requirement R4. The entity shall provide, as part of its assessment, ~~evidence of any corrective actions taken that it took appropriate corrective actions as part of its assessment for all instances~~ where an operating personnel's non-adherence to the protocols developed in Requirement R1 is the sole or partial cause of an Emergency and for all other instances where the entity determined that it was appropriate to take a corrective action to address deviations from the documented protocols developed in Requirement R1.

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## **D. Compliance**

### **1. Compliance Monitoring Process**

#### **1.1. Compliance Enforcement Authority**

As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority" means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

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The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances

where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, and Transmission Operator shall each keep data or evidence for each applicable Requirement for the current calendar year and one previous calendar year, with the exception of voice recordings which shall be retained for a minimum of 90 calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.

If a Balancing Authority, Distribution Provider, Generator Operator, Reliability Coordinator, or Transmission Operator is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

### **Compliance Monitoring and Assessment Processes**

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

### **1.3. Additional Compliance Information**

None

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	Low	<p>The responsible entity did not specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification, as required in Requirement R1, Part 1.5</p> <p>OR</p> <p>The responsible entity did not specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction, as required in Requirement R1, Part 1.6.</p>	<p>The responsible entity did not require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise, as required in Requirement R1, Part 1.1. An alternate language may be used for internal operations.</p>	<p>The responsible entity did not include Requirement R1, Part 1.4 in its documented communication protocols.</p>	<p>The responsible entity did not include Requirement R1, Part 1.2 in its documented communications protocols</p> <p>OR</p> <p>The responsible entity did not include Requirement R1, Part 1.3 in its documented communications protocols</p> <p>OR</p> <p>The responsible entity did not develop any documented communications protocols as required in Requirement R1.</p>

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R2	Long-term Planning	Low	N/A	N/A	An individual operator responsible for the Real-time operation of the interconnected Bulk Electric System at the responsible entity issued an Operating Instruction, prior to being trained on the documented communications protocols developed in Requirement R1.	An individual operator responsible for the Real-time operation of the interconnected Bulk Electric System at the responsible entity issued an Operating Instruction during an Emergency prior to being trained on the documented communications protocols developed in Requirement R1.
R3	Long-term Planning	Low	N/A	N/A	An individual operator at the responsible entity received an Operating Instruction prior to being trained.	An individual operator at the responsible entity received an Operating Instruction during an Emergency prior to being trained.

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R4	Operations Planning	Medium	<p>The responsible entity assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions and provided feedback to those operating personnel and took corrective action, as appropriate</p> <p>AND</p> <p>The responsible entity assessed the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modified its documented communication</p>	<p>The responsible entity assessed adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, but did not provide feedback to those operating personnel</p> <p>OR</p> <p>The responsible entity assessed adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions and provided feedback to those operating personnel but did not take corrective action, as appropriate</p> <p>OR</p> <p>The responsible entity assessed the effectiveness of its documented communications protocols</p>	<p>The responsible entity did not assess adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions</p> <p>OR</p> <p>The responsible entity did not assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions.</p>	<p>The responsible entity did not assess adherence to the documented communications protocols in Requirements R1 by its operating personnel that issue and receive Operating Instructions</p> <p>AND</p> <p>The responsible entity did not assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions.</p>

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
			protocols, as necessary AND The responsible entity exceeded twelve (12) calendar months between assessments.	in Requirement R1 for its operating personnel that issue and receive Operating Instructions, but did not modify its documented communication protocols, as necessary.		



R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R5	Real-time Operations	High	N/A	<p>The responsible entity that issued an Operating Instruction during an Emergency did not take one of the following actions:</p> <ul style="list-style-type: none"> <li>Confirmed the receiver’s response if the repeated information was correct (in accordance with Requirement R6).</li> <li>Reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver.</li> <li>Took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver.</li> </ul>	N/A	<p>The responsible entity that issued an Operating Instruction during an Emergency did not take one of the following actions:</p> <ul style="list-style-type: none"> <li>Confirmed the receiver’s response if the repeated information was correct (in accordance with Requirement R6).</li> <li>Reissued the Operating Instruction if the repeated information was incorrect or if requested by the receiver.</li> <li>Took an alternative action if a response was not received or if the Operating Instruction was not understood by the receiver.</li> </ul> <p>AND</p> <p>Instability, uncontrolled separation, or cascading failures occurred as a result.</p>

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R6	Real-time Operations	High	N/A	The responsible entity did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction.	N/A	The responsible entity did not repeat, not necessarily verbatim, the Operating Instruction during an Emergency and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction when receiving an Operating Instruction  AND  Instability, uncontrolled separation, or cascading failures occurred as a result.
R7	Real-time Operations	High	N/A	The responsible entity that that issued a written or oral single-party to multiple-party burst Operating Instruction during an Emergency did not confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.	N/A	The responsible entity that that issued a written or oral single-party to multiple-party burst Operating Instruction during an Emergency did not confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction  AND  Instability, uncontrolled separation, or cascading failures occurred as a result.

**E. Regional Variances**

None

**Version History**

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	February 7, 2006	Adopted by Board of Trustees	Added measures and compliance elements
2	November 1, 2006	Adopted by Board of Trustees	Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Retired R1, R1.1, M1, M2 and updated the compliance monitoring information. Replaced R2 with new R1, R2 and R3.
2a	February 9, 2012	Interpretation of R2 adopted by Board of Trustees	Project 2009-22
3	November 7, 2012	Adopted by Board of Trustees	

## Implementation Plan

### Operating Personnel Communications Protocols

#### COM-002-4

#### Standards Involved

Approval:

- COM-002-4 – Operating Personnel Communications Protocols

Retirements:

- COM-001-1.1 Requirement R4 – Telecommunications
- COM-002-2 – Communication and Coordination
- COM-002-3 – Communication and Coordination

#### Prerequisite Approvals

None

#### Revisions to Glossary

The following term is proposed for addition to the NERC Glossary of Terms:

#### Operating Instruction —

A command by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. (A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.)

#### Applicable Entities

Balancing Authority  
Distribution Provider  
Generator Operator  
Reliability Coordinator  
Transmission Operator

#### Conforming Changes to Other Standards

None

**Effective Date**

COM-002-4 and the definition of “Operating Instruction” shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date the standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

**Retirement of Existing Standards:**

COM-001-1.1 Requirement R4, COM-002-2, and COM-002-3, as applicable, shall be retired at midnight of the day immediately prior to the effective date of COM-002-4 in the particular jurisdiction in which the new standard is becoming effective.

# Implementation Plan

## Operating Personnel Communications Protocols

### COM-002-4

#### Standards Involved

Approval:

- COM-002-4 – Operating Personnel Communications Protocols

Retirements:

- COM-001-1.1 Requirement R4 – Telecommunications
- COM-002-2 – Communication and Coordination
- COM-002-3 – Communication and Coordination

#### Prerequisite Approvals

None

~~Approval of the definition of “Reliability Directive”~~

#### Revisions to Glossary

The following term is proposed for addition to the NERC Glossary of Terms:

##### **Operating Instruction —**

A command by operating personnel responsible for the Real-time ~~generation control and~~ operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. ~~(A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.)~~ ~~—A Reliability Directive is one type of an Operating Instruction.~~

#### Applicable Entities

Balancing Authority  
Distribution Provider  
Generator Operator  
Reliability Coordinator  
Transmission Operator

#### Conforming Changes to Other Standards

None

**Effective Date**

COM-002-4 and the definition of “Operating Instruction” shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date the standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

**Retirement of Existing Standards:**

COM-001-1.1 Requirement R4, COM-002-2, and COM-002-3, as applicable, shall be retired at midnight of the day immediately prior to the effective date of COM-002-4 in the particular jurisdiction in which the new standard is becoming effective.

## Standards Announcement

### Project 2007-02 Operating Personnel Communications Protocols COM-002-4

Final Ballot Now Open through April 7<sup>th</sup>, 2014

#### [Now Available](#)

A final ballot for **COM-002-4 – Operating Personnel Communications Protocols** is open through **8 p.m. Eastern on Monday, April 7<sup>th</sup>, 2014.**

Background information for this project can be found on the [project page](#).

As a result of select industry stakeholder comments, the Operating Personnel Communications Protocols Standards Drafting Team (OPCP SDT) made minor, non-substantive changes to COM-002-4 after the most recent comment and ballot period in order to clarify the OPCS SDT's intent and better align the language in the measures with the requirements. Requirement R4.1 was altered from "as appropriate" to "as deemed appropriate by the entity" in order to highlight the OPCS SDT's intent. In Measure M2 the words "its initial" were added to the sentence "shall provide its initial training records . . ." in order to align the language in Measure M2 with the language in Requirement R2. Measure M4 was altered to include the phrase "as part of its assessment" and "of any corrective actions taken" within the sentence "The entity shall provide, as part of its assessment, evidence of any corrective actions taken." Lastly, Measure M6 and M7 were changed to add the parenthetical "(if an entity has such recordings)" after the words "time-stamped recordings," and the second entry for "time-stamped recordings" was removed due to redundancy.

#### Instructions

In the final ballot, votes are counted by exception. Only members of the ballot pool may cast a ballot; all ballot pool members may change their previously cast votes. A ballot pool member who failed to cast a ballot during the last ballot window may cast a ballot in the final ballot window. If a ballot pool member does not participate in the final ballot, that member's vote cast in the previous ballot will be carried over as that member's vote in the final ballot.

Members of the ballot pool associated with this project may log in and submit their vote for the standard by clicking [here](#).



## Next Steps

Voting results for the standard will be posted and announced after the ballot window closes. If approved, the standard will be submitted to the Board of Trustees for adoption.

For information on the **Standards Development Process**, please refer to the [Standard Processes Manual](#).

*For more information or assistance, please contact [Wendy Muller](#), Standards Development Administrator, or at 404-446-2560.*

North American Electric Reliability Corporation  
3353 Peachtree Rd, NE  
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Atlanta, GA 30326  
404-446-2560 | [www.nerc.com](http://www.nerc.com)

## Standards Announcement

### Project 2007-02 Operating Personnel Communications Protocols COM-002-4

#### Final Ballot Results

#### [Now Available](#)

A final ballot of **COM-002-4 – Operating Personnel Communications Protocols** concluded at **8 p.m. Eastern on Monday, April 7, 2014.**

The standard achieved a quorum and received sufficient votes for approval. Voting statistics are listed below, and the [Ballot Results](#) page provides a link to the detailed results for the ballot.

Ballot Results
Quorum: 78.21%
Approval: 77.62%

Background information for this project can be found on the [project page](#).

#### Next Steps

The standard will be submitted to the Board of Trustees for adoption and then filed with the appropriate regulatory authorities.

For information on the **Standards Development Process**, please refer to the [Standard Processes Manual](#).

*For more information or assistance, please contact [Wendy Muller](#) (via email),  
Standards Development Administrator, or at 404-446-2560.*

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Log In

- Ballot Pools
- Current Ballots
- Ballot Results
- Registered Ballot Body
- Proxy Voters

[Home Page](#)

Ballot Results	
<b>Ballot Name:</b>	Project 2007-02 COM-002-4 Final Ballot
<b>Ballot Period:</b>	3/28/2014 - 4/7/2014
<b>Ballot Type:</b>	Final
<b>Total # Votes:</b>	323
<b>Total Ballot Pool:</b>	413
<b>Quorum:</b>	<b>78.21 % The Quorum has been reached</b>
<b>Weighted Segment Vote:</b>	77.62 %
<b>Ballot Results:</b>	<b>A quorum was reached and there were sufficient affirmative votes for approval.</b>

Summary of Ballot Results										
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Negative Vote without a Comment	Abstain	No Vote	
			# Votes	Fraction	# Votes	Fraction				
1 - Segment 1	107	1	56	0.675	27	0.325	0	5	19	
2 - Segment 2	11	0.8	8	0.8	0	0	0	2	1	
3 - Segment 3	97	1	46	0.676	22	0.324	0	4	25	
4 - Segment 4	39	1	20	0.741	7	0.259	0	0	12	
5 - Segment 5	88	1	47	0.746	16	0.254	0	5	20	
6 - Segment 6	50	1	34	0.773	10	0.227	0	1	5	
7 - Segment 7	0	0	0	0	0	0	0	0	0	
8 - Segment 8	7	0.3	2	0.2	1	0.1	0	0	4	
9 - Segment 9	5	0.1	1	0.1	0	0	0	0	4	

10 - Segment 10	9	0.9	8	0.8	1	0.1	0	0	0
<b>Totals</b>	<b>413</b>	<b>7.1</b>	<b>222</b>	<b>5.511</b>	<b>84</b>	<b>1.589</b>	<b>0</b>	<b>17</b>	<b>90</b>

**Individual Ballot Pool Results**

Segment	Organization	Member	Ballot	NERC Notes
1	Ameren Services	Kirit Shah	Affirmative	
1	American Electric Power	Paul B Johnson	Negative	SUPPORTS THIRD PARTY COMMENTS
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman	Negative	SUPPORTS THIRD PARTY COMMENTS
1	ATCO Electric	Glen Sutton	Affirmative	
1	Austin Energy	James Armke	Affirmative	
1	Avista Corp.	Scott J Kinney	Abstain	
1	Balancing Authority of Northern California	Kevin Smith	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Affirmative	
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	
1	Beaches Energy Services	Joseph S Stonecipher		
1	Black Hills Corp	Eric Egge	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Brazos Electric Power Cooperative, Inc.	Tony Kroskey	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Bryan Texas Utilities	John C Fontenot	Affirmative	
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Affirmative	
1	Central Electric Power Cooperative	Michael B Bax	Negative	SUPPORTS THIRD PARTY COMMENTS
1	City of Pasadena	Marco A Sustaita		
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City Utilities of Springfield, Missouri	Jeff Knottek	Negative	SUPPORTS THIRD PARTY COMMENTS
1	City Water, Light & Power of Springfield	Shaun Anders		
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Affirmative	
1	Colorado Springs Utilities	Paul Morland		
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	Consumers Power Inc.	Stuart Sloan		
1	CPS Energy	Richard Castrejana	Affirmative	
1	Dairyland Power Coop.	Robert W. Roddy	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash	Affirmative	
1	Deseret Power	James Tucker		
1	Dominion Virginia Power	Michael S Crowley	Affirmative	SUPPORTS THIRD PARTY COMMENTS
1	Duke Energy Carolina	Doug E Hils	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Empire District Electric Co.	Ralph F Meyer	Negative	COMMENT RECEIVED
1	Entergy Services, Inc.	Edward J Davis	Affirmative	COMMENT RECEIVED
1	FirstEnergy Corp.	William J Smith	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative	

1	Florida Power & Light Co.	Mike O'Neil	Affirmative	
1	Gainesville Regional Utilities	Richard Bachmeier	Affirmative	
1	Georgia Transmission Corporation	Jason Snodgrass	Negative	COMMENT RECEIVED
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon		
1	Hydro One Networks, Inc.	Ajay Garg	Affirmative	
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Affirmative	
1	Idaho Power Company	Molly Devine	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Abstain	
1	JEA	Ted Hobson	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Kansas City Power & Light Co.	Michael Gammon	Negative	COMMENT RECEIVED
1	Keys Energy Services	Stanley T Rzad		
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca		
1	LG&E Energy Transmission Services	Bradley C. Young		
1	Long Island Power Authority	Robert Ganley	Affirmative	
1	Los Angeles Department of Water & Power	John Burnett	Affirmative	
1	Lower Colorado River Authority	Martyn Turner	Abstain	
1	M & A Electric Power Cooperative	William Price	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Manitoba Hydro	Joe D Petaski	Affirmative	
1	MEAG Power	Danny Dees	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	
1	Minnesota Power, Inc.	Randi K. Nyholm	Affirmative	
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Negative	SUPPORTS THIRD PARTY COMMENTS
1	National Grid USA	Michael Jones	Affirmative	
1	Nebraska Public Power District	Cole C Brodine	Negative	SUPPORTS THIRD PARTY COMMENTS
1	New York Power Authority	Bruce Metruck	Affirmative	
1	New York State Electric & Gas Corp.	Raymond P Kinney		
1	Northeast Missouri Electric Power Cooperative	Kevin White	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Northeast Utilities	David Boguslawski	Affirmative	
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Abstain	
1	Ohio Valley Electric Corp.	Robert Matthey		
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Negative	SUPPORTS THIRD PARTY COMMENTS - SPP Std Review Team
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Jen Fiegel	Negative	
1	Orlando Utilities Commission	Brad Chase		
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan		
1	PECO Energy	Ronald Schloendorn		
1	Platte River Power Authority	John C. Collins	Negative	
1	Portland General Electric Co.	John T Walker	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Abstain	
1	Public Service Company of New Mexico	Laurie Williams	Affirmative	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative	
	Public Utility District No. 2 of Grant County,			

1	Washington	Rod Noteboom		
1	Puget Sound Energy, Inc.	Denise M Lietz	Affirmative	
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell	Negative	COMMENT RECEIVED
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Sho-Me Power Electric Cooperative	Denise Stevens	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Sierra Pacific Power Co.	Rich Salgo		
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	
1	South California Edison Company	Steven Mavis	Affirmative	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Negative	
1	Southern Illinois Power Coop.	William Hutchison	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Tampa Electric Co.	Beth Young		
1	Tennessee Valley Authority	Larry G Akens	Negative	COMMENT RECEIVED
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Negative	COMMENT RECEIVED
1	Tucson Electric Power Co.	John Tolo	Affirmative	
1	United Illuminating Co.	Jonathan Appelbaum	Negative	COMMENT RECEIVED
1	Westar Energy	Allen Klassen	Affirmative	
1	Western Area Power Administration	Brandy A Dunn		
1	Xcel Energy, Inc.	Gregory L Pieper	Negative	SUPPORTS THIRD PARTY COMMENTS
2	Alberta Electric System Operator	Mark B Thompson	Affirmative	
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
2	California ISO	Rich Vine	Affirmative	
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Affirmative	
2	Independent Electricity System Operator	Barbara Constantinescu	Affirmative	
2	ISO New England, Inc.	Kathleen Goodman	Abstain	
2	Midwest ISO, Inc.	Marie Knox	Abstain	
2	New Brunswick System Operator	Alden Briggs		
2	New York Independent System Operator	Gregory Campoli	Affirmative	
2	PJM Interconnection, L.L.C.	stephanie monzon	Affirmative	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Affirmative	
3	Alabama Power Company	Richard J. Mandes	Negative	COMMENT RECEIVED
3	Alameda Municipal Power	Douglas Draeger		
3	Ameren Services	Mark Peters	Affirmative	COMMENT RECEIVED
3	APS	Steven Norris	Affirmative	
3	Associated Electric Cooperative, Inc.	Chris W Bolick	Negative	SUPPORTS THIRD PARTY COMMENTS
3	Atlantic City Electric Company	NICOLE BUCKMAN	Affirmative	
3	Avista Corp.	Robert Lafferty	Abstain	
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blachly-Lane Electric Co-op	Bud Tracy		
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham		

3	Central Electric Power Cooperative	Adam M Weber	Negative	SUPPORTS THIRD PARTY COMMENTS
3	Central Lincoln PUD	Steve Alexanderson	Affirmative	
3	City of Austin dba Austin Energy	Andrew Gallo	Affirmative	
3	City of Bartow, Florida	Matt Culverhouse	Affirmative	
3	City of Clewiston	Lynne Mila		
3	City of Farmington	Linda R Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoeinghaus	Abstain	
3	City of Green Cove Springs	Gregg R Griffin		
3	City of Lodi, California	Elizabeth Kirkley		
3	City of Palo Alto	Eric R Scott		
3	City of Redding	Bill Hughes	Affirmative	
3	City of Ukiah	Colin Murphey		
3	City Water, Light & Power of Springfield	Roger Powers		
3	Clearwater Power Co.	Dave Hagen		
3	Cleco Corporation	Michelle A Corley	Affirmative	
3	Colorado Springs Utilities	Charles Morgan	Negative	SUPPORTS THIRD PARTY COMMENTS
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy	Richard Blumenstock	Affirmative	
3	Consumers Power Inc.	Roman Gillen		
3	Coos-Curry Electric Cooperative, Inc	Roger Meader		
3	Cowlitz County PUD	Russell A Noble	Affirmative	
3	CPS Energy	Jose Escamilla	Affirmative	
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Dominion Resources, Inc.	Connie B Lowe	Affirmative	
3	Entergy	Joel T Plessinger		
3	Fall River Rural Electric Cooperative	Bryan Case		
3	FirstEnergy Energy Delivery	Stephan Kern	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Affirmative	
3	Florida Power Corporation	Lee Schuster	Negative	SUPPORTS THIRD PARTY COMMENTS
3	Georgia System Operations Corporation	Scott McGough	Negative	COMMENT RECEIVED
3	Great River Energy	Brian Glover	Affirmative	
3	Hydro One Networks, Inc.	David Kiguel	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Negative	SUPPORTS THIRD PARTY COMMENTS
3	Kansas City Power & Light Co.	Charles Locke	Negative	
3	Kissimmee Utility Authority	Gregory D Woessner	Affirmative	
3	Lakeland Electric	Mace D Hunter		
3	Lane Electric Cooperative, Inc.	Rick Crinklaw		
3	Lincoln Electric System	Jason Fortik	Affirmative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Louisville Gas and Electric Co.	Charles A. Freibert	Abstain	
3	M & A Electric Power Cooperative	Stephen D Pogue	Negative	SUPPORTS THIRD PARTY COMMENTS
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Modesto Irrigation District	Jack W Savage	Negative	
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Affirmative	
3	Nebraska Public Power District	Tony Eddleman	Negative	
3	New York Power Authority	David R Rivera	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann	Negative	SUPPORTS THIRD PARTY

				COMMENTS
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby		
3	NW Electric Power Cooperative, Inc.	David McDowell	Negative	SUPPORTS THIRD PARTY COMMENTS
3	Omaha Public Power District	Blaine R. Dinwiddie		
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative	
3	Owensboro Municipal Utilities	Thomas T Lyons	Negative	SUPPORTS THIRD PARTY COMMENTS
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	Pacific Northwest Generating Cooperative	Rick Paschall		
3	Platte River Power Authority	Terry L Baker	Negative	
3	PNM Resources	Michael Mertz		
3	Portland General Electric Co.	Thomas G Ward	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Affirmative	
3	Puget Sound Energy, Inc.	Erin Apperson	Affirmative	
3	Raft River Rural Electric Cooperative	Heber Carpenter		
3	Rutherford EMC	Thomas Haire	Negative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salmon River Electric Cooperative	Ken Dizes		
3	Salt River Project	John T. Underhill	Affirmative	
3	Santee Cooper	James M Poston	Negative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas	Negative	SUPPORTS THIRD PARTY COMMENTS
3	South Carolina Electric & Gas Co.	Hubert C Young	Abstain	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L. Donahey		
3	Tennessee Valley Authority	Ian S Grant	Negative	SUPPORTS THIRD PARTY COMMENTS
3	Tri-County Electric Cooperative, Inc.	Mike Swearingen		
3	Tri-State G & T Association, Inc.	Janelle Marriott	Negative	COMMENT RECEIVED
3	Umatilla Electric Cooperative	Steve Eldrige		
3	Westar Energy	Bo Jones	Affirmative	
3	Wisconsin Electric Power Marketing	James R Keller	Negative	SUPPORTS THIRD PARTY COMMENTS
3	Xcel Energy, Inc.	Michael Ibold	Negative	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini		
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache		
4	City of Austin dba Austin Energy	Reza Ebrahimian	Affirmative	
4	City of Clewiston	Kevin McCarthy		
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle		
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	
4	Consumers Energy	David Frank Ronk	Affirmative	
4	Cowlitz County PUD	Rick Syring	Affirmative	
4	Detroit Edison Company	Daniel Herring	Affirmative	
4	Flathead Electric Cooperative	Russ Schneider	Negative	COMMENT RECEIVED
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Cairo Vanegas	Affirmative	
4	Georgia System Operations Corporation	Guy Andrews	Negative	SUPPORTS THIRD PARTY



				COMMENTS
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative	
4	Imperial Irrigation District	Diana U Torres		
4	Indiana Municipal Power Agency	Jack Alvey	Negative	COMMENT RECEIVED
4	LaGen	Richard Comeaux		
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	
4	Modesto Irrigation District	Spencer Tacke	Affirmative	
4	Northern California Power Agency	Tracy R Bibb		
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Oklahoma Municipal Power Authority	Ashley Stringer	Negative	SUPPORTS THIRD PARTY COMMENTS
4	Old Dominion Electric Coop.	Mark Ringhausen	Negative	SUPPORTS THIRD PARTY COMMENTS
4	Pacific Northwest Generating Cooperative	Aleka K Scott		
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Negative	SUPPORTS THIRD PARTY COMMENTS
4	South Mississippi Electric Power Association	Steven McElhane		
4	Southern Minnesota Municipal Power Agency	Richard L Koch		
4	Tacoma Public Utilities	Keith Morissette	Affirmative	
4	Utility Services, Inc.	Brian Evans-Mongeon	Affirmative	
4	West Oregon Electric Cooperative, Inc.	Marc M Farmer		
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative	SUPPORTS THIRD PARTY COMMENTS
4	WPPI Energy	Todd Komplin		
5	AEP Service Corp.	Brock Ondayko		
5	AES Corporation	Leo Bernier		
5	Amerenue	Sam Dwyer	Affirmative	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Negative	SUPPORTS THIRD PARTY COMMENTS
5	Avista Corp.	Edward F. Groce	Abstain	
5	BC Hydro and Power Authority	Clement Ma	Affirmative	
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	Affirmative	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative	SUPPORTS THIRD PARTY COMMENTS
5	Calpine Corporation	Phillip Porter		
5	City and County of San Francisco	Daniel Mason		
5	City of Austin dba Austin Energy	Jeanie Doty	Affirmative	
5	City of Redding	Paul A. Cummings	Affirmative	
5	City of Tallahassee	Karen Webb	Affirmative	
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative	
5	Cleco Power	Stephanie Huffman	Affirmative	
5	Cogentrix Energy, Inc.	Mike D Hirst	Affirmative	
5	Colorado Springs Utilities	Jennifer Eckels	Negative	COMMENT RECEIVED
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Affirmative	
5	Consumers Energy Company	David C Greyerbiehl	Affirmative	
5	Cowlitz County PUD	Bob Essex	Affirmative	
5	Dairyland Power Coop.	Tommy Drea	Affirmative	
5	Deseret Power	Phillip B Tice Jr		
5	Detroit Edison Company	Christy Wicke	Affirmative	

5	Dominion Resources, Inc.	Mike Garton	Affirmative	
5	Duke Energy	Dale Q Goodwine	Negative	SUPPORTS THIRD PARTY COMMENTS
5	Dynegy Inc.	Dan Roethemeyer	Negative	SUPPORTS THIRD PARTY COMMENTS
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain	
5	Electric Power Supply Association	John R Cashin		
5	Essential Power, LLC	Patrick Brown		
5	Exelon Nuclear	Michael Korchynsky	Affirmative	
5	ExxonMobil Research and Engineering	Martin Kaufman		
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	
5	Great River Energy	Preston L Walsh	Affirmative	
5	Hydro-Québec Production	Roger Dufresne	Affirmative	
5	Imperial Irrigation District	Marcela Y Caballero		
5	JEA	John J Babik	Affirmative	
5	Kansas City Power & Light Co.	Brett Holland	Negative	
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Affirmative	
5	Liberty Electric Power LLC	Daniel Duff	Negative	COMMENT RECEIVED
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative	
5	Luminant Generation Company LLC	Mike Laney		
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Negative	COMMENT RECEIVED
5	New York Power Authority	Wayne Sipperly	Affirmative	
5	NextEra Energy	Allen D Schriver	Affirmative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative	SUPPORTS THIRD PARTY COMMENTS
5	Northern Indiana Public Service Co.	William O. Thompson		
5	Occidental Chemical	Michelle R DAntuono		
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard K Kinas		
5	Pacific Gas and Electric Company	Richard J. Padilla	Affirmative	
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Roland Thiel		
5	Portland General Electric Co.	Matt E. Jastram	Affirmative	
5	PowerSouth Energy Cooperative	Tim Hattaway	Negative	SUPPORTS THIRD PARTY COMMENTS
5	PPL Generation LLC	Annette M Bannon	Abstain	
5	PSEG Fossil LLC	Tim Kucey	Affirmative	
5	Public Utility District No. 1 of Lewis County	Steven Grega		
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Affirmative	
5	Puget Sound Energy, Inc.	Tom Flynn	Affirmative	
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative	
5	Salt River Project	William Alkema	Affirmative	
5	Santee Cooper	Lewis P Pierce	Negative	
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	South Carolina Electric & Gas Co.	Edward Magic		
5	Southeastern Power Administration	Douglas Spencer		
5	Southern California Edison Co.	Denise Yaffe		
5	Southern Company Generation	William D Shultz	Negative	

5	Tacoma Power	Chris Mattson	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Affirmative	
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Negative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Negative	SUPPORTS THIRD PARTY COMMENTS
5	U.S. Bureau of Reclamation	Martin Bauer		
5	Westar Energy	Bryan Taggart	Affirmative	
5	Wisconsin Electric Power Co.	Linda Horn	Negative	SUPPORTS THIRD PARTY COMMENTS
5	WPPI Energy	Steven Leovy		
5	Xcel Energy, Inc.	Liam Noailles	Negative	COMMENT RECEIVED
6	AEP Marketing	Edward P. Cox	Negative	SUPPORTS THIRD PARTY COMMENTS
6	Ameren Energy Marketing Co.	Jennifer Richardson	Affirmative	SUPPORTS THIRD PARTY COMMENTS - SERC OC
6	APS	Randy A. Young	Affirmative	
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Negative	SUPPORTS THIRD PARTY COMMENTS
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa Martin	Affirmative	
6	City of Redding	Marvin Briggs	Affirmative	
6	Cleco Power LLC	Robert Hirschak	Affirmative	
6	Colorado Springs Utilities	Lisa C Rosintoski	Negative	COMMENT RECEIVED
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative	
6	Constellation Energy Commodities Group	Donald Schopp	Affirmative	
6	Discount Power, Inc.	David Feldman		
6	Dominion Resources, Inc.	Louis S. Slade	Affirmative	
6	Duke Energy	Greg Cecil	Negative	SUPPORTS THIRD PARTY COMMENTS
6	Entergy Services, Inc.	Terri F Benoit		
6	FirstEnergy Solutions	Kevin Querry	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	
6	Florida Power & Light Co.	Silvia P Mitchell	Affirmative	
6	Great River Energy	Donna Stephenson	Affirmative	
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	COMMENT RECEIVED
6	Lakeland Electric	Paul Shipps	Affirmative	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Los Angeles Department of Water & Power	Brad Packer	Affirmative	
6	Luminant Energy	Brad Jones	Affirmative	
6	Manitoba Hydro	Daniel Prowse	Affirmative	
6	Modesto Irrigation District	James McFall	Affirmative	
6	Muscatine Power & Water	John Stolley	Affirmative	
6	New York Power Authority	Saul Rojas	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	NRG Energy, Inc.	Alan Johnson		
6	Omaha Public Power District	David Ried		
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Negative	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative	
6	Public Utility District No. 1 of Chelan County	Hugh A. Owen	Abstain	
6	Sacramento Municipal Utility District	Diane Enderby	Affirmative	
6	Salt River Project	Steven J Hulet	Affirmative	
6	Santee Cooper	Michael Brown	Negative	

6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Snohomish County PUD No. 1	William T Moojen	Affirmative	
6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Southern Company Generation and Energy Marketing	John J. Ciza	Negative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Negative	
6	Westar Energy	Grant L Wilkerson	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F Lemmons	Negative	COMMENT RECEIVED - Alice Ireland
8		Roger C Zaklukiewicz	Affirmative	
8		Edward C Stein		
8		James A Maenner		
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Pacific Northwest Generating Cooperative	Margaret Ryan		
8	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman		
8	Volkman Consulting, Inc.	Terry Volkman	Negative	SUPPORTS THIRD PARTY COMMENTS
9	California Energy Commission	William M Chamberlain		
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J. Barney		
9	Oregon Public Utility Commission	Jerome Murray		
9	Public Utilities Commission of Ohio	Klaus Lambeck		
10	Florida Reliability Coordinating Council	Linda Campbell	Affirmative	
10	Midwest Reliability Organization	William S Smith	Affirmative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Negative	COMMENT RECEIVED
10	SERC Reliability Corporation	Carter B Edge	Affirmative	
10	Southwest Power Pool RE	Emily Pennel	Affirmative	
10	Texas Reliability Entity, Inc.	Donald G Jones	Affirmative	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Affirmative	

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**Exhibit O**

**NERC Board of Trustees Input Responses**

## **Communication Protocols**

### **Response to NERC Board of Trustees Questions by the Independent Experts**

**Question 1.** Proposed COM-002-3 Reliability Standard provides a standard that addresses communication protocols in an emergency. Are there circumstances that are not an emergency (as defined in COM-002-3) that can lead to reliability risks if not appropriately addressed by a standard? If so, what are these circumstances and how important is it that there be a standard to address them?

**Answer 1.** Yes, there are circumstances that are not an emergency that can lead to reliability risks if the communications are not clearly understood and followed. It is for this reason that the Independent Experts believe that the Standards must address clear protocols for all circumstances. Some examples are as follows:

- Communications where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element or Facility of the Bulk Electric System can put the BES at risk if the instruction is not understood correctly. This is possible even if the BES is not currently experiencing an Emergency or an Adverse Reliability Impact. For example, the action could put the BES in an insecure state for the next contingency.
- While operators must always be aware of the consequences of actions they take, they should not be required to categorize the current situation or potential consequence as an Emergency or Adverse Reliability Impact to decide what communication protocol is appropriate. In addition, it may be clear that action is required even before the operator has determined that the BES is facing an Emergency or an Adverse Reliability Impact.
  - This confusion will remain if there are different communication protocols for actions under a Reliability Directive and other situations with the proposed definition of Operating Instruction.
- Most entities require safety related communications, such as closing a breaker, to use three-part communications regardless of the impact on the BES. Inconsistent protocols for a subset of reliability related actions can cause confusion.
- For peak human performance, communication protocols should be as consistent as possible, having no distinction between emergency and non-emergency situations.

The bottom line is that the Independent Experts believe that it is very important for the Standards to address communications protocols for non-emergency situations.

## **Communication Protocols**

### **Response to NERC Board of Trustees Questions by the Independent Experts**

**Question 2.** Does the latest draft of the COM-003-1 Reliability Standard address such circumstances appropriately? Is it a “quality standard” on the basis of the criteria that are being used to assess existing and future standards by the Independent Experts Panel?

**Answer 2.** As written, COM 003-1 Draft 6 does not address non-emergency communication appropriately since it allows for the development of non-consistent communication protocols across RCs as well as providing for a difference in communication protocols between emergency and non-emergency conditions.

- Non-consistent communication protocols can hinder coordination between adjacent RCs, as well as the TOPs and BAs in their respective RC footprints, thus negatively impacting reliable operations
- The current COM-003-1 as drafted does not align with IRO-014-1, IRO-015-1 and IRO-016-1, which require coordination between RCs, as adjacent RCs could have different communication protocols.
- FERC Order 693 P. 532 determined “We also believe an integral component in tightening the protocols is to establish communication uniformity as much as practical on a continent-wide basis. This will eliminate possible ambiguities in communications during normal, alert and emergency conditions.”
- Providing for a difference in protocol between emergency and non-emergency conditions creates a situation where an Operator must not only focus on what they are saying but also must make a decision as to what is the appropriate communication protocol to use.
- COM 003-1 R2 and R3 do not support a reliability objective; rather they only serve to mitigate compliance risk.

The Independent Experts scoring and comments are in Attachment 2. We find that COM 003-1 draft 6 is not a “quality standard”. Requirement 1 received a content score of zero out of three and a quality score of 7 out of 12. Requirements 2 and 3 should be deleted. The key deficiencies are as described above.

**Question 3.** Are there changes you would recommend to improve the current draft of the COM-003-1 Reliability Standard? Describe how the enhancements would address any gaps in bulk-power system reliability.

**Answer 3.** Following is a summary of our recommendations for COM-002-2, COM-002-3 and COM-003-1. Example language for an improved combined COM standard is in Attachment 1.

While the recommendations below allow situations where three-part

## Communication Protocols

### Response to NERC Board of Trustees Questions by the Independent Experts

communications is not required we believe this will not cause confusion. The distinction between an Operating Instruction and other communications such as discussion of alternatives or providing information where no action is to be taken should be clear.

- There should be only one communications protocol standard that covers both emergency and non-emergency situations.
  - **Combine COM-002-2, COM-002-3 and COM-003-1.**
- To the greatest extent practical the standard should provide for a **consistent continent-wide set of communications protocol.**
  - One exception would be the time zone for verbal and written operating communications.
- Expand applicability of COM 003-1 draft 6 to include GOs and TOs.
- Retire the term Reliability Directive in the Glossary of Terms<sup>1</sup>.
  - Develop a new Glossary definition for **Operating Instruction:**  
*Communication with the intent to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.*
- **Describe the attributes of three-part communications.**
- Address other communications protocols (see Attachment 1).
- Matters used to demonstrate compliance or to mitigate compliance risk should not be a Requirement in the Standard but should instead be provided elsewhere in the Standard.
- **This Standard is a candidate for an internal controls compliance assessment pilot project where corrected deficiencies are not necessarily reported as violations.**
- Some versions of COM-003-1 addressed "all call" or "blast" messages. We believe that the requirement for three-part communications should only apply to communications between two parties. It is not practical to have responses to "all call" or "blast" messages.

**Question 4.** Should the proposed COM-002-3 Reliability Standard approved by the Board be rescinded and a new standard developed that addresses communications during both emergency and non-emergency conditions? If so, what key issues would

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<sup>1</sup> Retirement of the term Reliability Directive will require minor, non-substantive edits to IRO-001-3, TOP-001-1 and TOP-001-2.



## **Communication Protocols**

### **Response to NERC Board of Trustees Questions by the Independent Experts**

it address, including an appropriate definition of “non-emergency conditions”?

**Answer 4.** Yes. The Independent Experts recommend that COM-002-2, COM-002-3 and COM-003-1 be combined to address both emergency and non-emergency conditions. As proposed by the Independent Experts there is no need to specifically define “non-emergency conditions.” Please see detailed recommendations in response to Question 3.

**Question 5.** Do you have any additional input regarding the development of the COM-003-1 Reliability Standard for the Board to consider in its deliberations on next steps?

**Answer 5.** The Independent Experts considered whether communication protocols could be managed by the use of a guideline, but determined that a guideline is not appropriate because:

- 3-part communications and other uniform communication protocols are crucial to maintain reliability when the state of the system is changed or maintained; and
- while 3-part communication and other uniform communication protocols are typically used today, they are not uniformly applied. A guideline would not ensure application; and
- a guideline would not fulfill the FERC directives in Order No. 693.

After reviewing responses to the five questions, the Independent Experts are recommending the Board should rescind approval of COM-002-3 and direct a redraft to combine COM-002-2, COM-002-3 and COM-003-1. Given the disparate views that have delayed completion of this work the Board should describe the expected attributes of a revised Standard and set a limited timeline for bringing the revised Standard to the Board for approval.

The Independent Experts also recommend that internal controls become the cornerstone for compliance assessment of a combined COM standard but should not be a Requirement in the Standard. The level and method for internal controls is left to the entity’s discretion but would be a good candidate for a guideline. Controls might include:

- Implementing a training program;
- Implementing a management process to periodically verify performance; and
- Taking corrective actions when needed in a timely manner.

The more effective an entity’s controls, the more benefit can be realized by the entity during compliance assessment. Therefore, the Experts recommend that this standard become the FERC-approved pilot for risk-based compliance monitoring. In

## **Communication Protocols**

### **Response to NERC Board of Trustees Questions by the Independent Experts**

this pilot, a determination of whether a possible violation (PV) would be assessed would be based on consideration of an entity's internal controls, as described below. Consideration of internal controls and internal compliance programs are basic auditing concepts and principles designed to be forward-looking. These concepts follow the Government Auditing Standards.<sup>2</sup>

Under this compliance assessment method, not all acts of non-compliance with the Requirements are reported as possible violations or violations. This transfers focus to accomplishing the reliability related task of providing clear, accurate communications and eliminates compliance concerns regarding zero-defect tolerance. While details should be provided in the NERC petition that reflect the Reliability Assurance Initiative (RAI) effort, high level concepts include:

- Compliance Enforcement Authorities' (CEAs) would communicate with an entity to understand the entity's internal controls.
- The level of evidence review (sample size) would be determined by the strength of an entity's internal controls and would be drawn from recent communications.
- Where non-compliant communications were in the gathered samples, the CEA would see if the entity's internal controls had identified the root cause of the non-compliance and whether the entity had taken corrective action to address the cause. If so, the CEA would note the non-compliance and verify that improved internal controls to prevent this cause were effective at the next compliance assessment. No PV would be assessed.
- Where non-compliant communications were not addressed, were prevalent or systemic, or were addressed but improved internal controls were not able to prevent recurrence, a PV would be assessed.

Again, this compliance assessment method would be detailed and included for FERC approval in the NERC petition for this standard.

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<sup>2</sup>Available at: <http://www.gao.gov/products/GAO-12-331G>, April 2012.

**Attachment 1**  
**Example Requirements for Combined COM Standard**

Applicable Functional Entities:

Reliability Coordinator  
Balancing Authority  
Transmission Operator  
Generator Operator\*  
Distribution Provider\*  
Transmission Owner\*  
Generator Owner\*

\*These functional entities are to be subject to this Standard for communication protocols regarding BES Elements and Facilities, but there is no requirement for these entities to be certified under PER-003, and applicability to this standard is not intended to suggest otherwise. For Distribution Providers this Standard only applies to communication protocols regarding UVLS, UFLS and load shedding equipment.

Revise Definition:

**Operating Instruction** — Communication with the intent to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.

**R1.** Each Applicable Functional Entity shall use the following three-part protocol when communicating an Operating Instruction internally or externally:

**1.1.** The issuer states an Operating Instruction.

**1.2.** The receiver of an Operating Instruction shall take one of the following actions:

**1.2.1.** Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct.

**1.2.2.** Request that the issuer reissue the Operating Instruction.

**1.3.** The issuer shall wait for a response from the receiver. After the response is received, or if no response is received, the issuer shall take one of the following actions:

**1.3.1.** Confirm the receiver's response if the repeated information is correct (not necessarily verbatim).

**1.3.2.** Reissue the Operating Instruction if the repeated information is incorrect or if the receiver does not issue a response.

**1.3.3.** Reissue the Operating Instruction if requested by the receiver.

- R2.** Each Applicable Functional Entity shall use the following protocols when communicating an Operating Instruction internally or externally:
- 2.1.** Use the English language for all communications between and among operating personnel responsible for the real-time control and operation of the interconnected Bulk Electric System unless otherwise required by law or regulation.
  - 2.2.** Use the 24-hour clock format when referring to clock times.
  - 2.3.** To the extent that a common time zone is not in use for each of the three interconnections – Eastern, Western and ERCOT, every communication that includes a clock time shall include the time zone.
  - 2.4.** Use common nomenclature of interface Elements and/or Facilities.
  - 2.5.** Use NATO or other alpha-numeric clarifiers when issuing an oral Operating Instruction in instances where the nomenclature of Facilities or Elements are in alpha-numeric format (e.g. a circuit breaker designated as “12B”).

## Attachment 2 Independent Experts Score for COM 003-1 draft 6

Standard Number	Req Number	Text of Requirement <i>(If text is incomplete, please see entire requirement posted on NERC.com)</i>	Passed the Reliability Principle test?	Passed the Para 81 or Guide test?	Content Score 0-3	Quality Score 0-12	IE top 16 priority standards to improve	Identified as one of the key impactful requirements (high is whatever top #)
COM-003-1	R1	R1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator, in each Reliability Coordinator area, shall develop, subject to the Reliability Coordinator's approval, documented communication protocols for the issuance of Operating Instructions in that Reliability Coordinator's area.  The documented communication protocols will address, where applicable, the following:  The use of the English language when issuing or responding to an oral or written Operating Instruction, unless another language is mandated by law or regulation.  The instances, if any, that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.  The nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.  The instances, if any, where alpha-numeric clarifiers are necessary when issuing an oral Operating Instruction and the format for those clarifiers.  The instances where the issuer of an oral two party, person-to-person Operating Instruction requires the receiver to repeat, restate, rephrase, or recapitulate the Operating Instruction and the issuer to:  Confirm that the response from the recipient of the Operating Instruction was accurate; or  Reissue the Operating Instruction to resolve a misunderstanding.	Yes	Yes	0	7	Yes	High
COM-003-1	R2	Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement its communication protocols developed in Requirement R1 so that the failure to use the protocols by the issuer of an Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.	No					N/A
COM-003-1	R3	Each Balancing Authority, Transmission Operator, Generator Operator and Distribution Provider shall repeat, restate, rephrase, or recapitulate an Operating Instruction when required by the issuer of an Operating Instruction in its communication protocols developed in Requirement R1 so that the failure to repeat, restate, rephrase, or recapitulate the Operating Instruction does not result in an operating condition that requires the issuance of a Reliability Directive by the original issuer of the Operating Instruction or by another Balancing Authority, Reliability Coordinator, or Transmission Operator.	No					N/A

### Independent Experts Content Score Details for COM 003-1 draft 6

Standard Number	Req Number	Supports a Reliability Objective (as defined by the Reliability Principles) (Yes/No/Maybe)	Para 81 Retire requirement?	Appropriate as a guide rather than a standard?	Is everything covered?	Are the correct Functional Entities Identified?	Does the content seem to be technically correct? (Including correct level of actions for accountability - Who, What, When)	Passed the Reliability Principle test?	Passed the Para 81 or Guide test?	Content Score 0-3
COM-003-1	R1	Yes - #1, 3	No	No	No - this should cover both emergency and Normal communications. *Protocols should not be unique to each RC; there should be continent wide consistency for the protocols. These protocols should be identified in the standard. (supported by FERC Order No. 693 P.532). *Protocols need to be strengthened/tightened - see answers to questions. **"All-calls" should be addressed in the requirement separate from 3-part communication. *3-part communication should be used whenever an RC, TO or BA requests action to be taken on the system (BPS), regardless of whether it is identified as a Reliability Directive.	No - If standard was drafted appropriately, this requirement would lay out the protocols and all of the applicable entities would be subject to them. Currently, only the BA, DPs, GOP, RC and TOP are subject to the standard. The GO and TO functional entities should also be included.	No - this should cover both emergency and Normal communications. *Protocols should not be unique to each RC; there should be continent wide consistency for the protocols. These protocols should be identified in the standard. (supported by FERC Order No. 693 P.532). *Protocols need to be strengthened/tightened - see answers to questions. **"All-calls" should be addressed in the requirement separate from 3-part communication. *3-part communication should be used whenever an RC, TO or BA requests action to be taken on the system (BPS), regardless of whether it is identified as a Reliability Directive.	Yes	Yes	0
COM-003-1	R2	No - this requirement only serves to mitigate compliance risk						No		
COM-003-1	R3	No - this requirement only serves to mitigate compliance risk						No		

### Independent Experts Quality Score Details for COM 003-1 draft 6

Standard Number	Req Number	Should it be kept as it is and not consolidated with other standards or requirements?	Is it RBS format? Drafted as one of these requirement types: Performance, Risk-based (preventative), Capability, & Format for subparts	Is it technology neutral? (Yes/No)	Applicability - are the expectations for each function clear?	Does the requirement align with the Purpose?	Is it a higher solution than the lowest common denominator (considering cost)?	Measurability	Technical basis in engineering and operations	Complete? Self-contained	Clear language? Is RRO clarified?	Can it be practically implemented?	Consistent Terminology	Quality Score 0-12
COM-003-1	R1	No - should be collapsed with COM-002-3	Yes	Yes	Yes	No - this requirements does not reduce the possibility of miscommunications; it increases the possibility of miscommunications	No - however it would be lower if there were no protocols	Yes	No - will allow for inconsistent protocols that may hinder communications	Yes	Yes	No - conflicts with IRO-014-1, IRO-015-1 and IRO-016-1 (which may be retired under pending standards (IRO-014-2))	Yes	7
COM-003-1	R2													
COM-003-1	R3													

September 6, 2013

Fred Gorbet, Chair  
NERC Board of Trustees

Gerry Cauley, President and CEO  
NERC

Gentlemen,

At the August 2013 Board of Trustees meeting, the Reliability Issues Steering Committee (RISC) was asked by the Board to provide answers to a series of questions related to Operating Personnel Communication Protocols – COM-003-1. The RISC provides the responses below.

Please reach out to me if you have any questions or concerns.

Sincerely,

*Chris Schwab*

Chair, Reliability Issues Steering Committee

cc: RISC Members

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**RISC Response to Questions from the  
August 15, 2013, NERC Board of Trustees Resolution regarding  
Operating Personnel Communication Protocols – COM-003-1**

**Question 1.**

Proposed COM-002-3 Reliability Standard provides a standard that addresses communication protocols in an emergency. Are there circumstances that are not an emergency (as defined in COM-002-3) that can lead to reliability risks if not appropriately addressed by a standard? If so, what are these circumstances and how important is it that there be a standard to address them?

**Response:**

Yes, there is a category of non-emergency circumstances that could possibly lead to a reliability risk. Some such circumstances could include the switching of bulk electric system facilities (e.g., capacitor banks, etc.), manual ramp-up or ramp-down of generation, and oral alerts. However, the RISC believes that such categorization should be defined by the Operating Committee, as they have the greatest amount of experience and knowledge in this area.

In the ten years since the 2003 Northeast Blackout, much progress has been made in the area of communications. The “Arizona-Southern California Outages on September 8, 2011” report cited 27 causes and recommendations; ineffective or confusing non-emergency communications was not listed as a cause. Similarly, the “Report on Outages and Curtailments During the Southwest Cold Weather Event of February 1-5, 2011” listed 26 Key Findings and Recommendations for the electric industry, none of which included ineffective or confusing non-emergency communications.

Additionally, it appears that NERC event analysis data has not yielded evidence of a reliability gap regarding non-emergency communication as a contributing factor to bulk electric system events.

The RISC suggests that the Operating Committee should be tasked with defining the non-emergency circumstances that can lead to a reliability risk that threatens the BES. This activity should be based on review of available data and the application of the expertise and knowledge of the Operating Committee.

While the RISC recognizes there is limited empirical data indicating that communication errors in non-emergency situations have led to reliability problems, the RISC believes a standard will be developed in response to this concern. The RISC believes it is critical that the standard be developed based on the risk to reliability associated with whatever special circumstances are identified.

**Question 2.**

Does the latest draft of the COM-003-1 Reliability Standard address such circumstances appropriately? Is it a “quality standard” on the basis of the criteria that are being used to assess existing and future standards by the Independent Experts Panel?

**Response:**

The COM-003-1 standard does address such circumstances, but may not do so at an appropriate level of prescription, and does not represent a quality standard.

Any standard that is developed should include requirements that are results-based, minimize disruptive administrative requirements, and be complementary to any other methods used for addressing system operator communication.

**Question 3.**

Are there changes you would recommend to improve the current draft of the COM-003-1 Reliability Standard? Describe how the enhancements would address any gaps in bulk-power system reliability.

**Response:**

Please see our answer to question 5.

**Question 4.**

Should the proposed COM-002-3 Reliability Standard approved by the Board be rescinded and a new standard developed that addresses communications during both emergency and non-emergency conditions? If so, what key issues would it address, including an appropriate definition of “non-emergency conditions”?

**Response:**

The RISC does not recommend the Board rescind its approval of the proposed COM-002-3. The RISC does recommend the immediate filing of the COM-002-3 standard, as well as the COM-002-2 Interpretation, since both will improve reliability of the BES. As work on COM-003-1 progresses, it is critical that it be complementary to COM-002-3, and that there are clear delineations between emergency and non-emergency communications and the associated obligations created by the standard.

**Question 5.**

Do you have any additional input regarding the development of the COM-003-1 Reliability Standard for the Board to consider in its deliberations on next steps?

**Response:**

The RISC offers the following guiding principles in the development of a COM-003-1 standard:

- A risk-informed process should be used to define a risk-based standard. The standard should be drafted based on expert opinion and data to recognize the differing risks of the categories defined by the OC in which a failure to communicate clearly during non-emergency circumstances could possibly lead to a threat to the BES.
  - For those categories that present the greater risk, it is appropriate to be more prescriptive and more uniform within and across regions and reliability coordination areas.
  - For those categories that present less risk, it is appropriate to allow more flexibility.
- The enforcement regime for such a standard cannot be zero-tolerance. Focus should be on the quality of an entity's communication protocols, the quality of their associated training, and how the entity ensures their protocols are followed.
- There must be clear delineations between emergency and non-emergency communications and the associated obligations created by the standards.
- The standard should not address protocols for electronic pulsing for Automatic Generation Control or electronically delivered alerts.

**NERC Management Response to  
the Questions of the NERC Board of Trustees  
on Reliability Standard COM-003-1**

September 6, 2013

At the August 14-15, 2013 meeting of the Board of Trustees (“Board”) of the North American Electric Reliability Corporation (“NERC”), the Board considered action on Agenda Item 7a: Operating Personnel Communication Protocols – COM-003-1 to discuss next steps for the development of a Reliability Standard<sup>1</sup> to respond to the Federal Energy Regulatory Commission’s (“FERC”) directives in Order No. 693 concerning communications. On August 15th, the Board passed a resolution to consider at its next meeting how best to act with respect to: (1) the disposition of the Board-approved interpretation of the currently effective COM-002-2 Reliability Standard; (2) the Board-approved COM-002-3 Reliability Standard; and (3) the draft COM-003-1 Reliability Standard, including whether to exercise the authority the Board has with respect to actions it can take under Section 321 of the NERC Rules of Procedure.

The Board directed NERC’s Reliability Issues Steering Committee, the Independent Experts Review Panel, and NERC management to respond to certain questions related to the draft COM-003-1 Reliability Standard. The following is NERC management’s responses to the questions posed in the Board resolution.

**Question 1**

Proposed COM-002-3 Reliability Standard provides a standard that addresses communication protocols in an emergency. Are there circumstances that are not an emergency (as defined in COM-002-3) that can lead to reliability risks if not appropriately addressed by a standard? If so, what are these circumstances and how important is it that there be a standard to address them?

**NERC Management Response**

Yes, there are non-emergency circumstances that can lead to reliability risks not covered by the proposed COM-002-3 Reliability Standard that need to be addressed in a mandatory and enforceable Reliability Standard.

For example, miscommunication by operating personnel could result in switching errors during routine switching of Bulk Electric System Elements, which could jeopardize the reliable operation of the Bulk Electric System. Examples of incorrect switching include opening or closing the wrong Bulk Electric System Element. This incorrect switching could directly cause or exacerbate a serious reliability impact. Additionally, switching often involves enabling or disabling protective relaying on Bulk Electric System Elements. If this action is not performed

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<sup>1</sup> Unless otherwise designated, all capitalized terms shall have the meaning set forth in the *Glossary of Terms Used in NERC Reliability Standards* (“NERC Glossary”), available at [http://www.nerc.com/files/Glossary\\_of\\_Terms.pdf](http://www.nerc.com/files/Glossary_of_Terms.pdf).

correctly, the system may be left in a vulnerable state where a future action or system condition could place the Bulk Electric System in an Emergency or result in an Adverse Reliability Impact.

Ineffective communications during non-emergency conditions could also lead to a lack of situational awareness for system operators of adjacent systems. This lack of situational awareness could result in a system operator expecting the Bulk Electric System to be in a certain configuration to take action on its system that could place the Bulk Electric System in an Emergency or could have an Adverse Reliability Impact. In fact, a lack of situational awareness was cited as a common factor in several events that contributed to the August 14, 2003 electric power blackout in large portions of the Midwest and Northeast United States and Ontario, Canada (“2003 Blackout”).<sup>2</sup> The 2003 Blackout report noted:

*“Under normal conditions, parties with reliability responsibility need to communicate important and prioritized information to each other in a timely way, to help preserve the integrity of the grid. This is especially important in emergencies. During emergencies, operators should be relieved of duties unrelated to preserving the grid. A common factor in several of the events described above was that information about outages occurring in one system was not provided to neighboring systems.”*<sup>3</sup>

The report continues, in the context of Recommendation 26, that on the date of the blackout, Reliability Coordinator and control area communications regarding conditions in northeastern Ohio were, in some cases, ineffective, unprofessional, and confusing.<sup>4</sup> Such communications contributed to a lack of situational awareness and precluded effective actions to prevent the cascade.<sup>5</sup> The 2003 Blackout Report notes that consistent application of effective communications protocols, particularly during alerts and emergencies, is essential to reliability.<sup>6</sup> Furthermore, the need to tighten communications protocols and improve communications systems was raised by several commenters in response to the interim blackout report.

Regardless of whether the circumstance is an emergency or non-emergency, any communication that directs a system operator to change or preserve the current state of the Bulk Electric System has the potential to create a reliability risk. For this reason, it is appropriate and necessary to develop a Reliability Standard that defines the communication expectations in both emergency and non-emergency circumstances.<sup>7</sup> Unlike a voluntary guideline, a mandatory and enforceable standard would allow the ERO to hold entities accountable for their communications

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<sup>2</sup> See U.S.-Canada Power System Outage Task Force, *Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations*, available at <http://www.nerc.com/pa/trm/ea/Pages/Blackout-August-2003.aspx>.

<sup>3</sup> *Id.* at 109 (emphasis added).

<sup>4</sup> *Id.* at 161.

<sup>5</sup> *Id.*

<sup>6</sup> *Id.*

<sup>7</sup> In 2012, the Operating Committee recognized the need to provide guidance for utilities when developing a System Operator verbal communications program. This document provides a general framework to assist entities in identifying the concepts and steps to consider when developing an effective System Operator verbal communications program. However, the use of the concepts presented in the document is strictly voluntary.

and would allow the ERO to assure that entities are meeting expectations for effective communications. However, it is not necessary to develop a mandatory and enforceable Reliability Standard to define protocols for communication for all circumstances. For example, discussions between system operators of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns, while important and valuable, do not necessitate coverage by a mandatory and enforceable Reliability Standard.

The following examples of actual events are provided to support the need to develop a Reliability Standard that covers circumstances that are emergencies and non-emergencies:

<b>Desired Action</b>	<b>Communication</b>	<b>Response</b>	<b>Consequence</b>	<b>Impact to Reliability</b>
Deploy Reserve Capacity	All call executed. No clarity in directive for action.	No response (no verbal response and no specific actions taken by all call recipients)	All call repeated six minutes later with clarity and acknowledgment.	Frequency recovery significantly delayed until corrective actions were implemented
Alleviate overloads	TOP and TO discussed options to alleviate overloads in area. No directive was actually given with a resulting delay in executing relief actions.	No specific actions taken because of confusion or lack of understanding.	Operators' communications lacked clarity and directness, which led to delays in executing the appropriate course of action. Action items were not summarized at the end of the discussions, leading to confusion over what appropriate actions were to be taken.	Emergency rating on a transmission line was exceeded for 3 hours and 5 minutes.
Shared Recognition of System Conditions	The RC attempts to ensure that identification of an abnormal condition is communicated to all system operators without delay.	Vital information was not exchanged.	The communications problems exacerbated the Event, because TOP was unable to take timely corrective action internally and in coordination with other entities.	Establishment of a shared understanding of system conditions delayed restoration.

All of these examples included communications that directed a system operator to change or preserve the current state of the Bulk Electric System. While the first example included

communications that would have been covered under COM-002-3, the last two examples included some communications that would not have been covered under COM-002-3, but would be covered under the proposed COM-003-1 standard.

## **Question 2**

Does the latest draft of the COM-003-1 Reliability Standard address such circumstances appropriately? Is it a “quality standard” on the basis of the criteria that are being used to assess existing and future standards by the Independent Experts Panel?

## **NERC Management Response**

Yes, the latest draft of the COM-003-1 standard does attempt to address the circumstances described above, but it is not a “quality standard.”

The current draft of COM-003-1 addresses non-emergency communications by requiring recipients to follow commands that change or preserve the state, status, output, or input of an Element of the Bulk Electric System (i.e., Operating Instructions). Therefore, in combination with COM-002-3, which covers communications during emergencies, the current draft of COM-003-1 technically addresses the communications of concern as described in the answer to Question 1.

However, the latest draft of COM-003-1 is not a “quality standard.” While Requirement R1 does meet some of the quality criteria defined by the Independent Experts Panel, the Requirement is deficient because it does not include a baseline set of protocols for both emergency and non-emergency conditions. Requirements R2 and R3 are confusing and appear to only mitigate compliance risk for applicable entities. Attachment 1 provides an analysis by NERC management of the requirements included in the latest draft of the COM-003-1 standard using the criteria established by the Independent Experts Panel. In short, NERC management’s analysis finds that: (1) the expectations for each function are not clear; (2) the requirements do not align with the purpose of the Reliability Standard; and (3) the Reliability Standard represents a “lowest common denominator”<sup>8</sup> standard.

The current draft of COM-003-1 is also not a quality standard because it:

- 1. Artificially distinguishes “Operating Instructions” from “Reliability Directives” to separate the protocols from those in COM-002-3.** This separation gives the appearance that three-part communications is the only protocol necessary for Reliability Directives, while several more protocols are necessary for Operating Instructions. It is as

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<sup>8</sup> Earlier versions of the draft COM-003-1 standard more appropriately addressed the circumstances identified in the response to Question 1 (Drafts 1-4). Prior drafts established mandatory uniform communication protocols for use in emergency and non-emergency situations. Later drafts shifted from that approach in response to industry comments focused on mitigating compliance risk. The standard drafting team, in performing their responsibility, made modifications to the standard in an attempt to achieve ballot body consensus while attempting to maintain essential communication protocols.

important, if not more important, that common communications protocols be used for emergency communications. Taking time to clearly delineate when a Reliability Directive is issued and differs from an Operating Instruction also may not be a practical exercise during a real-time situation.

- 2. Does not strike the proper balance between prescriptiveness and flexibility to establish communication protocols.** COM-003-1 requires entities to self-define the conditions for which they apply the protocols in Requirement R1 of COM-003-1, including when three-part communication is necessary. This preserves avenues for potential miscommunication between parties by not creating a clear baseline of required protocols for communications.
- 3. Creates a reverse incentive to issue emergency directives by connecting compliance risk in COM-003-1 to the issuance of Reliability Directives in COM-002.** This connection between compliance risk in COM-003-1 and the issuance of Reliability Directives in COM-002-3 creates an incentive to not issue a Reliability Directive to take emergency action in order to avoid compliance risk under COM-003-1. This connection should be removed to eliminate the reverse incentive.
- 4. Requires approval of communications protocols by the Reliability Coordinator.** The current draft of COM-003-1 makes communications protocols subject to the approval of the Reliability Coordinator. The Reliability Coordinator should not have the responsibility or the authority to determine third-party protocols. Either the entity should have the ability to determine the necessary protocols, or the Reliability Standard should state the protocols.

### Question 3

Are there changes you would recommend to improve the current draft of the COM-003-1 Reliability Standard? Describe how the enhancements would address any gaps in bulk-power system reliability.

### NERC Management Response

Yes, NERC management recommends combining the proposed COM-002-3 and COM-003-1 standards to provide a single standard to address communications protocols for emergency and non-emergency operations. A recommended draft standard is included in Attachment 2. At a minimum, the standard should:

- Require the use of established communications protocols for operations to be used in both non-emergency and emergency operations;
- Require certain baseline protocols to be used by all entities;<sup>9</sup>

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<sup>9</sup> These protocols must include the use of the English language for all communications in order to retire a similar requirement that remains in COM-001 that is not reflected in the Board-approved proposed Reliability Standard COM-001-2. This issue was specifically deferred to the proposed COM-003-1 Reliability Standard.



- Require that the communications procedure be implemented;
- Require training of system operators on the communications procedure and demonstrate evidence of that training; and
- Specify a process to review communications with system operators and provide feedback on adherence to the communication protocols and identify any necessary changes to the protocols.

Also, the definition of Operating Instruction should be modified to encompass Reliability Directives. Merging the definitions eliminates the ambiguity inherent in attempting to clearly define what classifies as an Operating Instruction and what necessitates the issuance of a Reliability Directive during real-time conditions. As noted above, these two definitions are currently artificially distinguished in the current proposed COM-003-1 and COM-002-3. With this modification, COM-002-3 and COM-003-1 can be combined into a single standard to cover emergency and non-emergency communications.

Additionally, entities should be accountable for incorrect use of communication protocols in connection with a Reliability Directive, without exception. For all other Operating Instructions, compliance should be measured using standard audit practices. During an audit, an entity should present the method they used to sample communications to determine the effectiveness of their communication. They should also show how they document and determine the level of corrective actions in connection with the deficiencies that are identified, and ensure that operators are consistent in their application of protocols. This approach will provide the reasonable assurance that, while occasional non-emergency communications may not always follow every protocol, operators are proficient in the protocol use.

#### **Question 4**

Should the proposed COM-002-3 Reliability Standard approved by the Board be rescinded and a new standard developed that addresses communications during both emergency and non-emergency conditions? If so, what key issues would it address, including an appropriate definition of “non-emergency conditions”?

#### **NERC Management Response**

Yes, the Board of Trustees should withdraw its approval of proposed Reliability Standard COM-002-3. NERC management recommends the drafting of a single standard that addresses communication during emergency and non-emergency operations. This would provide a holistic approach to creating communication protocols. The key elements of a single combined standard have already been identified in the response to Question 3. Withdrawing approval of COM-002-3 will allow the combined standard to cover issues such as protocols related to use of one-way

burst messaging systems (i.e., all-calls) that are currently not reflected in the COM-002-3 Reliability Standard.<sup>10</sup>

Withdrawing approval of COM-002-3 would also allow for any adjustments to COM-002-3 needed to prevent conflict between the final language of a COM-003-1 Reliability Standard and COM-002-3 should the standards remain separate. Otherwise, any further development of a COM-003-1 standard will face the same difficulty the current standard drafting team encountered working with the approved language in COM-002-3 to craft a complimentary COM-003-1.

### **Question 5**

Do you have any additional input regarding the development of the COM-003-1 Reliability Standard for the Board to consider in its deliberations on next steps?

### **NERC Management Response**

Yes, additional input for the Board's consideration on the interpretation of COM-002-2 and compliance concerns related to the development of COM-003-1 is provided below.

First, NERC management recommends holding the filing of the interpretation of COM-002-2 until development of a standard covering both emergency and non-emergency conditions is completed. By submitting the interpretation, NERC places the issue of the proper scope of COM-002-2 before FERC for decision prior to the completion of further development work, which could impact the development of a single communications standard. The issue raised in the interpretation should instead be addressed through an appropriately scoped single standard proposed for FERC approval. Similarly, if the Board does not withdraw approval of COM-002-3, NERC management also recommends holding the filing of COM-002-3 so that FERC will consider COM-002-3 along with the proposed COM-003-1 standard to reduce the risk of a remand of COM-002-3.

Second, concerns over creating an operational and compliance environment that requires mining of hundreds, thousands or millions of routine/normal communications to prove compliance or make a finding of reasonable assurance of compliance was consistently cited in comments to all drafts of COM-003-1. NERC plans to address this issue in the compliance section of the standard and in development of the RSAW concurrently with development of the standard.

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<sup>10</sup> The standard drafting team for proposed COM-002-3 deferred the issue of protocols related to use of one-way burst messaging systems (i.e. all-calls) to the COM-003-1 Reliability Standard. All-calls can be calls initiated by one party to multiple parties where the receiving parties are in a "listen only" mode. All-calls of this nature cannot be used with a requirement for the use of three-part communication procedures specified in COM-002-3. During development of COM-003-1, NERC received a number of comments that the introduction of protocols for all-calls would create a conflict between the requirement in COM-002-3 to use three-part communication and the specific protocols for all-calls developed in COM-003-1. The result is a lack of protocols for all-calls in both standards.

**Attachment 1**  
**NERC Management Analysis of COM-003-1 Draft 6 Using Independent Experts Panel Criteria**

Requirement Number	Should it be kept as it is and not consolidated with other standards/requirements?	Is it RBS format? Drafted as one of these requirement types: Performance, Risk-based (preventative), Capability, & Format for subparts	Is it technology neutral? (Yes/No)	Applicability - are the expectations for each function clear?	Does the requirement align with the Purpose?	Is it a higher solution than the lowest common denominator (considering cost)?
R1	No - should be collapsed with COM-002-3	Yes	Yes	Yes	No	No
R2	No	Yes	Yes	No	No	No
R3	No	Yes	Yes	No	No	No

Requirement Number	Measurability	Technical basis in engineering and operations	Complete? Self-contained	Clear language? Is RRO clarified?	Can it be practically implemented?	Consistent Terminology	Quality Score 0-12
R1	Yes	No	Yes	Yes	Yes	Yes	8
R2	Yes	No	Yes	No	Yes	Yes	6
R3	Yes	No	Yes	No	Yes	Yes	6

## **Attachment 2**

### **Sample Requirements for a Communication Standard for Non-emergency and Emergency Operations**

Operating Instruction — A command by operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System where the recipient of the command is expected to act to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction. A Reliability Directive is one form of an Operating Instruction.

While Distribution Provider is listed below, the standard would only be applicable to Distribution Providers that operate Bulk Electric System Elements (e.g. under frequency load shedding and under voltage load shedding).

- R1.** Each Balancing Authority, Distribution Provider, Reliability Coordinator, and Transmission Operator shall develop one or more written communications protocols. The protocols must: [*Violation Risk Factor: Low*][*Time Horizon: Long-term Planning*]
- 1.1.** Require the use of the English language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System, unless agreed to otherwise. An alternate language may be used for internal operations.
  - 1.2.** Require the issuer of an oral two party, person-to-person Operating Instruction to wait for a response from the receiver. After the response is received, or if no response is received, require the issuer to take one of the following actions:
    - Confirm the receiver's response if the repeated information is correct.
    - Reissue the Operating Instruction if the repeated information is incorrect or if the receiver does not issue a response.
    - Reissue the Operating Communication if requested by the receiver.
  - 1.3.** Require the receiver of an oral two party, person-to-person Operating Instruction to take one of the following actions:
    - Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct.
    - Request that the issuer reissue the Operating Instruction.
  - 1.4.** Require the issuer of an oral Operating Instruction to verbally or electronically confirm receipt from one or more receiving parties when issuing the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all-call system).
  - 1.5.** Require the receiver of an oral Operating Instruction to request clarification from the initiator if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all-call system).
  - 1.6.** Include other communications protocols as deemed necessary by the entity.
- R2.** Each Balancing Authority, Distribution Provider, Reliability Coordinator, and Transmission Operator shall implement the written communications protocols developed in Requirement R1. [*Violation Risk Factor: High*][*Time Horizon: Real-time Operations*]
- R3.** Each Balancing Authority, Distribution Provider, Reliability Coordinator, and Transmission Operator shall train their operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System on their

written communications protocols specified in Requirement R1. *[Violation Risk Factor: Low][Time Horizon: Long-term Planning]*

- R4.** Each Balancing Authority, Distribution Provider, Reliability Coordinator, and Transmission Operator shall implement a method to review communications with their operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System that provides feedback on adherence to the documented communication protocols specified in Requirement R1. *[Violation Risk Factor: Low][Time Horizon: Real-time Operations]*
- R5.** Each Balancing Authority, Distribution Provider, Reliability Coordinator, and Transmission Operator shall implement a method for evaluating the documented communication protocols specified in Requirement R1 that: *[Violation Risk Factor: Low][Time Horizon: Real-time Operations]*
- 5.1.** Performs ongoing assessments of adherence to the documented communication protocols,
  - 5.2.** Evaluates the effectiveness of the documented communication protocols, and
  - 5.3.** Provides feedback to improve the effectiveness of operator communication, which may include the addition of communication protocols.

September 23, 2013

Mr. Fred Gorbet  
Chairman  
NERC Board of Trustees

RE: Operating Committee Response to COM-003-1 Reliability Standard

Dear Mr. Gorbet:

At the August 15, 2013 NERC Board of Trustees (Board) meeting, the NERC Operating Committee (OC) was directed to review the responses from the Reliability Issues Steering Committee (RISC), the Independent Experts Review Panel and NERC management to five questions pertaining to the draft COM-003-1 Reliability Standard. These were included in the NERC OC meeting material for the committee to review in preparation for the meeting discussion. Armed with this information, the OC reviewed and discussed the five questions at their September 17-18, 2013 meeting. Following are the NERC OC's perspectives and thoughts on the five questions answered.

Clear communication is important for the reliable operation of the system in both normal and emergency conditions. As such, the OC believes that incentives are currently in place and three-part communications are currently being used for many operational communications. The need for clear communications is not something new, it has always been vital for safe operations to protect utility personnel, the public, and assets, as well as for ensuring reliable operations. In recognition of this need, the OC created Reliability Guideline: System Operator Verbal Communications - Current Industry Practices. The purpose of this reliability guideline is "...to document and share current verbal BES communications practices and procedures from across the industry that have been found to enhance the effectiveness of system operator communications programs. These (practices and procedures) are not mapped to existing or future mandatory requirements, but rather are intended to show the breadth of industry practices concerning verbal communications."

As noted in the RISC's comments, there is little evidence that non-emergency communications represent a reliability gap. NERC's Events Analysis process has not identified non-emergency operational communications as a concern. In addition, neither the February 2011 Southwest Cold Weather Event nor the September 2011 Arizona-Southern California Blackout reports identified non-emergency operational communications as a concern. Hence, the NERC OC recommends that a standard is not needed for non-emergency operational communications. However, if a standard is developed for non-emergency operational communications, the NERC OC has the following comments:

The existing COM-003-1 Standard Drafting Team (SDT) has been through several iterations without success. A fresh start is needed with a new team. This team should have substantial operational experience, preferably extensive on-shift experience.

A Reliability Assurance Initiative (RAI) or non-zero tolerance approach is recommended for a communication standard. This could set a benchmark on how Reliability Standards can be focused on improving future performance through internal controls that include program development, training, monitoring, evaluation and correction. Such action would also recognize that many operational communications are problem identification and solution finding discussions that should not be subjected to a three part communications process.

In addition, consideration should be given to limiting the additional compliance and administrative burdens for NERC, the Regional Entities, and the industry created by a new standard, since there is little evidence that non-emergency communication represents a significant risk.

The OC's responses to the five questions follow.

**Question 1:** Proposed COM-002-3 Reliability Standard provides a standard that addresses communication protocols in an emergency. Are there circumstances that are not an emergency (as defined in COM-002-3) that can lead to reliability risks if not appropriately addressed by a standard? If so, what are these circumstances and how important is it that there be a standard to address them?

#### OC Response

- The NERC OC agrees non-emergency communications in real-time operations can lead to reliability risks. However, the OC does not believe that this alone creates a need for a separate standard to address communications during normal operations. The electric system is designed and operated to limit the effect of a (n-1) contingency. The OC also believes incentives are currently in place today, such as personnel and public safety and human error prevention, to ensure proper communications in normal operations and that additional standards are not required.
- If the Board chooses to move forward with the standard development, the OC could support a single standard that addresses operational communication that provides continuity across all operational states. We would suggest starting with a clean slate to develop one standard replacing COM-002 and COM-003. See Q5.

**Question 2:** Does the latest draft of the COM-003-1 Reliability Standard address such circumstances appropriately? Is it a "quality standard" on the basis of the criteria that are being used to assess existing and future standards by the Independent Experts Review Panel?

#### OC Response

- The OC does not consider the draft COM-003-1 as a quality standard.
- The OC could support a single communications standard that addresses operational communications under all operational states as outlined in the OC responses below.

Question 3: Are there changes you would recommend to improve the current draft of the COM-003-1 Reliability Standard? Describe how the enhancements would address any gaps in Bulk-Power System reliability.

#### OC Response

- This response is based on the OC's response to Question 1.

The OC could support a single communications standard that addresses operational communications under all operational states. Our recommendation to improve the standard would be to modify the standard for entities to self monitor, evaluate, and correct communication deficiencies with a goal of future performance improvement, as opposed to a zero defect type of standard. Under no circumstances do we believe that a zero defect approach is constructive or warranted in the context of operational communications.

Question 4: Should the proposed COM-002-3 Reliability Standard approved by the Board be rescinded and a new standard developed that addresses communications during both emergency and non-emergency conditions? If so, what key issues would it address, including an appropriate definition of "non-emergency conditions"?

#### OC Response

- This response is based on the OC's response to Question 1.

The OC believes that all Board action with regard to proposed COM-002-3 be placed on hold and expedite moving forward with a new COM standard.

The OC could support a single communications standard that addresses operational communications under all operating states as outlined in the OC responses to questions 3 and 5.

Question 5: Do you have any additional input regarding the development of the COM-003-1 Reliability Standard for the Board to consider in its deliberations on next steps?

#### OC Response

- If the Board determines it is necessary to move forward with a standard, the OC recommends taking a clean slate approach (i.e., a new SAR and new SDT) to develop one standard addressing operational communications. The standard should focus on communication categories where three-part communications can be applied in an effective and practical way such as topology changes, and not including less practical categories such as "all calls," routine adjustments such as resource dispatch instructions within the normal operational range of the resource, and leaving space for problem solving discussions. The standard should not be zero tolerance based. The standard should focus on self monitoring, evaluating, and correcting any communication deficiencies.



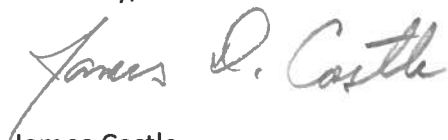
## Other Considerations

- Compliance (Move away from zero tolerance and get to a programmatic and results based standard – e.g., FAC-003-3)
- Training (How will a new standard impact training across the industry?)
- Timing (Consolidating COM-002 and 003 into a single standard takes more time but results in a better product than two separate standards.)
- Refrain from creating new glossary terms, such as “operating instructions.”

In summary, the OC believes that a standard is not needed for non-emergency operational communications. However, if the Board chooses to move forward with a standard development, the OC could support a single standard that addresses operational communication that provides continuity across all operational states.

The Operating Committee thanks the Board of Trustees for allowing us the opportunity to provide feedback regarding the draft COM-003-1 Reliability Standard.

Sincerely,



James Castle  
Operating Committee Chair

cc: Board of Trustees  
Operating Committee  
Mark Lauby  
Mike Moon  
Holly Hawkins

**Exhibit P**

**Standard Drafting Team Rosters for Project 2006-06 Reliability Coordination COM-001-2 and Project  
2007-02 Operating Personnel Communications Protocols COM-002-4**

# Team Roster

## Project 2006-06 Reliability Coordination

	Participant	Entity
Chair	William M. Hardy	Southern Company
	Earl A. Barber	National Grid
	James S. Case	Entergy Services, Inc.
	Albert M. DiCaprio	PJM Interconnection
	Anthony P. Jankowski	WE Energies
	H. Steven Myers	ERCOT
	Robert C. Rhodes	Southwest Power Pool, Inc.
	Eric Senkowicz	Florida Reliability Coordinating Council
NERC staff	Scott Barfield-McGinnis	North American Electric Reliability Corporation
NERC staff	Stephen Crutchfield	North American Electric Reliability Corporation

Version	Date	Description
1.0	3/8/2012	New format.
2.0	4/19/2012	Edited by Wendy Kinnard

4/19/2012, Version Draft

# Standard Drafting Team Roster

## Project 2007-02 Operating Personnel Communications Protocols

	Participant	Entity
Chair	Lloyd Snyder	Georgia System Operators
Member	Glen Boyle	PJM
Member	Mike Brost	JEA
Member	Tom Irvine	Hydro One
Member	Robert Rhodes	Southwest Power Pool
Member	Stephen Solis	Electric Reliability Council of Texas
Member	Fred Waites	Southern Company
Member	John Stephens	City Utilities of Springfield
NERC Staff	Howard Gugel (Director, Performance Analysis)	North American Electric Reliability Corporation
NERC Staff	William Edwards (NERC Legal)	North American Electric Reliability Corporation
NERC Staff	Stephen Eldridge (Standards Development)	North American Electric Reliability Corporation

Version	Date	Description
1.0		

**Exhibit Q**

**Operating Committee Reliability Guideline: “System Operator Verbal Communications – Current Industry Practices”**

# Reliability Guideline: System Operator Verbal Communications – Current Industry Practices

## Preamble

It is in the public interest for NERC to develop guidelines that are useful for maintaining or enhancing the reliability of the Bulk Electric System (BES). Reliability Guidelines provide suggested guidance on a particular topic for use by BES users, owners, and operators according to each entity's circumstances. Reliability Guidelines are not to be used to provide binding norms, establish mandatory reliability standards, or create parameters by which compliance to standards is monitored or enforced.

## Introduction

This Reliability Guideline is available to electricity sector organizations responsible for the operation of the BES. It provides general concepts that may be considered when developing a system operator verbal communications program. This guideline provides a general framework for identifying the concepts and steps to consider for an effective system operator verbal communications program. This document, written in the form of a guideline, is a collection of industry practices compiled by the NERC Operating Committee (OC). The use of these methodologies and guidelines is strictly voluntary. Entities should consider goals of going beyond the standards to facilitate a higher level of reliable operations without the expectation of having to be perfect in meeting the goals for compliance purposes. As BES communications practices, procedures and technologies change, electric entities are encouraged to implement such changes as appropriate.

## Purpose

The purpose of this guideline is to document and share current verbal BES communications practices and procedures from across the industry that have been found to enhance the effectiveness of system operator communications programs. These are not mapped to existing or future mandatory requirements, but rather are intended to show the breadth of industry practices concerning verbal communications.

## Guideline Details

Components of an effective system operator verbal communications program may include:

### I. Verbal Communications Tools

System operators use a variety of tools for communicating information with other system operators. The tool used for communicating specific information with various recipients depends on a number of factors, such as the urgency, importance, and intended impact of the information being communicated. The urgency, importance, and impact of the specific information are highly dependent on the role and responsibility of each party to the communication. As an example, email may be the

appropriate tool if the information exchange is not urgent, while a one-on-one phone call may be the best method to communicate both urgent and important information. Also, in some cases multiple tools may be used to communicate the same information to different parties.

Tools used for system operator communications and some typical applications for those tools are as follows:

#### 1. Voice Communications

- a. Public Switched Telephone Network (PSTN) – This is the most common communication tool for system operators to use to communicate with other system operators and field personnel. It is highly reliable and secure. Application examples include:
  - i. Dedicated conference call arrangements
  - ii. Dedicated circuits between facilities
  - iii. Multi-party initiated calls
  - iv. Speed dial functionality
- b. Private Internal Telecommunications Systems – Some utilities have found economies of scale by installing their own communications network utilizing microwave and/or fiber optic telecommunications networks. These networks perform the same function as the PSTN discussed above.
- c. Voice Over Internet Protocol (VOIP) – The communication protocols, technologies, methodologies, and transmission techniques involved in the delivery of voice communications and multimedia sessions over Internet Protocol (IP) networks, such as the Internet, rather than the public switched telephone network (PSTN).
- d. Cell phones – These are widely used by field personnel to contact system operators. They are reliable in urban and suburban settings but are less reliable in remote areas. Cell phones function similarly to traditional phones but are more susceptible to background noise.
- e. Radios – A common communication medium for municipal utilities and vertically integrated utilities in which uses extend beyond operation of the BES. The communication method for radios differs from other devices because they are not full duplex devices and, therefore, do not allow simultaneous transmission from both parties. Also, radio transmissions are typically not encrypted and are accessible to third parties via scanners, etc.
- f. Government Emergency Telecommunications Service (GETS) and Wireless Priority Service (WPS) – GETS and WPS provide an emergency access and priority processing in the local and long-distance segments of the PSTN or cellular networks. GETS and WPS are intended to be used in an emergency or crisis situation when the PSTN or cellular network is congested and

the probability of completing a call over normal or other telecommunications means has significantly decreased.

- g. Satellite phones – Typically used as emergency voice communication medium between functional entities and their respective reliability coordinators. Satellite phones function similarly to traditional phones and cell phones; however, a clear view of the sky for the antenna is required. A lesson learned from the industry’s Y2K preparation was that for satellite phones to be most effective in emergency/outage conditions, entities have to ensure their phones do not require transmitting through any ground relaying stations (i.e., that their phones have direct point-to-point functionality).
  - h. All Call/Blast Call Functionality – Some entities utilize technology that blasts general messaging and directives with multiple entities. Blast calls and messaging systems are effective tools to rapidly share information with multiple parties or to get group action.
2. Other Communications Tools
- a. Email – Typically used to communicate information that is not time sensitive. Used to communicate system status and events to a broad array of support staff/management as well as interconnected entities.
  - b. Messaging Systems – An internal system used by reliability coordinators to send messages to their Balancing Authorities (BA) and Transmission Operators (TOP) or an external system used by Reliability Coordinators (RC) to send messages to other RC (e.g., the RC Information System).
  - c. Fax (short for facsimile) – Sometimes called telecopying, faxing is the telephonic transmission of scanned printed material (both text and images), normally to a telephone number connected to a printer or other output device.

## II. Policies and Procedures

The following are excerpts of policies and procedures currently in use by a sampling of industry members. When developing formal communications policies and procedures, the registered entity may consider addressing the following items:

- 1. Policy Applicability
  - a. Who – To whom the procedure applies
  - b. When – Under what condition the specific communications policy or procedure is to be used (e.g., normal or emergency conditions)
  - c. How – Technique to be used for emergency communications versus normal communications
    - i. There are two schools of thought regarding utilization of three-part communication for routine operating instructions. Every routine communication opportunity has a



different impact on the reliability of the BES, and many routine communication opportunities have no impact on reliability. While the industry has disparate viewpoints on the necessity of the use of three-part communication for all real-time communications, most agree that the point is to be effective when it counts for reliability — not that every communication opportunity has a reliability impact.

1. One thought is that the three-part communication protocol is special and reserved to address real-time emergencies in order to make those communications stand out from normal communications.
  2. Another school of thought is that the three-part communication protocol is good practice for both normal and emergency operating instructions.
- d. If an entity determines it would utilize the three-part communication protocol for routine operating instructions, that entity should define when its system operators are expected to utilize the protocol, including coordinating with entities regarding when the use of three-part communication is expected. In addition, entities could consider beginning the communication with the phrase “This instruction requires a three-part communication.” Further, entities should consider providing system operators a general format or a script that can be applied when using three-way communications. Some entities provide these written scripts at each system operator position and may ask the receiver to write out the transmitted directive.

2. Use of Three-Part Communication for Routine Operating Instructions<sup>1</sup> – The following is an example of when the three-part communication protocol for routine operating instructions could be implemented:

SAMPLE TEXT from an internal procedure:

- a. For any actionable item, there should be specific three-part communication by the receiver to ensure there is no misunderstanding of the details involved. An actionable item is instruction or information conveyed in which one party is informing the other that:
  - i. A physical change needs to be made or has been made to BES facilities pre- or post-contingency (e.g., generation starts, transmission reconfigurations, manual redispatches, voltage changes); or
  - ii. A change needs to be made in the computer systems used to operate the BES (e.g., updating operating limits, forecasts, schedules).

3. Elements of Effective Communication

- a. Communication Etiquette – At all times, professionalism and professional tone and manner are essential. Communications are best undertaken in a courteous, business-like fashion.
- b. Opening Phrase – It is important that both parties understand with whom they are speaking; therefore, the person answering the phone or making a call should state the following information: company, location, name, and function.
- c. Acknowledgement – Whenever a call is made or received, the initiating party should clearly communicate the purpose of the call so that all issues are fully understood and addressed.
- d. Content – The person requesting action should speak in a clear and calm manner, review the information and request three-way communication, if appropriate. If any action is to be taken, the recipient will fully understand when that action is expected to be taken (e.g., now, at a specific time, or “some” time). Closing – At the end of any call, those communicating want to confirm that what was expected was completed, that no other activity is required, and whether there is a clear commitment for call-back.

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<sup>1</sup> While the practice of using three-part communications for routine communications may be a good practice, the failure to use three-part communications for routine communications is not considered to undermine reliability.

4. Barriers to Effective Verbal Communications
  - a. Sender or receiver not stating his or her name and/or work location when using a telephone or radio.
  - b. Sender attempting to communicate with someone already engaged in another conversation.
  - c. Sender stating too much information or multiple actions in one message.
  - d. Sender not giving enough information for the receiver to understand the message.
  - e. Sender not explicitly verifying that receiver understood the message.
  - f. Receiver failing to ask for needed clarification of the message, if required.
  - g. Receiver taking action before the communication is complete.
  - h. Receiver not writing the message on paper, if there are several items (more than two) to remember.
  - i. Receiver mentally preoccupied with another task (e.g., driving, texting, personal calls).
  - j. Message not being stated loudly enough to be heard.
  - k. Enunciating words poorly.
  - l. Distractions to communications (e.g., background noise).

### **III. Communications Training for System Operators**

Effective communication is one of the most important defenses in the prevention of errors and events. Training provides an opportunity to ensure that personnel know their company's requirements and expectations for verbal communications, and it also reinforces good communication practices through the use of drills and exercises.

Communications training can be based on company-specific policies and procedures for verbal communications. The goal of communications training is to ensure effective verbal communications during real-time operations. The following practices are provided for consideration in the development of training exercises and drills and for management observation/coaching involving verbal communications:

1. Classroom Training and Management Review
  - a. Classroom training can focus on company-specific policies and procedures for verbal communications. The trainer wants to be clear on what communications protocols are expected to be followed, when they are expected to be followed, and by whom. The trainer also wants to emphasize the benefits of following the specific protocols.

- b. Classroom training on effective communication is most thorough when it addresses the following: 1) basis for use (why it is used); 2) when to use specific communications protocols (provide specific examples); 3) roles and responsibilities for each participant (include the significance of active listening); and 4) behavior expectations of each participant.
  - c. Effective communication principles can be reinforced during system operator training simulations, exercises, or drills. Performance objectives or competencies can be established and measured as part of these activities. Feedback assessments (both self and instructor) can be part of the communications training process.
  - d. Management or peer observations (e.g., operator coaching session) can be utilized to determine if the tools for effective communication are practiced by personnel in the actual job environment. These observations provide an opportunity to recognize personnel who meet or exceed expectations for use of effective communication tools. They also provide an opportunity in a non-punitive environment to coach personnel who need to improve their use of communication tools. The observations can be considered to determine if changes or improvements are needed when training on communication tools.
  - e. Management involvement in system operator training, exercises, and drills can be used to provide feedback and encourage a strong communications program.
2. Communication Practices – The following beneficial practices are provided for consideration in the development or modification of training on effective communication:
- a. Incorporate a “Communication Topic” as part of each continuing training cycle.
  - b. Ensure training on communication stresses effective, active listening. Even though the “Sender or Initiator” of three-part communication is expected to ensure the message is understood, the individual(s) receiving the message want to be engaged and actively listening for effective communication to occur.
  - c. Use quizzes or reminders administered by email or other online testing applications to emphasize key aspects of effective communication. This tool can also be used to provide feedback on department or group level understanding of key points.
  - d. Incorporate internal and external operating experience related to communication as part of initial and continuing training. The operating experience can be based on: 1) management observations; 2) performance trends; 3) review of tapes from actual communication, including system events in which directives were provided; or 4) related events from other industries.
  - e. Use small groups or breakouts as part of training to conduct peer reviews of actual communication. Audio tapes of actual operators can be reviewed by small groups to identify proper communication and areas for improvement. In addition, system operators

may opt to review and critique their own voice recordings to identify lessons learned and opportunities for improvement.

- f. Conduct training seminars or communications workshops that involve operators and other parties (e.g., receivers) they communicate with to educate all involved parties on the expectations for effective communication.
- g. As part of training, incorporate videos that depict proper usage of tools for effective communication. Videos depicting operators in “real world” situations demonstrating proper use of tools for effective communication can enhance buy-in by personnel. Videos can also be used to depict scenarios in which tools for effective communication are *not* properly used. Participants can critique or identify the area(s) for improvement in the use of the tools for effective communication.
- h. Structure field trips or benchmark trips to other industries (e.g., nuclear plants, aviation control centers) that allow operators to listen to another perspective. This can help reinforce a good balance on when to use three-part communication.

#### **IV. Performance Assessment**

Successful implementation of verbal communications programs often includes the development and maintenance of a comprehensive series of controls and leadership practices that develop, reinforce, and maintain effective communication. Examples of some effective elements of control programs are listed below.

1. For many reasons the electric industry records most of its operational communications. These recordings provide a rich vehicle for assessment, feedback, and learning when coupled with periodic reviews of the recordings for the elements of effective communication.
2. In line with feedback and training programs, shift supervisors or operations leaders at many operating entities assess a specific number of hours of recordings or a specific number of recordings that may cover various topical areas (e.g., switching evolutions, AVR notifications, SPS notifications, etc.) within an established period of time (e.g., every quarter or month) for each of the operators under his or her leadership. Those leaders are then expected to share their reviews with the operators involved. Such feedback is often most effective when it is provided soon after an operational event has transpired. Some entities prefer such recording review sessions be made in an informal coaching session. Other entities have tied effective communication to the very formal aspect of annual performance goals and the resulting performance reviews. Periodic assessments, including grading or scoring of calls, can quickly provide needed feedback to ensure a system operator will be successful in achieving such a performance goal throughout the course of the year. Entities may choose to reflect that success in employee performance compensation.

3. Recognition Programs – Consider development of positive reinforcement programs that recognize good system operator communications.
4. System Operator Assessments – Some entities assess the following:
  - a. Was the operator following the company’s communication policy?
  - b. When three-part communication was required, were each of the three elements of three-part communication evident?
  - c. If the receiver did not effectively repeat back the communication the first time, did the sender pursue the receiver until the receiver did repeat back the elements of the reliability directive?
  - d. How professional was the actual communication in both content and tone?
  - e. The focus of these reviews might involve more than the spoken word, since some entities also include reviewing the resulting field paperwork. Such reviews help organizations ensure good housekeeping and see that the complete company policy is being implemented.
5. Event Analysis
  - a. If an operating entity has a system event that triggers a category 2 or higher event review in accordance with the NERC Events Analysis Process, or if the operating entity has any other event for which it wants to further assess its operations, this circumstance provides the operating entity an opportunity to delve into assessing the effectiveness of its communications.
  - b. When the system event’s recordings are pulled and reviewed, it provides an opportunity for leaders, operators, and trainers to assess the effectiveness of their communications as related to that event and, in some cases, to access broader operating practices.
  - c. Communication often involves parties beyond the organizational structure of one operating entity. As such, when a third party (the receiver) of a communication has not facilitated effective communication (either by not following agreed-upon protocol or by unprofessionalism) this circumstance provides an opportunity for the reviewing leader to share his or her observations with the receiver’s leader to enable learning across both operating entities.

## **V. Aids to Communication**

1. Recorders – Typically used to preserve a record of conversations to assist in the review of incidents. Also used to check conversations to ensure communications are effective and appropriate.
2. System Operator Logs – Used as a knowledge transfer device between system operators in the same control room, as well as for management to respond to inquiries about situations that

occurred days, weeks or even months afterward. Used in conjunction with all other forms of communication.

3. Checklists – Used as an aid to ensure consistency in the information contained in routine communications. A typical use of a checklist is during shift turnover of system operators to ensure appropriate operating information is communicated to the system operator coming on-shift.
4. Standard Verbal Cues - To develop a common understanding of the urgency and attention required for a verbal communication entities may develop standard phraseology such as:
  - a. “This is a directive”: This is a simple way to let the receiver know that the next statement will relay an expected mandatory action and will require a “repeat back” of the order.
  - b. “I (we) have a problem”: Important information is forthcoming.
  - c. “I need your help”: Action is needed, albeit not for an emergency.
  - d. “Are you ready to copy/write?”: When you want the recipient to write down the message.
  - e. “Say again”: When you need the sender to repeat a message
5. Tailgate Sessions – These are information sharing sessions prior to an important job or evolution. They are a give and take briefing of the scope of the task to be done, special safety precautions and an opportunity to ask clarifying questions. The intent of the session is to ensure everyone knows the goal and has the necessary tools and information. A clear transition from a tailgate session to formal communications such as a standard verbal cue should be used.
6. Standard (or Special) Operating Instructions – These may be known by various other names. Rather than issue a set of complex instructions verbally, the sender provides an advance copy of written steps. When the order is given, the sender ensures the recipient has the correct document (name and date/version) and gives the instruction to complete certain steps or the entire procedure.

#### Related Documents and Links

1. *Electric Reliability Organization Event Analysis Process*, dated February 2012  
[ERO Event Analysis Process](#)
2. *DOE Standard: Human Performance Improvement Handbook, Volume 2: Human Performance Tools for Individuals, Work Teams, and Management*; DOE-HDBK-1028-2009, dated June 2009  
[Human Performance Tools for Individuals, Work Teams, and Management](#)
3. *Human Performance Tools for Workers: General Practice for Anticipating, Preventing, and Catching Human Error During the Performance of Work*, dated April 2006. Developed by the Institute of Nuclear Power Operations (INPO 06-002)

## 4. Reliability Standard COM-002-2 (Communications and Coordination)

**Revision History**

<b>Date</b>	<b>Version Number</b>	<b>Reason/Comments</b>
9/19/2012	1.0	Initial Version – Reliability Guideline: <i>System Operator Verbal Communications – Current Industry Practices</i>